Texas Commission on Environmental Quality

P.O. Box 13087 Austin, Texas 78711-3087

GENERAL PERMIT TO DISPOSE OF WASTEWATER
under provisions of Chapter 26 of the Texas Water Code
and 30 Texas Administrative Code Chapter 205

This permit supersedes and replaces
General Permit No. WQG200000, issued on November 10, 2008.

Wastewater generated from livestock manure compost operations

located in the state of Texas

may be disposed of by evaporation or beneficial use by irrigation adjacent to water in the state

only according to effluent limitations, monitoring requirements and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the Commission of the TCEQ (Commission). The issuance of this general permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the disposal route. This includes property belonging to, but not limited to, any individual, partnership, corporation or other entity. Neither does this general permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary for the conveyance of wastewater.

This general permit and the authorization contained herein shall expire at midnight on November 10, 2018.

EFFECTIVE DATE: November 10, 2013
ISSUED DATE: OCT 28 2013

Bryan L. Shaw

For the Commission

TCEQ GENERAL PERMIT NUMBER WQG200000 RELATING TO THE DISPOSAL OF WASTEWATER FROM MANURE COMPOST FACILITIES

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Part I. Definitions

All definitions in Section 26.001 of the Texas Water Code (TWC) and Title 30 Texas Administrative Code (TAC) Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

Agronomic rate – The application rate of wastewater designed to provide the amount of nutrients needed by the crop or vegetation grown on the land and to minimize the amount of a nutrient which passes below the root zone of the crop or vegetation grown on the land to the groundwater as well as to prevent nutrients in the wastewater from passing outside of the irrigation area through surface transport.

Air contaminant – Particulate matter, radioactive material, dust, fumes, gas, mist, smoke, vapor, odor or any combination thereof produced by processes other than natural. Water vapor is not an air contaminant.

Beneficial use – Application of wastewater to land in a manner which does not exceed the agronomic need or rate for a cover crop is considered beneficial.

Compost – The stabilized product of the decomposition process that is used or distributed for use as a soil amendment, artificial top soil, growing medium amendment, or other similar uses.

Control facility – Any system used for the retention of wastes on the premises until its ultimate use or disposal. This includes any system for the collection and retention of manure and compost.

Discharge or to discharge – To deposit, conduct, drain, emit, throw, run, allow to seep, or otherwise release or dispose of, or to allow, permit or suffer any of these acts or omissions. For purposes of this permit, an allowable discharge of wastewater can only occur adjacent to water in the state, by evaporation or beneficial use by irrigation.

Exempt compost materials – Materials identified in 30 TAC §332.3 as exempt from regulation under that chapter, including source-separated yard trimmings, clean wood material, paper, vegetative material, and manure.

Edwards Aquifer – As defined in 30 TAC §213.3, *Edwards Aquifer Definitions*, that portion of an arcuate belt of porous, water-bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson Counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

Edwards Aquifer Recharge Zone – Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the TCEQ and the appropriate underground water conservation district(s).

Facility – Includes all contiguous land and fixtures, structures, or appurtenances used for storing, processing, treating, or disposing of wastewater. A facility may consist of several storage, processing, treatment, or disposal operation units.

Groundwater – Subsurface water that occurs below the water table in soils and geologic formations that are saturated, other than underflow of a stream or an underground stream.

Hydrologic connection – The interflow and exchange between surface water and groundwater.

Irrigation – The removal of wastewater from a control facility and distribution to or incorporation into the soil mantle for beneficial use purposes.

Liner – Any barrier in the form of a layer, membrane or blanket, either naturally existing, constructed or installed, to prevent a significant hydrologic connection between liquids contained in retention facilities and water in the state.

Livestock manure – Manure (feces and urine), litter, bedding, or feed waste from animal feeding operations.

Notice of change or NOC – A written submission to the executive director from a permittee authorized under a general permit, providing information on changes to information previously provided to the Commission, or any changes with respect to the nature or operations of the regulated entity or the characteristics of the discharge.

Notice of intent or NOI – A written submission to the executive director from an applicant notifying its intent to discharge or dispose of waste under the provisions of a general permit.

Notice of termination or NOT – A written submission to the executive director from a permittee authorized under a general permit requesting termination of coverage under the general permit.

Nuisance – Any discharge of air contaminant(s), including but not limited to odors, of sufficient concentration and duration that are or may tend to be injurious to or which adversely affects human health or welfare, animal life, vegetation, or property, or which interferes with the normal use and enjoyment of animal life, vegetation, or property.

Operator – The person responsible for the overall operation of a facility or part of a facility.

Owner – The person who owns a facility or part of a facility.

Permittee – Any person issued or covered by a permit.

Process wastewater – For the purpose of this permit, any water used or generated in the operation of a livestock manure composting facility, but not including domestic sewage.

Retention facility – A man-made excavation formed primarily of earthen materials (although it may be lined with man-made materials), for the containment, detainment, evaporation, or storage of wastewater. Examples of retention facilities are holding and storage ponds, pits, and lagoons.

Sodium adsorption ratio (SAR) – A ratio of soil extracts and irrigation waters used to express the relative activity of sodium ions in exchange reactions with soils, defined by the following equation (with all ions expressed in millequivalents/liter):

$$SAR = \frac{[Na+]}{\sqrt{\tfrac{1}{2}([Ca+2] + [Mg+2])}}$$

Site – The physical area where any system or activity authorized by this general permit is located. Site may include any adjacent land used in connection with the system or activity and may be an area larger than the area where compost is produced.

Stormwater associated with industrial activity – For the purpose of this permit, rainfall runoff, snow melt runoff, and surface runoff and drainage from storage areas for raw materials, intermediate and final products, and areas where composting activity has taken place in the past and significant materials remain and are exposed to stormwater. The term excludes areas located onsite separate from the site's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above described areas.

Tail water control facility – A diked or bermed area, pond, or other similar structure placed down-gradient of a wastewater irrigation area and designed to prevent off-site runoff or runoff to water in the state.

Texas Land Application Permit (TLAP) – A permit issued by the TCEQ for the land application and disposal of waste that does not result in a discharge to surface water in the state.

Wastewater – Water, either containing waste or that has contacted waste, including without limitation, process wastewater and stormwater.

Water in the state – Groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state.

Part II. Permit Applicability and Coverage

Section A. Discharges Covered

This general permit authorizes the disposal of wastewater generated from livestock manure composting operations and processes by evaporation or beneficial use by irrigation adjacent to water in the state. This authorization includes any retention facility, control facility, storage or processing areas for livestock manure, compost material derived from livestock manure, livestock manure composted with exempt compost material, and storage of finished compost product.

Livestock manure composting operations that recycle all process wastewater or stormwater associated with industrial activities back into the composting process, and that do not discharge or dispose of wastewater by irrigation or evaporation, are not required to be authorized by this general permit.

Section B. Limitations on Coverage

1. No discharge is allowed by this general permit into any surface water in the state. Discharge adjacent to water in the state by disposal of wastewater by irrigation or evaporation is allowed only under the conditions described in this permit.

2. This general permit does not authorize the disposal of wastewater generated from livestock manure composting operations and processes which occur at a facility either permitted or otherwise authorized by the Commission as a Concentrated Animal Feeding Operation (CAFO). The discharge or disposal of wastewater occurring at these facilities must be authorized under a separate permit or authorization.

3. Additional authorization may be required for discharges into or adjacent to water in the state, located on or within ten stream miles upstream of the Edwards Aquifer recharge zone, as defined in 30 TAC Chapter 213, *Edwards Aquifer*.

4. For facilities located on or within ten stream miles upstream of the Edwards Aquifer recharge zone, applicants must also submit a copy of the NOI to the appropriate TCEQ regional office.

Counties:	Contact:
Comal, Bexar, Medina, and Kinney	TCEQ, Water Program Manager San Antonio Regional Office 14250 Judson Rd. San Antonio, Texas 78233-4480 (210) 490-3096

Counties:	Contact:
Williamson, Travis, and Hays	TCEQ, Water Program Manager Austin Regional Office P.O. Box 13087 Austin, Texas 78711-3087 (512) 339-2929

5. This general permit does not authorize the storage, processing, or disposal of solid waste, including livestock manure, compost, or exempt compost materials. It is the responsibility of any person conducting such activities to comply with any applicable requirements of the Commission, as described in 30 TAC Chapters 312, 330, 332 and 335, *Sewage Sludge Use, Disposal and Transportation, Municipal Solid Waste, Composting* and *Industrial Solid Waste and Municipal Hazardous Waste*, respectively.

6. Disposal of wastewater shall not be authorized by this general permit where prohibited by any other state rule or law.

7. The executive director will deny an application for authorization under this general permit, and may require that the applicant apply for an individual permit, if the executive director determines that disposal activities will not maintain existing uses of receiving waters. Additionally, the executive director may cancel, revoke, or suspend authorization for disposal under this general permit based on a finding of historical and significant noncompliance with the provisions of this general permit. The executive director shall deny or suspend a facility's authorization for disposal under this general permit based on a rating of "unsatisfactory performer" according to commission rules in 30 TAC §60.3, *Use of Compliance History*. An applicant who owns or operates a facility classified as an "unsatisfactory performer" is entitled to a hearing before the commission prior to having its coverage denied or suspended, in accordance with Tex. Water Code § 26.040(h). Denial of authorization for dispoal under this general permit will be done according to commission rules in 30 TAC Chapter 205, *General Permits for Waste Discharges*.

8. The executive director may deny an application for authorization under this general permit and may require that the applicant apply for an individual Texas Land Application Permit (TLAP), for any reasons described in 30 TAC §205.4 (c)(2)(A)-(F).

9. In response to the administration of a Total Maximum Daily Load (TMDL) or an implementation plan of a TMDL, this general permit may be revised or an individual permit required for facilities covered by the general permit, if necessary.

Section C. Application for Coverage

1. Contents of the Notice of Intent (NOI)

   Applicants seeking authorization for disposal under this general permit must submit a completed NOI on a form approved by the executive director. The NOI shall, at a minimum, include:

   (a) the legal name and address of the owner and operator,

(b) the facility name and address,
(c) the location, description and acreage of any wastewater irrigation area,
(d) the type of disposal (evaporation or irrigation),
(e) description and size of the composting control facility,
(f) retention facility size,
(g) the estimated irrigation application rate, and
(h) confirmation that a Technical Report has been developed in accordance with Part III.b.1 of this general permit.

2. Facilities authorized under the previous general permit issued November 10, 2008 are required to submit a new NOI within 90 days of the effective date of this general permit to continue authorization.

3. Submission of a NOI is an acknowledgment that the conditions of this general permit are applicable to the proposed disposal, and that the applicant agrees to comply with the conditions of this general permit. Provisional authorization to dispose of wastewater under the terms and conditions of this general permit begins 48 hours after a completed NOI is postmarked for delivery to the TCEQ. If the TCEQ provides for electronic submission of NOIs during the term of this permit, provisional authorization begins immediately following confirmation of receipt of the electronic NOI form by the TCEQ. The NOI must be submitted to the address indicated on the NOI form. Following review of the NOI, the executive director will:

   a. determine that the NOI is complete and confirm coverage by providing a written notification and an authorization number;

   b. determine that the NOI is incomplete and request additional information needed to complete the NOI; or

   c. deny coverage in writing. Denial of coverage will be made in accordance with 30 TAC §205.4, *Applications and Notices of Intent.*

4. Authorization under this general permit is not transferable. If the owner or operator of the regulated entity changes, the present owner and operator shall submit a Notice of Termination (NOT) and the new owner and operator shall submit a NOI. Any change in a permittee's Charter Number, as registered with the Texas Secretary of State, is considered a change in ownership of the company. The NOT and NOI must be submitted no later than 10 days prior to the changes to avoid a lapse in authorization for the facility.

5. If the owner or operator becomes aware that they failed to submit any relevant facts or submitted incorrect information in a NOI or that information provided in the NOI changes (for example, permittee address, or information related to wastewater irrigation areas, retention facilities, or control facilities), the correct information shall be provided to the executive director in a Notice of Change (NOC) within 14 days after discovery. A NOT is required for a change in the site location or changes in ownership and/or operator.

Section D. Termination of Coverage

A permittee shall terminate coverage under this general permit through the submittal of a NOT, on a form approved by the executive director, when the owner or operator of the facility changes, when disposal becomes unnecessary, is delayed, or is authorized under an individual permit. Unless coverage is terminated because an individual permit has been obtained, the permittee must include, with the NOT, the certification that retention facilities have been properly closed, in accordance with Part III.B.4.

Authorization to dispose of wastewater terminates at midnight on the day that a NOT is postmarked for delivery. If the TCEQ provides for electronic submission of NOTs, authorization under this permit terminates immediately following confirmation of receipt of the electronic NOT form by the TCEQ. A NOT must be submitted within 10 days after the facility completes the closure requirements in Part III.B.4., obtains coverage under an individual permit, or obtains coverage under an alternative general permit. Compliance with the conditions and requirements of this permit are required until a NOT is submitted.

Section E. Authorization Under an Individual Permit

1. Wastewater disposal eligible for authorization by this general permit may alternatively be authorized by an individual permit according to 30 TAC Chapter 305, *Consolidated Permits*.

2. When an individual permit is issued for wastewater disposal that is currently authorized under this general permit, the permittee shall submit a NOT to the executive director. The permittee cannot hold both a general permit and an individual permit.

3. The disposal of wastewater from facilities currently authorized by an individual permit, and disposal by facilities currently authorized under another general permit, may only be authorized under this general permit if the following conditions are met:

    a. the disposal meets the applicability and eligibility requirements for coverage under this general permit;

    b. the current individual permit does not contain numeric water-quality based effluent limitations for the disposal, unless the disposal that resulted in the limitations have ceased and any contamination that resulted in those limitations is removed or remediated;

    c. the executive director has not determined that continued coverage under an individual permit is required based on consideration of a history of substantive non-compliance or other site-specific considerations;

    d. a previous application or permit for the disposal has not been denied, terminated, or revoked by the executive director as a result of enforcement or water-quality related concerns. The executive director may provide a waiver to this provision based on new circumstances at the facility, or if there is a new facility owner or operator; and

e. the applicant submits a NOI and requests cancellation or amendment of the existing individual permit, as appropriate.

Section F. Permit Expiration

1. This general permit is effective for five years from the effective date. Authorizations for disposal under the provisions of this general permit may be issued until the expiration date of the general permit. This general permit may be amended, revoked, or cancelled by the commission after notice and comment as provided by 30 TAC §§205.3, *Public Notice, Public Meetings, and Public Comment* and 205.5, *Permit Duration, Amendment, and Renewal.*

2. If the executive director proposes to reissue this general permit prior to the expiration date, the general permit shall remain in effect after the expiration date for those existing facilities authorized under the permit in accordance with 30 TAC Chapter 205. The general permit will remain in effect for authorized facilities until the date the Commission takes final action on the proposal to reissue this general permit. No new NOIs will be accepted or new authorizations issued under this general permit after the expiration date of this general permit or after the effective date of an amended and re-issued general permit.

3. Upon issuance of a renewed or amended general permit, all facilities, including those covered under the expired general permit, will be required to submit a NOI in accordance with the requirements of the new or amended permit within 90 days following the effective date of the renewed permit. A facility may also obtain an individual permit, or shall cease disposal of wastewater.

4. According to 30 TAC §205.5(d), *Permit Duration, Amendment, and Renewal*, if the Commission does not propose to reissue this general permit at least 90 days before the expiration date, permittees authorized under this general permit shall submit an application for an individual or alternative general permit before the expiration date. If the application for an individual or alternative general permit is submitted before the general permit expiration date, authorization under this expiring general permit remains in effect until the issuance or denial of an individual or alternative general permit.

Part III. Permit Requirements

Section A. General Requirements

All facilities authorized by this general permit must comply with the following general requirements.

1. The permittee shall notify the appropriate TCEQ regional office at least 48 hours before putting into operation any new or replacement retention facility. For purposes of this general permit, "putting into operation" means the retention facility commences the receipt of wastewater from a control facility.

2. The permittee shall notify the appropriate TCEQ regional office at least 48 hours before the initial operation of any irrigation system.

3. Facilities which generate industrial solid wastes, as defined in 30 TAC §335.1, shall comply with the provisions of 30 TAC Chapter 335, *Industrial Solid Waste and Municipal Hazardous Waste*. If the requirements of 30 TAC Chapter 335 do not apply, the solid wastes shall be disposed of in accordance with the Texas Health and Safety Code, Chapter 361, *Solid Waste Disposal*.

4. The facility shall be designed and operated to prevent the occurrence of a nuisance condition.

5. The permittee shall take reasonable steps necessary to prevent adverse effects to human health or safety, or to the environment. The permittee shall immediately cease disposal upon becoming aware that the disposal method may endanger human health or safety, or the environment and to provide notification to TCEQ as required in Part III. A.6.(a).

6. The permittee shall provide the following noncompliance notifications.

   a. Any noncompliance that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. The information shall be provided orally or by facsimile transmission (FAX) to the appropriate TCEQ regional office within 24 hours of the permittee becoming aware of the noncompliance. A written report shall also be provided by the permittee to the appropriate TCEQ regional office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written report shall contain:

      (1) a description of the noncompliance and its cause;
      (2) the potential danger to human health or safety, or the environment;
      (3) the period of noncompliance, including exact dates and times. If the noncompliance has not been corrected, the anticipated time it is expected to continue; and
      (4) steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance and to mitigate its adverse effects.

   b. In the event the permittee disposes of wastewater other than as authorized in the permit, the permittee shall give 24-hour oral or fax notice and 5-day written notice to TCEQ as required by paragraph (a) above.

   c. Any noncompliance other than that specified in paragraphs 6.a. and 6.b. above, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible.

7. All records, reports, drawings, certifications, and other documentation required by this general permit must be maintained for a minimum period of five years from the date of the record and either be kept on-site or made readily available for review by an authorized representative of the Commission upon request. This period may be extended at the request of the executive director.

Section B. Specific Requirements for Evaporation and Irrigation

1. Technical Report. An applicant seeking authorization under this general permit must develop and implement a Technical Report before submitting a NOI for coverage under this general permit. The Technical Report must be maintained onsite and be made readily available for review by authorized TCEQ personnel upon request and must be updated if changes occur at the facility. The Technical Report must contain the following:

    a. Design Analysis. All engineering design documents required in Part III.B.2 of this general permit.

    b. Site drawing. A legal description of all land which is to be a part of the facilityand a scale drawing that shows the location of all existing and proposed structures and areas of the facility to include: buildings, composting areas, control facilities, retention facilities, wastewater irrigation areas, tail water control facilities, buffer zones, and water wells. A United States Geological Survey topographic map (7 ½ minute series if available) of the area should be used to plot the exact boundaries of the facility and wastewater irrigation areas and to evaluate slope and tail water control needs. This drawing should have an index of wells and other prominent features.

    c. Geology. The existence of any geological formations such as faults or sinkholes on the facility, which may provide a hydrologic connection for surface water to recharge groundwater, shall be noted in the Technical Report and identified on the site map.

    d. Soils. A general survey of soils with regard to standard classifications shall be compiled for all wastewater irrigation areas. Soil surveys compiled by the United States Department of Agriculture Natural Resources Conservation Service (NRCS) shall be utilized where available. Design aspects related to wastewater application rates, annual crop systems, seepage, and runoff controls shall be described in the Technical Report based upon the soil's physical and chemical properties, hydraulic characteristics, and crop use suitability for the wastewater irrigation areas. Soil limitations for the application of wastewater should also be addressed such as, but not limited to, rapid permeability, seasonal perched groundwater, and decreased available water capacity.

    e. Groundwater quality. The Technical Report shall fully assess the impact of wastewater irrigation on the uses and water quality of local groundwater resources. The design of retention facilities, wastewater irrigation areas, tail water control facilities, and the wastewater application rate must preclude the migration of wastewater and recharge into the underlying groundwater and must maximize the beneficial use of the wastewater by a cover crop within the soil zone.

2. Design Analysis. A licensed Texas professional engieer shall design retention facilities and irrigation systems in a manner that limits hydraulic and nutrient application rates and wastewater storage needs. Written documentation shall include the justifications developed for evapotranspiration rates, including the reference sources for rainfall and evaporation data, irrigation efficiency, electrical conductivity of wastewater which is used

in irrigation, crop salt tolerances, and runoff curve numbers. The design shall be certified by a Texas licensed professional engineer. This certification and all supporting documents must be retained onsite until the retention facility is closed in accordance with Part III.B.4 of this permit.

a. Irrigation System Design.

(1) A water balance study shall be developed as a part of a detailed application rate analysis in order to determine the irrigation water requirement, including a leaching requirement if needed, for the crops on the wastewater irrigation areas.

(2) The water balance study must generally follow the example shown in Table 1 of 30 TAC §309.20 or may be obtained by contacting the TCEQ's Industrial Permits Team (MC-148). The water balance study may also consider return flows of wastewater back to the composting operation.

(3) Precipitation inputs to the water balance shall utilize the average annual rainfall and the monthly precipitation distribution based on past rainfall records. The consumptive use requirements (evapotranspiration losses) of the crops shall be developed on a monthly basis. The method of determining the consumptive use requirement shall be documented as a part of the water balance study.

(4) A leaching requirement shall be included in the water balance study when the irrigated wastewater will have a total dissolved solids concentration which presents the potential for developing excessive soil salinity buildup due to the long term operation of the wastewater irrigation system. Excess soil salinity must be considered in the design analysis to prevent groundwater contamination and to ensure crop salt tolerance. The total dissolved solids or conductivity analysis shall be used to support this design.

(5) The wastewater irrigation system must be designed and operated to utilize wastewater to supply the growth needs of the annual crops. Application rates shall not exceed the agronomic rate of the crops. Crop water needs that are satisfied by expected precipitation must be accounted for in the water balance study.

(6) The wastewater irrigation system shall be designed and operated to prevent a discharge from entering surface water in the state and to achieve use of the wastewater without adversely affecting the agricultural productivity of the wastewater irrigation areas. Discharge (run-off) of wastewater from the wastewater irrigation areas is prohibited. Timing and rate of applications shall be in response to crop needs, assuming usual nutrient losses, expected precipitation, and soil conditions. Irrigation of wastewater under this permit shall not cause or contribute to a violation of surface water quality standards, contaminate groundwater or create a nuisance condition.

(7) The wastewater irrigation system must be designed and operated to maintain all buffer zones required by Part III.C.6 of this general permit.

(8) The wastewater irrigation system must be designed and operated in a manner not to exceed an irrigation application rate as determined by the water balance study or 3.2 acre-feet wastewater/acre/year, whichever is more stringent.

(9) The wastewater irrigation system must be designed and operated in a manner not to exceed an irrigation application rate of 100 pounds organic material/acre/day, in order to prevent the occurrence of anaerobic conditions on a wastewater irrigation area. Organic loading estimates for this purpose shall be established through periodic analysis of 5-day biochemical oxygen demand, according to Part III.C.2. of this general permit.

(10) The design of the wastewater irrigation system shall include appropriate engineering considerations with respect to limitations presented by geological features that provide a hydrologic connection, including a design that will prevent disposal of wastewater onto such areas.

b. Retention Facility Design for Irrigation System

(1) Retention facilities must be designed and maintained to prevent any discharge to surface water in the state.

(2) Retention facilities shall be designed based upon the more stringent of two evaluations:

(i) Retention facilities designed to retain the runoff from the 25-year/24-hour storm event in addition to process wastewater inflows and other non-stormwater inflows generated over a 30 day period into the retention facility; or

(ii) Retention facilities designed following the example shown in Table 2 of 30 TAC §309.20 or an example may be obtained by contacting the TCEQ's Industrial Permits Team (MC-148). This storage requirement calculation shall be based on the highest annual rainfall amount and the lowest annual evaporation from a meteorological record of at least the most recent 25 years, distributed over a 12-month period in proportion to the average monthly percentages for each of the months.

(3) Design of the retention facility shall include a top freeboard of not less than two feet. Freeboard shall account for settlement and slope stability of the materials used at the time of design and construction.

(4) Retention facilities shall not be located in the 100-year flood plain, as defined in 30 TAC Chapter 301, *Levee Improvement Districts, District Plans of Reclamation, and Levees and Other Improvements*, unless the retention

facility is protected from inundation and damage that may occur during that flood event.

c. Retention Facility Design for Evaporation System

(1) Retention facilities must be designed and maintained to prevent any discharge to surface water in the state.

(2) Evaporation systems (wastewater disposal without irrigation) shall be designed based upon the more stringent of two evaluations:.

(i) Average Conditions: The retention facility must have enough surface area to evaporate the design flow to the retention facility under average rainfall conditions.

(ii) Critical Conditions: The retention facility's storage capacity must be enough to hold the accumulated wastewater under the lowest net evaporation conditions in the last 25 years.

(3) An example of an evaporation pond evaluation is available upon request from the TCEQ's Industrial Permits Team (MC-148).

(4) Design of the retention facility shall include a top freeboard of not less than two feet. Freeboard shall account for settlement and slope stability of the materials used at the time of design and construction.

(5) Retention facilities may not be located in the 100-year flood plain, as defined in 30 TAC Chapter 301, *Levee Improvement Districts, District Plans of Reclamation, and Levees and Other Improvements*, unless the facility is protected from inundation and damage that may occur during that flood event.

3. Retention Facility Construction Requirements. All retention facilities shall conform to the following requirements.

a. All retention facilities whether constructed of earthen or other impervious material shall be designed and constructed so as to prevent groundwater contamination.

(1) Soils used for a lining shall be free from foreign material such as paper, brush, trees, and large rocks. All soil liners must be comprised of compacted material, at least 18-inches thick, compacted in lifts not greater than six inches thick and compacted to 95% of Standard Proctor Density 1% to 3% of optimum moisture. Soil liners must meet the following particle size gradation and Atterberg limits: 30% or more passing a number 200 mesh sieve; a liquid limit of 30% or greater; a plasticity index of 15 or greater; and a permeability less than or equal to 1×10^{-7} cm/sec.

(2) Synthetic membrane linings shall have a minimum thickness of 40 mils with a leak detection system.

(3) In-situ liners at least 18-inches thick and meeting a permeability less than or equal to 1×10^{-7} cm/sec are acceptable alternatives to the requirements of (1) and (2) of this section.

(4) In-situ, placed soil, or compacted clay liners must be proven, by laboratory or field testing, to retain their permeability characteristics when exposed to the quality of the wastewater proposed to be contained in the pond. The wastewater shall not chemically alter the liner in such a manner that the permeability is increased over the above standard.

(5) A licensed Texas professional engineer shall certify that the retention facility lining meets the requirements identified above prior to utilization of the retention facility.

b. Soils used in the construction of a retention facility's embankment walls shall be free of foreign material such as paper, brush, trees, and large rocks. Soil embankment walls shall have a top width of at least five feet. The interior and exterior slopes of soil embankment walls shall be no steeper than one foot vertical to three feet horizontal unless alternate methods of slope stabilization are utilized. Soil embankment walls must be constructed of material compacted in lifts no greater than six inches to 95% of Standard Proctor Density at 1% to 3% of optimum moisture. All soil embankment walls shall be protected by a vegetative cover or other stabilizing material, excluding brush and trees, to prevent erosion. Erosion stops and water seals shall be installed on all piping penetrating the embankments.

4. Closure. Closure activities include the discontinued use of any retention facility or tail water control facility regulated by this general permit. Pursuant to the requirements of 30 TAC §335.8(b)(1), a permittee operating a wastewater retention facility, shall notify the Environmental Cleanup Section (MC-127) of the Remediation Division, in writing, of any closure activity at least 90 days prior to commencing such an activity. This notification must include a closure plan. At a minimum the closure plan shall be consistent with the NRCS Practice Standard, "Closure of Waste Impoundments" (Code 360) and shall include procedures to make the following determinations:

a. The lateral and vertical extent of contamination by soil sampling;

b. The quantity of solid and liquid waste, including compost product, to be removed, as well as a methodology for management, handling, and disposal of the waste. This should include detailed information on disposal or treatment of all wastes generated, including information on location and quantity of wastes to be disposed off-site;

c. Specification of the sampling protocol, sample handling, hold times, preservation, quality assurance and quality control, and chain of custody information for the collection of soil and water samples; and

d. A closure schedule which includes such milestones as 1) initiation of closure, 2) removal, treatment or disposal of waste and product inventory, 3) completion of closure activities (should not be more than 180 days), and 4) submission of a final report (within 90 days of completion of closure activities).

A final report of closure activities shall be submitted to the Environmental Cleanup Section (MC-127) of the Remediation Division within 90 days of completion of closure and provide detailed information on: 1) laboratory analysis conducted regarding investigation of the lateral and vertical extent of contamination; 2) description of removal or decontamination activities; 3) laboratory analysis conducted regarding verification sampling (verification of samples are confirmatory samples of media which documents the removal and decontamination of all waste or waste materials); 4) waste disposal activities; and 5) closure certification. The closure certification shall indicate that closure activities were conducted according to an approved closure plan, must be certified by a licensed Texas professional engineer and must be signed by the owner and operator.

Section C. Operational Requirements

1. Soil Testing. Prior to commencing wastewater irrigation, and annually thereafter, representative soil samples of the wastewater irrigation areas shall be collected and analyzed according to the following procedures:

   a. For composting facilities located in Erath, Hamilton, and Bosque Counties soil testing shall be conducted by the NRCS, a nutrient management specialist certified by the NRCS or Texas Certified Crop Advisor's Board, the State Soil and Water Conservation Board, the Texas AgriLife Extension Service, an agronomist or soil scientist on the full-time staff of an accredited university located in Texas, or a professional agronomist or soil scientist certified by the American Society of Agronomy.

   b. Representative soil samples shall be taken from the root zones of wastewater irrigation areas to establish pre-operational soil concentrations of the parameters listed below. The soil samples must be taken at a spatial distribution of one composite sample per every 40 acres of each wastewater irrigation area, but at least one composite sample must be obtained from every wastewater irrigation area. Soil samples from separate wastewater irrigation areas may not be composited together. Sampling procedures shall employ accepted techniques of soil science for obtaining representative analytical results. Soil samples should be taken within the same 45-day time frame during each calendar year, analyzed within 30 days of collection, and compiled by December 31. Baseline values of the parameters shall be determined and described in the Technical Report.

   c. Composite soil samples shall be comprised of no less than 15 randomly sampled cores obtained from each of the following soil depth zones:

      (1) Zone 1: 0-6 inches; and

      (2) Zone 2: 6-24 inches

d. Soil samples shall be submitted to a soil testing laboratory along with a previous crop history of the site, intended crop use, and yield goal. Soil test reports shall include nutrient recommendations for the crop yield goal.

e. Chemical and nutrient parameters and analytical procedures for laboratory analysis of soil samples from wastewater irrigation areas shall include the following:

Parameter	Method	Minimum Analytical Level (MAL)	Reporting units
pH	2:1 (v/v) water to soil mixture		Reported to 0.1 pH units after calibration of pH meter
Electrical Conductivity	Obtained from the SAR water saturated paste extract	0.01	dS/m (same as mmho/cm)
Nitrate-nitrogen	From a 1 N KCl soil extract	1	mg/kg (dry weight basis)
Total Kjeldahl Nitrogen (TKN)	For determination of Organic plus Ammonium Nitrogen. Procedures that use Mercury (Hg) are not acceptable.	20	mg/kg (dry weight basis)
Total Nitrogen	= TKN plus Nitrate-nitrogen		mg/kg (dry weight basis)
Plant-available: Phosphorus	Mehlich III with inductively coupled plasma	1	mg/kg (dry weight basis)
Water-soluble: Sodium (Na) Calcium (Ca) Magnesium (Mg)	Obtained from the SAR water saturated paste extract	1 (Na) 1 (Ca) 1 (Mg)	Water soluble constituents are *reported* in mg/L

Sodium Adsorption Ratio (SAR)	$SAR = \frac{Na}{\sqrt{\frac{(Ca+Mg)}{2}}}$		Express *concentrations* of Na, Ca and Mg in the water saturated paste extract in milliequivalents/liter (meq/L) to calculate the SAR. The SAR value is unit less. If the SAR is greater than 10, amendments (e.g., gypsum) shall be added to the soil to adjust the SAR to less than 10.

f. Reporting Requirements. The permittee shall submit soil sample results by March 20 of the next year for each wastewater irrigation area to the TCEQ's Enforcement Division (MC 224), to the appropriate TCEQ regional office, and to the TCEQ's Industrial Permits Team (MC-148) using an approved self-reporting form that is signed and certified as required by Part IV. 7. of this permit. If soil samples are not collected for a wastewater irrigation area, a self-reporting form must still be submitted for that area indicating no samples were collected.

2. Wastewater Testing. Representative wastewater samples shall be taken prior to initial irrigation and at least once every three months during the time that irrigation is occurring. Wastewater shall be collected from the irrigation system at a point after removal from the retention facility. The wastewater samples shall be collected, stored, and conveyed to a laboratory using acceptable procedures, and analyzed for the following parameters by a NELAC certified laboratory:

   a. 5-day biochemical oxygen demand;

   b. Total nitrogen;

   c. Total phosphorus; and

   d. Total dissolved solids.

3. Excessive Phosphorus Soil Loading.

   a. When results of the annual soil analysis for extractable phosphorus indicate a level greater than 200 mg/kg of extractable phosphorus (reported as P) in Zone 1 for a particular wastewater irrigation area, then the permittee shall not apply any wastewater to the affected wastewater irrigation area.

   b. Within 30 days of receipt of the results identified in Part III.C.3.a of this general permit, the permittee shall provide a written notification to the appropriate TCEQ regional office and to the TCEQ's Industrial Permits Team (MC-148). The

notifications must include a description of all of the wastewater irrigation areas being utilized under this general permit and the submittal of all soil testing results collected according to Part III.C.1. of this general permit, since the NOI for this general permit was filed.

c. The permittee shall evaluate the ability to comply with all conditions of this general permit, without the use of the affected wastewater irrigation area. The permittee is responsible for changing or terminating the authorization with a NOC or NOT to utilize other land for wastewater irrigation. The permittee may submit an application for an individual permit, if necessary, in order to obtain any required authorization for the disposal of wastewater adjacent to water in the state.

d. Based upon adequate information substantiating a reduction of the soil phosphorus levels in the affected wastewater irrigation area, the executive director may provide a written approval to allow resumption of wastewater irrigation in the affected wastewater irrigation area.

4. Irrigation Records. The permittee shall maintain records of all wastewater that is beneficially used by irrigation or that is used in the production of compost. The records shall be updated each time wastewater is removed from the retention facility and whenever wastewater is directly conveyed for irrigation without retention. Irrigation records must be compiled by December 31 of each year and kept on site.

a. When wastewater is land applied via irrigation, records shall include the following information:

(1) date of wastewater irrigation;

(2) location of wastewater irrigation area(s) and the number of acres utilized during each irrigation event;

(3) acreage of each individual crop on which wastewater is applied;

(4) application rate and volume of wastewater used during the irrigation event;

(5) crop yields harvested; and

(6) results of the analysis of samples of the soil and wastewater required under Part III.C.1 and 2. of this general permit.

b. Where wastewater is used to assist in the production of compost, such records shall include the following information:

(1) date of wastewater use; and

(2) volume of wastewater used.

5. Liner Maintenance and Repair.

   a. The permittee must maintain any retention facility liner to inhibit infiltration of wastewater.

   b. The retention facility and liner shall be restricted from access by domestic and wild animals by fences or other protective devices.

   c. Earthen levees and embankments shall be vegetated or stabilized in a manner to control erosion. Vegetation, when utilized, shall be maintained at all times through mowing, watering, or other suitable maintenance practices. All trees or woody vegetation shall be removed and not allowed to grow within a retention facility or on an earthen levee or embankment.

   d. Any mechanical or structural damage to the liner shall be evaluated by a NRCS engineer or a licensed Texas professional engineer within 30 days of the damage.

   e. Documentation of liner maintenance shall be kept on site.

   f. The permittee shall have a NRCS engineer or a licensed Texas professional engineer review the documentation and complete an onsite evaluation of each retention facility every five years.

   g. If notified by the executive director that significant potential exists for the contamination of ground or surface water, the permittee shall install a leak detection system or monitoring well(s) in accordance with that notice. In the event monitoring wells are required, the permittee must:

      (1) sample each monitoring well annually for nitrate as nitrogen, chloride, and total dissolved solids using methods approved by the executive director, and

      (2) compare the analytical results to the baseline data. The first year's sampling shall be considered the baseline data and must be retained on site for the life of the facility unless otherwise provided by the executive director. If a ten percent (10%) increase in concentration of any of the sampled constituents is found, the permittee must notify the executive director (c/o Water Quality Assessment Section, MC-150) within 30 days of receiving the analytical results. In response, the executive director may suspend the authorization, may require the operator to cease further disposal and operation of a retention facility, and may require facility closure in accordance with Part III.B.4.

   h. The permittee shall notify the appropriate TCEQ Regional Office in writing two weeks prior to the time any retention facility is cleaned out by means other than pumping. If the retention facility is cleaned using a dragline or if the liner is disturbed, the permittee shall have the pond liner re-certified by a licensed Texas

professional engineer. The liner certification should be sent to the appropriate TCEQ Regional Office.

i. All solid waste resulting from cleaning operations and the sludge deposited in retention facilities and associated control facilities should be incorporated into compost in accordance with the conditions of this permit. Solids shall be removed in accordance with a predetermined schedule for cleanout of all retention facilities to prevent the accumulation of solids from exceeding fifty percent (50%) of the original storage volume.

j. Removal of solids shall be conducted during favorable wind conditions that carry odors away from nearby receptors. The permittee shall notify the appropriate TCEQ regional office within 5 days after the cleaning has been completed. At no time shall emissions from any activity create a nuisance. Any increase in odors associated with a properly managed cleanout under this subsection will be taken into consideration by the executive director when determining compliance with the provisions of this permit.

6. Other Operational Requirements.

a. The permittee shall maintain direct responsibility and control over all aspects of the wastewater retention and irrigation operations, as well as all aspects of any agricultural activities carried out on the wastewater irrigation areas.

b. When compost and manure is stockpiled, it shall be stored in a well drained area with no ponding of water, and the top and sides of stockpiles shall be adequately sloped to ensure proper drainage. Runoff from storage piles must be retained onsite and routed to a retention facility or utilized for irrigation.

c. Stormwater drainage shall be designed to prevent or minimize run-on, commingling, or contact with wastewater, the control facility, retention facilities, and wastewater irrigation areas.

d. Nighttime irrigation of wastewater shall be allowed only in areas with no occupied residence(s) within 0.25 mile from the outer boundary of the wastewater irrigation area.

e. There shall be no water quality impairment to public and neighboring private drinking water wells or to surface water in the state, due to wastewater handling at the facility. Additionally, nuisance abatement must be accomplished through required setbacks of retention facilities and wastewater irrigation areas. The following requirements must be met at the time: 1) a facility obtains authorization under this general permit; or 2) a facility which is currently authorized by this general permit begins construction for expansion. For this subsection, expansion means construction of new retention facilities or use of new wastewater irrigation areas. The minimum buffers for compliance with these requirements are:

(1) No less than a 100 foot wide vegetative strip must be maintained between wastewater irrigation areas or tail water control structures and any surface water in the state.

(2) Retention facilities, wastewater irrigation areas, and tail water control structures shall not be located closer than 500 feet from a public water supply well.

(3) Retention facilities, wastewater irrigation areas, and tail water control structures shall not be located closer than 150 feet from a private water well.

(4) Retention facilities must be located more than 150 feet from the nearest property line and more than 1/4 mile from the nearest edge of any occupied residence or business structure, school (including associated recreational areas), permanent structure containing a place of worship, or public park, unless:

(i) The affected landowner within the buffer zone provides written consent and approval of the retention facility. The written consent must include the following: Name, physical address, mailing address, and phone number of the affected landowner; a description of the retention facility within the buffer zone for which the landowner is giving consent; an acknowledgement that consent by the affected landowner excuses the permittee from otherwise applicable legal requirements; and the signature of the affected landowner. In addition to the consent of the owner of the land, written consent from the governmental entity responsible for operating a school or public park, if the governmental entity is not the owner of the land is required; or

(ii) An odor control plan, certified by a licensed Texas professional engineer, is developed and implemented to control odors at the facility and reduce the quantity of air contaminants emitted from the facility. At a minimum, the plan shall address existing climatological conditions such as wind velocity and atmospheric stability, wastewater characteristics, proposed solutions to prevent nuisance conditions at the edge of the buffer zone and beyond, and identify all structural and management practices that the permittee must employ to minimize odor and control air contaminants at the facility. The plan must also address manure and wastewater storage, the compost processing, irrigation activities, and dust control measures. If the executive director determines that the implementation and employment of these practices is not effective in controlling air contaminants, the permittee shall include any necessary additional abatement measures in the odor control plan and implement those measures to control and reduce these contaminants within the time period specified by the executive director.

(5) Wastewater irrigation areas and tail water control structures may not be located closer than 50 feet to the nearest property line.

f. Appropriate measures necessary to prevent spills and to clean up spills shall be taken. Where potential spills can occur, materials handling procedures and storage shall be specified. Procedures for cleaning up spills shall be identified and the necessary equipment to implement a clean up shall be available to personnel.

g. A rain gauge shall be kept onsite and properly maintained. A written log of all daily measurable rainfall events shall be maintained onsite and made available for inspection by TCEQ.

h. Wastewater shall not be irrigated when the ground is frozen or saturated or within 24 hours of a rainfall event of 0.5 inches or greater.

i. Irrigation practices shall be managed so as to reduce or minimize ponding or puddling of wastewater on the site and pollution of water in the state and to prevent the occurrence of nuisance conditions.

j. Infrastructure including ponds, pipes, ditches, pumps, diversions, and irrigation equipment shall be maintained to insure ability to fully comply with the terms of this general permit.

Part IV. Standard Permit Conditions.

1. The permittee has a duty to comply with all conditions in this general permit. Failure to comply with any condition is a violation of the general permit and the statutes under which the general permit was issued. Any violation may be grounds for enforcement action, for terminating coverage under this general permit, or for requiring a permittee to apply for and obtain an individual permit.

2. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted disposal to maintain compliance with the general permit.

3. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) installed or used by the permittee to achieve compliance with the permit conditions. Proper operation and maintenance also includes adequate laboratory and process controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with general permit.

4. The permittee shall furnish any information, at the request of the executive director, that is necessary to determine whether cause exists for revoking, suspending, or terminating authorization under this general permit. The requested information must be provided within a reasonable time frame and in no case later than 30 days from the date of the request.

5. Inspection and entry shall be allowed under TWC Chapters 26 and Texas Health and Safety Code §§ 361.032-361.033 and 361.037. The statement in TWC § 26.014 that Commission entry of a regulated entity shall occur in accordance with an establishment's

rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the regulated entity, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

6. Standard monitoring requirements.

   a. Samples shall be collected and measurements shall be taken at times and in a manner so as to be representative of the monitored discharge or activity. Samples shall be delivered to the laboratory immediately upon collection, in accordance with any applicable analytical method and required maximum holding time. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 – 319.12. Measurements, tests and calculations shall be accurately accomplished in a representative manner.

   b. Records of monitoring activities must include:

      (1) the date, time, and place of sample or measurement;

      (2) the identity of any individual who collected the sample or made the measurement;

      (3) the chain-of-custody procedures used to maintained sample integrity from sample collection to laboratory delivery;

      (4) the date and time of laboratory analysis;

      (5) the identity of the individual and laboratory who performed the analysis;

      (6) the technique or method of analysis; and

      (7) the results of the analysis or measurement and quality assurance/quality control records.

   c. The permittee shall ensure that properly trained and authorized personnel monitor and sample the soil or wastewater related to any permitted activity.

7. NOIs, NOTs, and NOCs shall be signed in accordance with the requirements of 30 TAC §305.44(a), *Signatories to Applications*. Reports and other information requested or required by the executive director shall be signed in accordance with the requirements of 30 TAC §305.128, *Signatories to Reports*.

8. Authorization under this general permit may be suspended or revoked for the reasons stated in 30 TAC §205.4, *Authorizations and Notices of Intent*. Notifying the TCEQ of planned changes or an anticipated noncompliance does not stay any permit condition.

9. This permit does not convey any property rights of any sort or any exclusive privilege.

10. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Chapter 7 of the TWC for violations including but not limited to the following:

    a. negligently or knowingly violating the TWC Chapter 26;

    b. falsifying, tampering with, or knowingly rendering inaccurate any monitoring device or method required to be maintained under this general permit; and

    c. knowingly making any false statement, representation, or certification in any record or other document submitted or required to be maintained under this general permit, including monitoring reports or reports of compliance or noncompliance.

Part V. Fees

1. Application Fee – An application fee of $100 must be submitted with each NOI. A fee is not required for submission of a NOT or NOC.

2. Annual Water Quality Fee – Facilities having an active authorization on September 1 of each year (have not submitted a NOT prior to this date) will be billed $100 for the following fiscal year.