

JWD/04674/PA

Kathleen Hartnett White, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Larry R. Soward, *Commissioner*
Glenn Shankle, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 8, 2005

TO: Persons on the attached mailing list.

RE: Synagro of Texas-CDR, Inc.
Permit No. WQ0004674000

This letter is your notice that the Texas Commission on Environmental Quality (TCEQ) executive director has issued final approval of the above-named application.

You may file a **motion to overturn** with the chief clerk. A motion to overturn is a request for the commission to review the TCEQ executive director's approval of the application. Any motion must explain why the commission should review the TCEQ executive director's action.

A motion to overturn must be received by the chief clerk within 23 days after the date of this letter. An original and 11 copies of a motion must be filed with the chief clerk in person, or by mail to the chief clerk's address on the attached mailing list. On the same day the motion is transmitted to the chief clerk, please provide copies to the applicant, the Executive Director's attorney, and the Public Interest Counsel at the addresses listed on the attached mailing list. If a motion to overturn is not acted on by the commission within 45 days after the date of this letter, then the motion shall be deemed overruled.

Individual members of the public may seek further information by calling the TCEQ Office of Public Assistance, toll free, at 1-800-687-4040.

Sincerely,

LaDonna Castañuela
Chief Clerk

LDC/spb

RECEIVED
AUG 10 2005
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CENTRAL FILE ROOM

MAILING LIST
for
Synagro of Texas-CDR, Inc.
Permit No. WQ0004674000

FOR THE APPLICANT:

Kimon Lymberry
Synagro of Texas-CDR, Inc.
4512 Brittmoore Road
Houston, Texas 77041

The Honorable Al Jamison
Colorado County
400 Spring Street
Columbus, Texas 78934

FOR THE EXECUTIVE DIRECTOR:

John Williams, Staff Attorney
Texas Commission on Environmental Quality
Environmental Law Division MC-173
P.O. Box 13087
Austin, Texas 78711-3087

Tassie Fish, Technical Staff
Texas Commission on Environmental Quality
Waco Regional Office MC-R9
6801 Sanger Avenue, Suite 2500
Waco, Texas 76710-7826

FOR OFFICE OF PUBLIC ASSISTANCE:

Jodena Henneke, Director
Texas Commission on Environmental Quality
Office of Public Assistance MC-108
P.O. Box 13087
Austin, Texas 78711-3087

FOR PUBLIC INTEREST COUNSEL:

Blas J. Coy, Jr., Attorney
Texas Commission on Environmental Quality
Public Interest Counsel MC-103
P.O. Box 13087
Austin, Texas 78711-3087

FOR THE CHIEF CLERK:

LaDonna Castañuela
Texas Commission on Environmental Quality
Office of Chief Clerk MC-105
P.O. Box 13087
Austin, Texas 78711-3087

PROTESTANTS/INTERESTED PERSONS:

See attached list.

JAMES & LILLIE BRUNE
509 SEIFERT LOOP
WEIMAR TX 78962-1107

ALFRED HOFFMAN
1001 HOFFMAN LN
ALLEYTON TX 78935-2047

JANE MELDAHL
210 GOLF COURSE RD
EAGLE LAKE TX 77434-3104

LESLEY MATTHEWS CAREY
PO BOX 394
GARWOOD TX 77442-0394

ALFRED & BELITA HOFFMAN
1001 HOFFMAN LN
ALLEYTON TX 78935-2047

DANNY NOVAK
PO BOX 397
EAGLE LAKE TX 77434-0397

DANIEL D CLINTON JR
PECAN VALLEY FARM
12410 BOHEME DR
HOUSTON TX 77024-4930

BELITA HOFFMAN
1001 HOFFMAN LN
ALLEYTON TX 78935-2047

ARTHUR & RITA KAY RHODES
4621 FM 102
EAGLE LAKE TX 77434-7037

THE HONORABLE ROBERT L "ROBBY" COOK
TEXAS HOUSE OF REPRESENTATIVES
PO BOX 2910
TIN TX 78768-2910

BETTY & JAMES E HOFFMAN
1027 HOFFMAN LN
ALLEYTON TX 78935-2047

REVEREND OBIE RHODES
4623 FM 102
EAGLE LAKE TX 77434-7037

VANCE C DUNCAN
2146 CALHOUN RD
EAGLE LAKE TX 77434-7006

JAMES W HOFFMAN
1406 DEER RUN ST
CEDAR PARK TX 78613-2714

SYLVIA RUCKA
PO BOX 941
EAGLE LAKE TX 77434-0941

RELL GERTSON
310 S MCCARTY AVE
EAGLE LAKE TX 77434-3108

ARTHUR & CLARA MAHALITC
1910 COUNTY ROAD 79
EAGLE LAKE TX 77434-7056

ELLIS A STEINHAUSER
PO BOX 536
HOUSTON TX 77001-0536

GAIL GERTSON
1007 HONEYDEW LN
EAGLE LAKE TX 77434-3302

MR ARTHUR MAHALITC
1910 COUNTY ROAD 79
EAGLE LAKE TX 77434-7056

BLIOT P TUCKER
2199 TROON RD
HOUSTON TX 77019-1511

SID HARPER
1013 VICTORIAN CT
SEABROOK TX 77586-2583

MARY & STEPHEN A MAHALITC
1839 COUNTY ROAD 79
EAGLE LAKE TX 77434-7055

DR. E B WHORTON
PO BOX 281
EAGLE LAKE TX 77434-0281

LISA A HATZENBUEHLER MGR
LCRA
PO BOX 220
AUSTIN TX 78767-0220

RAYMOND MAHALITC
1910 COUNTY ROAD 79
EAGLE LAKE TX 77434-7056

EVANGELINE LOESSIN WHORTON
PO BOX 281
EAGLE LAKE TX 77434-0281

MERCY D HILL
COUNTY ROAD 79
EAGLE LAKE TX 77434-7055

WAVELY MAHALITC
1851 COUNTY ROAD 79
EAGLE LAKE TX 77434-7055

ROBERT P WILCOX
306 CLARK ST
EAGLE LAKE TX 77434-1710

SHARON L WITTE
1146 PECAN VALLEY RD
ALLEYTON TX 78935-2067



PERMIT NO. WQ0004674000

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

PERMIT TO LAND APPLY SEWAGE SLUDGE

under provisions of Chapter 26 of the Texas Water Code,
Chapter 361 of Health and Safety Code,
Chapter 312 of Texas Administrative Code

I. PERMITTEE:

Synagro of Texas - CDR, Inc.
4512 Brittmoore Road
Houston, Texas 77041

II. AUTHORIZATION:

Beneficial Land Application of Wastewater Treatment Plant (WWTP) sewage sludge.

III. GENERAL DESCRIPTION AND LOCATION OF SITE:

Description: The permittee is authorized to land apply WWTP sewage sludge at an annual rate not to exceed 8.3 dry tons per acre per year on Fields 1 - 4 on 271.81 acres located within approximately 484 acres at this site.

Location: The sewage sludge land application site is located adjacent to the west side of Farm-to-Market Road 194, approximately 1/2 mile north of the intersection of Farm-to-Market Road 194 and Highway 90, approximately 4.5 miles west of the City of Eagle Lake in Colorado County, Texas. See Attachment A.

SIC Code: 0139

Drainage Basin: The facility is located in the drainage area of the Colorado River Below Smithville in Segment No. 1402 of the Colorado River Basin. No discharge of pollutants into water in the State is authorized by this permit.

This permit and the authorization contained herein shall expire at midnight five years from date of issuance listed below.

ISSUED DATE: **AUG 03 2005**

A handwritten signature in black ink, appearing to be "R. White", written over a horizontal line.

For the Commission

IV. GENERAL REQUIREMENTS:

- A. The permittee shall handle and dispose of sewage sludge in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.
- B. Application for renewing this permit shall be submitted by the permittee at least 180 days prior to expiration date of this permit.

C. WWTP sludge

- 1. In all cases, the generator or processor of sewage sludge shall provide necessary analytical information to the parties who receive the sludge, including those receiving the sewage sludge for land application, to assure compliance with these regulations.
- 2. Permittee shall not accept the sewage sludge that fails the Toxicity Characteristic Leaching Procedure (TCLP) test per the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I or other method, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 261.24.
- 3. Sewage sludge shall not be applied to the land if the concentration of any metal exceed the ceiling concentrations listed in the Table 1 below. Additional information on the frequency of testing for metals in Table 1 is found in Section IX.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration (milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

* Dry weight basis

- 4. When the total aggregate amount of any metal in Table 2 (in all sludge applied at the site during the entire use of this site) reaches the cumulative level listed in table 2 below, only sludge with metal levels at or below those shown Table 3 below can be applied at the site. To compute this criteria, the total amount of each metal in all sludge applied must be summed on a continuing basis as sludge is applied.

Table 2

<u>Pollutant</u>	<u>Cumulative Pollutant Loading Rate (pounds per acre)</u>
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

* Dry weight basis

5. Sludge also cannot be applied in excess of the most restrictive of the following criteria:
 - a. The maximum sludge application rate (MSAR) based on crop nitrogen needs (also referred to as the agronomic rate), which is calculated based on the total amount of nitrogen in the sludge, septage and in the soils at the application site and on the nitrogen requirements of the vegetation in the application area.
 - b. The MSAR for each metal pollutant in Table 1 above, which is calculated individually for each metal based on its concentration in the sludge and in the soils in the application area.
6. All of the MSARs above must be calculated using Appendix A of the "Application for Permit for Beneficial Land Use of Sewage Sludge." These calculations must cover both sludge and septage for areas where both are applied. If sludge is received from multiple sources, the average concentration of each of the elements above must be determined using "Table 2 - Volume Weighted Average (Mean) of Nutrient and Pollutant Concentration" from the application form.
7. Anytime the permittee plans to accept WWTP sludge from any source(s) other than those listed in the application and approved for this permit, the permittee must notify and receive authorization from the Water Quality Division, Land Application Team (MC 148) of the TCEQ prior to receiving the new sludge. The notification must include information to demonstrate the sludge from the proposed new source(s) meets the requirements of this permit. The permittee must provide certifications from each source that the sludge meets the requirement for a Process to Significantly Reduce Pathogens (PSRP) or other alternatives. The permittee must provide documentation that the sludge meets the limits for polychlorinated biphenyls (PCBs), vector attraction and the metal pollutants in Table 1 above. No sludge from sources other than the ones listed in the application can be land applied prior to receiving written authorization from the TCEQ.

V. OPERATIONAL REQUIREMENTS:

The operation and maintenance of this land application site must be in accordance with 30 TAC Chapter 312 and Title 40 of the Code of Federal Regulations (40 CFR) Part 503 as they relate to land application for beneficial use. All applicable local and county ordinances must also be followed.

VI. REQUIRED MANAGEMENT PRACTICES:

- A. Sludge applications must not cause or contribute to the harm of a threatened or endangered species of plant, fish, or wildlife or result in the destruction or adverse modification of the critical habitat of a threatened or endangered species.
- B. Sludge must not be applied to land that is flooded, frozen or snow-covered to prevent entry of bulk sewage sludge into wetland or other waters in the State.
- C. Sludge shall be land applied in a manner which complies with Management Requirements in accordance with 30 TAC Section 312.44 including maintaining the following buffer zones for each application area:

a.	Established school, institution, business or residence	750 feet
b.	Public water supply well, intake, public water supply spring or similar source, public water treatment plant, or public water supply elevated or ground storage tank	500 feet
c.	Solution channels, sinkholes, or other conduits to groundwater	200 feet
d.	Waters in the State of Texas	200 feet
e.	Private water supply well	150 feet
f.	Public right of way	50 feet
g.	Property boundary	50 feet
h.	Waters in the State if sludge is both incorporated into the soil within 48 hours of application and a vegetative cover is present between the application area and all adjacent surface waters.	33 feet
i.	Irrigation conveyance canals	10 feet

- D. Sludge must be applied to the land at an annual application rate that is equal to or less than the agronomic rate for the vegetation in the area on which the sludge is applied.
- E. The seasonally high water table, groundwater table, or depth to water-saturated soils must be at least three (3) feet below the treatment zone for soils with moderate to slow permeability (less than two inches per hour) or four (4) feet below the treatment zone for soils with rapid to moderately rapid permeability (between two and twenty inches per hour). Sludge can not be applied to soils with permeation rates greater than twenty inches per hour.
- F. Sludge must be applied by a method and under conditions that prevent runoff beyond the active application area and that protect the quality of the surface water and the soils in the unsaturated zone.

In addition the following conditions must be met:

1. Sludge must be applied uniformly over the surface of the land.
 2. Sludge must not be applied to areas where permeable surface soils are less than 2 feet thick.
 3. Sludge must not be applied during rainstorms or during periods in which surface soils are water-saturated.
 4. Sludge must not be applied to any areas having a slope in excess of 8%.
 5. Where runoff from the active application area is evident, the operator must cease further sludge application until the condition is corrected.
 6. The site operator must prevent public health nuisances. Sludge debris must be prevented from leaving the site. Where nuisance conditions exist, the operator must eliminate the nuisance as soon as possible.
 7. Sludge application practices must not allow uncontrolled public access, so as to protect the public from potential health and safety hazards at the site.
 8. Sewage sludge can be applied only to the land application area shown on Attachment B. The buffer zones as listed on that map must not have any sludge applied on them.
- G. The permittee shall post a sign that is visible from a road or sidewalk that is adjacent to the premises on which the land application unit is located stating that a beneficial land use application site is located on the premises.

VII. PATHOGEN CONTROL:

- A. All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.
1. Six alternatives are available to demonstrate compliance with Class A sewage sludge.

The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC §312.82(a)(2)(A) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std.

units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC §312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC §312.82(a)(2)(C)(iv-vi) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall be treated in one of the processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

2. Three alternatives are available to demonstrate compliance with Class B criteria for sewage sludge.

Alternative 1 i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.

ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U. S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U. S. Environmental Protection Agency final guidance;

- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The executive director will accept from the U. S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

B. In addition, the following site restrictions must be met if Class B sludge is land applied:

1. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
2. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.
3. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.
4. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.
5. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
6. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
7. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.
8. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
9. Land application of sludge shall be in accordance with the buffer zone requirements found in 30 TAC §312.44.

VIII. VECTOR ATTRACTION REDUCTION REQUIREMENTS:

- A. All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent [30 TAC §312.83(b)(1)].
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance [30 TAC §312.83(b)(2)].
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance [30 TAC §312.83(b)(3)].
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius. This test may only be run on sludge with a total percent solids of 2.0% or less [30 TAC §312.83(b)(4)].
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius [30 TAC §312.83(b)(5)].
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container [30 TAC §312.83(b)(6)].
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process [30 TAC §312.83(b)(7)].
- Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process [30 TAC §312.83(b)(8)].

Alternative 9 - Sewage sludge shall be injected below the surface of the land. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected. When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process [30 TAC §312.83(b)(9)].

Alternative 10 - Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land. When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process [30 TAC §312.83(b)(10)].

IX. MONITORING REQUIREMENTS:

The sewage sludge must be monitored according to 30 TAC §312.46(a)(1) for the ten metals in Table 1 in above, pathogen reduction, and vector attraction reduction.

- A. If the concentration of nitrogen or any of the metals in Table 1 (in IV.C.3) exceeds the concentration used to calculate any of the MSARs in IV.C.5 and IV.C.6, the MSAR for that element must be recalculated. If the sludge comes from multiple sources, the calculations must use Table 2 (in IV.C.4) to provide a volume weighted average of all sludge that will be applied during the current monitoring period.
- B. After the sludge has been monitored according to 30 TAC §312.46(a)(1) for a period of two years, an application may be submitted to amend this permit to reduce the frequency of monitoring.
- C. The frequency of monitoring will be increased if recalculation of the agronomic rate increases the amount of sludge that can be applied to a higher threshold, as shown in 30 TAC §312.46(a)(1). The frequency of monitoring may also be increased if the TCEQ determines that the level of pollutants or pathogens in the sludge warrants such action.
- D. If WWTP sludge is received at this site for land application then the permittee must ensure that the test data for Toxicity Characteristic Leaching Procedure (TCLP) Test and PCBs is provided from the generators.
- E. All metal constituents and Fecal coliform or Salmonella sp. bacteria shall be monitored at the appropriate frequency pursuant to 30 TAC §312.46(a)(1):
- F. Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC §312.7.

X. RECORD KEEPING REQUIREMENTS:

The permittee shall fulfill record keeping requirements per 30 TAC §312.47. The documents shall be retained at the site and/or shall be readily available for review by a TCEQ representative.

- A. Records of the following general information must be kept for all types sludge and domestic septage lab application permits:

1. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC §312.47(a)(4)(A)(ii) or 30 TAC §312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.
 2. The location, by street address, and specific latitude and longitude, of each site on which sewage sludge (including WTP sludge, domestic septage if applicable) is applied.
 3. The number of acres in each site on which bulk sludge is applied.
 4. The dates, times and quantities of sludge (and/or domestic septage if applicable) is applied to each site.
 5. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
 6. The total amount of sludge applied to each site in dry tons.
 7. A description of how the management practices listed above in Section IV-C and 30 TAC §312.44 are being met. If these requirements are being met, prepare and keep a certification statement per 30 TAC §312.47(5)(B)(viii).
- B. For Sewage Sludge with metal concentrations at or below levels in Table 3 above; which also meets Class A pathogen requirements in 30 TAC §312.82(a), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):
1. A description of how the vector attraction reduction requirements are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).
- C. For Sewage Sludge with metal concentrations at or below levels in Table 3 above; and which also meets Class B pathogen requirements in 30 TAC §312.82(b), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):
1. A description of how site restrictions for Class B sludge in 30 TAC §312.82(b)(3) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(x).
 2. A description of how the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).
- D. For Sewage Sludge with metal concentrations at or below levels in Table 1 above; and which also meets Class B pathogen requirements in 30 TAC §312.82(b), and the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10):
1. A description of how the requirements to obtain information from the generators of sludge in 30 TAC §312.42(e) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(vi).
 2. A description of how site restrictions for Class B sludge in 30 TAC §312.82(b)(3) are being met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(x).

3. A description of how the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met. If these requirements are being met prepare and keep a certification statement per 30 TAC §312.47(5)(B)(xii).

XI. REPORTING REQUIREMENTS:

A. Permittee shall submit a separate annual report by September 30th of each year per 30 TAC §312.48 for each site. The annual report must include all the information required under 30 TAC §312.48 (including the items listed below) for a period covering September 1 of previous year through August 31 of current year. Additionally an "Annual Sludge Summary Report Form" (**Attachment C**) should be filled out and submitted with the annual report. Submit your report to the Water Quality Division, Land Application Team (MC 148) and the TCEQ Regional Office (MC Region 12). Record retention requirements must be followed in accordance with 30 TAC §312.47.

1. Annual Sludge Summary Sheet (a blank form is provided in Attachment C of this permit) with following information. This information must be submitted by all permittees:
 - i. Permit number.
 - ii. The site location (address or latitude and longitude).
 - iii. Operator address, contact person name, telephone number, and fax number.
 - iv. Amount of sludge disposal dry weight (lbs/acre) at each disposal site. Report domestic septage quantities in gallons.
 - v. Number of acres on which sludge and septage is land applied.
 - vi. Vegetation grown and number of cuttings.
 - vii. Other items listed in the summary sheet.
2. If the sludge concentration for any metal listed in Table 3 [per 30 TAC §312.43(b)(3)] is exceeded, the report must include the following information:
 - i. Date and time of each sludge application.
 - ii. All four certification statements required under 30 TAC §312.47(a)(5)(B).
 - iii. A description of how the information from the sludge generator was obtained, as per 30 TAC §312.42(e).
 - iv. A description of how each of the management practices in 30 TAC §312.44 were met for this site.
 - v. A description of how the site restrictions in 30 TAC §312.82(b)(3) were met for the site.
 - vi. If the vector attraction reduction requirements in 30 TAC §312.83(b)(9) or (10) are met, a description of how this was done.

- vii. Soil and sludge test reports, as per Section XII.
 - viii. Calculations of the current agronomic sludge application rate and the life of the site based on metal loadings (Appendix A of application, as identified in Section IV.C.4, or similar form).
3. If none of the concentrations for the metals exceed the values listed in Table 3 of this permit [per 30 TAC 312.43(b)(3)]:
 - i. Information per 30 TAC §312.47(a)(3)(B) for Class A sludge.
 - ii. Information per 30 TAC §312.47(a)(4)(B) for Class B Sludge.
 4. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2 of this permit the permittee shall provide the following additional information:
 - i. Date and time of each sludge application.
 - ii. The information in 30 TAC §312.47(a)(5)(A) must be obtained from the sludge generator and included in the report.
 - iii. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 applied to each site through bulk sewage sludge.
- B. Permittee shall submit a quarterly report by the 15th day of the month following each quarter during the reporting period (ie. quarterly reports will be due December 15th, March 15th, June 15th, and September 15th). Additionally, a "Quarterly Sludge Summary Report Form" (**Attachment D**) should be filled out and submitted with the quarterly report. The quarterly report must include all the information listed below. Submit your report to the Water Quality Division, Land Application Team (MC 148) and the TCEQ Regional Office (MC Region 12). Record retention requirements must be followed in accordance with 30 TAC §312.47.
1. The source, quality, and quantity of sludge applied to the land application unit.
 2. The location of the land application unit, either in terms of longitude and latitude or by physical address, including the county.
 3. The dates of delivery of Class B sludge.
 4. The dates of application of Class B sludge.
 5. The cumulative amount of metals applied to the land application unit through the application of Class B sludge.
 6. Crops grown at the land application unit site.
 7. The suggested agronomic application rate for the Class B sludge.

XII. SOIL SAMPLING:

The permittee is required to notify the local TCEQ Regional Office 48 hours prior to taking annual soil samples at the permitted site.

The permittee must monitor the soil-sludge mixture for the site as follows using soil sampling requirements described in 30 TAC §312.11(d)(2) and (3):

	PARAMETER	NOTE	FREQUENCY	SAMPLE DEPTH	
				0"-6"	6"-24"
1.	Nitrate Nitrogen (NO ₃ -N)		1 per year	X	X
2.	Ammonia Nitrogen (NH ₄ -N)		1 per year	X	X
3.	Total Nitrogen (TKN)	1	1 per year	X	X
4.	Phosphorus (extractable)	2	1 per year	X	X
5.	Potassium (extractable)		1 per year	X	X
6.	Sodium (extractable)		1 per year	X	X
7.	Magnesium (extractable)		1 per year	X	X
8.	Calcium (extractable)		1 per year	X	X
9.	Soluble Salts/EC	3	1 per year	X	X
10.	Soil Water pH (S.U.)	4	1 per year	X	X
11.	Total Arsenic (mg/kg)	*	1 per 5 years	X	NA
12.	Total Cadmium (mg/kg)	*	1 per 5 years	X	NA
13.	Total Chromium (mg/kg)	*	1 per 5 years	X	NA
14.	Total Copper (mg/kg)	*	1 per 5 years	X	NA
15.	Total Lead (mg/kg)	*	1 per 5 years	X	NA
16.	Total Mercury (mg/kg)	*	1 per 5 years	X	NA
17.	Total Molybdenum (mg/kg)	*	1 per 5 years	X	NA
18.	Total Nickel (mg/kg)	*	1 per 5 years	X	NA
19.	Total Selenium (mg/kg)	*	1 per 5 years	X	NA
20.	Total Zinc (mg/kg)	*	1 per 5 years	X	NA

1. Determined by Kjeldahl digestion or an equivalent accepted procedure. Methods that rely on Mercury as a catalyst are not acceptable.
2. TAMU or Mehlich III extraction.
3. Electrical Conductivity (EC) - determine from extract of 2:1 (volume/volume) water/soil mixture.
4. Soil pH must be analyzed by the electrometric method in "Test Methods for Evaluating Solid Waste," EPA SW-846, 40 CFR 260.11; method 9040.

* Analysis for metals in sludge and soil must be performed according to methods outlined in "Test

Methods for Evaluating Solid Waste," EPA SW-846; method 3050.

XIII. STANDARD PROVISIONS:

- A. This permit is granted in accordance with the Texas Water Code, Health and Safety Code, and the rules and other Orders of the Commission and the laws of the State of Texas.
- B. Unless specified otherwise, any noncompliance which may endanger human health or safety, or the environment shall be reported to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided to the TCEQ Regional Office (MC Region 12) and to the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; 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 steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
- C. Any noncompliance other than that specified in the Standard Provision B, or any required information not submitted or submitted incorrectly, shall be reported to the TCEQ Enforcement Division (MC 224) as promptly as possible.
- D. Acceptance of this permit constitutes an acknowledgment and agreement that the permittee will comply with all the terms, provisions, conditions, limitations and restrictions embodied in this permit and with the rules and other Orders of the Commission and the laws of the State of Texas. Agreement is a condition precedent to the granting of this permit.
- E. Prior to any transfer of this permit, Commission approval must be obtained. The Commission must be notified, in writing, of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Water Quality Applications Team (MC 161) of the Registration, Review, and Reporting Division.
- F. The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.
- G. The permittee is subject to the provisions of 30 TAC §305.125.
- H. The permittee shall remit to the Commission annual fees per 30 TAC §312.9 . Failure to pay the fees on time may result in revocation of this permit.
- I. This permit does not become a vested right in the permit holder.
- J. The permittee may not accept Class B sludge unless the sludge has been transported to the land application unit in a covered container with the covering firmly secured at the front and back.

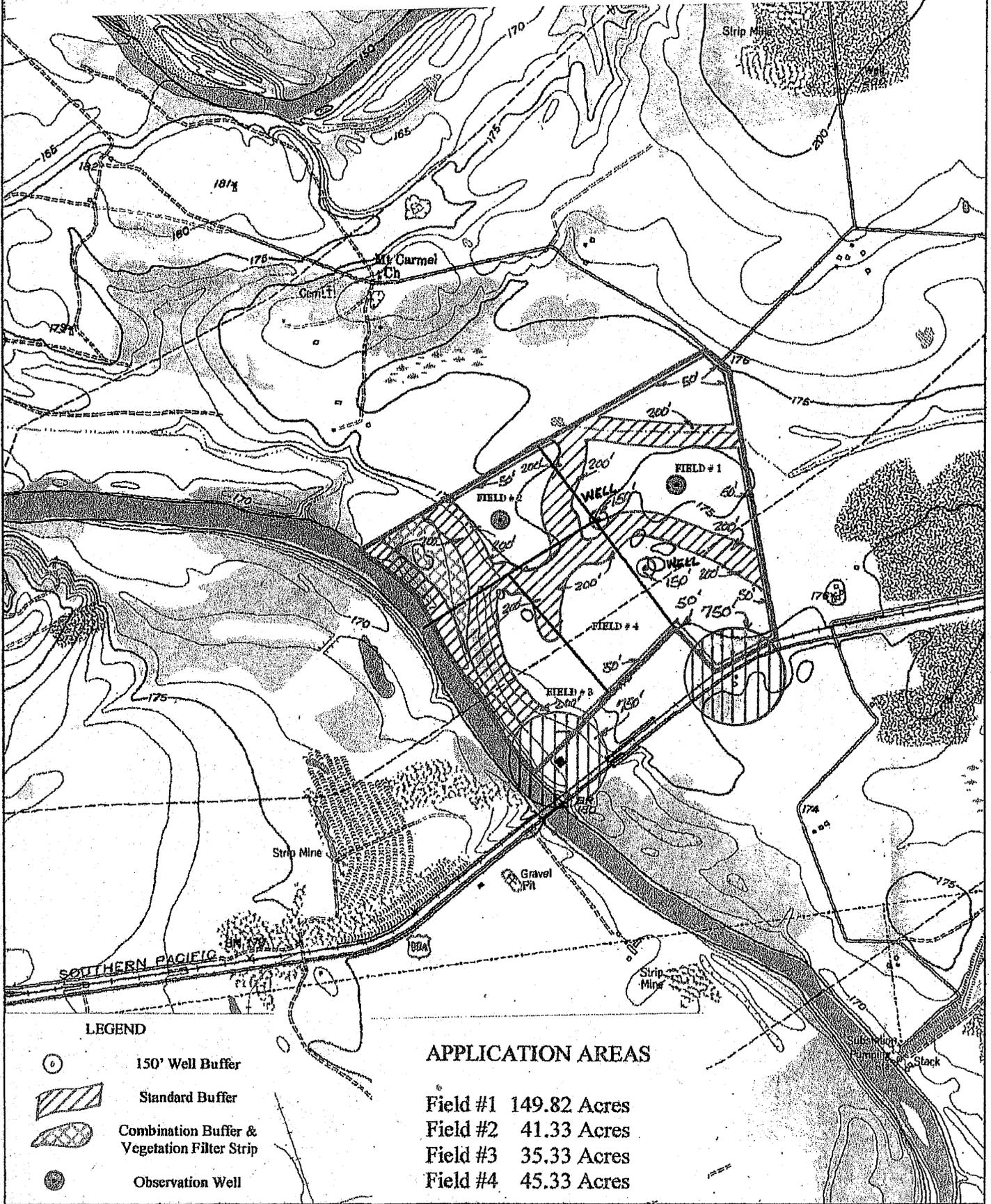
XIV. SPECIAL PROVISIONS:

- A. Maximum annual sludge application rate shall not exceed 8.3 dry tons per acre per year on Fields 1 - 4 and shall be land applied at a frequency proposed in the application. Agronomic loading rates shall be calculated on an annual basis to ensure that nutrient balances are not exceeded.

- B. The permittee should consider nutrient management practices appropriate for land application of sewage sludge and assess the potential risk for nitrogen and phosphorous to contribute to water quality impairment. Information and assistance to develop and implement a nutrient management plan are available from certified Nutrient Management Specialists, the Natural Resource Conservation Service (NRCS) Code 590 Practice Standard, and the Phosphorous Index. Annual analysis for extractable phosphorous in soil samples should be conducted using either the TAMU or Mehlich III extraction. **Attachment E** lists sources for obtaining more information on Certified Nutrition Management Specialists, the NRCS 590 Standard, and the Phosphorous Index.
- C. The permittee shall comply with the sludge management plan (SMP) approved by the TCEQ on March 4, 2004. Records of observation required by the SMP shall be kept on file.
- D. Application areas (Fields 1-4) must be distinguished from each other by the use of flags, posting or fencing to ensure that each is separated.
- E. The permittee is prohibited from land applying sewage sludge during the months of April, May, June and September (with an understanding by all parties that the permittee may not be able to incorporate applications during the months of July and August).



Attachment B



LEGEND

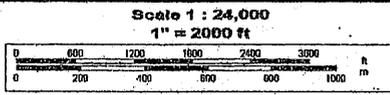
-  150' Well Buffer
-  Standard Buffer
-  Combination Buffer & Vegetation Filter Strip
-  Observation Well

APPLICATION AREAS

Field #1	149.82 Acres
Field #2	41.33 Acres
Field #3	35.33 Acres
Field #4	45.33 Acres



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Annual Sludge Summary Report Form

- Note 1: If your site has more than one land application field, please submit a separate form for each field.
- Note 2: Please note, in addition to the summary form, you need to submit all information as required by 30 TAC 312.48.
- Note 3: If you operate other registered/permitted sludge land application sites, a form should be submitted for each site.
- Note 4: Also send one complete copy of your report and this form to the TCEQ regional office in your area.

For TCEQ Fiscal year _____ Reporting period from September 1, _____, August 31, _____

REGISTRATION / PERMIT NO.: _____ **DATE:** _____

NAME OF PERMITTEE / REGISTRANT : _____

MAILING ADDRESS: _____

CONTACT PERSON: Name: _____ Telephone No: _____

Field No: _____ (Please submit a separate form for each field).

- a. Sewage Sludge -
 - Land Applied : _____ dry tons / year
 - Disposed Via Monofill : _____ dry tons / year
 - Disposed Via MSW Landfill : _____ dry tons / year
- b. Treated Domestic Septage - Land Applied : _____ gallons / year
 - Method used to treat Domestic Septage: _____
- c. Water Treatment Plant Sludge -
 - Land Applied: _____ dry tons / year. Disposed Via monofill : _____ dry tons/year
- d. Class A sludge land applied : _____ dry tons / year
- e. Acreage used for Sludge Application/disposal at this site:- _____ acres
- f. Site Vegetation (such as grass type etc) and # of cuttings:- _____

Sewage Sludge only – Please provide information regarding the following 3 items:-

1. Does any of the sludge you have generated or received NOT MEET the concentration limits for the metals listed in Table 3 of “30 TAC §312.43 (b)? Yes _____ No _____
2. Has your field/site reached or exceeded 90% of the cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC §312.43 (b)? Yes _____ No _____
3. Has sewage sludge been applied to the field/site after 90% of cumulative metal loading rates for any of the metals per Table 2 of “ 30 TAC §312.43 (b)” been reached? Yes _____ No _____

PLEASE MAIL THE COMPLETED ANNUAL REPORT TO :

Texas Commission on Environmental Quality
 Land Application Team (M/C 148)
 Wastewater Permitting Section
 P.O. Box 13087
 Austin, TX 78711-3087

TCEQ

Quarterly Sludge Summary Report Form

- Note 1: If your site has more than one land application field, please submit a separate form for each field.
- Note 2: Please place this sheet at the top of your Quarterly Sludge Report.
- Note 3: If you have more than one permitted site, then fill-out this form for each one of those sites.
- Note 4: Please send a copy of this sheet and all attachments to the local TCEQ regional office.

For TCEQ Quarter _____ Reporting period from _____, to, _____

REGISTRATION / PERMIT NO.: _____ **DATE:** _____

NAME OF PERMITTEE / REGISTRANT : _____

MAILING ADDRESS: _____

CONTACT PERSON: Name: _____ Telephone No: _____

Field No: _____ (Submit separate form for each field, if site has two or more fields)

- Class B Sewage Sludge Land Applied : _____ dry tons / quarter
- Treated Domestic Septage - Land Applied : _____ gallons / quarter
 - Method used to treat Domestic Septage: _____
- Water Treatment Plant Sludge - Land Applied: _____ dry tons /quarter
- Class A sludge land applied : _____ dry tons / quarter

- a. Acreage used for Sludge Application/disposal at this site:- _____ acres
- b. Site Vegetation (such as grass type etc) and # of cuttings:- _____
- c. Does any of the sludge you have generated or received DOES NOT MEET concentration limits for any of the metals listed in Table 3 of "30 TAC §312.43 (b)"? Yes _____ No _____
- d. Site location: Latitude: _____, Longitude: _____
- e. Site physical address : _____

Please attach the information regarding the following items(Sewage Sludge only):-

Please note the following information shall be provided in computer generated report format:

Please place check mark before each item below to indicate you have attached that item with this report.

- _____ 1. Metal concentration, pathogen analysis data and vector attraction certifications of sludge for each source.
- _____ 2. Provide a list containing the name and permit number of each source of sludge.
- _____ 3. Date of delivery of each load of sludge land applied.
- _____ 4. Date of land application of each load of sludge.
- _____ 5. The cumulative metal loading rates for any metals as listed in Table 2 of 30 TAC §312.43 (b)"?
- _____ 6. The suggested agronomic rate for the class B sludge.

PLEASE MAIL THE COMPLETED REPORT TO :

Texas Commission on Environmental Quality
 Land Application Team (M/C 148)
 Wastewater Permitting Section
 P.O. Box 13087
 Austin, TX 78711-3087

TCEQ

Attachment E

Information Sources on Phosphorous Risk Management

■ Certified Nutrient Management Specialists:

- ▶. "<http://soilcrop.tamu.edu/events/index.html>".

■ Natural Resource Conservation Service (NRCS) Code 590 Practice

Standard: *This standard addresses the kind, source, placement, form, amount, timing, and application method of nutrients and soil amendments.*

- ▶. "<http://www.tx.nrcs.usda.gov/eng/TexasStandards/Final/590tx.pdf>".

■ Phosphorous Index: *This is a simple screening tool to rank vulnerability of fields as sources of phosphorous loss to surface runoff.*

- ▶. "<http://www.tx.nrcs.usda.gov/eng/TexasStandards/Final/TxTechnote15.pdf>".

Note: The website addresses could change from time to time. So, please check for the latest addresses for these sites.