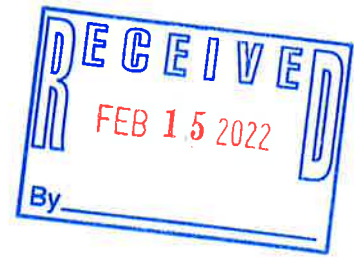




Dyer Wastewater Treatment Plant  
 Permit TNB0021563  
 Annual Biosolids Report  
 Land Applied Bio-solids for 2021  
 January 31, 2022



**ANNUAL REPORT**

**Biosolids Generated- General Information**

- a. Total Bio solids Applied in 2021: 64.65 Dry Metric Tons
- b. Concentration of Metals: 8/24/2021 See Attachment
- c. PCB ; Report Date: 8/24/2021 See Attachment
- d. TCLP; Report Date: 8/24/2021 See Attachment
- e. Pathogen Reduction Process Description and Results: Aerobic Digestion  
Pathogen reduction for the City of Dyer is achieved utilizing Alternative 1 for Class B Bio-solids located in Appendix C: Pathogen reduction alternatives for Class B Bio-solids. Attached to this report you will find the appropriate certification statement (Statement # 6) along with the most recent samples taken for Fecal Coliform analysis titled Pathogen Compliance Log.
- f. Vector Attraction Reduction Description and Results: Aerobic Digestion  
The City of Dyer Section 3.1.3 (d) The specific oxygen uptake rate (SOUR) for bio solids 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. Attached to this report you will find Certification statement # 6.
- g. Generator Certification Statement  
The City of Dyer has provided with this report the Certification Statements required thru The General State Operating Permit for the Land Application of Non-Exceptional Quality Bio-solids. Attached to this report Certification Statement # 6 for Pathogen and vector Attraction requirements, certification Statement # 5 for Management Practices in Section 3.2.

**Application Sites:**

**Site information changes annually due to application site.**

- a. Site Name/ or Number : Site 1 SOS Farm / McCurdy Farms  
Site 2 Keathley north / Bob McCurdy  
Site 3 Big Zoysia Field / Raymond McCurdy
- b. Site Owner : Site 1 McCurdy Farms  
Site 2 Bob McCurdy  
Site 3 Raymond McCurdy
- c. Site Operator : McCurdy Sod Farms
- d. Applier: Bob McCurdy Site 1, 2 & 3
- e. Latitude and Longitude of Site: Site 1 Lat. 36.06044 Lon. -88.96503  
Site 2 Lat. 36.07136 Lon. -88.96944  
Site 3 Lat. 36.06420 Lon. -88.96750
- f. Street Address, other location description: Site 1 State Route 185, Dyer, TN  
Site 2 State Route 185, Dyer, TN  
Site 3 McCurdy Rd. Dyer, TN
- g. County: Gibson

- h. Size (acres).
1. Approved Acres: Site 1 = 16  
Site 2 = 12  
Site 3 = 08
  2. Acres excluding setbacks: Site 1 = 16  
Site 2 = 12  
Site 3 = 08
  3. Acres Applied: 36
- i. Crop Information.
1. Crop/s Grown: Bermuda Grass
  2. Yield: 1.9 Tons/acre
- j. Application Method: Class B Alternative 1 (i)(ii)
- k. Agronomic Rate (tons/acre) and if applicable, the cumulative loadings for each contaminant.
1. Agronomic Loading Rate: 4.7 tons/acre
  2. Maximum Plant Available Nitrogen (PAN) loading lbs. N/Acre  
Derived from TDEC Agronomic Loading Spreadsheet Revision 2/3/2011  
Bermuda Grass 200 lbs. N acre per year
  3. Loading Rate to achieve PAN Dry T/Acre  
4.7 tons/acre
  4. Actual application tonnage/volume wet:
  5. Actual application tonnage, dry: 64.65
  6. Total wet tons or volume per field:
  7. Total dry tons per field Site 1 = 30.4 tons  
Site 2 = 19 tons  
Site 3 = 15.25 tons
- l. Nitrogen Concentrations. Report average and maximum test concentrations
1. Ammonia: Maximum: 23,600 mg/kg Average: 23,600 mg/kg
  2. Average TKN: Maximum: 30,000 mg/kg Average: 30,000 mg/kg
  3. Average Organic Nitrogen: Maximum: No Test\* mg/kg Average: mg/kg
  4. Average Nitrate Maximum: 390 mg/kg Average: 390 mg/kg
  5. Total Solids Percent: Average: 0.437%
- \*Organic Nitrogen is being added to all sludge testing. Agronomic report has been added to this report.
- m. Ammonia, TKN, NO2, NO3 as percent of Total Solids
1. See Agronomic Loading Rate Worksheet attached.
  2. Item 1,a is pounds of TKN, TKN lbs./ 2000 = 3.0 % TKN
  3. Item 1,b is pounds of NH3, NH3 lbs./ 2000 = 2.36 % NH3
  4. Item 1,c is pounds of NO2+3,NO2+3 lbs./ 2000 = .039 % NO2+3
- n. Tonnage Applied
1. Biosolids Applied to Site
    - i. Total Tonnage or Volume 64.65 dry tons
    - ii. Dry tons 64.65 dry tons
  2. Biosolids Applied to Each Site
    - i. First Application Date 8/23/2021  
Last Application Date 9/23/2021

- o. **Metals:** *See attached Lab Report*
- p. **Management Practices.** (Describe how each item below is met)
  - 1. Set Backs:
  - 2. **Agronomic Loading:** Calculated annually with applications tracked as they occur.
  - 3. **Weather Restrictions:** Per 3.2.3 in General Permit TNB021563
  - 4. **Soil Restrictions:** Per 3.2.4 in General Permit TNB021563
  - 5. **Threatened and Endangered Species:** Per 3.2.5 in General Permit TNB021563. No known Threatened or Endangered Species known to be within disposal area.
  - 6. **Metals Loading:** Always met Table 3 with testing results attached.
  - 7. **Notification of Owners:** owner of permitted disposal area.
- q. **Site Restrictions (describe how site restrictions are met):** Growing season is longer than site restriction in 3.1.2.3.f
- r. **Certification Statement/s:** *All appropriate statements included*



Certification Statement 5

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in Section 3.2, the site restrictions in Subsection 3.1.2.3, and the vector attraction reduction requirement in 3.1.3 (d) was prepared for each site on which bulk biosolids are applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Randy Gregory  
Name (Printed or typed)

Randy Gregory  
Signature

Waste water Supervisor  
Title (Printed or typed)

2-7-2022  
Date



City Of Dyer, TN

Permit # TNB0021563

Certification Statement 6

"I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements in Appendix C Alternative 1 and the vector attraction reduction requirement in 3.1.3 (d) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Randy Gregory  
Name (Printed or typed)

Randy Gregory  
Signature

Wastewater Supervisor  
Title (Printed or typed)

2-7-2022  
Date



00132  
City of Dyer  
Mr. Randy Gregory  
105 Main Street  
Dyer, TN 38330

Project ID :  
Project Annual Municipal Sludge  
Information :

Report Date : 09/09/2021  
Received : 08/24/2021

Report Number : **21-236-0016**

**REPORT OF ANALYSIS**

Billie L. Haynes  
Lab Manager

Lab No : **90590**  
Sample ID : **Municipal Sludge**

Matrix: **Solids**  
Sampled: **8/24/2021 7:10**

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Method
% Moisture	<b>99.6</b>	%			1	08/26/21 15:50	FMM	SW-DRYWT
Ammonia Nitrogen	<b>23600 J</b>	mg/Kg - dry	4000	25000	1	08/31/21 13:00	JPJ	4500NH3C-2011
Nitrate (NO3-N)	<b>390</b>	mg/Kg - dry	82.5	250	1	09/08/21 12:55	JCA	9056A
Nitrite (NO2-N)	<82.5	mg/Kg - dry	82.5	250	1	09/08/21 12:55	JCA	9056A
Nitrate+Nitrite-N	<b>390</b>	mg/Kg - dry	82.5	250	1	09/08/21 12:55		9056A
Total Solids	<b>0.437</b>	%			1	08/26/21 15:50	FMM	SW-DRYWT
Total Volatile Solids	<b>47.6</b>	%	0.010	0.010	1	08/26/21 15:50	FMM	2540G-2011
Total Kjeldahl Nitrogen	<b>30000</b>	mg/Kg - dry	6200	12500	1	09/03/21 14:44	CLP	4500NORGD-2011
Arsenic	<21.4	mg/Kg - dry	21.4	62.5	5	08/31/21 16:54	BKN	6020B
Cadmium	<6.48	mg/Kg - dry	6.48	62.5	5	09/01/21 10:49	BKN	6020B
Chromium	<29.0	mg/Kg - dry	29.0	62.5	5	08/31/21 16:54	BKN	6020B
Copper	<20.2	mg/Kg - dry	20.2	62.5	5	08/31/21 16:54	BKN	6020B
Lead	<7.75	mg/Kg - dry	7.75	62.5	5	08/31/21 16:54	BKN	6020B
Mercury	<1.65	mg/Kg - dry	1.65	3.78	1	08/31/21 10:43	TJS	7471A
Molybdenum	<11.4	mg/Kg - dry	11.4	62.5	5	08/31/21 16:54	BKN	6020B
Nickel	<15.8	mg/Kg - dry	15.8	62.5	5	08/31/21 16:54	BKN	6020B
Selenium	<25.8	mg/Kg - dry	25.8	62.5	5	08/31/21 16:54	BKN	6020B
Zinc	<134	mg/Kg - dry	134	625	5	08/31/21 16:54	BKN	6020B

Qualifiers/ Definitions	DF	Dilution Factor	J	Estimated value
	L	Limit Exceeded	MQL	Method Quantitation Limit





00132  
 City of Dyer  
 Mr. Randy Gregory  
 105 Main Street  
 Dyer, TN 38330

Project ID :  
 Project Annual Municipal Sludge  
 Information :

Report Date : 09/09/202  
 Received : 08/24/202

*Billie L. Haynes*

Report Number : 21-236-0016

**REPORT OF ANALYSIS**

Billie L. Haynes  
 Lab Manager

Lab No : 90590  
 Sample ID : Municipal Sludge

Matrix: Solids  
 Sampled: 8/24/2021 7:10

Analytical Method: 8082      Prep Batch(es): L571591 08/30/21 10:32  
 Prep Method: 3546

Test	Results	Units	MDL	MQL	DF	Date / Time Analyzed	By	Analytical Batch
Aroclor 1016	<47000	µg/Kg - dry	47000	231000	10	08/30/21 21:36	NFP	L571856
Aroclor 1221	<76800	µg/Kg - dry	76800	231000	10	08/30/21 21:36	NFP	L571856
Aroclor 1232	<76800	µg/Kg - dry	76800	231000	10	08/30/21 21:36	NFP	L571856
Aroclor 1242	<76800	µg/Kg - dry	76800	231000	10	08/30/21 21:36	NFP	L571856
Aroclor 1248	<76800	µg/Kg - dry	76800	231000	10	08/30/21 21:36	NFP	L571856
Aroclor 1254	<76800	µg/Kg - dry	76800	231000	10	08/30/21 21:36	NFP	L571856
Aroclor 1260	<82800	µg/Kg - dry	82800	231000	10	08/30/21 21:36	NFP	L571856
Surrogate: Decachlorobiphenyl	94.6		Limits: 25-125%		10	08/30/21 21:36	NFP	L571856
Surrogate: Tetrachloro-m-xylene	107		Limits: 25-125%		10	08/30/21 21:36	NFP	L571856

**Qualifiers/ Definitions**      DF      Dilution Factor      J      Estimated value  
 MQL      Method Quantitation Limit



