Report Number
F18319-6519
Account Number
63512

a&lgreatlakes LABORATORIES
Scientists who don't mind getting dirty.™

3505 Conestoga Dr.
Fort Wayne, IN 46808
260.483.4759
algreatlakes.com

**To:** ANGELINA-NECHES RIVER AUTHOR.
PO BOX 387
LUFKIN, TX 75902-0387

**For:** STOCKPILE 273

STA

**COPY:** HILARY NICHOLS

**Attn:** DALE BAILEY

**Sample ID:** STOCKPILE 273
**Lab Number:** 12955

# COMPOST ANALYSIS

**Date Sampled:** 11/14/2018
**Date Received:** 11/15/2018
**Date Reported:** 12/3/2018



| Analysis | Unit | Analysis Result | Dry Basis Result | Analysis Method |
|---|---|---|---|---|
| Moisture @ 70 C | % | 32.44 | | TMECC 03.09-A |
| Solids | % | 67.56 | | TMECC 03.09-A |
| Total Nitrogen (N) | % | 1.70 | 2.51 | TMECC 04.02-D |
| Phosphorus (P) | % | 0.78 | 1.15 | TMECC 04.03-A |
| Phosphate ($P_2O_5$) | % | 1.79 | 2.63 | TMECC 04.03-A |
| Potassium (K) | % | 0.24 | 0.35 | TMECC 04.04-A |
| Potash ($K_2O$) | % | 0.28 | 0.42 | TMECC 04.04-A |
| Magnesium (Mg) | % | 0.17 | 0.25 | TMECC 04.05-MG |
| Calcium (Ca) | % | 0.95 | 1.40 | TMECC 04.05-CA |
| Arsenic | mg/kg | 4.53 | 6.70 | US EPA SW846-6020 |
| Cadmium | mg/kg | 0.517 | 0.765 | US EPA SW846-6020 |
| Chromium | mg/kg | 17.5 | 25.9 | US EPA SW846-6020 |
| Copper | mg/kg | 249 | 368 | US EPA SW846-6010C |
| Mercury | mg/kg | < 0.379 | < 0.561 | US EPA SW846-6020 |
| Molybdenum | mg/kg | 2.91 | 4.30 | US EPA SW846-6020 |

TMECC - Test Methods for the Examination of Composting and Compost (TMECC), The U.S. Composting Council.

-COMPOST

Report Approved By: Greg T. Neyman
Greg Neyman - Vice President / COO

Approval Date: 12/03/2018

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| Analysis | Unit | Analysis Result | Dry Basis Result | Analysis Method |
|---|---|---|---|---|
| Nickel | mg/kg | 7.4 | 11.0 | US EPA SW846-6020 |
| Lead | mg/kg | 11.1 | 16.5 | US EPA SW846-6020 |
| Selenium | mg/kg | 2.21 | 3.27 | US EPA SW846-6020 |
| Zinc | mg/kg | 241 | 356 | US EPA SW846-6010C |
| 503 Metals PASS/FAIL | pass/fail | | PASS | EPA 503 Metal Limits |
| pH | - | 6.7 | | TMECC 04.11-A |
| Soluble Salts | dS/m | 2.64 | | TMECC 04.10-A |
| Fecal Coliform/MPN | MPN/g dry | | < 2 | SM(20th)-9221E TMECC |
| Pathogen Reduction - PASS/FAIL | pass/fail | | PASS | 40 CFR 503 Class A Compost |
| Ash @ 550 C | % | 29.69 | 43.94 | TMECC 03.02-B |
| Organic Matter (LOI @ 550 C) | % | 37.87 | 56.06 | TMECC 05.07-A |
| Total Organic Carbon (C) | % | 18.94 | 28.03 | TMECC 04.01-A |
| Carbon:Nitrogen Ratio (C:N) | - | 11.2:1 | 11.2:1 | TMECC 05.02-A |
| Foreign Material | % | | 0.00 | TMECC 03.08-A |
| Germination - Emergence | % | 87 | | TMECC 05.05-A |

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# COMPOST ANALYSIS

Date Sampled: 11/14/2018
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Date Reported: 12/3/2018



| Analysis | Unit | Analysis Result | Dry Basis Result | Analysis Method |
|---|---|---|---|---|
| Germination - Vigor | % | 100 | | TMECC 05.05-A |
| Ave Ht of Seedlings in Control | centimeters | 6.5 | | TMECC 05.05-A |
| Ave Ht of Seedlings in Compost | centimeters | 8.7 | | TMECC 05.05-A |
| Respiration - CO2-C/g TS | mg CO2-C / g TS/Day | | 1.6 | TMECC 05.08-B |
| Respiration - CO2-C/g OM | mg CO2-C / g OM/Day | | 1.4 | TMECC 05.08-B |
| Compost Stability Index | - | | Stable | TMECC 05.08 |
| Retained on U.S. 2-inch Sieve | % | | 0.00 | TMECC 02.02-B |
| Retained on U.S. 1-inch Sieve | % | | 0.00 | TMECC 02.02-B |
| Retained on U.S. 5/8-inch Sieve | % | | 0.00 | TMECC 02.02-B |
| Retained on U.S. 3/8-inch Sieve | % | | 3.21 | TMECC 02.02-B |
| Retained on U.S. 1/4-inch Sieve | % | | 6.54 | TMECC 02.02-B |
| Retained on U.S. 5/32-inch | % | | 16.09 | TMECC 02.02-B |

TMECC - Test Methods for the Examination of Composting and Compost (TMECC), The U.S. Composting Council.

F18319-6519

Acct: 63512

# OFFICIAL Seal of Testing Assurance Compost Sample Chain of Custody Form

STA Laboratory: A&L Great Lakes Lab
Address: 3505 Conestaga Dr.
City, State Zip code: Ft. Wayne IN. 46808
Tel:
FAX:
Email:

Client/Reporting Company: ANRA / NCF
Contact Name: D. Bailey
Billing Address: 210 E. Lufkin Ave.
City, State Zip code: Lufkin Tx 75901-0310
Tel: 936-632-7795
FAX:
Email:

Send Results to: same as above
City, State Zip code:

Name or Source of Sample(s): Stockpile 273
Name of Person(s), Sample Collector(s): D. Bailey

LABORATORY USE ONLY — Storage Locations
Freezer ____ Cold Room ____ Storage Shelf ____
Sample Condition:
Temperature: ____ Malodor: ____ Moisture: ____

**Sample Type:** O POINT ● COMPOSITE O STRATIFIED O INTERVAL

P.O. Number:

USCC Member: ● YES O NO

**SELECTION OF ANALYSIS.** *Refer to http://www.tmecc.org/cap/methods.html for details.* STA Suite; State DOT Tests (indicate State); A, B, C – Specify other tests in fields A through C, (e.g., tests required for regulated samples, etc.). **NOTE !** *STA **analytical** results via the STA Compost Technical Data Sheet and this Chain of Custody form are submitted to STA program management.*

A C10-A | B C10-E | C

| Client Sample ID and Special Instructions | 1. List Feedstocks 2. Check all that apply 3. List % by volume. (Optional) | | Collection Date/Time | Sample Matrix | Composting Operation Type | Shipping Temperature | Indicate Compost Analysis Requirements (*identify state) | | | | | LAB USE ONLY Job Number & Sample Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Stockpile 273 | ✓ Green waste | Carcass | Date: ~~11/14/18~~ 11/14/18 | Compost ● | Windrow ● | Ambient O | STA Suite | State DOT Identify State | A | B | C | 12955 |
| | Manure | Fish Waste | | Feedstock O | Static pile O | Wet Ice O | | | | | | |
| | Food | Grease, Fats | Time: 0900 | Mulch O | In-Vessel O | Dry Ice ● | | | | | | |
| | ✓ Biosolids | | | ____ O | ____ O | | | | | | | |
| | MSW | | Initials: D.B | ____ O | ____ O | | | | | | | |
| | Wood | | | | | | | | | | | |

**INFORM THE STA LABORATORY AND SPECIFY THE REQUIRED LABORATORY TESTS WHEN SUBMITTING REGULATED COMPOST SAMPLES** (please use spaces A, B and C provided above).

PLEASE PROVIDE SPECIFIC FEEDSTOCK AND OPERATIONAL DETAIL IN THE SPACE PROVIDED.
***YOUR VOLUNTEERED INFORMATION PROVIDES USCC STANDARDS AND PRACTICES COMMITTEE WITH CRUTIAL DATA NEEDED TO BETTER UNDERSTAND THE COMPOSTING PROCESS AND COMPOST END USES.***

| Releasing | Date | Time | Receiving | Date | Time |
|---|---|---|---|---|---|
| Signature 1 | | | Signature 1 | 11/15/18 | 2:30 PM |
| Signature 2 | | | Signature 2 | | |
| Signature 3 | | | Signature 3 | | |
| Signature 4 | | | Signature 4 | | |

8091 9639 1869