USA EPA Region 8/CDPHE-Water Quality Control Division
BIOSOLIDS ANNUAL REPORT

SECTION I – BIOSOLIDS LAND APPLICATION REPORT

By Authority of 40 CFR Part 503 and Regulation 64, this form is to be used by generators and distributors to report biosolids applied to the land (beneficially used) which are subject to 40 CFR Part 503 and Regulation 64.
The information provided herein will be used to determine fees to support the program in accordance with Regulation 64.

REPORTS ARE DUE February 19, 2013

Please note: All Treatment Works Treating Domestic Sewage (TWTDS) are required to complete and return this form.
**** If you hauled liquid biosolids to another facility, list the amount hauled and the haulers name.**

REQUIRED INFORMATION - TO BE COMPLETED BY GENERATOR OR DISTRIBUTOR. (Please type or print.)

FACILITY NAME			NPDES and/or State Permit Number
Stromo, LLC			COG-6510195
FACILITY ADDRESS			TELEPHONE NO.
6600 West 20th Street #11			303-535-5677 / 970-539-0653
CITY	STATE	ZIP	CONTACT PERSON
Greeley	CO	80634	Lawton Lieder, Operator

DURING FISCAL YEAR 2012 (1/1/_2012___ - 12/31/_2012___), THE GENERATOR/DISTRIBUATOR NAMED ABOVE LAND APPLIED

1,755 DRY METRIC TONS OF BIOSOLIDS

0 DRY METRIC TONS OF BIOSOLIDS TO LANDS WITHIN THE STATE OF COLORADO

0 TOTAL DRY METRIC TONS OF BIOSOLIDS GENERATED

0 TOTAL DRY METRIC TONS **LANDFILLED**

0 TOTAL DRY METRIC TONS **INCINERATED**

0 TOTAL DRY METRIC TONS **TRANSPORTED OUT OF STATE**

0 TOTAL GALLONS TRANSPORTED TO ANOTHER WASTEWATER TREATMENT FACILITY

_____ RECEIVING FACILITY NAME

_____ HAULERS NAME

To convert the English system (short tons) to metric tons, use the following equation: DRY METRIC TONS = DRY SHORT TONS x .907

I certify that the information as provided on this form is true.

Signature of Authorized Representative: [signature] Stromo, LLC

Date: 1-23-14

REQUIRED INFORMATION. COMPLETE TO ENSURE YOU RECEIVE YOUR INVOICE IN A TIMELY MANNER.

MAILING NAME			
Stromo, LLC			
MAILING ADDRESS			
6600 West 20th Street #11			
MAILING CITY	STATE	ZIP	CONTACT PERSON and EMAIL ADDRESS
Greeley	CO	80634	John Moser, johnmoser@comcast.net

IF YOU HAVE ANY QUESTIONS ABOUT COMPLETING THIS FORM, PLEASE CONTACT THE BIOSOLIDS STAFF PERSON AT CDPHE

PLEASE RETURN COMPLETED FORM TO:
BIOSOLIDS PROGRAM
CDPHE-Water Quality Control Division
WQCD-WQP-B2
4300 Cherry Creek Dr. S.
Denver, CO 80246-1530

(12/2011)

USA EPA Region 8/CDPHE-Water Quality Control Division
BIOSOLIDS ANNUAL REPORT

SECTION II – GENERAL FACILITY INFORMATION

By Authority of Regulation 64, these forms are to be used by generators and distributors to report biosolids applied to the land which are subject to Regulation 64.

1. Annual Reporting Year January1, **2012** to December 31, **2012**		2. NPDES or State Permit Number **COG-6510195**
3. Generator Name **Metro Wastewater Reclamation District**		4. Facility Name (if Different) **Stromo, LLC**
5. Latitude (nearest 15 seconds) **40.1971**	Longitude **-104.6403**	6. Plant Type **Composter**
7. Permit Issued (Date) **September 18, 2007**		8. Permit Expires (Date) **September 18, 2012**
9. Current Actual Flow Rate (MGD) **n/a**		10. Industrial Pretreatment? (check one) ☐ YES ☒ NO
11. Facility sends biosolids out of state? (Y/N) ☐ YES ☒ NO		
12. Facility Physical Address		
Street: **21970 Weld County Road 30**		City: **Hudson**
County: **Weld**	Zip Code: **80642**	Phone (include area code): **(303) 535-5677**
13. Facility Mailing Address (if different)		
Street: **6600 West 20th Street #11**		City: **Greeley**
County: **CO**	Zip Code: **80634**	Phone (include area code): **(303) 535-5677**
14. Name of Responsible Official **John Moser**		15. Title of Responsible Official **Owner**
16. Facility Contact Person Information		
Name of Contact **Lawton Lieder**		Title **Operator**
E-Mail Address **llieder@renewablefiber.com**		Phone **(303) 535-5677** Fax **(303) 535-5348**
17. Contract Applier(s)/Hauler(s) Information		
Name of Contractor **Metro Wastewater Reclamation District**		
Phone **(303) 286-3000**		Contact **Richard Menor**
Name of Contractor		
Phone		Contact

****Please place all attachments at the end of the report packet as appendices <u>not</u> after each section**

USA EPA Region 8/CDPHE-Water Quality Control Division
BIOSOLIDS ANNUAL REPORT

SECTION III – FINAL USE/DISPOSAL PRACTICES (reporting year **2012**)
Permit Number (**COG-6510195**)

1. Land Application (total)	_____ **dmt**		
Bulk Biosolids:	_____ **dmt**	Derived Materials:	_____ **dmt**
Agricultural Land	_____ **dmt**	Agricultural Land	_____ **dmt**
Forest	_____ **dmt**	Forest	_____ **dmt**
Public Contact Site	_____ **dmt**	Public Contact Site	_____ **dmt**
Reclamation Site	_____ **dmt**	Reclamation Site	_____ **dmt**
Sold or Given Away	_____ **dmt**	Sold or Given Away	**1, 755 dmt**
Lawn or Garden	_____ **dmt**	Lawn or Garden	_____ **dmt**
2. Surface Disposal (Total)	_____ **dmt**	3. Landfill (Total)	_____ **dmt**
With Liner and LCS	_____ **dmt**	Landfill Disposal	_____ **dmt**
Without Liner and LCS	_____ **dmt**	Landfill Cover	_____ **dmt**
4. Incineration	_____ **dmt**	Landfill Name	
5. Transported to Another Facility	_____ **dmt**	6. Received From Another Facility	**1,755 dmt**
Name		Name	
Address		Address	
NPDES		NPDES	
Phone		Phone	
7. Other	_____ **dmt**	8. Stored **Some carryover as part of composting cycle, material continually cycled through facility, exact dmt not specified**	

9. Certifications: **(*Please Attach All Required Certification Statements)**

Pathogen Certification (select one)	☒ **YES**	☐ **NO**	☐ **NOT APPLICABLE**
Vector/Attraction Certification? (select one)	☒ **YES**	☐ **NO**	☐ **NOT APPLICABLE**
Management Practice Certification? (select one)	☐ **YES**	☐ **NO**	☒ **NOT APPLICABLE**
CPLR Certification? (select one)	☐ **YES**	☐ **NO**	☒ **NOT APPLICABLE**
- CPLR Site Restrictions Certification? (select one)	☐ **YES**	☐ **NO**	☒ **NOT APPLICABLE**

**dmt = Dry Metric Tons
**CPLR: Cumulative Pollutant Loading Rate – when pollutants exceed Table 3 concentrations (mg/kg)

If you have any questions about the preparation of this form, contact the CDPHE/EPA biosolids program staff person.

SECTION IV – LAND APPLICATION SITE INFORMATION (reporting year 2012)
Permit Number (**COG-6510195**)

SITE NO APPLICATION - INFORMATION		
Site Name	Site Number	Indian Country ☐ YES ☐ NO
Owner		
Operator		
Applier		
Latitude	Longitude	Reached 90% CPLR App. Rate? ☐ YES ☐ NO
Township	Range	Section
Acres	Acres Used	Crop
Application Rate (tons/acre)	Notification (select one) ☐ YES ☐ NO	Cumulative Load Required (select one) ☐ YES ☐ NO

SITE NO APPLICATION - INFORMATION		
Site Name	Site Number	Indian Country ☐ YES ☐ NO
Owner		
Operator		
Applier		
Latitude	Longitude	Reached 90% CPLR App. Rate? ☐ YES ☐ NO
Township	Range	Section
Acres	Acres Used	Crop
Application Rate (tons/acre)	Notification (select one) ☐ YES ☐ NO	Cumulative Load Required (select one) ☐ YES ☐ NO

SITE NO APPLICATION – INFORMATION		
Site Name	Site Number	Indian Country ☐ YES ☐ NO
Owner		
Operator		
Applier		
Latitude	Longitude	Reached 90% CPLR App. Rate? ☐ YES ☐ NO
Township	Range	Section
Acres	Acres Used	Crop
Application Rate (tons/acre)	Notification (select one) ☐ YES ☐ NO	Cumulative Load Required (select one) ☐ YES ☐ NO

****Attach additional copies of this sheet as necessary, or you may attach your contractor's Land Application Reports, or use the CDPHE/EPA Biosolids Recycling Sheet**

If you have any questions about the preparation of this form, contact the CDPHE/EPA biosolids program staff person.

BIOSOLIDS TREATMENT PROVIDED (No. of Units or 999 as default)

THICKENING:
1. Gravity ☐
2. DAF ☐
3. Centrifuge ☐
4. _____ ☐

STABILIZATION:
5. Aerobic Dig. ☐
6. Anaerobic Dig. ☐
7. Heat Treat. ☐
8. Wet Oxidation ☐
9. Chemical (Lime) Stab. ☐
10. Composting ☒
11. Biosolids Lagoons ☐
12. _____ ☐

CONDITIONING:
13. Chemical Cond. ☐
14. _____ ☐

DEWATERING:
15. Vacuum Filter ☐
16. Pressure Filter ☐
17. Belt Filter ☐
18. Drying Bed ☐
19. Drying Lagoon ☐
20. Heat Drying ☐
21. Centrifuge ☐
22. _____ ☐

OTHER:
23. Wastewater Lagoon ☐
24. Mixing of Biosolids ☐
25. Oxidation Ditch ☐
26. Incineration ☐
27. Septage ☐
28. _____ ☐

SECTION V – MONITORING DATA SUMMARY (reporting year **2012**)
Permit Number (**COG-6510195**)

Parameter	Minimum Monthly Concentration	Average Monthly Concentration	Maximum Monthly Concentration	Units	# of Analyses	Average Method Detection Limit	Test Method	Sample Type
Inorganics								
Total Solids	67.11	70.4	75.83	%	3	n/a	03.09-A	☐ Grab ☒ Composite
Total Arsenic	1.2	1.5	1.8	mg/kg	2	n/a	04.06/70 60	☐ Grab ☒ Composite
Total Cadmium	0.6	0.65	0.7	mg/kg	2	n/a	04.06/71 90	☐ Grab ☒ Composite
Total Copper	139.7	160.5	178.4	mg/kg	3	n/a	04.06/70 60	☐ Grab ☒ Composite
Total Lead	11.9	12	12.1	mg/kg	2	n/a	04.06/74 20	☐ Grab ☒ Composite
Total Mercury	0.5	0.55	0.6	mg/kg	2	n/a	04.06/74 71	☐ Grab ☒ Composite
Total Molybdenum	4	4.25	4.5	mg/kg	2	n/a	04.06/74 80	☐ Grab ☒ Composite
Total Nickel	4.6	5.5	6.4	mg/kg	2	n/a	04.06/75 20	☐ Grab ☒ Composite
Total Selenium	1.7	1.9	2.1	mg/kg	2	n/a	04.06/77 40	☐ Grab ☒ Composite
Total Zinc	227	237	253	mg/kg	2	n/a	04.06/79 50	☐ Grab ☒ Composite
Nutrients								
Total Kjeldahl Nitrogen	10140	12230	15310	mg/kg	3	n/a	04.02-D	☐ Grab ☒ Composite
Ammonium Nitrogen	1293	1948	3208	mg/kg	3	n/a	04.02-C	☐ Grab ☒ Composite
Total Phosphorus	7190	8030	8870	mg/kg	3	n/a	04.03-A	☐ Grab ☒ Composite
Total Potassium	1920	3760	6580	mg/kg	3	n/a	04.04-A	☐ Grab ☒ Composite

****Include copies of the actual analytical laboratory data sheets as an attachment at the end of the packet.** All sampling shall be representative of the biosolids applied to land during the reporting period and in accordance with 40 CFR Part and 503 Regulation 64 Frequency of Monitoring – Land Application. All analysis should be provided on a dry weight basis.

If you have any questions about the preparation of this form, contact the CDPHE/EPA biosolids program staff person.

SECTION VI – PATHOGEN AND VECTOR ATTRACTION REDUCTION (reporting year **2012**)
Permit Number (**COG-6510195**)

1. **Pathogen Reduction**
   Class A

- ☐ Class A – Alternative 1 (+ elevated temp for specified time)
- ☐ Class A – Alternative 2 (+ pH adjust for specified time/temp)
- ☐ Class A – Alternative 3 (+ virus and helminth criteria)
- ☐ Class A – Alternative 4 (+ other virus and helminth criteria)
- ☐ Class A – Alternative 5 (indicate which PFRP)
  - ☒ (a) composting
  - ☐ (b) heat drying
  - ☐ (c) heat treatment
  - ☐ (d) thermophillic aerobic digestion
  - ☐ (e) beta ray irradiation
  - ☐ (f) gamma ray irradiation
  - ☐ (g) pasteurization
- ☐ Class A – Alternative 6 (attach PFRP equivalent documentation)

2. **Pathogen Reduction**
   Class B

- ☐ Class B – Alternative 1 (geometric mean of 7 samples)
- ☐ Class B – Alternative 2 (indicate which PSRP)
  - ☐ (a) aerobic digestion
  - ☐ (b) air drying
  - ☐ (c) anaerobic digestion
  - ☐ (d) composting
  - ☐ (e) lime stabilization (pH at 25' C or equivalent)
- ☐ Class B – Alternative 3 (attach PSRP equivalent documentation)

3. **Vector Attraction Reduction**
   Method Used:

- ☒ Option 1 (minimum 38 percent reduction in volatile solids) **Met before coming onsite at the Metro Facility**
- ☐ Option 2 (Anaerobic process, with bench-scale demonstration)
- ☒ Option 3 (Aerobic Process, with bench scale demonstration) **Aerobic process through composting occurs prior to material outgoing**
- ☐ Option 4 (Specific Oxygen Uptake Rate (SOUR), aerobically digested)
- ☐ Option 5 (Aerobic Process plus raised temperature)
- ☐ Option 6 (Raise pH to 12 and retain at 11.5)
- ☐ Option 7 (75% solids with no unstabilized solids)
- ☐ Option 8 (90% solids with unstabilized solids)
- ☐ Option 9 (Injection below land surface with significant soil coverage)
- ☐ Option 10 (Covering active sewage sludge unit daily)

****Attach all Pathogen Reduction and Vector Attraction Reduction documentation to demonstrate compliance at the end of the packet**

If you have any questions regarding the preparation of this form, contact the CDPHE/EPA biosolids program staff person.

USA EPA Region 8/CDPHE-Water Quality Control Division
BIOSOLIDS ANNUAL REPORT

SECTION VII – SIGNATURE PAGE

Facility Name	NPDES or CO Permit Number
Stromo, LLC	**COG-6510195**

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with the system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system of those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name and Official Title **Lawton Lieder, Operator**

Signature Lawton L Lieder

Telephone Number **(303) 535-5677** 1970-539-0653

Date Signed 1-27-14

Name and Official Title

Signature

Date Signed

Upon request from the State, you may be required to submit additional information necessary to access biosolids use or disposal practices at your facility or to identify appropriate permitting requirements.

PLEASE RETURN COMPLETED FORMS TO:

Tim Larson
BIOSOLIDS PROGRAM
WQCD-WQP-B2
4300 Cherry Creek Dr. S.
Denver, CO 80246-1530

And

Bob Brobst
Attn: Water Program
Regional Biosolids Program, P-W-P
USEPA Region VIII,
1595 Wynkoop St.
Denver, Colorado 80202-1129

Applies to
Reporting Year
2010, 2011, 2012, & 2013

Certification Statement

"I certify, under penalty of law, that the Grade I metals based requirements in section 64.12(A), the appropriate Class A pathogen destruction requirements in sections 64.12(B)(1) through 64.12(B)(7), and the appropriate vector attraction reduction requirements in sections 64.12(C)(1) through 64.12(C)(10) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen destruction requirements and biosolids stability requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Printed Name: LAWTON L LEEDER

Date: 1-17-14

Signature:

Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: LAWTON LIEDER

LAB NO: 26514.04

BILL TO: RENEWABLE FIBER - FT LUPTON
P.O. BOX 205
FORT LUPTON CO 80621

DATE RCVD: 1/13/12

REPORTED: 1/26/12

PROJECT: STROMO/MORWAI COMPOST

PO NO.: STROMO

SAMPLE ID: **BIO-SOLID COMPOST**
MATRIX: COMPOST
SAMPLE DATE: 1/13/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	67.11	100.00	03.09-A
MOISTURE (%)	32.89	0.00	03.09-A
ORGANIC MATTER (%)	21.04	31.35	05.07-A
ASH (%)	46.07	68.65	05.07-A
SOLUBLE SALTS 1:5 (MMHOS/CM)	2.16	-	04-10-A
pH 1:5 (UNITS)	7.60	-	04-11-A
TOTAL NITROGEN (LBS/TON)	22.480	33.500	04.02-D
ORGANIC NITROGEN (LBS/TON)	19.670	29.312	CALC
AMMONIA NITROGEN (LBS/TON)	2.6857	4.002	04.02-C
NITRATE NITROGEN (LBS/TON)	0.1248	0.1860	04.02-B
TOTAL PHOSPHORUS AS P (LBS/TON)	14.374	21.420	04.03-A
TOTAL PHOSPHORUS AS P2O5 (LBS/TON)	33.060	49.266	04.03-A
TOTAL POTASSIUM AS K (LBS/TON)	13.154	19.602	04.04-A
TOTAL POTASSIUM AS K2O (LBS/TON)	15.785	23.522	04.04-A
C/N RATIO	10	10	CALC
AMMONIA-N/NITRATE-N RATIO	21.5	21.5	CALC

TO CONVERT % TO PPM MULTIPLY BY 10,000. TO CONVERT % TO LBS/TON MULTIPLY BY 20.

COLORADO ANALYTICAL LABORATORY IS AN APPROVED TESTING FACILITY FOR THE US COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM. SEE THE US COMPOSTING COUNCIL'S WEB SITE AT WWW.COMPOSTING COUNCIL.ORG FOR MORE INFORMATION.

TMECC = "TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST", US COMPOSTING COUNCIL, AUG 2001, W.H. THOMPSON

ANALYSIS SUPERVISED BY

DATA APPROVED FOR RELEASE BY

240 South Main Street / Brighton, Colorado 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, Colorado 80601-0507 / Fax: 303-659-2315

Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: LAWTON LIEDER

LAB NO: 26514.04

BILL TO: RENEWABLE FIBER - FT LUPTON
P.O. BOX 205
FORT LUPTON CO 80621

DATE RCVD: 1/13/12

REPORTED: 1/26/12

PROJECT:

PO NO.: STROMO

SAMPLE ID: **BIO-SOLID COMPOST**
MATRIX: COMPOST
SAMPLE DATE: 1/13/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	67.11	100.00	03.09-A
MOISTURE (%)	32.89	0.00	03.09-A
ARSENIC (MG/KG)	1.2	1.8	04.06/7060
CADMIUM (MG/KG)	0.7	1.0	04.06/7130
CHROMIUM (MG/KG)	6.1	9.1	04.06/7190
COPPER (MG/KG)	139.7	208.2	04.06/7210
LEAD (MG/KG)	11.9	17.8	04.06/7420
MERCURY (MG/KG)	0.6	0.9	04.06/7471
MOLYBDENUM (MG/KG)	4.0	6.0	04.06/7480
NICKEL (MG/KG)	4.6	6.9	04.06/7520
SELENIUM (MG/KG)	1.7	2.5	04.06/7740
ZINC (MG/KG)	229.6	342.2	04.06/7950
PASS/FAIL - USEPA CLASS A METALS STD	-	PASS	-

COLORADO ANALYTICAL LABORATORY IS AN APPROVED TESTING FACILITY FOR THE U.S COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM. SEE THE US COMPOSTING COUNCIL'S WEB SITE AT WWW.COMPOSTING COUNCIL.ORG FOR MORE INFORMATION.
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ANALYSIS SUPERVISED BY

DATA APPROVED FOR RELEASE BY

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Mailing Address: P.O. Box 507 / Brighton, Colorado 80601-0507 / Fax: 303-659-2315

Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: LAWTON LIEDER

LAB NO: 26514.04

DATE RCVD: 1/13/12

BILL TO: RENEWABLE FIBER - FT LUPTON
P.O. BOX 205
FORT LUPTON CO 80621

REPORTED: 1/26/12

PROJECT:

PO NO.: STROMO

SAMPLE ID: **BIO-SOLID COMPOST**
MATRIX: COMPOST
SAMPLE DATE: **1/13/12**

	AS RECEIVED BASIS	DRY WEIGHT BASIS	TMECC/EPA METHOD
FECAL COLIFORM (MPN/G)	-	<10	07.01-B
PASS/FAIL - USEPA CLASS A PATHOGEN STD	-	PASS	-

COLORADO ANALYTICAL LABORATORY IS AN APPROVED TESTING FACILITY FOR THE US COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM. SEE THE US COMPOSTING COUNCIL'S WEB SITE AT WWW.COMPOSTING COUNCIL.ORG FOR MORE INFORMATION.
TMECC = "TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST", US COMPOSTING COUNCIL, AUG 2001, W.H. THOMPSON

240 South Main Street / Brighton, Colorado 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, Colorado 80601-0507 / Fax: 303-659-2315

Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: DEWAYNE BROWN

LAB NO: 26636.05

DATE RCVD: 7/26/12

BILL TO: RENEWABLE FIBER
11605 WADSWORTH BLVD
BROOMFIELD CO 80020

REPORTED: 8/14/12

PROJECT:

PO NO.: STROMO

SAMPLE ID: **BIO COMPOST**
MATRIX: COMPOST
SAMPLE DATE: 7/26/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	75.83	100.00	03.09-A
MOISTURE (%)	24.17	0.00	03.09-A
ORGANIC MATTER (%)	30.86	40.70	05.07-A
ASH (%)	44.96	59.30	05.07-A
SOLUBLE SALTS 1:5 (MMHOS/CM)	2.80	-	04-10-A
pH 1:5 (UNITS)	6.74	-	04-11-A
TOTAL NITROGEN (%)	1.531	2.019	04.02-D
ORGANIC NITROGEN (%)	1.131	1.492	CALC
AMMONIA NITROGEN (%)	0.3208	0.423	04.02-C
AMMONIA NITROGEN (PPM)	3,207.7	4,230.3	04.02-C
NITRATE NITROGEN (%)	0.0788	0.1039	04.02-B
NITRATE NITROGEN (PPM)	787.6	1,038.6	04.02-B
TOTAL PHOSPHORUS AS P (%)	0.803	1.059	04.03-A
TOTAL PHOSPHORUS AS P2O5 (%)	1.847	2.436	04.03-A
TOTAL POTASSIUM AS K (%)	0.278	0.366	04.04-A
TOTAL POTASSIUM AS K20 (%)	0.333	0.440	04.04-A
C/N RATIO	11	11	CALC
AMMONIA-N/NITRATE-N RATIO	4.1	4.1	CALC

TO CONVERT % TO PPM MULTIPLY BY 10,000. TO CONVERT % TO LBS/TON MULTIPLY BY 20.

COLORADO ANALYTICAL LABORATORY IS AN APPROVED TESTING FACILITY FOR THE US COMPOSTING COUNCIL'S SEAL OF TESTING ASSURANCE PROGRAM. SEE THE US COMPOSTING COUNCIL'S WEB SITE AT WWW.COMPOSTING COUNCIL. ORG. FOR MORE INFORMATION.

TMECC = "TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST"; US COMPOSTING COUNCIL; AUG 2001; W.H. THOMPSON

ANALYSIS SUPERVISED BY

DATA APPROVED FOR RELEASE BY

240 South Main Street / Brighton, Colorado 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, Colorado 80601-0507 / Fax: 303-659-2315

Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: DEWAYNE BROWN

LAB NO: 26636.05

DATE RCVD: 7/26/12

BILL TO: RENEWABLE FIBER
11605 WADSWORTH BLVD
BROOMFIELD CO 80020

REPORTED: 9/11/12

PROJECT:

PO NO.: STROMO

SAMPLE ID: **BIO COMPOST**
MATRIX: COMPOST
SAMPLE DATE: 7/26/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	75.83	100.00	03.09-A
MOISTURE (%)	24.17	0.00	03.09-A
ORGANIC MATTER (%)	30.86	40.70	05.07-A
ASH (%)	44.96	59.30	05.07-A
SOLUBLE SALTS 1:5 (MMHOS/CM)	2.80	-	04-10-A
pH 1:5 (UNITS)	6.74	-	04-11-A
TOTAL NITROGEN (%)	1.531	2.019	04.02-D
ORGANIC NITROGEN (%)	1.131	1.492	CALC
AMMONIA NITROGEN (%)	0.3208	0.423	04.02-C
AMMONIA NITROGEN (PPM)	3,207.7	4,230.3	04.02-C
NITRATE NITROGEN (%)	0.0788	0.1039	04.02-B
NITRATE NITROGEN (PPM)	787.6	1,038.6	04.02-B
TOTAL PHOSPHORUS AS P (%)	0.803	1.059	04.03-A
TOTAL PHOSPHORUS AS P2O5 (%)	1.847	2.436	04.03-A
TOTAL POTASSIUM AS K (%)	0.278	0.366	04.04-A
TOTAL POTASSIUM AS K20 (%)	0.333	0.439	04.04-A
TOTAL CALCIUM (%)	3.166	4.175	04.05-Ca
TOTAL MAGNESIUM (%)	0.479	0.632	04.05-Mg
TOTAL COPPER (PPM)	178.4	235.3	04.06-Cu
TOTAL IRON (PPM)	5937.2	7830.0	04.05-Fe
TOTAL MANGANESE (PPM)	141.3	186.4	04.06-Mn
TOTAL ZINC (PPM)	253.8	334.8	04.06-Zn
SULFATE AS SO4 (PPM)	5,257.8	6,934.0	04.05-S
BORON (PPM)	25.6	33.8	04.05-B
SODIUM (%)	0.125	0.164	04.05-Na
CHLORIDE (%)	0.084	0.110	04.05-Cl
AG INDEX	17.8	17.8	CALC
C/N RATIO	11	11	CALC
AMMONIA-N/NITRATE-N RATIO	4.1	4.1	CALC

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TMECC = "TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST"; US COMPOSTING COUNCIL; AUG 2001; W.H. THOMPSON

ANALYSIS SUPERVISED BY

DATA APPROVED FOR RELEASE BY

240 South Main Street / Brighton, Colorado 80601-0507 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, Colorado 80601-0507 / Fax: 303-659-2315

Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: DEWAYNE BROWN

LAB NO: 26636.05

DATE RCVD: 7/26/12

BILL TO: RENEWABLE FIBER
11605 WADSWORTH BLVD
BROOMFIELD CO 80020

REPORTED: 9/18/12

PROJECT:

PO NO.: STROMO

SAMPLE ID: **BIO COMPOST**
MATRIX: COMPOST
SAMPLE DATE: 7/26/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	75.83	100.00	03.09-A
MOISTURE (%)	24.17	0.00	03.09-A
BULK DENSITY (LBS/CU YD)	1,036	834	SSSA

TO CONVERT % TO PPM MULTIPLY BY 10,000. TO CONVERT % TO LBS/TON MULTIPLY BY 20.

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Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: LAWTON LIEDER

LAB NO: 26643.02

DATE RCVD: 8/16/12

BILL TO: RENEWABLE FIBER
2600 WEST OXFORD
ENGLEWOOD CO 80010

REPORTED: 8/31/12

PROJECT:

PO NO.:

SAMPLE ID: **BIO-COMPOST**
MATRIX: COMPOST

SAMPLE DATE: 8/16/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	68.27	100.00	03.09-A
MOISTURE (%)	31.73	0.00	03.09-A
ORGANIC MATTER (%)	20.62	30.20	05.07-A
BULK DENSITY (LBS/CU YD)	1,160	792	SSSA
ASH (%)	47.65	69.80	05.07-A
SOLUBLE SALTS 1:5 (MMHOS/CM)	2.28	-	04-10-A
pH 1:5 (UNITS)	8.74	-	04-11-A
TOTAL NITROGEN (%)	1.014	1.486	04.02-D
ORGANIC NITROGEN (%)	0.868	1.272	CALC
AMMONIA NITROGEN (%)	0.1293	0.189	04.02-C
AMMONIA NITROGEN (PPM)	1,292.7	1,893.7	04.02-C
NITRATE NITROGEN (%)	0.0170	0.0250	04.02-B
NITRATE NITROGEN (PPM)	170.4	249.6	04.02-B
TOTAL PHOSPHORUS AS P (%)	0.887	1.300	04.03-A
TOTAL PHOSPHORUS AS P2O5 (%)	2.041	2.990	04.03-A
TOTAL POTASSIUM AS K (%)	0.192	0.281	04.04-A
TOTAL POTASSIUM AS K20 (%)	0.230	0.337	04.04-A
C/N RATIO	11	11	CALC
AMMONIA-N/NITRATE-N RATIO	7.6	7.6	CALC

TO CONVERT % TO PPM MULTIPLY BY 10,000. TO CONVERT % TO LBS/TON MULTIPLY BY 20.

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Colorado Analytical Laboratories, Inc.

LABORATORY ANALYSIS REPORT

REPORT TO: LAWTON LIEDER

LAB NO: 26643.02

DATE RCVD: 8/16/12

BILL TO: RENEWABLE FIBER
2600 WEST OXFORD
ENGLEWOOD CO 80010

REPORTED: 9/6/12

PROJECT:

PO NO.:

SAMPLE ID: **BIO-COMPOST**
MATRIX: COMPOST
SAMPLE DATE: 8/16/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	68.27	100.00	03.09-A
MOISTURE (%)	31.73	0.00	03.09-A
ARSENIC (MG/KG)	1.8	2.6	04.06/ 7060
CADMIUM (MG/KG)	0.6	0.9	04.06/ 7130
CHROMIUM (MG/KG)	8.5	12.5	04.06/ 7190
COPPER (MG/KG)	163.4	239.3	04.06/ 7210
LEAD(MG/KG)	12.1	17.8	04.06/ 7420
MERCURY (MG/KG)	0.5	0.7	04.06/ 7471
MOLYBDENUM (MG/KG)	4.5	6.6	04.06/ 7480
NICKEL (MG/KG)	6.4	9.4	04.06/ 7520
SELENIUM (MG/KG)	2.1	3.1	04.06/ 7740
ZINC (MG/KG)	227.1	332.6	04.06/ 7950
PASS/ FAIL - USEPA CLASS A METALS STD	-	PASS	-

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LABORATORY ANALYSIS REPORT

REPORT TO: LAWTON LIEDER

LAB NO: 26643.02

DATE RCVD: 8/16/12

BILL TO: RENEWABLE FIBER
2600 WEST OXFORD
ENGLEWOOD CO 80010

REPORTED: 9/6/12

PROJECT:

PO NO.:

SAMPLE ID: **BIO-COMPOST**
MATRIX: COMPOST

SAMPLE DATE: 8/16/12

	AS RECEIVED BASIS	DRY MATTER BASIS	TMECC METHOD
TOTAL SOLIDS (%)	68.27	100.00	03.09-A
MOISTURE (%)	31.73	0.00	03.09-A
FECAL COLIFORM (MPN/G)	-	264	07.01-B
PASS/ FAIL - USEPA CLASS A PATHOGEN STD	-	PASS	-

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METRO WASTEWATER RECLAMATION DISTRICT

12-Month Self Monitoring Summary Report

CAKE

Date	TOTAL ARSENIC mg/Kg	TOTAL CADMIUM mg/Kg	TOTAL CHROMIUM mg/Kg	TOTAL COPPER mg/Kg	TOTAL LEAD mg/Kg	TOTAL MERCURY mg/Kg	TOTAL MOLYBDENUM mg/Kg	TOTAL NICKEL mg/Kg	TOTAL SELENIUM mg/Kg	TOTAL ZINC mg/Kg
01/12	1.7	0	24	585	30.0	0.59	14.6	14	9.3	663
02/12	1.5	0	25	538	32.5	0.93	13.0	13	8.6	574
03/12	1.6	0	23	596	65.2	1.20	11.8	14	8.1	613
04/12	2.0	0	25	641	31.8	1.05	13.7	14	9.2	682
05/12	1.7	1	27	696	37.1	0.85	15.7	15	10.8	699
06/12	2.0	1	27	753	41.3	0.86	22.5	15	10.7	740
07/12	1.9	0	28	695	36.0	0.92	20.8	13	9.4	700
08/12	3.1	1	31	728	38.3	0.76	23.9	13	10.3	773
09/12	1.7	1	29	791	35.6	0.90	22.5	13	8.6	760
10/12	1.9	1	27	750	38.1	0.93	23.0	19	8.9	748
11/12	1.7	1	25	638	36.0	0.80	22.2	14	9.0	680
12/12	1.7	1	21	601	30.1	0.90	21.9	12	7.8	621
Average	1.9	1	26	668	37.7	0.89	18.8	14	9.2	688
Limits: Grade I:	41	39		1500	300	17		420	100	2800
Grade II:	75	85		4300	840	57	75	420	100	7500

Date	PH SU	NITRATE % DW	AMMONIA % DW	ORGANIC-N % DW	TKN % DW	TOTAL PHOSPHORUS % DW	TOTAL POTASSIUM % DW	TOTAL SOLIDS %	VOLATILE SOLIDS %	FEC (GEO.) mpn/gTS	SRT DAYS	AVG TEMP DEG. F	VS RED.,%
01/12	8.3	0.00	1.18	6.25	7.37	2.65	0.274	19.40	77.0		24	97	56.8
02/12	8.4	0.00	1.27	6.04	7.31	3.03	0.246	19.66	75.0		22	97	57.9
03/12	8.4	0.00	1.28	5.40	6.72	3.17	0.268	20.05	72.0		21	98	58.2
04/12	8.4	0.00	1.26	5.91	7.13	2.87	0.248	19.89	74.4		24	98	58.4
05/12	8.3	0.00	1.22	5.95	7.15	2.64	0.215	20.21	75.2		23	98	55.6
06/12	8.4	0.00	1.34	5.87	7.07	2.74	0.221	20.49	74.2		22	98	53.1
07/12	8.2	0.00	1.40	5.43	6.83	3.13	0.244	20.89	71.1		22	98	49.6
08/12	8.5	0.00	1.19	5.74	7.01	2.76	0.224	20.70	73.1		22	98	57.0
09/12	8.5	0.00	1.01	5.72	6.73	2.47	0.188	20.78	74.7		23	99	54.4
10/12	8.5	0.00	1.00	6.01	7.01	2.53	0.222	20.80	76.1		23	98	52.8
11/12	8.4	0.00	1.08	6.09	7.17	2.55	0.225	20.64	77.0		21	98	54.4
12/12	8.5	0.00	1.04	6.27	7.31	2.27	0.213	20.75	77.8		24	98	57.3
Average	8.4	0.00	1.19	5.89	7.07	2.73	0.232	20.36	74.8		23	98	55.5
Limit:										2000000	15	95	38

Class B Criteria			Average	Minimum Allowed	Maximum Allowed
Pathogen Destruction:	Solids Retention Time, Day	=	23 Days	15 Days	
	And				
	Temperature, Deg. C(Deg. F)	=	36.6(98)	35 Deg. C (95 Deg. F)	
	Or				
	Fecal Coliform, mpn/gTs	=			2,000,000
Vector Attraction Reduction:	Volatile Solids Reduction	=	55.5	38%	

All values are based on monthly averages.

Report: brr_monitor_summary
Run Date: 20-DEC-2013
Page: 1 of 1

STROMO COMPOST SITE
Seven Day Turn Schedule

ROW	LAYOUT DATE	FIRST TURN DATE	TEMP WEEK # 1	TEMP WEEK # 2	TEMP WEEK # 3	TEMP WEEK # 4	TEMP WEEK # 5	TEMP WEEK # 6	TEMP WEEK # 7	TEMP WEEK # 8	TEMP WEEK # 9	TEMP WEEK # 10	AVERAGE TEMP		
BIO 5	1/4/12	1/5/12	132	144	110	132	122	118	114	115	112	123	122	3/7/12	STATIC PILED
BIO 6	1/11/12	1/12/12	100	132	132	144	117	118	110	119	132	120	122	3/14/12	STATIC PILED
BIO 7	1/18/12	1/19/12	100	140	132	125	132	133	140	118	119	112	125	3/21/12	STATIC PILED
BIO 8	1/25/12	1/26/12	114	117	119	132	125	142	113	118	118	133	123	3/28/12	STATIC PILED
BIO 9	2/1/12	2/2/12	100	118	117	123	142	128	129	130	132	132	125	4/4/12	STATIC PILED
BIO 10	2/8/12	2/9/12	118	125	135	125	122	105	114	118	135	135	123	4/11/12	STATIC PILED
BIO 11	2/15/12	2/16/12	112	113	114	117	119	126	134	136	132	130	123	4/18/12	STATIC PILED
BIO 12	2/22/12	2/23/12	102	131	135	135	141	143	138	116	101	88	123	4/25/12	STATIC PILED
BIO 13	2/29/12	3/1/12	135	134	132	118	114	117	125	135	136	141	129	5/2/12	STATIC PILED
BIO 14	3/7/12	3/8/12	140	131	121	125	141	114	114	118	135	135	127	5/9/12	STATIC PILED
BIO 15	3/14/12	3/15/12	135	134	132	118	114	117	125	135	136	141	129	5/16/12	STATIC PILED
BIO 16	3/21/12	3/22/12	132	144	110	132	122	118	114	115	112	123	122	5/23/12	STATIC PILED
BIO 1	3/28/12	3/29/12	100	132	132	144	117	118	110	119	132	120	122	5/30/12	STATIC PILED
BIO 2	4/4/12	4/5/12	100	140	132	125	132	133	140	118	119	112	125	6/6/12	STATIC PILED
BIO 3	4/11/12	4/12/12	114	117	119	132	125	142	113	118	118	133	123	6/13/12	STATIC PILED
BIO 4	4/18/12	4/19/12	100	118	117	123	142	128	129	130	132	132	125	6/20/12	STATIC PILED
BIO 5	4/25/12	4/26/12	118	125	135	125	122	105	114	118	135	135	123	6/27/12	STATIC PILED
BIO 6	5/2/12	5/3/12	112	113	114	117	119	126	134	136	132	130	123	7/4/12	STATIC PILED
BIO 7	5/9/12	5/10/12	102	131	135	135	141	143	138	116	101	88	123	7/11/12	STATIC PILED
BIO 8	5/16/12	5/17/12	135	134	132	118	114	117	125	135	136	141	129	7/18/12	STATIC PILED
BIO 9	5/23/12	5/24/12	140	131	121	125	141	114	114	118	135	135	127	7/25/12	STATIC PILED
BIO 10	5/30/12	5/31/12	135	134	132	118	114	117	125	135	136	141	129	8/1/12	STATIC PILED
BIO 11	6/6/12	6/7/12	132	144	110	132	122	118	114	115	112	123	122	8/8/12	STATIC PILED
BIO 12	6/13/12	6/14/12	100	132	132	144	117	118	110	119	132	120	122	8/15/12	STATIC PILED
BIO 13	6/20/12	6/21/12	100	140	132	125	132	133	140	118	119	112	125	8/22/12	STATIC PILED
BIO 14	6/27/12	6/28/12	114	117	119	132	125	142	113	118	118	133	123	8/29/12	STATIC PILED
BIO 15	7/4/12	7/5/12	100	118	117	123	142	128	129	130	132	132	125	9/5/12	STATIC PILED
BIO 16	7/11/12	7/12/12	118	125	135	125	122	105	114	118	135	135	123	9/12/12	STATIC PILED
BIO 1	7/18/12	7/19/12	112	113	114	117	119	126	134	136	132	130	123	9/19/12	STATIC PILED
BIO 2	7/25/12	7/26/12	102	131	135	135	141	143	138	116	101	88	123	9/26/12	STATIC PILED
BIO 3	8/1/12	8/2/12	135	134	132	118	114	117	125	135	136	141	129	10/3/12	STATIC PILED
BIO 4	8/8/12	8/9/12	140	131	121	125	141	114	114	118	135	135	127	10/10/12	STATIC PILED
BIO 5	8/15/12	8/16/12	135	134	132	118	114	117	125	135	136	141	129	10/17/12	STATIC PILED
BIO 6	8/22/12	8/23/12	100	140	132	125	132	133	140	118	119	112	125	10/24/12	STATIC PILED
BIO 7	8/29/12	8/30/12	114	117	119	132	125	142	113	118	118	133	123	10/31/12	STATIC PILED
BIO 8	9/5/12	9/6/12	100	118	117	123	142	128	129	130	132	132	125	11/7/12	STATIC PILED
BIO 9	9/12/12	9/13/12	118	125	135	125	122	105	114	118	135	135	123	11/14/12	STATIC PILED

BIO 10	9/19/12	9/20/12	112	113	114	117	119	126	134	136	132	130	123	11/21/12	STATIC PILED
BIO 11	9/26/12	9/27/12	102	131	135	135	141	143	138	116	101	88	123	11/28/12	STATIC PILED
BIO 12	10/3/12	10/4/12	135	134	132	118	114	117	125	135	136	141	129	12/5/12	STATIC PILED
BIO 13	10/10/12	10/11/12	140	131	121	125	141	114	114	118	135	135	127	12/12/12	STATIC PILED
BIO 14	10/17/12	10/18/12	135	134	132	118	114	117	125	135	136	141	129	12/19/12	STATIC PILED
BIO 15	10/24/12	10/25/12	132	144	110	132	122	118	114	115	112	123	122	12/26/12	STATIC PILED
BIO 16	10/31/12	11/1/12	100	132	132	144	117	118	110	119	132	120	122	1/2/13	STATIC PILED
BIO 1	11/7/12	11/8/12	100	140	132	125	132	133	140	118	119	112	125	1/9/13	STATIC PILED
BIO 2	11/14/12	11/15/12	114	117	119	132	125	142	113	118	118	133	123	1/16/13	STATIC PILED
BIO 3	11/21/12	11/22/12	100	118	117	123	142	128	129	130	132	132	125	1/23/13	STATIC PILED
BIO 4	11/28/12	11/29/12	118	125	135	125	122	105	114	118	135	135	123	1/30/13	STATIC PILED
BIO 5	12/5/12	12/6/12	112	113	114	117	119	126	134	136	132	130	123	2/6/13	STATIC PILED
BIO 6	12/12/12	12/13/12	102	131	135	135	141	143	138	116	101	88	123	2/13/13	STATIC PILED
BIO 7	12/19/12	12/20/12	135	134	132	118	114	117	125	135	136	141	129	2/20/13	STATIC PILED
BIO 8	12/26/12	12/27/12	140	131	121	125	141	114	114	118	135	135	127	2/27/13	STATIC PILED