COLORADO
Department of Public Health & Environment

CDPHE-Water Quality Control Division
BIOSOLIDS ANNUAL REPORT

SECTION I – BIOSOLIDS LAND APPLICATION REPORT

By Authority of 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, 2025

Please note: All Biosolids Preparers and Biosolids Appliers are required to complete and return this form.
** If you **hauled** biosolids to another facility, list the facility, 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
Twin Enviro Apex			COBMP1931
FACILITY ADDRESS			TELEPHONE NO.
20650 RCR 205			970-879-6985
CITY	STATE	ZIP	BIOSOLIDS CONTACT PERSON and EMAIL ADDRESS
Steamboat Springs	CO	80487	Lacie Coupe lcoupe@apexwasteco.com

INFORMATION for FISCAL YEAR **2024** (**1/1/2024 - 12/31/2024**) , FOR THE **GENERATOR / DISTRIBUATOR NAMED ABOVE**

1397.6 **TOTAL** DRY METRIC TONS OF BIOSOLIDS **GENERATED / PRODUCED** (during reporting year)

508.1 DRY METRIC TONS OF BIOSOLIDS TO LANDS WITHIN THE STATE OF COLORADO (**Beneficial Use, including Composting**)

889.5 TOTAL DRY METRIC TONS **LANDFILLED**

0 TOTAL DRY METRIC TONS **INCINERATED**

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

0 TOTAL **GALLONS OF LIQUID** TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

0 TOTAL **DRY METRIC TON OF CAKE** TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

n/a RECEIVING FACILITY NAME

n/a 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.

Lacie Coupe

Signature of Authorized Representative — Date: 2/7/2025

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

MAILING NAME			
Twin Enviro Apex			
MAILING ADDRESS			
PO Box 775810			
MAILING CITY	STATE	ZIP	**CONTACT PERSON and EMAIL ADDRESS**
Steamboat Springs	CO	80477	Lacie Coupe lcoupe@apexwasteco.com

IF YOU HAVE ANY QUESTIONS ABOUT COMPLETING THIS FORM, PLEASE CONTACT: Tim Larson – CDPH&E (303) 691-4091

PLEASE RETURN COMPLETED FORM & INFO BY Email or Mail:
***Email to both**:*

Biosolids+AnnualReports@state.co.us = (*new email address*)

AND

cdphe.wqrecordscenter@state.co.us

***OR mail to**:*

Tim Larson
BIOSOLIDS PROGRAM
CDPHE-Water Quality Control Division
WQCD-WQP-B2
4300 Cherry Creek Dr. S.
Denver, CO 80246-1530

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 January 1, **2024** to December 31, **2024**	2. NPDES or State Permit Number **COBMP1931**
3. Generator Name **Steamboat Springs WWTP**	4. Facility Name (if Different) **Received by: Twin Enviro Apex**

5. Waste Water Treatment Plant Type:

Activated Sludge ☒ Ox Ditch ☐ RBC ☐ SBR ☐ Trickling Filter ☐ Lagoon ☐ Other _____

6. Designed Capacity of Facility (mgd)
5

7. Biosolids Treatment Plant Type:

Aerobic ☒ Anerobic ☐ Lagoon ☐ Composting ☒ Other _____

8. Facility sends biosolids out of state? (Y/N)

☐ YES ☒ NO

9. Facility Physical Address		
Street: **39565 County Road 33**		City: **Steamboat Springs**
County: **Routt**	Zip Code: **80487**	Phone (include area code): **970-879-7700**
10. Facility Mailing Address (if different)		
Street:		City:
County:	Zip Code:	Phone (include area code):
11. Name of Responsible Official for Biosolids **Gilbert Anderson**		12. Title of Responsible Official for Biosolids **Plant Manager**
13. Facility Contact Person Information		
Name of Contact **Gilbert Anderson**		Title **Plant Manager**
E-Mail Address **ganderson@steamboatsprings.net**		Phone **970-879-7700**
14. Contract Applier(s)/Hauler(s) Information		
Name of Contractor **Twin Envio Apex**		
Phone **970-879-6985**		Name of Contact **David Keating**
Name of Contractor		
Phone		Name of Contact

****Please place all attachments at the end of the report packet as appendices, not after each section.**

If you have any questions about the preparation of this form, contact **Tim Larson – CDPHE (303) 691-4091**.

SECTION III – FINAL USE/DISPOSAL PRACTICES (reporting year **2024**)

Permit Number (COBMP1931)

1. **Beneficial Use** / Land Application (**total**) (**Class B** & **Class A**) **508.1 dmt**

Class B Biosolids **(total):** **0 dmt**

- Agricultural Land **0 dmt**
- Rangeland **0 dmt**
- Reclamation Site **0 dmt**

Class A Biosolids **Composted (total):** **508.1 dmt**

Class A Biosolids **"Other" (total):** **0 dmt**

- Agricultural Land **0 dmt**
- Rangeland **0 dmt**
- Reclamation Site **0 dmt**
- Lawn &/or Home Garden **0 dmt**
- Other STORED **508.1 dmt**

2. Landfill (**Total**) : **889.5 dmt**

- Landfill Disposal **889.5 dmt**
- Landfill Cover **0 dmt**

Landfill **Name** Twin Enviro Apex

Address 20650 CR 205, Steamboat Springs CO 80487

3. Surface Disposal (**Total**): **0 dmt**

4. Incineration **0 dmt**

5. Transported to Another Facility: **0 dmt &/or 0 gallons** **for further processing**

- Name
- Address
- NPDES
- Phone

6. Received From Another Facility: **889.5 dmt &/or 0 gallons**

- Name SEE ATTACHED TABLE
- Address
- NPDES
- Phone

7. Other HISTORIC COMPOST STORED **3,940 dmt**

8. **Stored** January 1 of Reporting Year **767.81 dmt**

Stored December 31 of Reporting Year **1,275.91 dmt**

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 (PER EDOP)**
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 **Tim Larson – CDPHE (303) 691-4091**.

SECTION IV – LAND APPLICATION SITE INFORMATION (reporting year **2024**)
Permit Number (COBMP1931)

SITE N/A - INFORMATION		
1. Field ID / Number	2. Site BMP Number	3. Indian Country ☐ YES ☐ NO
4. Land Owner	5. Biosolids Generator	6. Biosolids Applier
7. Section	8. Township	9. Range
10. Crop to be grown	11. Dryland or Irrigated Crop	12. Yield Goal for Crop (yield/acre)
13. Total Field Acres	14. "Applied To" Field Acres	15. Recommended Nitrogen (lb/ac)
16. Wet Pounds of **Cake** to Field	**17. Gallons** of **Liquid** to Field	18. Total **Dry Ton** Biosolids **Applied** to Field
19. Method of Application: ☐ Surface Application	☐ Surface Application with Incorporation ☐ Injection	20. Nitrogen applied (lb/ac)
21. Application: **Start Date** **Finish Date**	22. Cumulative Load Required (select one) ☐ YES ☐ NO	23. Reached 90% CPLR App. Rate? ☐ YES ☐ NO

SITE _____ - INFORMATION		
1. Field ID / Number	2. Site BMP Number	3. Indian Country ☐ YES ☐ NO
4. Land Owner	5. Biosolids Generator	6. Biosolids Applier
7. Section	8. Township	9. Range
10. Crop to be grown	11. Dryland or Irrigated Crop	12. Yield Goal for Crop (yield/acre)
13. Total Field Acres	14. "Applied To" Field Acres	15. Recommended Nitrogen (lb/ac)
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19. Method of Application: ☐ Surface Application	☐ Surface Application with Incorporation ☐ Injection	20. Nitrogen applied (lb/ac)
21. Application: **Start Date** **Finish Date**	22. Cumulative Load Required (select one) ☐ YES ☐ NO	23. Reached 90% CPLR App. Rate? ☐ YES ☐ NO

SITE _____ – INFORMATION		
1. Field ID / Number	2. Site BMP Number	3. Indian Country ☐ YES ☐ NO
4. Land Owner	5. Biosolids Generator	6. Biosolids Applier
7. Section	8. Township	9. Range
10. Crop to be grown	11. Dryland or Irrigated Crop	12. Yield Goal for Crop (yield/acre)
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19. Method of Application: ☐ Surface Application	☐ Surface Application with Incorporation ☐ Injection	20. Nitrogen applied (lb/ac)
21. Application: **Start Date** **Finish Date**	22. Cumulative Load Required (select one) ☐ YES ☐ NO	23. Reached 90% CPLR App. Rate? ☐ YES ☐ NO

** **Attach additional copies of this sheet as necessary, or you may attach your contractor's Land Application Spreadsheets/Reports which includes this information.**

** **Include copies of the actual analytical laboratory soils data sheets as an attachment at the end of the packet.**

If you have any questions about the preparation of this form, contact **Tim Larson – CDPHE (303) 691-4091.**

BIOSOLIDS TREATMENT PROVIDED (No. of Units)

THICKENING:
1. Gravity ☐
2. DAF ☐
3. Centrifuge ☐
4. ____N/A_____ ☒

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

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. _COMPOSTING____ ☒

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

SECTION V – MONITORING DATA SUMMARY (reporting year **2024**)
Permit Number ( )

Parameter	Minimum Monthly Concentration	Average Monthly Concentration	Maximum Monthly Concentration	Units	Number of Analyses	Method Detection Limit	Test Method	Sample Type
Inorganics								
Total Solids	**62.4**	**71.0**	**75.8**	%	**2**	**0.01**	**Sm 2540**	☐ Grab ☒ Composite
Total Arsenic	**5.4**	**5.57**	**5.74**	mg/kg	**2**	**5**	**Epa 6010**	☐ Grab ☒ Composite
Total Cadmium	**0.89**	**0.99**	**1.08**	mg/kg	**2**	**0.872**	**Epa 6010**	☐ Grab ☒ Composite
Total Copper	**111**	**127**	**143**	mg/kg	**2**	**1.09**	**Epa 6010**	☐ Grab ☒ Composite
Total Lead	**7.9**	**14.97**	**22**	mg/kg	**2**	**3.27**	**Epa 6010**	☐ Grab ☒ Composite
Total Mercury	**0.11**	**0.055**	**0.000119**	mg/kg	**2**	**3.48ng/kg**	**Epa 7471**	☐ Grab ☒ Composite
Total Molybdenum	**3**	**3**	**3**	mg/kg	**1**	**1.0**	**Epa 6010**	☐ Grab ☒ Composite
Total Nickel	**16.2**	**16.2**	**16.2**	mg/kg	**1**	**1.0**	**Epa 6010**	☐ Grab ☒ Composite
Total Selenium	**ND**	**ND**	**ND**	mg/kg	**1**	**5.45**	**Epa 6010**	☐ Grab ☒ Composite
Total Zinc	**243**	**292**	**341**	mg/kg	**2**	**2.18**	**Epa 6010**	☐ Grab ☒ Composite
Nutrients								
Total Kjeldahl Nitrogen		**n/a**		% dry weight				☐ Grab ☒ Composite
Organic Nitrogen	**1.13**	**1.13**	1.13	% dry weight	**1**	**0.01**	**Wc 055**	☐ Grab ☒ Composite
Ammonia Nitrogen	**0.154**	**0.154**	**0.154**	% dry weight	**1**	**0.01**	**Aoac 920.3**	☐ Grab ☒ Composite
Nitrate Nitrogen	**0.03**	**0.03**	**0.03**	% dry weight	**1**	**0.01**	**Wc proc 32**	☐ Grab ☒ Composite
Total Phosphorus	**0.58**	**0.58**	**0.58**	% dry weight	**1**	**0.1**	**Mwl me proc 23**	☐ Grab ☒ Composite
Total Potassium	**0.45**	**0.45**	**0.45**	% dry weight	**1**	**0.05**	**Mwl me proc 26**	☐ 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 503 and 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 **Tim Larson – CDPHE (303) 691-4091.**

SECTION VI – PATHOGEN AND VECTOR ATTRACTION REDUCTION (reporting year **2024**)
Permit Number (COBMP1931)

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)
- ☐ Option 2 (Anaerobic process, with bench-scale demonstration)
- ☐ Option 3 (Aerobic Process, with bench scale demonstration)
- ☐ 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 **Tim Larson – CDPHE (303) 691-4091.**

SECTION VII – SIGNATURE PAGE (reporting year **2024**)

Facility / Company Name	NPDES or CO Permit Number
Twin Enviro Apex	COBMP1931

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: **Lacie Coupe General Manager**

Telephone Number: **970-879-6985**

E-mail Address: lcoupe@apexwasteco.com

Signature: Lacie Coupe

Date Signed: 2/7/2025

Upon request from the State, you may be required to submit additional information necessary to assess biosolids use or disposal practices, or to identify appropriate compliance requirements.

Please Return Completed Forms and All Additional Information (Including That Which Is Required by Regulation 64.17.B & C) by email or mail:

***Email (to both)**:*

Biosolids+AnnualReports@state.co.us
= (*new email address*)

AND

cdphe.wqrecordscenter@state.co.us

***Or mail to**:*

Tim Larson
BIOSOLIDS PROGRAM
CDPHE – Water Quality Control Division
WQCD-WQP-B2
4300 Cherry Creek Dr. S.
Denver, CO 80246-1530

COBMP1931
Additional Facilities
Page 2, Section 6

Facility Name	Address	Phone Number	DMT Received
Mt Werner Water	3310 Clearwater Trail, Steamboat Springs, CO 80487	(970) 879-2424	58.1
Morrison Creek Water & Sanitation District	24490 Uncompahgre Road Oak Creek, CO 80467	(970) 736-8250	13.1
Milner WWTP	38700 Main St, Milner CO 80487	(970)870-5588	283.2
Phippsburg WWTP	22158 CR 12, Phippsburg CO 80467	(970)870-5588	535.1

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Lab # 70499168 **Report of Analysis** Report Number: 24-216-4014

Account: 64012	DAVID KEATING Twin Enviro Services 20650 COUNTY RD 205 Steamboat Springs CO 80477
Date Sampled:	2024-07-19
Date Received:	2024-07-22
Sample ID:	COMPOST 71924

Robert Ferris
Account Manager
402-829-9871

TWIN ENVIRO

		Analysis (as rec'd)	Analysis (dry weight)	Total content, lbs per ton (as rec'd)
NUTRIENTS				
Nitrogen				
Total Nitrogen	%	0.99	1.31	19.8
Organic Nitrogen	%	0.85	1.13	17.1
Ammonium Nitrogen	%	0.117	0.154	2.3
Nitrate Nitrogen	%	0.02	0.03	0.4
Major and Secondary Nutrients				
Phosphorus	%	0.44	0.58	8.8
Phosphorus as P2O5	%	1.01	1.33	20.2
Potassium	%	0.34	0.45	6.8
Potassium as K2O	%	0.41	0.54	8.2
Sulfur	%	0.19	0.25	3.8
Calcium	%	1.26	1.66	25.2
Magnesium	%	0.31	0.41	6.2
Sodium	%	0.060	0.079	1.2
Micronutrients				
Zinc	ppm	184.6	244	0.4
Iron	ppm	10200	13456	20.4
Manganese	ppm	520	686	1.0
Copper	ppm	87.2	115	0.2
Boron	ppm	< 100	----	----
OTHER PROPERTIES				
Moisture	%	24.20		
Total Solids	%	75.80		1516.0
Organic Matter	%	25.90	34.17	518.0
Ash	%	49.60	65.44	992.0
C:N Ratio		11 : 1		
Total Carbon	%	11.24	14.83	
Chloride	%	< 0.01	----	
pH		7.3		
Conductivity 1:5 (Soluble Salts)	mS/cm	1.67		

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Compost Results Interpretations
Page 1

Report #: 24-216-4014
DATE RECEIVED: 2024-07-22

Organic Matter %

25.90 As Received
34.17 Dry Weight

Greater than 20% indicates a desirable range for compost on a dry weight basis.

Compost is a significant source of Organic Matter, which is an important supplier of carbon. Organic Matter improves soil and plant efficiency by improving soil physical properties, providing a source of energy to beneficial organisms, and enhancing the reservoir of soil nutrients.

C/N Ratio

11.4:1

20-30 indicates an ideal range for the initial compost process.
10-20 indicates an ideal range for a finished compost.

All organic matter is made up of substantial amounts of carbon with lesser amounts of nitrogen. The balance of these two elements is called the Carbon/Nitrogen Ratio. For the best performance, the compost pile requires the correct proportion of carbon for energy and nitrogen for protein production. If the C:N ratio is too high (excess carbon) decomposition slows down. If the C:N ratio is too low (excess Nitrogen) the compost pile could be difficult to manage.

Moisture %

24.20

<35% = Indicates overly dry compost

>55% = Indicates overly wet compost

Moisture Percent is the measure of water present in the compost and expressed as a percentage of total weight. Moisture present affects handling and transport. Overly dry will be light and dusty while overly wet will be heavy and clumpy. A desirable moisture content of finished compost will range between 40 to 50%.

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Compost Results Interpretations
Page 2

Report #: 24-216-4014
DATE RECEIVED: 2024-07-22

Conductivity or Soluble Salts measures the conductance of electrical current in a liquid compost slurry. Excessive soluble salt content in a compost can prevent or delay seed germination and proper root growth. Conductivity analysis is done on a 1:5 basis.

Conductivity 1:5
1.7

Conductivity Level	Interpretation
Greater than 10	Very High nutrient content. Use for Ag Applications
5 - 10	High nutrient content. Use for Ag Applications
3 - 5	Higher than desirable for salt sensitive plants, some loss of vigor
0.6 - 3	Desirable range for most plants
0.3 - 0.6	Ideal range for greenhouse growth media
0.0 - 0.3	Very Low: Indicates very low nutrient status: plants may show deficiencies.

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Compost Results Interpretations
Page 3

Report #: 24-216-4014
DATE RECEIVED: 2024-07-22

pH Value

7.3

0 to 14 scale with 6 to 8 as normal pH levels for compost

A pH in the 6 to 8 pH range indicates a more mature compost

pH measures the acidity or alkalinity of the compost, and is a measurement of the hydrogen ion activity of a soil or compost on a logarithmic scale. The pH scale ranges from 0 to 14 and 7 indicates a neutral pH. Growing media with a higher pH or pH greater than 7 can benefit from a compost that has a more acidic pH or pH below 7. This type of application will possibly lower the soil pH making the soil more conducive to plants that thrive in a more acidic soil condition.

Nutrient Index (Ag Index)

>10

The Nutrient Index normally runs between 1 and 10.

The Nutrient Index is obtained by dividing the total nutrients (N,P,K) by the amount of salt (Sodium and Chloride). The higher the Nutrient Index the less chance of having a toxic buildup of Sodium (salt) in the soil.

AG INDEX CHART

salt injury possible	*use on soils with excellent drainage characteristics, good water quality and low salts*				*you may use on soils with poor drainage, poor water quality, or high salts*					*for all soils*
1	2	3	4	5	6	7	8	9	10	> 10

Nutrients (N+P205+K20)

3.18 Average Nutrient Content Dry Weight <2 = Low, >5 = High

1-1-0.5 Rating As Received

The most commonly used compost data is the amount of Nitrogen, Phosphate, and Potash (abbreviated as N,P,K) present and the information is similar to that found in common fertilizers. If a compost result has the rating 1-2-2 it means that the compost has 1% Nitrogen, 2% Phosphate and 2% Potash. Most compost tests will have a average nutrient level (N+P+K) of < 5%.

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Twin Enviro Services
DAVID KEATING
20650 COUNTY RD 205
Steamboat Springs CO 80477

REPORT OF ANALYSIS

For: (64012) Twin Enviro Services
TWIN ENVIRO

Analysis	Level Found As Received	Level Found Dry Weight	Units	Reporting Limit	Method	Analyst-Date	Verified-Date
Sample ID: **COMPOST 71924** Lab Number: **70499168** Date Sampled: **2024-07-19 0950**							
Arsenic (total)	< 5.0	5.4	mg/kg	5.0	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Cadmium (total)	0.68	0.89	mg/kg	0.50	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Chromium (total)	18.6	24.6	mg/kg	1.00	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Cobalt (total)	4.74	6.26	mg/kg	1.00	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Copper (total)	84.1	111	mg/kg	1.0	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Mercury (total)	0.08	0.11	mg/kg	0.05	EPA 7471	Mab7-2024/08/02	kkh9-2024/08/03
Molybdenum (total)	2.3	3.0	mg/kg	1.0	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Nickel (total)	12.3	16.2	mg/kg	1.0	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Lead (total)	6.0	7.9	mg/kg	5.0	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Selenium (total)	< 10.0	< 10.0	mg/kg	10.0	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Zinc (total)	184.6	243.5	mg/kg	2.0	EPA 6010	erw9-2024/07/26	kkh9-2024/08/03
Fecal coliforms	49.3	65.0	MPN/g	0.2	EPA 1681	cjb1-2024/07/25	snl7-2024/07/25
Salmonella	< 1.20	< 1.20	MPN/4g	1.20	TMECC 7.02 (mod)	sdw8-2024/07/27	snl7-2024/07/29

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.

Midwest Laboratories®
13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770
www.midwestlabs.com

Twin Enviro Services
DAVID KEATING
20650 COUNTY RD 205
Steamboat Springs CO 80477

REPORT OF ANALYSIS

For: (64012) Twin Enviro Services
TWIN ENVIRO

Analysis	Level Found As Received	Level Found Dry Weight	Units	Reporting Limit	Method	Analyst-Date	Verified-Date

Sample(s) was prepared for EPA 6010 analysis by EPA 3050b.

EPA 1681 holding time of < 24 hours from sampling to laboratory set up of samples for biosolids and compost has been exceeded. Individual states enforce different holding times for compost or biosolids so please contact the regulatory body in your state for their requirements.

MPN = most probable number , ppm = parts per million, ppm = mg/kg, ppm = mg/L

For questions please contact:

Kerri Stanek
Account Manager
kstanek@midwestlabs.com (402)590-2982

REPORT NUMBER
24-268-4023

REPORT DATE
Sep 24, 2024

SEND TO
64012

RECEIVED DATE
Sep 18, 2024

Midwest Laboratories®
13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770
www.midwestlabs.com

ISSUE DATE
Sep 24, 2024

Twin Enviro Services
DAVID KEATING
20650 COUNTY RD 205
Steamboat Springs CO 80477

REPORT OF ANALYSIS

For: (64012) Twin Enviro Services
TWIN ENVIRO

Analysis	Level Found As Received	Level Found Dry Weight	Units	Reporting Limit	Method	Analyst-Date	Verified-Date
Sample ID: **COMPOST TESTING** Lab Number: **70526407** Date Sampled: **2024-09-17 1421**							
Salmonella	< 1.20	< 1.20	MPN/4g	1.20	TMECC 7.02 (mod)	ojb0-2024/09/21	snl7-2024/09/23
Fecal coliforms	2.4	3.2	MPN/g	0.2	EPA 1681	sdw8-2024/09/19	snl7-2024/09/19
Percent solids	74.8		%	0.01	SM 2540 G-(2015) *	Ppj2-2024/09/20	mgn8-2024/09/24

MPN = most probable number

For questions please contact:

Kerri Stanek
Account Manager
kstanek@midwestlabs.com (402)590-2982

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Revised Analytical Report

January 10, 2025

Report to:
Rebecca Lindeman
Jardon Engineering & Inspections
PO Box 772143
Steamboat, CO 80477

Bill to:
Accounts Payable
Twin Landfill Corporation
P.O. Box 774362
Steamboat Springs, CO 80477

cc: Dave Keating

Project ID:
ACZ Project ID: L92018

Rebecca Lindeman:

Enclosed are revised analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 12, 2024 and originally reported on December 26, 2024. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L92018. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L92018. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after January 25, 2025. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than $10/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical reports for five years.

If you have any questions or other needs, please contact your Project Manager.

Sue Webber has reviewed and approved this report.

Twin Landfill Corporation

January 10, 2025

Project ID:
ACZ Project ID: L92018

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 soil sample from Twin Landfill Corporation on December 12, 2024. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L92018. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

This sample was analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports.

This project was revised on 01/10/2025 to report additional metals as requested by the client. No other changes were made.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Analytical Results

Twin Landfill Corporation
Project ID:
Sample ID: COMPOST

ACZ Sample ID: ***L92018-01***
Date Sampled: *12/12/24 13:05*
Date Received: *12/12/24*
Sample Matrix: *Soil*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	EPA 6010D	109	5.74	B		mg/Kg	4.36	21.8	12/23/24 22:00	msp
Barium, total (3050)	EPA 6010D	109	252			mg/Kg	0.981	3.82	12/23/24 22:00	msp
Cadmium, total (3050)	EPA 6010D	109	1.08	B	*	mg/Kg	0.872	2.73	12/23/24 22:00	msp
Chromium, total (3050)	EPA 6010D	109	16.8		*	mg/Kg	2.18	5.45	12/23/24 22:00	msp
Copper, total (3050)	EPA 6010D	109	143		*	mg/Kg	1.09	5.45	12/23/24 22:00	msp
Lead, total (3050)	EPA 6010D	109	22.0			mg/Kg	3.27	16.4	12/23/24 22:00	msp
Mercury by Direct Combustion AA	EPA 7473	1	119		*	ng/g	3.48	17.4	01/09/25 15:53	jrj/rjw
Selenium, total (3050)	EPA 6010D	109	<5.45	U		mg/Kg	5.45	27.3	12/23/24 22:00	msp
Silver, total (3050)	EPA 6010D	109	4.89		*	mg/Kg	1.09	2.73	12/23/24 22:00	msp
Zinc, total (3050)	EPA 6010D	109	341		*	mg/Kg	2.18	5.45	12/23/24 22:00	msp

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	D2216-80	1	62.4		*	%	0.1	0.5	12/20/24 8:00	grw

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								12/17/24 7:40	jsa
Digestion - Hot Plate	EPA 3050B								12/20/24 10:40	bat2
Sieve-2000 um (2.0mm)	ASA No.9 15-4.2.2								12/18/24 7:25	jsa

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
MDL	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	Continuing Calibration Blank	*LFM*	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	*LFMD*	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	*LRB*	Laboratory Reagent Blank
ICB	Initial Calibration Blank	*MS*	Matrix Spike
ICV	Initial Calibration Verification standard	*MSD*	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	*PBS*	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	*PBW*	Prep Blank - Water
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4) EPA SW-846. Test Methods for Evaluating Solid Waste.
(5) Standard Methods for the Examination of Water and Wastewater.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Inorganic Extended Qualifier Report

Twin Landfill Corporation

ACZ Project ID: ***L92018***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L92018-01	WG603508	Cadmium, total (3050)	EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Chromium, total (3050)	EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Copper, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG604156	Mercury by Direct Combustion AA	EPA 7473	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG603508	Silver, total (3050)	EPA 6010D	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
		Zinc, total (3050)	EPA 6010D	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			EPA 6010D	ZH	Serial Dilution exceeded the acceptance criteria. Matrix interference [physical or chemical] is suspected.

Certification Qualifiers

Twin Landfill Corporation ACZ Project ID: ***L92018***

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Solids, Percent	D2216-80

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Twin Landfill Corporation

ACZ Project ID: L92018
Date Received: 12/12/2024 17:11
Received By:
Date Printed: 12/16/2024

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody form or other directive shipping papers present?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
5) If samples are received past hold time, proceed with requested short hold time analyses?	X		
6) Is the Chain of Custody form complete and accurate?	X		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?		X	

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]			X
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
7697	4.8	NA	15	N/A

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

Twin Landfill Corporation

ACZ Project ID:	L92018
Date Received:	12/12/2024 17:11
Received By:	
Date Printed:	12/16/2024

[1] The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

ACZ Laboratories, Inc. L92018

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

CHAIN of CUSTODY

Report to:

Name: David Keating | Address: 2650 Co Rd 205
Company: Tetra Tech | Steamboat Springs CO
E-mail: David.Keating@Aquatechnet.com | Telephone: 720 879 6065

Copy of Report to:

Name: Rebecca Linderman | E-mail: rlinderman@jordaneng.com
Company: Jordan | Telephone: 303 517 8189

Invoice to:

Name: Jim Quint | Address: 2650 Co Rd 205
Company: Tetra Tech | Steamboat Springs CO
E-mail: Jim.Quint@Aquatechnet.com | Telephone: 970 879 6065

L92018 Chain of Custody

Sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☑ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☑

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: David Keating **Sampler's Site Information** State CO Zip code 80487 Time Zone MT

***Sampler's Signature:** [signature]

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: Confirmed
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Alkalinity
Confirmed	12/12/24 1350		1	✓

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
David Keating	12/12/24 1350	[signature]	12/12/24 1350

FRMAD050.06.14.14 White - Return with sample. Yellow - Retain for your records.