

**LETTER OF INTENT
FOR THE USE AND DISTRIBUTION OF BIOSOLIDS
FOR UNRESTRICTED USE (LAWN AND HOME GARDEN)**

Regulation No. 64 Section 64.10(A)(1)

**Colorado Department of Public Health and Environment
Water Quality Control Division
Biosolids Management Program
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, CO 80246-1530**

DATE RECEIVED _____
LOIN DATE _____
COMP/AIR DATE _____
REC'D AIR/COMP DATE _____
NOA DATE _____

DO NOT WRITE ABOVE THIS LINE

GENERAL INFORMATION

Facility Name _____
Legal Contact _____
Street _____
City _____ State _____ ZIP _____
Phone _____ Fax _____

E-Mail _____

SITE INFORMATION

Certificate of Designation Number: N/A _____
Site Location (Section, Township, Range) _____
Center of Site GPS Reading _____
County _____
Closest Major Intersection _____
(Attach driving directions to the site from this location)

LETTER OF INTENT

BIOSOLIDS ANALYSES AND REPORTING UNITS					
PARAMETER	UNITS	VALUE	PARAMETER	UNITS	VALUE
total solids	percent		total arsenic	mg/kg dry weight	
pH	standard units		total cadmium	mg/kg dry weight	
total phosphorus	percent dry weight		total copper	mg/kg dry weight	
total potassium	percent dry weight		total lead	mg/kg dry weight	
volatile solids	percent of total solids		total mercury	mg/kg dry weight	
organic nitrogen as N	percent dry weight		total molybdenum	mg/kg dry weight	
total ammonia as N	percent dry weight		total nickel	mg/kg dry weight	
nitrate as N	percent dry weight		total selenium	mg/kg dry weight	
Laboratory:			total zinc	mg/kg dry weight	
Date Sampled (if individual sample) ____/____/____					
Dates of Samples if averaged (must be in same calendar month) ____/____/____; ____/____/____; ____/____/____					

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CLASS A PATHOGEN DESTRUCTION CRITERIA

CIRCLE ONE: Fecal Coliform OR Salmonella Monitoring Results (dry weight basis):

Laboratory	Sample Date	<i>Fecal Coliform Units = MPN/gram of Total Solids</i> <i>Salmonella Units = MPN/4 grams of Total Solids</i>
_____	____/____/____	_____
_____	____/____/____	_____
_____	____/____/____	_____
_____	____/____/____	_____
_____	____/____/____	_____
_____	____/____/____	_____

AND

Identify the Class "A" Alternative Used:

Alternative A-2 Alkaline Treatment N/A

- Sludge pH (logs of pH from beginning, middle and end of treatment) ≥ 12 S.U.
- Time pH maintained ≥ 12 (minimum 72 hours) _____ Hours
- Logs of sludge temps from beginning, middle, end and hourly - Minimum 12 hours > 52 °C (125.6 °F)
- Percent solids in sludge after drying _____ $\geq 50\%$

Attach Documentation

Alternative A-3 Prior Testing N/A

- Analytical Results (prior to pathogen reduction and, when appropriate, after treatment):
- Density of Enteric Viruses (1 plaque forming unit per 4 grams of total solids)
- Viable Helminth Ova (1 per 4 grams of total solids)
- Detailed Sampling and Analysis Plan Available
- Values or range of values for operating parameters to indicate consistent pathogen reduction treatment

Attach QAPP

Attach Analytical Results

Alternative A-4 No Prior Testing N/A

- Analytical Results (prior to pathogen reduction and, when appropriate, after treatment):
- Density of Enteric Viruses (1 plaque forming unit per 4 grams of total solids)
- Viable Helminth Ova (1 per 4 grams of total solids)
- Detailed Sampling and Analysis Plan Available

Attach QAPP

Attach Analytical Results

LETTER OF INTENT

CLASS A PATHOGEN DESTRUCTION CRITERIA

Alternative A-5 Process to Further Reduce Pathogens (PFRP) N/A

Heat Drying N/A

- Moisture content of dried sludge _____ < 10%
- Logs documenting temp of sludge particles or the wet bulb temp of gas in contact is ≥ 80 °C (176 °F)
(continuous reading or once per shift, minimum 2 readings per day)

Attach Documentation

Thermophilic Aerobic Digestion N/A

- Dissolved oxygen concentration in digester
- Temperature logs 55 °C – 60 °C (131 °F – 140 °F)
- Mean Cell Residence Time (MCRT) 10 days running average _____ days (see equations below)

For complete mixed, constant feed & withdrawal with decanting: $\theta_n = \frac{V C_v}{q C_q}$

V = reactor volume q = flow rate leaving C_v = concentration of solids in reactor

C_q = concentration of solids in existing sewage sludge θ_n = MCRT (running average solids residence time)

For batch withdrawal, daily step feeding and decanting: $\theta_n = \frac{S(ds \times \theta)}{S(ds)}$ or $\frac{S(V_i \times C_i \times T_i)}{S(V_i \times C_i)}$

ds = an increment of sludge solids that leaves the reactor θ = time period this increment has been in the reactor

V_i = volume of daily batch feed (incremental) to digester C_i = average concentration of solids in daily feed stream

Attach Documentation

Composting N/A

Composting method: Windrow Static Aerated Pile Within –vessel Other

- Temperature logs: ≥ 55 °C (131 °F) for 3 days if within-vessel or static aerated pile method
(continuous reading or one reading per shift, minimum 2 readings per day)
- Temperature logs: ≥ 55 °C (131 °F) for 15 days if windrow method
(one reading per shift, minimum 2 readings per day)
- Records of pile turnings – minimum of 5 if windrow method

Attach Documentation

LETTER OF INTENT

VECTOR ATTRACTION REDUCTION CRITERIA

Identify the vector attraction reduction method:

- Volatile Solids Reduction (64.12.C(3)) _____%
- Bench scale anaerobic digestion (64.12.C(4)) _____%
- Bench scale aerobic digestion (64.12.C(5)) _____%
- Specific oxygen uptake rate (64.12.C(6)) _____%
- Aerobic processing MCRT > 14 days /T > 40EC; xT > 45EC (64.12.C(7)) _____%
- Alkaline addition (64.12.C(8)) _____%
- No primary solids, solids content >75% prior to mixing (64.12.C(9)) _____%
- Primary solids, solids content >90% prior to mixing (64.12.C(10)) _____%

Attach Documentation

ATTACHMENTS

- FACILITY OPERATING PLAN

Attach a process description and a description of how the biosolids will be marketed to the public. The facility operating plan should also include copies of any labeling, information sheets, written cautions or written instructions for use required per Section 64.14.A(2) or 64.14.B(2) of the Biosolids Regulation.

SUBMITTAL REQUIREMENTS

Mail the Letter of Intent to the address listed on the front page.

Submit a copy of the Letter of Intent to the Local Health Authority. Don't forget to send additional information requested by the Division to the Local Health authority.

Allow 30 days for Division review – the Division will notify the Applicant within 30 days of the completeness of this Letter of Intent.

Allow 30 days from the date of the completeness notification for Division issuance of a Notice of Authorization.

Biosolids may not be distributed without a Notice of Authorization from the Water Quality Control Division

Contact the Division at 303-692-3613 with any questions you may have.

