



# Compost Quality Assurance/Quality Control

## SMSC Organics Recycling Facility



952.233.9191 • [SMSCORF.COM](http://SMSCORF.COM)  
1905 MYSTIC LAKE DRIVE S, SHAKOPEE, MN

OWNED AND OPERATED BY THE SHAKOPEE MDEWAKANTON SIOUX COMMUNITY



# Background - SMSC Organics Recycling Facility

- Shakopee Mdewakanton Sioux Community (SMSC)
- 70,000 tons of material per year
  - Food Waste
  - Yard Waste
  - Wood





# Turned Windrow Facility





Quality assurance should happen  
**BEFORE, DURING, and AFTER**  
composting



# Before Composting - Load Inspections

Unacceptable materials include:

- Glass
- Metal
- Plastics



- Front End Loader/Long handled hooks
- Load must contain less than 5% contamination to be accepted



# During Composting— Monitor the Process

- Meet PFRP. (Process to Further Reduce Pathogens)

- Requires that compost is monitored, heats up, and maintains heat for a certain amount of time.

- Ensures that weed seeds, pathogens, and invasive species are killed.



Day	Date	PFRP (131°F)	Temp (°F)	Mgmt	Oxy (%)	Moistur
	4/24/2017		116			
	4/25/2017		#N/A			
	4/26/2017	131	131		4.7	43
	4/27/2017	#N/A	#N/A		#N/A	
	4/28/2017	#N/A	145		#N/A	
	4/29/2017	#N/A	#N/A		#N/A	
	4/30/2017	#N/A	#N/A		#N/A	
	5/1/2017	#N/A	152		#N/A	
	5/2/2017	#N/A	#N/A		#N/A	
	5/3/2017	#N/A	151		7.7	48
	5/4/2017	#N/A	#N/A		#N/A	
	5/5/2017	#N/A	148		#N/A	
	5/6/2017	#N/A	#N/A		#N/A	
	5/7/2017	#N/A	#N/A		#N/A	
	5/8/2017	#N/A	151		#N/A	
	5/9/2017	#N/A	#N/A		#N/A	
	5/10/2017	#N/A	150		6.4	52
	5/11/2017	#N/A	148		#N/A	
	5/12/2017	#N/A	#N/A		#N/A	
	5/13/2017	#N/A	#N/A		#N/A	
	5/14/2017	#N/A	#N/A		#N/A	
	5/15/2017	#N/A	134		#N/A	
	5/16/2017	#N/A	#N/A		#N/A	
	5/17/2017	#N/A	136		18.6	43
	5/18/2017	#N/A	#N/A		#N/A	
	5/19/2017	#N/A	138		#N/A	
	5/20/2017	#N/A	#N/A		#N/A	
	5/21/2017	#N/A	#N/A		#N/A	
	5/22/2017	#N/A	145		#N/A	
	5/23/2017	#N/A	#N/A		#N/A	
	5/24/2017	#N/A	133		17.6	60
	5/25/2017	#N/A	#N/A	100	#N/A	
	5/26/2017	#N/A	132		#N/A	
	5/27/2017	#N/A	#N/A		#N/A	
	5/28/2017	#N/A	#N/A		#N/A	
6	5/29/2017	#N/A	#N/A		#N/A	
37	5/30/2017	#N/A	155		#N/A	
38	5/31/2017	#N/A	161	100	15.3	47
39	6/1/2017	#N/A	#N/A		#N/A	
40	6/2/2017	#N/A	163		#N/A	



# After Composting - Onsite Testing

## Solvita Tests

- Ensure product is cured enough (mature) to be sold
- Measures CO<sub>2</sub> and NH<sub>3</sub>
- Rating 1-8 (Need a reading of a 6 or higher to be sold)





## Contamination Checks

- Periodic quality checks during screening
- 5-gallon composite sample gathered
- Sieves (3/8", 1/4", No. 4)
- Contamination classified and documented



# After Composting - Third Party Testing

## STA Certified Compost

- USCC's Seal of Testing Assurance program (STA)
  
- In-depth testing for
  - Heavy metals
  - Pathogens
  - Maturity
  - Stability
  - Nutrients
  - pH
  - Organic matter



**US Composting  
Council**

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***Seal of Testing  
Assurance***<sup>®</sup>



US COMPOSTING COUNCIL

Seal of Testing Assurance

SMSC Organic Recycling Facility  
Erin Skelly  
2330 Sioux Trail NW  
Prior Lake  
MN 55372

Date Sampled/Received: 18 Jan. 22 / 19 Jan. 22

Product Identification  
Seven Generations Compost 1/22

## COMPOST TECHNICAL DATA SHEET

LABORATORY: Soil Control Lab; 42 Hangar Way; Watsonville, CA 95076 tel: 831.724.5422 fax: 831.724.3188			
Compost Parameters	Reported as (units of measure)	Test Results	Test Results
Plant Nutrients:	% weight basis	Not reported	Not reported
Moisture Content	% wet weight basis	40.6	
Organic Matter Content	% dry weight basis	48.5	
pH	units	8.29	
Soluble Salts <i>(electrical conductivity EC<sub>1</sub>)</i>	dS/m (mmhos/cm)	3.0	
Particle Size or Sieve Size	maximum aggregate size, inches	0.64	
Stability Indicator ( <i>respirometry</i> )		Stability Rating:	
CO <sub>2</sub> Evolution	mg CO <sub>2</sub> -C/g OM/day	2.0	Very Stable
	mg CO <sub>2</sub> -C/g TS/day	0.99	
Maturity Indicator (bioassay)			
Percent Emergence	average % of control	100.0	
Relative Seedling Vigor	average % of control	100.0	
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	Pass	Fecal coliform
		Pass	Salmonella
Trace Metals	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.13, Tables 1 and 3.	Pass	As, Cd, Cr, Cu, Pb, Hg Mo, Ni, Se, Zn

Participants in the US Composting Council's Seal of Testing Assurance Program have shown the commitment to test their compost products on a prescribed basis and provide this data, along with compost end use instructions, as a means to better serve the needs of their compost customers.

Laboratory Group: Jan22C Laboratory Number: 2010391-1/2

Analyst: Assaf Sadeh

www.compostlab.com

# Questions?

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