

LONG TERM LESSONS

Mixed MSW Composting



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IN-VESSEL ACCELERATED FERMENTATION



Designed and built by S&W Services / Groupe Conporec

Fully Enclosed – Receiving to Storage



Negative Aeration In Building

Mechanical Handling



Demag Crane

Highly Automated System



“Hot Seat” Operator Controls Most Systems thru HMI

Accelerated Fermentation Bioreactor



Three Day Residence Time for MSW

Material Screening



Primary & Secondary Contaminant Removal

Aerated Turned Windrows



IPS System with 56 Days for Maturation

COMPOST FOR SALE



WeCare brokerage services

LESSONS LEARNED

- ❑ Quality MSW Compost is Achievable
- ❑ Odor Management Continual
- ❑ Economic Downturn and POTW Biosolids
- ❑ Capital & Maintenance Intensive
- ❑ Compost Process is Tolerant
- ❑ Engineered Systems Lack Elasticity
- ❑ Limited Import Opportunities
- ❑ Organics Compliment ISWM Systems
- ❑ Organics Compete With ISWM Systems
- ❑ Organics Management is Cost Competitive

MSW Pre-Compost 602 Conveyor

MSW PRE-COMPOST (3 DAY)

Lab

dry weight basis

	NYSDEC	USEPA	NYSDEC	Wet or Dry W / D	Units	SIX YEAR ANALYTICALS (2007-2012)		
	Class A	EQ	Ceiling			High	Low	average
	Limits		Limits					
pH	2 - 12		2 - 12	w		6.77	5.99	6.33
Total Solids				w		52.62	46.08	48.70
Mercury (Hg)	10	17	57	d	mg/kg	0.45	0.15	0.33
Molybdenum (Mo)	40		75	d	mg/kg	2.85	2.05	2.55
Cadmium (Cd)	10	39	85	d	mg/kg	3.86	1.75	2.99
Selenium (Se)	28	36	100	d	mg/kg	5.70	0.60	2.62
Arsenic (As)	41	41	75	d	mg/kg	12.00	2.16	5.69
Nickel (Ni)	200	420	420	d	mg/kg	29.00	25.27	27.46
Chromium (Cr-total)	1000	1200	1000	d	mg/kg	46.82	29.80	38.68
Lead (Pb)	300	300	840	d	mg/kg	152.10	89.82	121.30
Copper (Cu)	1500	1500	4300	d	mg/kg	247.18	161.74	201.70
Zinc (Zn)	2500	2800	7500	d	mg/kg	538.18	388.89	451.11

Finished Product 800 Stockpile

dry weight basis

NYSDEC

Class A

SIX YEAR ANALYTICALS (2007-2012)

<u>Characteristics</u>	Units	Standard	High	Low	Average
pH		2 - 12	8.31	7.77	8.02
Moisture Content	%		37.25	26.72	30.77
Total Volatile Solids	%		70.90	55.17	63.81
Fecal coliform	CFU/gm-dry	1,000	966.50	3.60	393.36
Organic Matter	% dry wt		66.32	55.00	62.85
<u>Trace Elements</u>			-	-	
Arsenic (As)	mg/kg (dry)	41	7.13	1.43	3.63
Cadmium (Cd)	mg/kg (dry)	10	5.72	2.23	4.25
Chromium (Cr-total)	mg/kg (dry)	1,000	68.87	41.64	48.81
Copper (Cu)	mg/kg (dry)	1,500	415.18	311.03	364.36
Lead (Pb)	mg/kg (dry)	300	236.33	146.70	169.49
Mercury (Hg)	mg/kg (dry)	10	2.15	0.24	0.74
Molybdenum (Mo)	mg/kg (dry)	40	5.94	3.16	4.35
Nickel (Ni)	mg/kg (dry)	200	44.50	21.26	35.33
Selenium (Se)	mg/kg (dry)	28	14.47	0.40	4.04
Zinc (Zn)	mg/kg (dry)	2,500	725.97	560.95	620.75

