REC. WSRO 7-24-13

Compost	State of North Carolina Department of Environment and Natural Resources Division of Waste Management	**COMPOST** Facility Annual Report For the period of **July 1, 2012-June 30, 2013**

According to (G.S. 130A-309.09D(b)) completed forms must be returned by August 1, 2013 and a copy of this report must be sent to the County Manager of each county from which waste was received. If you have questions or require assistance in completing this report, contact your Regional Environmental Senior Specialist.

Facility Name: McGill Environmental Systems of NC Inc. Permit: 1906-COMPOST-

Facility Website (URL): www.mcgillcompost.com

Physical Address		Mailing Address	
Street 1: 634 Christian Chapel Church Rd		Street 1: 634 Christian Chapel Church Rd	
Street 2:		Street 2:	
City: New Hill	County: Chatham	City: New Hill	
State: North Carolina	Zip: 27562	State: North Carolina	Zip: 27562

Primary Facility Contact Person			Billing Contact Person		
Name: Steve Cockman			Name: Rhonda Henderson		
Phone: (919) 542-8903	Fax:	(919) 362-1141	Phone: (919) 362-1161	Fax:	(919) 362-1141
Email: scockman@mcgillcompost.com			Email: rhenderson@mcgillcompost.com		

1. Tipping Fee: $30.00 per Ton (Attach a schedule of tipping fees if appropriate.)

2. Please attach results of monthly temperature monitoring for the period of July 1, 2012 thru June 30, 2013.

3. For Type II, III, and IV facilities, attach results of tests (Waste Analysis with metals, foreign matter and pathogens) as required in Table 3 of Rule 15A NCAC 13B .1408 for the period of July 1, 2012 thru June 30, 2013. **Current Rules state that "Compost shall be analyzed at intervals of every 20,000 tons of compost produced or every six months, whichever comes first."**

4. What type and quantity of waste was composted by your facility?

Materials COMPOSTED	Check X if Received	Tons RECEIVED	Tons COMPOSTED	Unusable Tons DISPOSED
Yard Waste	☒	15,326.93	15,326.93	
Clean Wood	☐			
Sawdust	☐			
Wooden Pallets	☒	5,708.77	5,708.77	
Food Waste	☒	1,070.06	1,070.06	
Animal Waste	☒	1,806.74	1,806.74	
Sludge and Biosolids	☒	52,909.55	52,909.55	
Grease Trap Waste	☒	7,728.8	7,728.8	
Animal Mortalities	☐			
Sheetrock	☒	352.22	352.22	
Commingled (Describe)	☐			
Other (Describe) Tobacco dust & stems	☒	331.67	331.67	
Other (Describe) Ash	☒	518.75	518.75	
Other (Describe) Feed	☒	8.86	8.86	
	TOTAL	85,762.35	85,762.35	

5. What type and quantity of compost was produced and removed from your facility?

Type	Tons CREATED	Tons USED On Site	Tons SOLD to Public	Tons GIVEN to Public	Tons STOCKPILED	Tons DISPOSED	Other
Mulch							
Grade A Compost	24,377.3		23,098.53	1,278.77	1,200		
Grade B Compost							
Other							
Other							
TOTAL	24,377.3		23,098.53	1,278.77	1,200		

6. Indicate waste received at this compost facility during the period of July 1, 2012, through June 30, 2013. Indicate **tonnage** received by COUNTY of waste origin. Please indicate COUNTY and STATE if received from another state.

Received from	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Alamance				594.24					159.71	359.00	573.79	118.75	1,805.49
Chatham	424.21	236.19	287.40	136.86	170.71	122.73	216.60	143.03	271.29	373.44	92.15	176.65	2,651.26
Cumberland	444.08	362.60	370.56	377.87	372.17	309.14	483.84	314.56				19.70	3,054.52
Durham	29.50	8.84	9.93	13.98	8.92	90.26	388.36	448.68	746.70	1,045.97	1,006.06	541.59	4,338.79
Franklin			18.83		18.27	13.19	13.32	11.63		41.75			116.99
Granville	13.66	11.32	14.09	16.52	20.52	17.30	17.48	20.10	21.76	19.34	17.90	19.41	209.40
Guilford	171.01	401.24	334.18	436.76	393.36	346.41	417.76	376.58	431.15	241.06	62.72	128.05	3,740.28
Hoke	125.79	346.75	388.23	234.58	171.98	69.70	208.55	104.63	140.98	61.03	44.99	58.28	1,955.49
Johnston	478.91	451.33	442.37	506.80	297.72	329.22	588.98	417.00	226.26	273.45	296.91	329.27	4,638.22
Lee	295.15	340.43	332.82	563.80	402.99	320.08	457.46	569.39	548.41	400.19	360.39	371.94	4,963.05
Moore				7.65	33.86				309.69	1,350.43	551.00		2,252.63
Orange	35.50	66.60	26.07	16.61	12.49	16.87					2.92	40.71	217.77
Pitt	349.79	330.28	302.47	369.37	391.57	392.86	960.42	922.35	821.69	611.15	882.35	858.31	7,192.61
Richmond	24.02	6.21	19.17	9.69	15.28		9.74	7.89	8.33	15.89	16.72	23.97	156.91
Robeson	50.31		18.05										68.36
Rockingham	36.41	280.31											316.72
Scotland											12.11	18.67	30.78
Wake	4,758.95	5,145.31	4,545.40	4,373.32	4,572.63	3,101.70	2,757.45	2,874.50	3,922.84	3,371.53	3,784.03	4,591.82	47,799.48

Grand Total 85,508.75

7. Did your facility stop receiving waste during this past Fiscal Year? ☐ Yes ☒ No

If so, please report the date this occurred: _____

REMINDER: According to (G.S. 130A-309.09D(b)), this report must be sent to the Regional Environmental Senior Specialist for your area and a copy of this report must be sent to the County Manager of each county from which waste was received.

Please send your completed report to:

John Patrone
585 Waughtown Street
Winston-Salem, NC 27107-2275
phone: 336.771.5095 email: John.Patrone@ncdenr.gov

CERTIFICATION: I certify that the information provided is an accurate representation of the activity at this facility.

Signature: _____ Date: 7-15-13

Name: Steve Cockman Title: Operations Manager

Phone Number: (919) 542-8903 Email: scockman@mcgillcompost.com

5. What type and quantity of compost was produced and removed from your facility?

Type	Tons CREATED	Tons USED On Site	Tons SOLD to Public	Tons GIVEN to Public	Tons STOCKPILED	Tons DISPOSED	Other
Mulch							
Grade A Compost							
Grade B Compost							
Other							
Other							
TOTAL							

6. Indicate waste received at this compost facility during the period of July 1, 2012, through June 30, 2013. Indicate **tonnage** received by COUNTY of waste origin. Please indicate COUNTY and STATE if received from another state.

Received from	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	Total
Wayne	13.10					17.22							30.32
Wilson	9.74		12.82	17.03	15.52	8.89	16.83	9.00	28.34	16.38	8.83	20.68	164.06
Anson	59.22												59.22

Grand Total 253.60

7. Did your facility stop receiving waste during this past Fiscal Year? ☐ Yes ☐ No

If so, please report the date this occurred: _____

REMINDER: According to (G.S. 130A-309.09D(b)), this report must be sent to the Regional Environmental Senior Specialist for your area and a copy of this report must be sent to the County Manager of each county from which waste was received.

Please send your completed report to:

CERTIFICATION: I certify that the information provided is an accurate representation of the activity at this facility.

Signature: _____ Date: _____

Name: _____ Title: _____

Phone Number: _____ Email: _____

WASTE

ANALYSIS

US COMPOSTING COUNCIL

Seal of Testing Assurance

McGill Environmental (New Hill)
Steve Cockman
634 Christian Chapel Church Road
New Hill
NC 27562 0

Product Identification Compost
Merry Oaks Soil Builder

Date Sampled/Received: 21 Aug. 12 / 24 Aug. 12

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	29.9	
Organic Matter Content	%. dry weight basis	46.6	
pH	units	7.28	
Soluble Salts *(electrical conductivity EC_5)*	dS/m (mmhos/cm)	9.0	
Particle Size or Sieve Size	maxium aggregate size. inches	0.38	
Stability Indicator *(respirometry)*			*Stability Rating:*
CO_2 Evolution	mg CO_2-C/g OM/day mg CO_2-C/g TS/day	2.2 1.0	Stable
Maturity Indicator (bioassay)			
Percent Emergence	average % of control	100.0	
Relative Seedling Vigor	average % of control	0.0	
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	Pass Pass	*Fecal coliform* *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:	Aug.12 D	Laboratory Number:	2080694-1/1
Analyst: Assaf Sadeh		www.compostlab.com	

Aug 2012

US COMPOSTING COUNCIL

Seal of Testing Assurance

McGill Environmental (New Hill)
Steve Cockman
634 Christian Chapel Church Road
New Hill
NC 27562 0

Product Identification Compost
Merry Oaks Soil Builder

Date Sampled/Received: 21 Aug. 12 / 24 Aug. 12

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	%, wet weight basis	%, dry weight basis
Nitrogen	Total N	1.3	1.9
Phosphorus	P_2O_5	1.8	2.5
Potassium	K_2O	0.48	0.69
Calcium	Ca	3.6	5.1
Magnesium	Mg	0.29	0.42
Moisture Content	%, wet weight basis	29.9	
Organic Matter Content	%, dry weight basis	46.6	
pH	units	7.28	
Soluble Salts *(electrical conductivity EC_5)*	dS/m (mmhos/cm)	9.0	
Particle Size or Sieve Size	% under 9.5 mm, dw basis	100.0	
Stability Indicator *(respirometry)*			*Stability Rating:*
CO_2 Evolution	mg CO_2-C/g OM/day mg CO_2-C/g TS/day	2.2 1.0	Stable
Maturity Indicator (bioassay)			
Percent Emergence	average % of control	100.0	
Relative Seedling Vigor	average % of control	0.0	
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	Pass Pass	*Fecal coliform* *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: Aug.12 D Laboratory Number: 2080694-1/1

Analyst: Assaf Sadeh www.compostlab.com

US COMPOSTING COUNCIL

Seal of Testing Assurance

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

McGill Environmental (New Hill)
Steve Cockman
634 Christian Chapel Church Road
New Hill
NC 27562 0

Product Identification: Compost
Merry Oaks Soil Builder

Date Sampled/Received: 21 Aug. 12 / 24 Aug. 12

COMPOST TECHNICAL DATA SHEET for NORTH CAROLINA DOT

LABORATORY: Soil Control Lab; 42 Hangar Way; Watsonville, CA 95076 *tel:* 831.724.5422 *fax:* 831.724.3188

Compost Parameters	*Test Results*	*Reported as (units of measure)*	*Project Specification (Allowable Limit)*
Organic Matter Content	46.6	%, dry weight basis	25 - 65
pH	7.28	Unitless	5.0 - 8.5
Moisture Content	29.9	%, wet weight basis	30 - 60
Soluble Salts (electrical conductivity)	9.0	dS/m (mmhos/cm)	5.0 dS/m, maximum
Particle Size	100.0 100.0 100.0 97.5	%, dry weight passing through 3 inch screen and 1 inch screen and 3/4 inch screen and 1/4 inch screen	100% 90% minimum 65% minimum 50% maximum
Stability Indicator (respirometry) CO2 Evolution	2.2	mg CO2-C/g OM/day	≤ 8
Maturity Indicator (bioassay) Percent Emergence	100.0	average % of control	80%, minimum
Relative Seedling Vigor	0.0	average % of control	80%, minimum
Select Pathogens (Fecal Coliform)	Pass	PASS/FAIL: Per US EPA Class A standard, 40 CFR 503.32(a)	Pass
Trace Metals	Pass	PASS/FAIL: Per US EPA Class A 40 CFR 503.13, tables 1 and 3.	Pass
Inert Contamination (man-made)	None Detected	%, dry weight	<1.0 %

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.

For additional information pertaining to compost use, the specific compost parameters tested for within the Seal of Testing assurance Program, or the program in general, log on to the US Composting Council's TMECC web-site at http://www.tmecc.org.

This compost product has been sampled and tested as required by the Seal of Testing assurance Program on the United States Composting Council (USCC), using certain methods from the "Test Methods for the Examination of Compost and Composting" manual. Test results are available upon request by contacting the compost producer (address at top of page). The USCC makes no warranties regarding this product or its content, quality, or suitability for any particular use.

Laboratory Group: Aug.12 D Laboratory Number: 2080694-1/1

Analyst: Assaf Sadeh

www.compostlab.com

ANALYTICAL CHEMISTS
and
BACTERIOLOGISTS
Approved by State of California

TEL: 831-724-5422
FAX: 831-724-3188
www.compostlab.com

SOIL CONTROL LAB

42 HANGAR WAY
WATSONVILLE
CALIFORNIA
95076
USA

Account #: 2080694-1/1-6691
Group: Aug.12 D #23
Reporting Date: September 6, 2012

McGill Environmental (New Hill)
634 Christian Chapel Church Road
New Hill, NC 27562
Attn: Steve Cockman

Date Received: 24 Aug. 12
Sample Identification: Merry Oaks Soil Builder
Sample ID #: 2080694 - 1/1

Nutrients	Dry wt.	As Rcvd.	units
Total Nitrogen:	1.9	1.3	%
Ammonia (NH_4-N):	2300	1600	mg/kg
Nitrate (NO_3-N):	130	88	mg/kg
Org. Nitrogen (Org.-N):	1.7	1.2	%
Phosphorus (as P_2O_5):	2.5	1.8	%
Phosphorus (P):	11000	7700	mg/kg
Potassium (as K_2O):	0.68	0.48	%
Potassium (K):	5700	4000	mg/kg
Calcium (Ca):	5.1	3.6	%
Magnesium (Mg):	0.42	0.29	%
Sulfate (SO_4-S):	5000	3500	mg/kg
Boron (Total B):	28	19	mg/kg
Moisture:	0	29.9	%
Sodium (Na):	0.27	0.19	%
Chloride (Cl):	0.2	0.14	%
pH Value:	NA	7.28	unit
Bulk Density :	28	39	lb/cu ft
Carbonates ($CaCO_3$):	92	64	lb/ton
Conductivity (EC5):	9.0	NA	mmhos/cm
Organic Matter:	46.6	32.7	%
Organic Carbon:	24.0	17.0	%
Ash:	53.4	37.5	%
C/N Ratio	13	13	ratio
AgIndex	> 10	> 10	ratio

Stability Indicator:		Biologically
CO2 Evolution	Respirometery	Available C
mg CO_2-C/g OM/day	2.2	2.2
mg CO_2-C/g TS/day	1.0	1.0
Stability Rating	*stable*	*stable*

Maturity Indicator: Cucumber Bioassay		
Compost:Vermiculite(v:v)	1:1	1:3
Emergence (%)	100	100
Seedling Vigor (%)	0	87
Description of Plants	*stunted*	*healthy*

Pathogens	Results	Units	Rating
Fecal Coliform	< 2.0	MPN/g	*pass*
Salmonella	< 3	MPN/4g	*pass*

Date Tested: 24 Aug. 12

Inerts	% by weight
Plastic	< 0.5
Glass	< 0.5
Metal	< 0.5
Sharps	ND

Metals	Dry wt.	EPA Limit	units
Aluminum (Al)	30000	-	mg/kg
Arsenic (As):	13	41	mg/kg
Cadmium (Cd):	< 1.0	39	mg/kg
Chromium (Cr):	37	1200	mg/kg
Cobalt (Co)	30	-	mg/kg
Copper (Cu):	160	1500	mg/kg
Iron (Fe):	21000	-	mg/kg
Lead (Pb):	17	300	mg/kg
Manganese (Mn):	1500	-	mg/kg
Mercury (Hg):	< 1.0	17	mg/kg
Molybdenum (Mo):	5.3	75	mg/kg
Nickel (Ni):	14	420	mg/kg
Selenium (Se):	4.3	36	mg/kg
Zinc (Zn):	350	2800	mg/kg

Size & Volume Distribution			
MM	% by weight	% by volume	BD g/cc
> 50	0.0	0.0	0.00
25 to 50	0.0	0.0	0.00
16 to 25	0.0	0.0	0.00
9.5 to 16	0.0	0.0	0.00
6.3 to 9.5	2.5	2.3	0.60
4.0 to 6.3	4.8	7.1	0.37
2.0 to 4.0	13.1	19.8	0.36
< 2.0	79.6	70.8	0.61

Bulk Density Description:<.35 Light Materials, .35-.60 medium weight materials, >.60 Heavy Materials

Analyst: Assaf Sadeh

*Sample was received and handled in accordance with TMECC procedures.

Account No.:		Date Received	24 Aug. 12
2080694 - 1/1 - 6691		Sample i.d.	Merry Oaks Soil Builder
Group:	Aug.12 D No. 23	Sample I.d. No.	1/1 2080694

INTERPRETATION:

Is Your Compost Stable?

Respiration Rate — Biodegradation Rate of Your Pile

2.2 mg CO2-C/ g OM/day

++++++++
< Stable >|<Moderately Unstable>|< Unstable >|< High For Mulch

Biologically Available Carbon (BAC) — Optimum Degradation Rate

2.2 mg CO2-C/ g OM/day

++++++++
< Stable >|<Moderately Unstable>|< Unstable >|< High For Mulch

Is Your Compost Mature?

AmmoniaN/NitrateN ratio

18 Ratio

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Account No.:		Date Received	24 Aug. 12
2080694 - 1/1 - 6691		Sample i.d.	Merry Oaks Soil Builder
Group:	Aug.12 D No. 23	Sample I.d. No.	1/1 2080694

INTERPRETATION:

Is Your Compost Stable?

Respiration Rate

2.2 Low: Good for all uses mg CO2-C/g OM/day

The respiration rate is a measurement of the biodegradation rate of the organic matter in the sample (as received). The respiration rate is determined by measuring the rate at which CO2 is released under optimized moisture and temperature conditions.

Biologically Available Carbon

2 Low: Good for all uses mg CO2-C/g OM/day

Biologically Available Carbon (BAC) is a measurement of the rate at which CO2 is released under optimized moisture, temperature, porosity, nutrients, pH and microbial conditions. If both the RR and the BAC test values are close to the same value, the pile is optimized for composting. If both values are high the compost pile just needs more time. If both values are low the compost has stabilized and should be moved to curing. BAC test values that are higher than RR indicate that the compost pile has stalled. This could be due to anaerobic conditions, lack of available nitrogen due to excessive air converting ammonia to the unavailable nitrate form, lack of nitrogen or other nutrients due to poor choice of feedstock, pH value out of range, or microbes rendered non-active.

Is Your Compost Mature?

AmmoniaN:NitrateN ratio

18 immature

Ammonia N ppm

2300 immature

Nitrate N ppm

130 mature

pH value

7.28 mature

Composting to stabilize carbon can occur at such a rapid rate that sometimes phytotoxins remain in the compost and must be neutralized before using in high concentrations or in high-end uses. This step is called curing. Typically ammonia is in excess with the break-down of organic materials resulting in an increase in pH. This combination results in a loss of volatile ammonia (it smells). Once this toxic ammonia has been reduced and the pH drops, the microbes convert the ammonia to nitrates. A low ammonia + high nitrate score is indicative of a mature compost, however there are many exceptions. For example, a compost with a low pH (<7) will retain ammonia, while a compost with high lime content can lose ammonia before the organic fraction becomes stable. Composts must first be stable before curing indicators apply.

Cucumber Bioassay

100.0 Percent

Cucumbers are chosen for this test because they are salt tolerant and very sensitive to ammonia and organic acid toxicity. Therefore, we can germinate seeds in high concentrations of compost to measure phytotoxic effects without soluble salts being the limiting factor. Values above 80% for both percent emergence and vigor are indicative of a well-cured compost. Exceptions include very high salts that affect the cucumbers, excessive concentrations of nitrates and other nutrients that will be in range when formulated to make a growing media. In addition to testing a 1:1 compost: vermiculite blend, we also test a diluted 1:4 blend to indicate a more sensitive toxicity level.

Is Your Compost Safe Regarding Health?

Fecal Coliform

< 1000 / g dry wt.

Fecal coliforms can survive in both aerobic and anaerobic conditions and is common in all initial compost piles. Most human pathogens occur from fecal matter and all fecal matter is loaded in fecal coliforms. Therefore fecal coliforms are used as an indicator to determine if the chosen method for pathogen reduction (heat for compost) has met the requirements of sufficient temperature, time and mixing. If the fecal coliforms are reduced to below 1000 per gram dry wt. it is assumed all others pathogens are eliminated. Potential problems are that fecal coliform can regrow during the curing phase or during shipping. This is because the conditions are now more favorable for growth than during the composting process.

Salmonella Bacteria

Less than 3 3 / 4g dry wt.

Salmonella is not only another indicator organism but also a toxic microbe. It has been used in the case of biosolids industry to determine adequate pathogen reduction.

Metals

Pass

The ten heavy metals listed in the EPA 503 regulations are chosen to determine if compost can be applied to ag land and handled without toxic effects. Most high concentrations of heavy metals are derived from woodwaste feedstock such as chrome-arsenic treated or lead painted demolition wood. Biosolids are rarely a problem.

Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)

5.1 High nutrient content

This value is the sum of the primary nutrients Nitrogen, Phosphorus and Potassium. Reported units are consistent with those found on fertilizer formulations. A sum greater than 5 is indicative of a compost with high nutrient content, and best used to supply nutrients to a receiving soil. A sum below 2 indicates low nutrient content, and is best-used to improve soil structure via the addition of organic matter. Most compost falls between 2 and 5.

Account No.:		Date Received	24 Aug. 12
2080694 - 1/1 - 6691		Sample i.d.	Merry Oaks Soil Builder
Group:	Aug.12 D No. 23	Sample I.d. No.	1/1 2080694

INTERPRETATION:

AgIndex (Nutrients/Na+Cl)

11 High nutrient ratio Composts with low AgIndex values have high concentrations of sodium and/or chloride compared to nutrients. Repeated use of a compost with a low AgIndex (< 2) may result in sodium and/or chloride acting as the limiting factor compared to nutrients, governing application rates. These composts may be used on well-draining soils and/or with salt-tolerant plants. Additional nutrients form another source may be needed if the application rate is limited by sodium or chloride. If the AgIndex is above 10, nutrients optimal for plant growth will be available without concern of sodium and/or chloride toxicity. Composts with an AgIndex of above 10 are good for increasing nutrient levels for all soils. Most composts score between 2 and 10. Concentrations of nutrients, sodium, and chloride in the receiving soil should be considered when determining compost application rates. The AgIndex is a product of feedstock quality. Feedstock from dairy manure, marine waste, industrial wastes, and halophytic plants are likely to produce a finished compost with a low AgIndex.

Plant Available Nitrogen (lbs/ton)

9 Average N Provider Plant Available Nitrogen (PAN) is calculated by estimating the release rate of Nitrogen from the organic fraction of the compost. This estimate is based on information gathered from the BAC test and measured ammonia and nitrate values. Despite the PAN value of the compost, additional sources of Nitrogen may be needed during he growing season to off-set the Nitrogen demand of the microbes present in the compost. With ample nutrients these microbes can further breakdown organic matter in the compost and release bound Nitrogen. Nitrogen demand based on a high C/N ratio is not considered in the PAN calculation because additional Nitrogen should always be supplemented to the receiving soil when composts with a high C/N ratio are applied.

C/N Ratio

13 Indicates maturity As a guiding principal, a C/N ratio below 14 indicates maturity and above 14 indicates immaturity, however, there are many exceptions. Large woodchips (>6.3mm), bark, and redwood are slow to breakdown and therefore can result in a relatively stable product while the C/N ratio value is high. Additionally, some composts with chicken manure and/or green grass feedstocks can start with a C/N ratio below 15 and are very unstable. A C/N ratio below 10 supplies Nitrogen, while a ratio above 20 can deplete Nitrogen from the soil. The rate at which Nitrogen will be released or used by the microbes is indicated by the respiration rate (BAC). If the respiration rate is too high the transfer of Nitrogen will not be controlable.

Soluble Nutrients & Salts (EC5 w/w dw - mmhos/cm)

9.0 High salts This value refers to all soluble ions including nutrients, sodium, chloride and some soluble organic compounds. The concentration of salts will change due to the release of salts from the organic matter as it degrades, volatilization of ammonia, decomposition of soluble organics, and conversion of molecular structure. High salts + high AgIndex is indicative of a compost high in readily available nutrients. The application rate of these composts should be limited by the optimum nutrient value based on soil analysis of the receiving soil. High Salts + low AgIndex is indicative of a compost low in nutrients with high concentrations of sodium and/or chloride. Limit the application rate according to the toxicity level of thesodium and/or chloride. Low salts indicates that the compost can be applied without risking salt toxicity, is likely a good source of organic matter, and that nutrients will release slowly over time.

Lime Content (lbs. per ton)

92 High lime content Compost high in lime or carbonates are often those produced from chicken manure (layers) ash materials, and lime products. These are excellent products to use on a receiving soil where lime has been recommended by soil analysis to raise the pH. Composts with a high lime content should be closely considered for pH requirements when formulating potting mixes.

Physical Properties

Percent Ash

53.4 Average ash content Ash is the non-organic fraction of a compost. Most composts contain approximately 50% ash (dry weight basis). Compost can be high in ash content for many reasons including: excess minerilzation(old compost), contamination with soil base material during turning, poor quality feedstock, and soil or mineral products added. Finding the source and reducing high ash content is often the fastest means to increasing nutrient quality of a compost.

Particle Size % > 6.3 MM (0.25")

2.5 May restrict use Large particles may restrict use for potting soils, golf course topdressings, seed-starter mixes, and where a fine size distribution is required. Composts with large particles can still be used as excellent additions to field soils, shrub mixes and mulches.

Particle Size Distribution

Each size fraction is measured by weight, volume and bulk density. These results are particularly relevent with decisions to screen or not, and if screening, which size screen to use. The bulk density indicates if the fraction screened is made of light weight organic material or heavy mineral material. Removing large mineral material can greatly improve compost quality by increasing nutrient and organic concentrations.

Appendix:

Plant Available Nitrogen (PAN) calculations:
PAN = (X * (organic N)) + ((NH4-N) + (NO3-N))

X value =	If BAC < 2 then X = 0.1
	If BAC =2.1 to 5 then X = 0.2
	If BAC =5.1 to 10 then X = 0.3
	If BAC > 10 then X = 0.4

Note: If C/N ratio > 15 additional N should be applied.

Estimated available nutrients for use when calculating application rates

	lbs/ton
Plant Available Nitrogen (PAN)	9.2
Ammonia (NH4-N)	3.20
Nitrate (NO3-N)	0.18
Available Phosphorus (P2O5*0.64)	22.4
Available Potassium (K2O)	9.6

2080694

CHAIN-OF-CUSTODY

Laboratory Information	Original Copy of Report Sent To:	Special Instructions:
Laboratory: Soil Control Lab	Company: McGILL ENVIRONMENTAL	
Address: 42 Hangar Way : Watsonville, CA 95076	Contact: STEVE COCKMAN	
Phone: (831) 724-5422 Fax: (831) 724-3188	Address1: 634 CHRISTIAN CHAPEL CH RD	
Person from your company to be contacted with questions	Address2	**Other Analyses Requested**
Name: STEVE COCKMAN	City, St. Zip NEW HILL NC 27562	
Phone#s: 919-542-8903	Phone: 919-362-1161 Fax: 919-362-1141	
Information on facility that the sample was drawn from	**E-mail Reports To: (in box below fill in up to 3 address)**	
Company:	SCOCKMAN@McgillCompost.com	
Contact:	gJACKSON@McgillCompost.com	
Address1:	**Invoice Sent To:**	
Address2	Company: McGILL ENVIRONMENTAL	
City, St. Zip	Contact:	
E-mail Addr:	Address1: 634 CHRISTIAN CHAPEL CH RD	
Phone:	City, St. Zip: NEW HILL NC 27562	
Sampler's Printed Name: STEVE COCKMAN	PO#:	

Sample Identification	Date & Time Sampled	Complete Compost Pkg STA	Complete Compost Pkg No STA	Other Analyses Requested					Lab Use Only: Storage Location: Freezer#: Temperature: Shelf: Shipper: Sample Condition:
MERRY OAKS SOIL BUILDER	8-21-12 10AM	X							

*Optional: Help us in our research. Please list your feedstock and approximate % used, process, and age of material. Thank you.

	Manure type & %	Biosolids %	MSW %	yard waste %	Foodwaste	Industrial type & %	Other type & %	Comp. Process	Age of material
Sample 1			5						
Sample 2			15						
Sample 3			15	3					
Sample 4			2						
Sample 5									

Released By (Signature and Printed Name):	Date/Time:	Received By (Signature and Printed Name):	Date/Time:
	8-22-12 11AM		08/24/12
STEVE COCKMAN		SUSAN USSIER	12:15

02/04/2011 10:43 8317243188 SOIL CONTROL LAB PAGE 01/01

US COMPOSTING COUNCIL

Seal of Testing Assurance

McGill Environmental (New Hill)
Steve Cockman
634 Christian Chapel Church Road
New Hill
NC 27562 0

Product Identification Compost
Merry Oaks Soil Builder

Date Sampled/Received: 01 Apr. 13 / 04 Apr. 13

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	43.0	
Organic Matter Content	%, dry weight basis	52.1	
pH	units	7.15	
Soluble Salts *(electrical conductivity EC_5)*	dS/m (mmhos/cm)	9.9	
Particle Size or Sieve Size	maxium aggregate size, inches	0.38	
Stability Indicator *(respirometry)*			*Stability Rating:*
CO_2 Evolution	mg CO_2-C/g OM/day	2.7	Stable
	mg CO_2-C/g TS/day	1.4	
Maturity Indicator (bioassay)			
Percent Emergence	average % of control	100.0	
Relative Seedling Vigor	average % of control	0.0	
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: Apr.13 A Laboratory Number: 3040167-1/1

Analyst: Assaf Sadeh www.compostlab.com

US COMPOSTING COUNCIL

Seal of Testing Assurance

McGill Environmental (New Hill)
Steve Cockman
634 Christian Chapel Church Road
New Hill
NC 27562 0

Product Identification	Compost
Merry Oaks Soil Builder	

Date Sampled/Received: 01 Apr. 13 / 04 Apr. 13

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	%, wet weight basis	%, dry weight basis
Nitrogen	Total N	1.2	2.0
Phosphorus	P_2O_5	1.3	2.3
Potassium	K_2O	0.36	0.63
Calcium	Ca	1.8	3.2
Magnesium	Mg	0.19	0.33
Moisture Content	%, wet weight basis	43.0	
Organic Matter Content	%, dry weight basis	52.1	
pH	units	7.15	
Soluble Salts *(electrical conductivity EC_5)*	dS/m (mmhos/cm)	9.9	
Particle Size or Sieve Size	% under 9.5 mm, dw basis	100.0	
Stability Indicator *(respirometry)*			*Stability Rating:*
CO_2 Evolution	mg CO_2-C/g OM/day mg CO_2-C/g TS/day	2.7 1.4	Stable
Maturity Indicator (bioassay)			
Percent Emergence	average % of control	100.0	
Relative Seedling Vigor	average % of control	0.0	
Select Pathogens	PASS/FAIL: per US EPA Class A standard, 40 CFR § 503.32(a)	Pass Pass	*Fecal coliform* *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: Apr.13 A Laboratory Number: 3040167-1/1

Analyst: Assaf Sadeh www.compostlab.com

US COMPOSTING COUNCIL

Seal of Testing Assurance

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

McGill Environmental (New Hill)
Steve Cockman
634 Christian Chapel Church Road
New Hill
NC 27562 0

Product Identification: Compost
Merry Oaks Soil Builder

Date Sampled/Received: 01 Apr. 13 / 04 Apr. 13

COMPOST TECHNICAL DATA SHEET for NORTH CAROLINA DOT

LABORATORY: Soil Control Lab; 42 Hangar Way; Watsonville, CA 95076 *tel:* 831.724.5422 *fax:* 831.724.3188

Compost Parameters	*Test Results*	*Reported as (units of measure)*	*Project Specification (Allowable Limit)*
Organic Matter Content	52.1	%, dry weight basis	25 - 65
pH	7.15	Unitless	5.0 - 8.5
Moisture Content	43.0	%, wet weight basis	30 - 60
Soluble Salts (electrical conductivity)	9.9	dS/m (mmhos/cm)	5.0 dS/m, maximum
Particle Size	100.0 100.0 100.0 97.8	%, dry weight passing through 3 inch screen and 1 inch screen and 3/4 inch screen and 1/4 inch screen	100% 90% minimum 65% minimum 50% maximum
Stability Indicator (respirometry) CO2 Evolution	2.7	mg CO2-C/g OM/day	≤ 8
Maturity Indicator (bioassay) Percent Emergence	100.0	average % of control	80%, minimum
Relative Seedling Vigor	0.0	average % of control	80%, minimum
Select Pathogens (Fecal Coliform)	Pass	PASS/FAIL: Per US EPA Class A standard, 40 CFR 503.32(a)	Pass
Trace Metals	Pass	PASS/FAIL: Per US EPA Class A 40 CFR 503.13, tables 1 and 3.	Pass
Inert Contamination (man-made)	None Detected	%, dry weight	<1.0 %

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.

For additional information pertaining to compost use, the specific compost parameters tested for within the Seal of Testing assurance Program, or the program in general, log on to the US Composting Council's TMECC web-site at http://www.tmecc.org.

This compost product has been sampled and tested as required by the Seal of Testing assurance Program on the United States Composting Council (USCC), using certain methods from the "Test Methods for the Examination of Compost and Composting" manual. Test results are available upon request by contacting the compost producer (address at top of page). The USCC makes no warranties regarding this product or its content, quality, or suitability for any particular use.

Laboratory Group: Apr.13 A Laboratory Number: 3040167-1/1

Analyst: Assaf Sadeh www.compostlab.com

ANALYTICAL CHEMISTS
and
BACTERIOLOGISTS
Approved by State of California

TEL: 831-724-5422
FAX: 831-724-3188
www.compostlab.com

SOIL CONTROL LAB

42 HANGAR WAY
WATSONVILLE
CALIFORNIA
95076
USA

Account #: 3040167-1/1-6691
Group: Apr.13 A #30
Reporting Date: April 18, 2013

McGill Environmental (New Hill)
634 Christian Chapel Church Road
New Hill, NC 27562
Attn: Steve Cockman

Date Received: 04 Apr. 13
Sample Identification: Merry Oaks Soil Builder
Sample ID #: 3040167 - 1/1

Nutrients	Dry wt.	As Rcvd.	units
Total Nitrogen:	2.0	1.2	%
Ammonia (NH_4-N):	2400	1400	mg/kg
Nitrate (NO_3-N):	77	44	mg/kg
Org. Nitrogen (Org.-N):	1.8	1.0	%
Phosphorus (as P_2O_5):	2.3	1.3	%
Phosphorus (P):	10000	5900	mg/kg
Potassium (as K_2O):	0.62	0.36	%
Potassium (K):	5200	3000	mg/kg
Calcium (Ca):	3.2	1.8	%
Magnesium (Mg):	0.33	0.19	%
Sulfate (SO_4-S):	5000	2800	mg/kg
Boron (Total B):	54	31	mg/kg
Moisture:	0	43.0	%
Sodium (Na):	0.25	0.14	%
Chloride (Cl):	0.24	0.13	%
pH Value:	NA	7.15	unit
Bulk Density :	23	40	lb/cu ft
Carbonates ($CaCO_3$):	50	28	lb/ton
Conductivity (EC5):	9.9	NA	mmhos/cm
Organic Matter:	52.1	29.7	%
Organic Carbon:	27.0	15.0	%
Ash:	47.9	27.3	%
C/N Ratio	13	13	ratio
AgIndex	> 10	> 10	ratio

Stability Indicator:		Biologically
CO2 Evolution	Respirometery	Available C
mg CO_2-C/g OM/day	2.7	3.0
mg CO_2-C/g TS/day	1.4	1.6
Stability Rating	*stable*	*stable*

Maturity Indicator: Cucumber Bioassay		
Compost:Vermiculite(v:v)	1:1	1:3
Emergence (%)	100	100
Seedling Vigor (%)	0	0
Description of Plants	*stunted*	*stunted*

Pathogens	Results	Units	Rating
Fecal Coliform	< 2.0	MPN/g	*pass*
Salmonella	< 3	MPN/4g	*pass*

Date Tested: 04 Apr. 13

Inerts	% by weight
Plastic	< 0.5
Glass	< 0.5
Metal	< 0.5
Sharps	ND

Metals	Dry wt.	EPA Limit	units
Aluminum (Al)	26000	-	mg/kg
Arsenic (As):	20	41	mg/kg
Cadmium (Cd):	< 1.0	39	mg/kg
Chromium (Cr):	59	1200	mg/kg
Cobalt (Co)	4.5	-	mg/kg
Copper (Cu):	120	1500	mg/kg
Iron (Fe):	18000	-	mg/kg
Lead (Pb):	13	300	mg/kg
Manganese (Mn):	1500	-	mg/kg
Mercury (Hg):	< 1.0	17	mg/kg
Molybdenum (Mo):	5.7	75	mg/kg
Nickel (Ni):	14	420	mg/kg
Selenium (Se):	2.8	36	mg/kg
Zinc (Zn):	310	2800	mg/kg

Size & Volume Distribution			
MM	% by weight	% by volume	BD g/cc
> 50	0.0	0.0	0.00
25 to 50	0.0	0.0	0.00
16 to 25	0.0	0.0	0.00
9.5 to 16	0.0	0.0	0.00
6.3 to 9.5	2.2	2.2	0.49
4.0 to 6.3	8.8	12.1	0.36
2.0 to 4.0	21.3	26.8	0.40
< 2.0	67.8	58.8	0.58

Bulk Density Description:<.35 Light Materials, .35-.60 medium weight materials, >.60 Heavy Materials

Analyst: Assaf Sadeh

*Sample was received and handled in accordance with TMECC procedures.

Account No.:		Date Received	04 Apr. 13
3040167 - 1/1 - 6691		Sample i.d.	Merry Oaks Soil Builder
Group:	Apr.13 A No. 30	Sample i.d. No.	1/1 3040167

INTERPRETATION:

Is Your Compost Stable?

Respiration Rate — Biodegradation Rate of Your Pile

2.7 mg CO2-C/ g OM/day

++++++++++
< Stable >|<Moderately Unstable>|< Unstable >|< High For Mulch

Biologically Available Carbon (BAC) — Optimum Degradation Rate

3.0 mg CO2-C/ g OM/day

++++++++++
< Stable >|<Moderately Unstable>|< Unstable >|< High For Mulch

Is Your Compost Mature?

AmmoniaN/NitrateN ratio

31 Ratio

++
VeryMature>|< Mature >|< Immature

Ammonia N ppm

2400 mg/kg dry wt.

++
VeryMature>|< Mature >|< Immature

Nitrate N ppm

77 mg/kg dry wt.

++
< Immature >|< Mature

pH value

7.15 units

++
< Immature >|< Mature >|< Immature

Cucumber Emergence

100.0 percent

++
< Immature >|< Mature

Is Your Compost Safe Regarding Health?

Fecal Coliform

< 1000 MPN/g dry wt.

+++++++
< Safe >|< High Fecal Coliform

Salmonella

Less than 3 /4g dry wt.

+++++++
<Safe (none detected) >|< High Salmonella Count(> 3 per 4 grams)

Metals US EPA 503

Pass dry wt.

+++++++++
<All Metals Pass >|< One or more Metals Fail

Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)

4.9 Percent dry wt.

++
<Low >|< Average >|< High Nutrient Content

AgIndex (Nutrients / Sodium and Chloride Salts) ((N+P2O5+K2O) / (Na + Cl))

10 Ratio

++
Na & Cl >|< Nutrient and Sodium and Chloride Provider >|< Nutrient Provider

Plant Available Nitrogen (PAN) — Estimated release for first season

7 lbs/ton wet wt.

++++++++++++++++++++++++++++
Low Nitrogen Provider>|< Average Nitrogen Provider >|<High Nitrogen Provider

C/N Ratio

13 Ratio

++++++++++++++++++++++++
< Nitrogen Release >|< N-Neutral >|< N-Demand>|< High Nitrogen Demand

Soluble Available Nutrients & Salts (EC5 w/w dw)

9.9 mmhos/cm dry wt.

++
SloRelease>|< Average Nutrient Release Rate >|<High Available Nutrients

Lime Content (CaCO3)

50 Lbs/ton dry wt.

++
< Low >|< Average >|< High Lime Content (as CaCO3)

What are the physical properties of your compost?

Percent Ash

47.9 Percent dry wt.

++++++++++++++++++++++++++++++++++++++
< High Organic Matter >|< Average >|< High Ash Content

Sieve Size % > 6.3 MM (0.25")

2.2 Percent dry wt.

++++++++++++++++++
All Uses >|< Size May Restrict Uses for Potting mix and Golf Courses

Account No.:		Date Received	04 Apr. 13
3040167 - 1/1 - 6691		Sample i.d.	Merry Oaks Soil Builder
Group:	Apr.13 A No. 30	Sample I.d. No.	1/1 3040167

INTERPRETATION:

Is Your Compost Stable?

Respiration Rate

2.7 Low: Good for all uses mg CO2-C/g OM/day

The respiration rate is a measurement of the biodegradation rate of the organic matter in the sample (as received). The respiration rate is determined by measuring the rate at which CO2 is released under optimized moisture and temperature conditions.

Biologically Available Carbon

3 Low: Good for all uses mg CO2-C/g OM/day

Biologically Available Carbon (BAC) is a measurement of the rate at which CO2 is released under optimized moisture, temperature, porosity, nutrients, pH and microbial conditions. If both the RR and the BAC test values are close to the same value, the pile is optimized for composting. If both values are high the compost pile just needs more time. If both values are low the compost has stabilized and should be moved to curing. BAC test values that are higher than RR indicate that the compost pile has stalled. This could be due to anaerobic conditions, lack of available nitrogen due to excessive air converting ammonia to the unavailable nitrate form, lack of nitrogen or other nutrients due to poor choice of feedstock, pH value out of range, or microbes rendered non-active.

Is Your Compost Mature?

AmmoniaN:NitrateN ratio

31 immature

Ammonia N ppm

2400 immature

Nitrate N ppm

77 mature

pH value

7.15 mature

Composting to stabilize carbon can occur at such a rapid rate that sometimes phytotoxins remain in the compost and must be neutralized before using in high concentrations or in high-end uses. This step is called curing. Typically ammonia is in excess with the break-down of organic materials resulting in an increase in pH. This combination results in a loss of volatile ammonia (it smells). Once this toxic ammonia has been reduced and the pH drops, the microbes convert the ammonia to nitrates. A low ammonia + high nitrate score is indicative of a mature compost, however there are many exceptions. For example, a compost with a low pH (<7) will retain ammonia, while a compost with high lime content can lose ammonia before the organic fraction becomes stable. Composts must first be stable before curing indicators apply.

Cucumber Bioassay

100.0 Percent

Cucumbers are chosen for this test because they are salt tolerant and very sensitive to ammonia and organic acid toxicity. Therefore, we can germinate seeds in high concentrations of compost to measure phytotoxic effects without soluble salts being the limiting factor. Values above 80% for both percent emergence and vigor are indicative of a well-cured compost. Exceptions include very high salts that affect the cucumbers, excessive concentrations of nitrates and other nutrients that will be in range when formulated to make a growing media. In addition to testing a 1:1 compost: vermiculite blend, we also test a diluted 1:4 blend to indicate a more sensitive toxicity level.

Is Your Compost Safe Regarding Health?

Fecal Coliform

< 1000 / g dry wt.

Fecal coliforms can survive in both aerobic and anaerobic conditions and is common in all initial compost piles. Most human pathogens occur from fecal matter and all fecal matter is loaded in fecal coliforms. Therefore fecal coliforms are used as an indicator to determine if the chosen method for pathogen reduction (heat for compost) has met the requirements of sufficient temperature, time and mixing. If the fecal coliforms are reduced to below 1000 per gram dry wt. it is assumed all others pathogens are eliminated. Potential problems are that fecal coliform can regrow during the curing phase or during shipping. This is because the conditions are now more favorable for growth than during the composting process.

Salmonella Bacteria

Less than 3 3 / 4g dry wt.

Salmonella is not only another indicator organism but also a toxic microbe. It has been used in the case of biosolids industry to determine adequate pathogen reduction.

Metals

Pass

The ten heavy metals listed in the EPA 503 regulations are chosen to determine if compost can be applied to ag land and handled without toxic effects. Most high concentrations of heavy metals are derived from woodwaste feedstock such as chrome-arsenic treated or lead painted demolition wood. Biosolids are rarely a problem.

Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)

4.9 Average nutrient content

This value is the sum of the primary nutrients Nitrogen, Phosphorus and Potassium. Reported units are consistent with those found on fertilizer formulations. A sum greater than 5 is indicative of a compost with high nutrient content, and best used to supply nutrients to a receiving soil. A sum below 2 indicates low nutrient content, and is best-used to improve soil structure via the addition of organic matter. Most compost falls between 2 and 5.

Account No.:		Date Received	04 Apr. 13
3040167 - 1/1 - 6691		Sample i.d.	Merry Oaks Soil Builder
Group:	Apr.13 A No. 30	Sample I.d. No.	1/1 3040167

INTERPRETATION:

AgIndex (Nutrients/Na+Cl)

10 Average nutrient ratio Composts with low AgIndex values have high concentrations of sodium and/or chloride compared to nutrients. Repeated use of a compost with a low AgIndex (< 2) may result in sodium and/or chloride acting as the limiting factor compared to nutrients, governing application rates. These composts may be used on well-draining soils and/or with salt-tolerant plants. Additional nutrients form another source may be needed if the application rate is limited by sodium or chloride. If the AgIndex is above 10, nutrients optimal for plant growth will be available without concern of sodium and/or chloride toxicity. Composts with an AgIndex of above 10 are good for increasing nutrient levels for all soils. Most composts score between 2 and 10. Concentrations of nutrients, sodium, and chloride in the receiving soil should be considered when determining compost application rates. The AgIndex is a product of feedstock quality. Feedstock from dairy manure, marine waste, industrial wastes, and halophytic plants are likely to produce a finished compost with a low AgIndex.

Plant Available Nitrogen (lbs/ton)

7 Average N Provider Plant Available Nitrogen (PAN) is calculated by estimating the release rate of Nitrogen from the organic fraction of the compost. This estimate is based on information gathered from the BAC test and measured ammonia and nitrate values. Despite the PAN value of the compost, additional sources of Nitrogen may be needed during he growing season to off-set the Nitrogen demand of the microbes present in the compost. With ample nutrients these microbes can further breakdown organic matter in the compost and release bound Nitrogen. Nitrogen demand based on a high C/N ratio is not considered in the PAN calculation because additional Nitrogen should always be supplemented to the receiving soil when composts with a high C/N ratio are applied.

C/N Ratio

13 Indicates maturity As a guiding principal, a C/N ratio below 14 indicates maturity and above 14 indicates immaturity, however, there are many exceptions. Large woodchips (>6.3mm), bark, and redwood are slow to breakdown and therefore can result in a relatively stable product while the C/N ratio value is high. Additionally, some composts with chicken manure and/or green grass feedstocks can start with a C/N ratio below 15 and are very unstable. A C/N ratio below 10 supplies Nitrogen, while a ratio above 20 can deplete Nitrogen from the soil. The rate at which Nitrogen will be released or used by the microbes is indicated by the respiration rate (BAC). If the respiration rate is too high the transfer of Nitrogen will not be controlable.

Soluble Nutrients & Salts (EC5 w/w dw - mmhos/cm)

9.9 High salts This value refers to all soluble ions including nutrients, sodium, chloride and some soluble organic compounds. The concentration of salts will change due to the release of salts from the organic matter as it degrades, volatilization of ammonia, decomposition of soluble organics, and conversion of molecular structure. High salts + high AgIndex is indicative of a compost high in readily available nutrients. The application rate of these composts should be limited by the optimum nutrient value based on soil analysis of the receiving soil. High Salts + low AgIndex is indicative of a compost low in nutrients with high concentrations of sodium and/or chloride. Limit the application rate according to the toxicity level of thesodium and/or chloride. Low salts indicates that the compost can be applied without risking salt toxicity, is likely a good source of organic matter, and that nutrients will release slowly over time.

Lime Content (lbs. per ton)

50 High lime content Compost high in lime or carbonates are often those produced from chicken manure (layers) ash materials, and lime products. These are excellent products to use on a receiving soil where lime has been recommended by soil analysis to raise the pH. Composts with a high lime content should be closely considered for pH requirements when formulating potting mixes.

Physical Properties

Percent Ash

47.9 Average ash content Ash is the non-organic fraction of a compost. Most composts contain approximately 50% ash (dry weight basis). Compost can be high in ash content for many reasons including: excess minerilzation(old compost), contamination with soil base material during turning, poor quality feedstock, and soil or mineral products added. Finding the source and reducing high ash content is often the fastest means to increasing nutrient quality of a compost.

Particle Size % > 6.3 MM (0.25")

2.2 May restrict use Large particles may restrict use for potting soils, golf course topdressings, seed-starter mixes, and where a fine size distribution is required. Composts with large particles can still be used as excellent additions to field soils, shrub mixes and mulches.

Particle Size Distribution

Each size fraction is measured by weight, volume and bulk density. These results are particularly relevent with decisions to screen or not, and if screening, which size screen to use. The bulk density indicates if the fraction screened is made of light weight organic material or heavy mineral material. Removing large mineral material can greatly improve compost quality by increasing nutrient and organic concentrations.

Appendix:

Plant Available Nitrogen (PAN) calculations:

PAN = (X * (organic N)) + ((NH4-N) + (NO3-N))

X value = If BAC < 2 then X = 0.1
If BAC =2.1 to 5 then X = 0.2
If BAC =5.1 to 10 then X = 0.3
If BAC > 10 then X = 0.4

Note: If C/N ratio > 15 additional N should be applied.

Estimated available nutrients for use when calculating application rates

	lbs/ton (As Rec'd)
Plant Available Nitrogen (PAN)	7.1
Ammonia (NH4-N)	2.80
Nitrate (NO3-N)	0.09
Available Phosphorus (P2O5*0.64)	17.2
Available Potassium (K2O)	7.2

3040167

CHAIN-OF-CUSTODY

Laboratory Information	Original Copy of Report Sent To:	Special Instructions:
Laboratory: Soil Control Lab	Company: McGILL ENVIRONMENTAL	
Address: 42 Hangar Way : Watsonville, CA 95076	Contact: STEVE COCKMAN	
Phone: (831) 724-5422 Fax: (831) 724-3188	Address1: 634 CHRISTIAN CHAPEL CH RD	
Person from your company to be contacted with questions	Address2	**Other Analyses Requested**
Name: STEVE COCKMAN	City, St. Zip NEW HILL NC 27562	
Phone #s: 919-542-8903	Phone: 919-362-1161 Fax: 919-362-1171	
Information on facility that the sample was drawn from	**E-mail Reports To: (in box below fill in up to 3 address)**	
Company:	SCOCKMAN@McGILLCompost.COM	
Contact:	GJACKSON@McGILLCompost.COM	
Address1:	**Invoice Sent To:**	
Address2	Company: McGILL ENVIRONMENTAL	
City, St. Zip	Contact:	
E-mail Addr:	Address1: 634 CHRISTIAN CHAPEL CH RD	
Phone:	City, St. Zip: NEW HILL NC 27562	
Sampler's Printed Name: STEVE COCKMAN	PO#:	

Sample Identification	Date & Time Sampled	Complete Compost Pkg STA	Complete Compost Pkg No STA						Lab Use Only: Storage Location	Storage Freezer #	Refrigerator #	Shelf #	Shelf #	Sample Condition
MERRY OAKS SOIL BUILDER	4-1-13 3PM	X												

*Optional: Help us in our research. Please list your feedstock and approximate % used, process, and age of material. Thank you.

	Manure type & %	Biosolids %	MSW %	yard waste %	Foodwaste	Industrial type & %	Other type & %	Comp. Process	Age of material
Sample 1									
Sample 2									
Sample 3									
Sample 4									
Sample 5									

USPS 6.5 2004

Released By (Signature and Printed Name):	Date/Time:	Received By (Signature and Printed Name):	Date/Time:
	4-2-13		04/04/13
STEVE COCKMAN	8:00 AM	LISAN USSICK	12:35

02/04/2011 10:43 8317243188 SOIL CONTROL LAB PAGE 01/01

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2012

ANALYTICAL RESULTS

Project: Compost Sampling 12/6/12
Pace Project No.: 92141178

Sample: Merry Oaks Compost **Lab ID: 92141178001** Collected: 12/06/12 10:00 Received: 12/07/12 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP SPE	Analytical Method: EPA 8081 Preparation Method: EPA 3535							
	Leachate Method/Date: EPA 1311; 12/12/12 11:45							
gamma-BHC (Lindane)	ND	mg/L	0.00050	1	12/13/12 09:00	12/13/12 21:46	58-89-9	
Chlordane (Technical)	ND	mg/L	0.0030	1	12/13/12 09:00	12/13/12 21:46	57-74-9	
Endrin	ND	mg/L	0.00050	1	12/13/12 09:00	12/13/12 21:46	72-20-8	
Heptachlor epoxide	ND	mg/L	0.00050	1	12/13/12 09:00	12/13/12 21:46	1024-57-3	
Methoxychlor	ND	mg/L	1.0	1	12/13/12 09:00	12/13/12 21:46	72-43-5	
Toxaphene	ND	mg/L	0.0030	1	12/13/12 09:00	12/13/12 21:46	8001-35-2	
Surrogates								
Decachlorobiphenyl (S)	51	%	10-138	1	12/13/12 09:00	12/13/12 21:46	2051-24-3	
Tetrachloro-m-xylene (S)	54	%	10-110	1	12/13/12 09:00	12/13/12 21:46	877-09-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Aluminum	**23000**	mg/kg	299	20	12/12/12 16:50	12/14/12 12:58	7429-90-5	
Arsenic	**7.3**	mg/kg	1.5	1	12/12/12 16:50	12/13/12 16:51	7440-38-2	
Cadmium	**0.79**	mg/kg	0.15	1	12/12/12 16:50	12/13/12 16:51	7440-43-9	
Calcium	**35300**	mg/kg	299	20	12/12/12 16:50	12/14/12 12:58	7440-70-2	
Chromium	**24.3**	mg/kg	0.75	1	12/12/12 16:50	12/13/12 16:51	7440-47-3	
Copper	**172**	mg/kg	0.75	1	12/12/12 16:50	12/13/12 16:51	7440-50-8	
Lead	**13.3**	mg/kg	0.75	1	12/12/12 16:50	12/13/12 16:51	7439-92-1	
Magnesium	**2860**	mg/kg	14.9	1	12/12/12 16:50	12/13/12 16:51	7439-95-4	
Molybdenum	**4.0**	mg/kg	0.75	1	12/12/12 16:50	12/13/12 16:51	7439-98-7	
Nickel	**9.1**	mg/kg	0.75	1	12/12/12 16:50	12/13/12 16:51	7440-02-0	
Potassium	**7800**	mg/kg	747	1	12/12/12 16:50	12/13/12 16:51	7440-09-7	
Selenium	**2.6**	mg/kg	1.5	1	12/12/12 16:50	12/13/12 16:51	7782-49-2	
Sodium	**4490**	mg/kg	747	1	12/12/12 16:50	12/13/12 16:51	7440-23-5	
Zinc	**306**	mg/kg	1.5	1	12/12/12 16:50	12/13/12 16:51	7440-66-6	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Leachate Method/Date: EPA 1311; 12/12/12 05:30							
Arsenic	ND	mg/L	0.050	1	12/13/12 04:35	12/14/12 14:22	7440-38-2	
Barium	**0.14**	mg/L	0.050	1	12/13/12 04:35	12/14/12 14:22	7440-39-3	
Cadmium	ND	mg/L	0.0050	1	12/13/12 04:35	12/14/12 14:22	7440-43-9	
Chromium	ND	mg/L	0.025	1	12/13/12 04:35	12/14/12 14:22	7440-47-3	
Lead	ND	mg/L	0.025	1	12/13/12 04:35	12/14/12 14:22	7439-92-1	
Selenium	ND	mg/L	0.10	1	12/13/12 04:35	12/14/12 14:22	7782-49-2	
Silver	ND	mg/L	0.025	1	12/13/12 04:35	12/14/12 14:22	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Leachate Method/Date: EPA 1311; 12/12/12 05:30							
Mercury	ND	mg/L	0.00020	1	12/17/12 11:05	12/17/12 15:08	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**0.17**	mg/kg	0.0074	1	12/11/12 16:40	12/12/12 14:23	7439-97-6	

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ANALYTICAL RESULTS

Project: Compost Sampling 12/6/12
Pace Project No.: 92141178

Sample: Merry Oaks Compost **Lab ID: 92141178001** Collected: 12/06/12 10:00 Received: 12/07/12 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
	Leachate Method/Date: EPA 1311; 12/12/12 11:45							
1,4-Dichlorobenzene	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	106-46-7	
2-Methylphenol(o-Cresol)	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17		
Hexachloroethane	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	67-72-1	
Nitrobenzene	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	98-95-3	
Hexachloro-1,3-butadiene	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	87-68-3	
2,4,6-Trichlorophenol	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	88-06-2	
2,4,5-Trichlorophenol	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	95-95-4	
2,4-Dinitrotoluene	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	121-14-2	
Hexachlorobenzene	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	118-74-1	
Pentachlorophenol	ND	mg/L	0.10	1	12/13/12 08:10	12/13/12 16:17	87-86-5	
Pyridine	ND	mg/L	0.050	1	12/13/12 08:10	12/13/12 16:17	110-86-1	
Surrogates								
Nitrobenzene-d5 (S)	43	%	12-102	1	12/13/12 08:10	12/13/12 16:17	4165-60-0	
2-Fluorobiphenyl (S)	43	%	13-107	1	12/13/12 08:10	12/13/12 16:17	321-60-8	
Terphenyl-d14 (S)	89	%	21-132	1	12/13/12 08:10	12/13/12 16:17	1718-51-0	
Phenol-d6 (S)	20	%	10-110	1	12/13/12 08:10	12/13/12 16:17	13127-88-3	
2-Fluorophenol (S)	29	%	10-110	1	12/13/12 08:10	12/13/12 16:17	367-12-4	
2,4,6-Tribromophenol (S)	66	%	27-108	1	12/13/12 08:10	12/13/12 16:17	118-79-6	
8260 MSV TCLP	Analytical Method: EPA 8260							
Benzene	ND	mg/L	0.19	38		12/12/12 03:20	71-43-2	
2-Butanone (MEK)	ND	mg/L	0.38	38		12/12/12 03:20	78-93-3	
Carbon tetrachloride	ND	mg/L	0.19	38		12/12/12 03:20	56-23-5	
Chlorobenzene	ND	mg/L	0.19	38		12/12/12 03:20	108-90-7	
Chloroform	ND	mg/L	0.19	38		12/12/12 03:20	67-66-3	
1,4-Dichlorobenzene	ND	mg/L	0.19	38		12/12/12 03:20	106-46-7	
1,2-Dichloroethane	ND	mg/L	0.19	38		12/12/12 03:20	107-06-2	
1,1-Dichloroethene	ND	mg/L	0.19	38		12/12/12 03:20	75-35-4	
Tetrachloroethene	ND	mg/L	0.19	38		12/12/12 03:20	127-18-4	
Trichloroethene	ND	mg/L	0.19	38		12/12/12 03:20	79-01-6	
Vinyl chloride	ND	mg/L	0.19	38		12/12/12 03:20	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	109	%	70-130	38		12/12/12 03:20	17060-07-0	1g
Toluene-d8 (S)	97	%	67-135	38		12/12/12 03:20	2037-26-5	
4-Bromofluorobenzene (S)	100	%	70-130	38		12/12/12 03:20	460-00-4	
Dibromofluoromethane (S)	106	%	70-130	38		12/12/12 03:20	1868-53-7	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**34.3**	%	0.10	1		12/12/12 12:56		
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010							
Flashpoint	**>200**	deg F	70.0	1		12/18/12 19:00		

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ANALYTICAL RESULTS

Project: Compost Sampling 12/6/12
Pace Project No.: 92141178

Sample: Merry Oaks Compost **Lab ID: 92141178001** Collected: 12/06/12 10:00 Received: 12/07/12 14:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**65.7**	%	0.000010	1		12/12/12 08:25		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.0**	Std. Units	0.10	1		12/17/12 10:30		
Plant Available Nitrogen	Analytical Method: 40CFR PART 432.2							
Plant Available Nitrogen	**5590**	mg/kg	1.0	1		12/21/12 17:19		N2
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**455**	mg/kg	14.6	1		12/11/12 14:50	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	**16000**	mg/kg	1270	20		12/21/12 16:44	7727-37-9	
353.2 Nitrogen, NO2/NO3	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**692**	mg/kg	3.0	1		12/20/12 00:14		
Nitrogen, Nitrite	**2.5**	mg/kg	1.5	1		12/20/12 00:14		
Nitrogen, NO2 plus NO3	**694**	mg/kg	3.0	1		12/20/12 00:14		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1							
Phosphorus	**6240**	mg/kg	27.2	5		12/17/12 16:38	7723-14-0	

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ANALYTICAL RESULTS

Project: 92141178CompostSampling12/6/12
Pace Project No.: 60135062

Sample: MERRY OAKS COMPOST **Lab ID: 92141178001** Collected: 12/06/12 10:00 Received: 12/08/12 08:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974							
Percent Moisture	**34.3**	%	0.50	1		12/12/12 13:00		
Reactive Sulfide	Analytical Method: SW-846 7.3.4.2							
Sulfide, Reactive	ND	mg/kg	40.0	1		12/20/12 13:00		
733C S Reactive Cyanide	Analytical Method: SW-846 7.3.3.2							
Cyanide, Reactive	ND	mg/kg	0.025	1		12/17/12 12:27		

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ANALYTICAL RESULTS

Project: 92141178 COMPOST SAMPLING 12/6
Pace Project No.: 3576726

Sample: MERRY OAKS COMPOST **Lab ID: 92141178001** Collected: 12/06/12 10:00 Received: 12/08/12 11:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8151 Chlorinate Herbicide TCLP	Analytical Method: EPA 8151 Preparation Method: EPA 3510							
2,4-D	ND	mg/L	0.015	1	12/17/12 08:00	12/17/12 17:41	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.015	1	12/17/12 08:00	12/17/12 17:41	93-72-1	
Surrogates								
2,4-DCAA (S)	105	%	70-130	1	12/17/12 08:00	12/17/12 17:41	19719-28-9	
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**34.3**	%	0.10	1		12/12/12 13:00		

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ANALYTICAL RESULTS

Project: TCLP Compost
Pace Project No.: 92160493

Sample: Merry Oaks Soil Builder **Lab ID: 92160493001** Collected: 06/04/13 09:00 Received: 06/05/13 15:26 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP	Analytical Method: EPA 8081 Preparation Method: EPA 3510							
	Leachate Method/Date: EPA 1311; 06/08/13 20:25							
gamma-BHC (Lindane)	ND	ug/L	0.50	1	06/12/13 10:20	06/14/13 03:40	58-89-9	
Chlordane (Technical)	ND	ug/L	3.0	1	06/12/13 10:20	06/14/13 03:40	57-74-9	
Endrin	ND	ug/L	0.50	1	06/12/13 10:20	06/14/13 03:40	72-20-8	
Heptachlor epoxide	ND	ug/L	0.50	1	06/12/13 10:20	06/14/13 03:40	1024-57-3	
Methoxychlor	ND	ug/L	1000	1	06/12/13 10:20	06/14/13 03:40	72-43-5	
Toxaphene	ND	ug/L	3.0	1	06/12/13 10:20	06/14/13 03:40	8001-35-2	
Surrogates								
Decachlorobiphenyl (S)	46	%	10-138	1	06/12/13 10:20	06/14/13 03:40	2051-24-3	
Tetrachloro-m-xylene (S)	30	%	10-110	1	06/12/13 10:20	06/14/13 03:40	877-09-8	
8151 Chlorinate Herbicide TCLP	Analytical Method: EPA 8151 Preparation Method: EPA 3510							
2,4-D	ND	mg/L	0.010	1	06/14/13 07:20	06/14/13 20:41	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.010	1	06/14/13 07:20	06/14/13 20:41	93-72-1	
Surrogates								
2,4-DCAA (S)	126	%	70-130	1	06/14/13 07:20	06/14/13 20:41	19719-28-9	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050							
Aluminum	**22300**	mg/kg	160	10	06/14/13 17:30	06/17/13 13:27	7429-90-5	
Arsenic	**7.3**	mg/kg	1.6	1	06/14/13 17:30	06/16/13 20:49	7440-38-2	
Cadmium	**0.32**	mg/kg	0.16	1	06/14/13 17:30	06/16/13 20:49	7440-43-9	
Calcium	**35500**	mg/kg	160	10	06/14/13 17:30	06/17/13 13:27	7440-70-2	
Chromium	**27.3**	mg/kg	0.80	1	06/14/13 17:30	06/16/13 20:49	7440-47-3	
Copper	**144**	mg/kg	0.80	1	06/14/13 17:30	06/16/13 20:49	7440-50-8	
Lead	**12.8**	mg/kg	0.80	1	06/14/13 17:30	06/16/13 20:49	7439-92-1	
Magnesium	**3100**	mg/kg	16.0	1	06/14/13 17:30	06/16/13 20:49	7439-95-4	
Molybdenum	**3.5**	mg/kg	0.80	1	06/14/13 17:30	06/16/13 20:49	7439-98-7	
Nickel	**10.2**	mg/kg	0.80	1	06/14/13 17:30	06/16/13 20:49	7440-02-0	
Potassium	**6680**	mg/kg	799	1	06/14/13 17:30	06/16/13 20:49	7440-09-7	
Selenium	**2.4**	mg/kg	1.6	1	06/14/13 17:30	06/16/13 20:49	7782-49-2	
Sodium	**3010**	mg/kg	799	1	06/14/13 17:30	06/16/13 20:49	7440-23-5	
Zinc	**357**	mg/kg	1.6	1	06/14/13 17:30	06/16/13 20:49	7440-66-6	
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010							
	Leachate Method/Date: EPA 1311; 06/14/13 23:30							
Arsenic	ND	mg/L	0.050	1	06/17/13 11:45	06/18/13 13:52	7440-38-2	
Barium	**0.36**	mg/L	0.25	1	06/17/13 11:45	06/18/13 13:52	7440-39-3	
Cadmium	ND	mg/L	0.0050	1	06/17/13 11:45	06/18/13 13:52	7440-43-9	
Chromium	**0.030**	mg/L	0.025	1	06/17/13 11:45	06/18/13 13:52	7440-47-3	
Lead	ND	mg/L	0.025	1	06/17/13 11:45	06/18/13 13:52	7439-92-1	
Selenium	ND	mg/L	0.10	1	06/17/13 11:45	06/18/13 13:52	7782-49-2	
Silver	ND	mg/L	0.025	1	06/17/13 11:45	06/18/13 13:52	7440-22-4	

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ANALYTICAL RESULTS

Project: TCLP Compost
Pace Project No.: 92160493

Sample: Merry Oaks Soil Builder **Lab ID: 92160493001** Collected: 06/04/13 09:00 Received: 06/05/13 15:26 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470							
	Leachate Method/Date: EPA 1311; 06/14/13 23:30							
Mercury	**0.00053**	mg/L	0.00020	1	06/17/13 13:30	06/18/13 14:00	7439-97-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471							
Mercury	**0.24**	mg/kg	0.029	4	06/17/13 18:15	06/18/13 15:32	7439-97-6	
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA 8270 Preparation Method: EPA 3510							
	Leachate Method/Date: EPA 1311; 06/08/13 20:25							
1,4-Dichlorobenzene	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	106-46-7	
2-Methylphenol(o-Cresol)	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36		
Hexachloroethane	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	67-72-1	
Nitrobenzene	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	98-95-3	
Hexachloro-1,3-butadiene	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	87-68-3	
2,4,6-Trichlorophenol	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	88-06-2	
2,4,5-Trichlorophenol	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	95-95-4	
2,4-Dinitrotoluene	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	121-14-2	
Hexachlorobenzene	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	118-74-1	
Pentachlorophenol	ND	mg/L	0.10	1	06/12/13 13:35	06/14/13 14:36	87-86-5	
Pyridine	ND	mg/L	0.050	1	06/12/13 13:35	06/14/13 14:36	110-86-1	
Surrogates								
Nitrobenzene-d5 (S)	34	%	12-102	1	06/12/13 13:35	06/14/13 14:36	4165-60-0	
2-Fluorobiphenyl (S)	32	%	13-107	1	06/12/13 13:35	06/14/13 14:36	321-60-8	
Terphenyl-d14 (S)	46	%	21-132	1	06/12/13 13:35	06/14/13 14:36	1718-51-0	
Phenol-d6 (S)	13	%	10-110	1	06/12/13 13:35	06/14/13 14:36	13127-88-3	
2-Fluorophenol (S)	18	%	10-110	1	06/12/13 13:35	06/14/13 14:36	367-12-4	
2,4,6-Tribromophenol (S)	48	%	27-108	1	06/12/13 13:35	06/14/13 14:36	118-79-6	
8260 MSV TCLP	Analytical Method: EPA 8260							
Benzene	ND	mg/L	0.19	38.5		06/12/13 22:01	71-43-2	
2-Butanone (MEK)	ND	mg/L	0.38	38.5		06/12/13 22:01	78-93-3	
Carbon tetrachloride	ND	mg/L	0.19	38.5		06/12/13 22:01	56-23-5	
Chlorobenzene	ND	mg/L	0.19	38.5		06/12/13 22:01	108-90-7	
Chloroform	ND	mg/L	0.19	38.5		06/12/13 22:01	67-66-3	
1,4-Dichlorobenzene	ND	mg/L	0.19	38.5		06/12/13 22:01	106-46-7	
1,2-Dichloroethane	ND	mg/L	0.19	38.5		06/12/13 22:01	107-06-2	
1,1-Dichloroethene	ND	mg/L	0.19	38.5		06/12/13 22:01	75-35-4	
Tetrachloroethene	ND	mg/L	0.19	38.5		06/12/13 22:01	127-18-4	
Trichloroethene	ND	mg/L	0.19	38.5		06/12/13 22:01	79-01-6	
Vinyl chloride	ND	mg/L	0.19	38.5		06/12/13 22:01	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	115	%	70-130	38.5		06/12/13 22:01	17060-07-0	1g
Toluene-d8 (S)	98	%	67-135	38.5		06/12/13 22:01	2037-26-5	
4-Bromofluorobenzene (S)	97	%	70-130	38.5		06/12/13 22:01	460-00-4	
Dibromofluoromethane (S)	104	%	70-130	38.5		06/12/13 22:01	1868-53-7	

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ANALYTICAL RESULTS

Project: TCLP Compost
Pace Project No.: 92160493

Sample: Merry Oaks Soil Builder **Lab ID: 92160493001** Collected: 06/04/13 09:00 Received: 06/05/13 15:26 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87							
Percent Moisture	**43.1**	%	0.10	1		06/07/13 10:28		
1010 Flashpoint,Closed Cup	Analytical Method: EPA 1010							
Flashpoint	**> 165**	deg F	70.0	1		06/13/13 16:15		
160.4 Total Volatile Solids	Analytical Method: EPA 160.4							
Total Volatile Solids	**370000**	mg/kg	10000	1		06/07/13 08:34		
2540G Total Percent Solids	Analytical Method: SM 2540G							
Total Solids	**56.9**	%	0.000010	1		06/06/13 16:40		
Reactive Sulfide	Analytical Method: SW-846 7.3.4.2							
Sulfide, Reactive	ND	mg/kg	100	1		06/18/13 19:15		
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	**7.3**	Std. Units	0.10	1		06/10/13 14:10		
Plant Available Nitrogen	Analytical Method: 40CFR PART 432.2							
Plant Available Nitrogen	**4180**	mg/kg	1.0	1		06/14/13 17:23		N2
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**3010**	mg/kg	87.9	5		06/06/13 13:31	7664-41-7	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	**11900**	mg/kg	2930	50		06/14/13 13:34	7727-37-9	
353.2 Nitrogen, NO2/NO3	Analytical Method: EPA 353.2							
Nitrogen, Nitrate	**4.4**	mg/kg	3.4	1		06/12/13 23:34		
Nitrogen, Nitrite	ND	mg/kg	1.7	1		06/12/13 23:34		
Nitrogen, NO2 plus NO3	**6.0**	mg/kg	3.4	1		06/12/13 23:34		
365.1 Phosphorus, Total	Analytical Method: EPA 365.1							
Phosphorus	**6470**	mg/kg	251	50		06/07/13 14:34	7723-14-0	
733C S Reactive Cyanide	Analytical Method: SW-846 7.3.3.2							
Cyanide, Reactive	ND	mg/kg	0.025	1		06/19/13 09:40		

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MONTHLY

TEMPERATURE

MONITORING

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	CURING VAR
10060613	Bay10			

Start Date/Time: 6/6/2013 3:54:11 PM *Comment*

Stop Date/Time: 6/21/2013 3:14:40 PM *Comment*

Mruntime: 0

Date/Time	Temperature
6/6/2013 5:00:00 PM	134
6/7/2013 5:00:00 PM	134
6/8/2013 5:00:00 PM	134
6/9/2013 5:00:00 PM	134
6/10/2013 5:00:00 PM	132
6/11/2013 5:00:00 PM	134
6/12/2013 5:00:00 PM	134
6/13/2013 5:00:00 PM	134
6/14/2013 5:00:00 PM	134
6/15/2013 5:00:00 PM	134
6/16/2013 5:00:00 PM	134
6/17/2013 5:00:00 PM	134
6/18/2013 5:00:00 PM	134
6/19/2013 5:00:00 PM	134
6/20/2013 5:00:00 PM	134

VAR SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	FW BIO YW OVERS
15060613	Bay15			

Start Date/Time: 6/6/2013 10:06:41 AM *Comment*

Stop Date/Time: 6/14/2013 10:50:00 AM *Comment*

Mruntime: 0

Date/Time	Temperature
6/6/2013 5:00:00 PM	117
6/7/2013 5:00:00 PM	133
6/8/2013 5:00:00 PM	133
6/9/2013 5:00:00 PM	133
6/10/2013 5:00:00 PM	133
6/11/2013 5:00:00 PM	133
6/12/2013 5:00:00 PM	133
6/13/2013 5:00:00 PM	133

PFRP 5c

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	CURING/VAR
16051013	Bay16			

Start Date/Time: 5/10/2013 4:10:14 PM

Comment

Stop Date/Time: 5/28/2013 4:06:25 PM

Comment

Mruntime: 0

Date/Time	Temperature
5/10/2013 5:00:00 PM	126
5/11/2013 5:00:00 PM	126
5/12/2013 5:00:01 PM	126
5/13/2013 5:00:00 PM	126
5/14/2013 5:00:00 PM	126
5/15/2013 5:00:00 PM	126
5/16/2013 5:00:00 PM	126
5/17/2013 5:00:00 PM	126
5/18/2013 5:00:00 PM	126
5/19/2013 5:00:00 PM	126
5/20/2013 5:00:00 PM	126
5/21/2013 5:00:00 PM	122
5/22/2013 5:00:00 PM	122
5/23/2013 5:00:00 PM	122 VAR SC
5/24/2013 5:00:00 PM	122
5/25/2013 5:00:01 PM	122
5/26/2013 5:00:00 PM	122
5/27/2013 5:00:00 PM	122

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	fwbioywovers
01050413	Bay01			

Start Date/Time: 5/4/2013 12:09:29 PM

Comment

Stop Date/Time: 5/13/2013 6:39:01 AM

Comment

Mruntime: 0

Date/Time	Temperature
5/4/2013 5:00:00 PM	128
5/5/2013 5:00:00 PM	143
5/6/2013 5:00:00 PM	133
5/7/2013 5:00:00 PM	133
5/8/2013 5:00:00 PM	133
5/9/2013 5:00:00 PM	133
5/10/2013 5:00:00 PM	133
5/11/2013 5:00:00 PM	133
5/12/2013 5:00:01 PM	95

PFRP 5C

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	fwbioywovers
05040913	Bay05			

Start Date/Time: 4/9/2013 11:21:31 AM

Comment

Stop Date/Time: 4/16/2013 4:05:53 PM

Comment

Mruntime: 0

Date/Time	Temperature
4/9/2013 5:00:00 PM	150
4/10/2013 5:00:00 PM	134
4/11/2013 5:00:00 PM	134
4/12/2013 5:00:00 PM	134
4/13/2013 5:00:01 PM	134
4/14/2013 5:00:00 PM	134
4/15/2013 5:00:00 PM	133

PFRP SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:
17030613	Bay17		FW BIO YW OVERS

Start Date/Time: 3/6/2013 12:49:04 PM

Comment

Stop Date/Time: 3/13/2013 3:26:32 PM

Comment

Mruntime: 0

Date/Time	Temperature
3/6/2013 5:00:00 PM	66
3/7/2013 5:00:00 PM	135
3/9/2013 5:00:00 PM	134
3/10/2013 5:00:01 PM	134
3/11/2013 5:00:00 PM	134
3/12/2013 5:00:00 PM	133

BFRP >C

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:
16021313	Bay16		

Start Date/Time: 2/22/2013 9:09:38 AM *Comment*

Stop Date/Time: 4/22/2013 5:45:34 PM *Comment*

Mruntime: 0

Date/Time	Temperature
2/22/2013 5:00:01 PM	120
2/23/2013 5:00:01 PM	128
2/24/2013 5:00:00 PM	133
2/25/2013 5:00:02 PM	133
2/26/2013 5:00:01 PM	133
2/27/2013 5:00:00 PM	133
2/28/2013 5:00:02 PM	133
3/1/2013 5:00:01 PM	133
3/2/2013 5:00:00 PM	133
3/3/2013 5:00:00 PM	133
3/4/2013 5:00:01 PM	133
3/5/2013 5:00:01 PM	133
3/6/2013 5:00:00 PM	133
3/7/2013 5:00:00 PM	133
3/9/2013 5:00:00 PM	133
3/10/2013 5:00:01 PM	133
3/11/2013 5:00:00 PM	0
3/12/2013 5:00:00 PM	0
3/13/2013 5:00:00 PM	0
3/14/2013 5:00:00 PM	0
3/15/2013 5:00:00 PM	0
3/16/2013 5:00:00 PM	0
3/17/2013 5:00:00 PM	0
3/19/2013 5:00:00 PM	0

✓ AR -SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	FW BIO YW OVERS
07020113	Bay07			

Start Date/Time: 2/1/2013 5:25:11 PM

Comment

Stop Date/Time: 2/11/2013 7:40:54 AM

Comment

Mruntime: 0

Date/Time	Temperature
2/3/2013 5:00:02 PM	134
2/4/2013 5:00:00 PM	133
2/5/2013 5:00:01 PM	134
2/6/2013 5:00:01 PM	134
2/7/2013 5:00:00 PM	134
2/8/2013 5:00:01 PM	134
2/9/2013 5:00:00 PM	134
2/10/2013 5:00:00 PM	134

PFRP 5c

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	CURING
21213112	Bay21			

Start Date/Time: 12/31/2012 2:21:24 PM *Comment*

Stop Date/Time: 1/19/2013 10:10:27 AM *Comment*

Mruntime: 0

Date/Time	Temperature
12/31/2012 5:00:00 PM	116
1/1/2013 5:00:00 PM	179
1/2/2013 5:00:01 PM	150
1/3/2013 5:00:01 PM	148
1/4/2013 5:00:00 PM	148
1/5/2013 5:00:00 PM	148
1/6/2013 5:00:01 PM	149
1/7/2013 5:00:01 PM	138
1/8/2013 5:00:01 PM	124
1/9/2013 5:00:00 PM	123
1/10/2013 5:00:01 PM	122
1/11/2013 5:00:01 PM	120
1/12/2013 5:00:01 PM	118
1/13/2013 5:00:00 PM	116
1/15/2013 5:00:00 PM	98
1/16/2013 5:00:01 PM	99
1/17/2013 5:00:01 PM	100
1/18/2013 5:00:00 PM	101

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	FW BIO YW OVERS
01011013	Bay01			

Start Date/Time: 1/10/2013 5:02:45 PM *Comment*

Stop Date/Time: 1/18/2013 3:03:17 PM *Comment*

Mruntime: 0

Date/Time	Temperature
1/11/2013 5:00:01 PM	156
1/12/2013 5:00:01 PM	152
1/13/2013 5:00:00 PM	146
1/15/2013 5:00:00 PM	134
1/16/2013 5:00:01 PM	133
1/17/2013 5:00:01 PM	133

PFRP SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	fwbioywovers
21121212	Bay21			

Start Date/Time: 12/12/2012 11:58:46 AM

Comment

Stop Date/Time: 12/28/2012 4:00:20 PM

Comment

Mruntime: 0

Date/Time	Temperature
12/12/2012 5:00:00 PM	162
12/13/2012 5:00:00 PM	133
12/14/2012 5:00:00 PM	132
12/15/2012 5:00:01 PM	132
12/16/2012 5:00:00 PM	132
12/17/2012 5:00:00 PM	135
12/18/2012 5:00:00 PM	147
12/19/2012 5:00:00 PM	148
12/20/2012 5:00:00 PM	148
12/21/2012 5:00:00 PM	148
12/22/2012 5:00:01 PM	148
12/23/2012 5:00:01 PM	147
12/24/2012 5:00:00 PM	147
12/25/2012 5:00:00 PM	147 ✓ AIR .5c
12/26/2012 5:00:00 PM	147
12/27/2012 5:00:00 PM	148

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	FW BIO YW OVERS
09120612	Bay09			

Start Date/Time: 12/6/2012 11:38:27 AM

Comment

Stop Date/Time: 12/17/2012 3:01:15 PM

Comment

Mruntime: 0

Date/Time	Temperature
12/6/2012 5:00:00 PM	128
12/7/2012 5:00:00 PM	130
12/8/2012 5:00:00 PM	129
12/9/2012 5:00:00 PM	129
12/10/2012 5:00:00 PM	143
12/11/2012 5:00:00 PM	134
12/12/2012 5:00:00 PM	133
12/13/2012 5:00:00 PM	132
12/14/2012 5:00:00 PM	132
12/15/2012 5:00:01 PM	132
12/16/2012 5:00:00 PM	132

PERP SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	CURING
21112012	Bay21			

Start Date/Time: 11/20/2012 7:19:00 AM *Comment*

Stop Date/Time: 12/6/2012 4:04:36 PM *Comment*

Mruntime: 0

Date/Time	Temperature
11/20/2012 5:00:00 PM	133
11/21/2012 5:00:00 PM	132
11/22/2012 5:00:00 PM	132
11/23/2012 5:00:00 PM	132
11/24/2012 5:00:00 PM	132
11/25/2012 5:00:00 PM	132
11/26/2012 5:00:00 PM	132
11/27/2012 5:00:00 PM	132
11/28/2012 5:00:00 PM	132
11/29/2012 5:00:00 PM	132
11/30/2012 5:00:00 PM	132
12/1/2012 5:00:00 PM	132
12/2/2012 5:00:00 PM	132
12/3/2012 5:00:00 PM	132 VAR SC
12/4/2012 5:00:00 PM	132
12/5/2012 5:00:00 PM	132

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	fwbioywovers
01110512	Bay01			

Start Date/Time: 11/5/2012 2:12:01 PM

Comment

Stop Date/Time: 11/12/2012 12:15:16 PM

Comment

Mruntime: 0

Date/Time	Temperature
11/5/2012 5:00:00 PM	118
11/6/2012 5:00:00 PM	134
11/7/2012 5:00:00 PM	134
11/8/2012 5:00:00 PM	134
11/9/2012 5:00:00 PM	134
11/10/2012 5:00:01 PM	133
11/11/2012 5:00:00 PM	133

PFRP SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	CURING
23101212	Bay23			

Start Date/Time: 10/12/2012 8:45:41 AM *Comment*

Stop Date/Time: 10/30/2012 6:42:03 AM *Comment*

Mruntime: 0

Date/Time	Temperature
10/12/2012 5:00:00 PM	110
10/13/2012 5:00:01 PM	122
10/14/2012 5:00:01 PM	125
10/15/2012 5:00:00 PM	132
10/16/2012 5:00:00 PM	134
10/17/2012 5:00:00 PM	134
10/18/2012 5:00:00 PM	138
10/19/2012 5:00:01 PM	134
10/20/2012 5:00:00 PM	132
10/21/2012 5:00:00 PM	133
10/22/2012 5:00:01 PM	132
10/23/2012 5:00:00 PM	132
10/24/2012 5:00:00 PM	132
10/25/2012 5:00:00 PM	131
10/26/2012 5:00:00 PM	122 JAR SC
10/27/2012 5:00:00 PM	124
10/28/2012 5:00:01 PM	129
10/29/2012 5:00:00 PM	132

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	FW BIO YW OVERS
01100912	Bay01			

Start Date/Time: 10/9/2012 12:40:30 PM

Comment

Stop Date/Time: 10/18/2012 7:12:29 AM

Comment

Mruntime: 0

Date/Time	Temperature
10/9/2012 5:00:00 PM	133
10/10/2012 5:00:00 PM	133
10/11/2012 5:00:01 PM	133
10/12/2012 5:00:00 PM	132
10/13/2012 5:00:01 PM	132
10/14/2012 5:00:01 PM	132
10/15/2012 5:00:00 PM	132
10/16/2012 5:00:00 PM	133
10/17/2012 5:00:00 PM	83

PF12P SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	fwbioywovers
23082912	Bay23			

Start Date/Time: 8/29/2012 11:56:26 AM *Comment*

Stop Date/Time: 9/18/2012 2:07:42 PM *Comment*

Mruntime: 0

Date/Time	Temperature
8/29/2012 5:00:00 PM	175
8/30/2012 5:00:00 PM	137
8/31/2012 5:00:00 PM	133
9/1/2012 5:00:00 PM	134
9/2/2012 5:00:00 PM	133
9/3/2012 5:00:01 PM	133
9/4/2012 5:00:00 PM	133
9/5/2012 5:00:00 PM	132
9/6/2012 5:00:00 PM	133
9/7/2012 5:00:00 PM	133
9/8/2012 5:00:01 PM	132
9/9/2012 5:00:01 PM	132
9/10/2012 5:00:00 PM	132
9/11/2012 5:00:00 PM	132
9/12/2012 5:00:00 PM	147
9/13/2012 5:00:00 PM	132
9/14/2012 5:00:00 PM	132
9/15/2012 5:00:00 PM	132
9/16/2012 5:00:00 PM	132
9/17/2012 5:00:00 PM	131

JAR SU

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	fwbioywovers
11090612	Bay11			

Start Date/Time: 9/6/2012 11:53:39 AM *Comment*

Stop Date/Time: 9/14/2012 7:50:05 AM *Comment*

Mruntime: 0

Date/Time	Temperature
9/6/2012 5:00:00 PM	113
9/7/2012 5:00:00 PM	157
9/8/2012 5:00:01 PM	150
9/9/2012 5:00:01 PM	146
9/10/2012 5:00:00 PM	136
9/11/2012 5:00:00 PM	134
9/12/2012 5:00:00 PM	134
9/13/2012 5:00:00 PM	133

PFRP

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	Curing
23081012	Bay23			

Start Date/Time: 8/10/2012 10:58:06 AM *Comment*

Stop Date/Time: 8/28/2012 12:44:12 PM *Comment*

Mruntime: 0

Date/Time	Temperature
8/10/2012 5:00:00 PM	169
8/11/2012 5:00:00 PM	133
8/12/2012 5:00:01 PM	133
8/13/2012 5:00:00 PM	133
8/14/2012 5:00:00 PM	133
8/15/2012 5:00:00 PM	133
8/16/2012 5:00:00 PM	132
8/17/2012 5:00:00 PM	136
8/18/2012 5:00:00 PM	135
8/19/2012 5:00:01 PM	135
8/20/2012 5:00:00 PM	136
8/21/2012 5:00:00 PM	132
8/22/2012 5:00:00 PM	132
8/23/2012 5:00:00 PM	135
8/24/2012 5:00:00 PM	132 UAR SC
8/25/2012 5:00:00 PM	132
8/26/2012 5:00:00 PM	133
8/27/2012 5:00:00 PM	132

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	fwbioywovers
09080412	Bay09			

Start Date/Time: 8/4/2012 12:13:07 PM

Comment

Stop Date/Time: 8/14/2012 8:05:25 AM

Comment

Mruntime: 0

Date/Time	Temperature
8/4/2012 5:00:00 PM	133
8/5/2012 5:00:00 PM	132
8/6/2012 5:00:00 PM	132
8/7/2012 5:00:00 PM	132
8/8/2012 5:00:00 PM	132
8/9/2012 5:00:00 PM	132
8/10/2012 5:00:00 PM	132
8/11/2012 5:00:00 PM	132
8/12/2012 5:00:01 PM	132
8/13/2012 5:00:00 PM	130

PFRP SC

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	CURING
21071112	Bay21			

Start Date/Time: 7/11/2012 9:49:43 AM

Comment

Stop Date/Time: 8/1/2012 2:48:31 PM

Comment

Mruntime: 0

Date/Time	Temperature
7/11/2012 5:00:00 PM	157
7/12/2012 5:00:01 PM	133
7/13/2012 5:00:01 PM	133
7/14/2012 5:00:01 PM	134
7/15/2012 5:00:01 PM	134
7/16/2012 5:00:00 PM	133
7/17/2012 5:00:00 PM	133
7/18/2012 5:00:00 PM	133
7/19/2012 5:00:00 PM	133
7/20/2012 5:00:00 PM	133
7/21/2012 5:00:00 PM	132
7/22/2012 5:00:00 PM	133
7/23/2012 5:00:00 PM	132
7/25/2012 5:00:00 PM	132 UAR SC
7/26/2012 5:00:01 PM	132
7/27/2012 5:00:00 PM	132
7/28/2012 5:00:00 PM	132
7/29/2012 5:00:00 PM	132
7/30/2012 5:00:00 PM	132
7/31/2012 5:00:00 PM	93

McGill Environmental Temperature Report

Batch	Bay	Initials	Residuals:	FW BIO YW OVERS
03062912	Bay03			

Start Date/Time: 6/29/2012 3:06:07 PM

Comment

Stop Date/Time: 7/10/2012 8:10:57 AM

Comment

Mruntime: 0

Date/Time	Temperature
7/2/2012 5:00:00 PM	134
7/3/2012 5:00:00 PM	134
7/4/2012 5:00:00 PM	133
7/5/2012 5:00:00 PM	133
7/6/2012 5:00:00 PM	133
7/7/2012 5:00:00 PM	132
7/8/2012 5:00:01 PM	132
7/9/2012 5:00:00 PM	132

PFRP