



Cedar Grove Composting Compost Quality Assurance Program 2009

1st Quarter Everett 2009

On February 11, 2004 the Washington State Department of Ecology imposed new minimum functional standards for all composting facilities. WAC 173-350-220 specifically defines compost manufacturing and product quality standards. Cedar Grove Composting meets these required standards. *(The new standards replace The Interim Guidelines for Grade AA Compost Quality.)*

As required, based on our production schedule at Cedar Grove, we sample every 10,000 yards of Type 1* and every 5,000 yards of Type 3* feedstock and send the samples to outside laboratories for the following **required** tests. Chart 1, Tables A & B below details the State Standards and Cedar Grove results.

In addition, on a quarterly basis, Cedar Grove tests the current compost sales inventory for moisture, nutrients and trace elements, salts, organic matter, and chloryralid. Chart 2, Table C on the next page outlines our additional **voluntary** testing protocol.

Chart 1. Washington Administrative Code (WAC) – Solid Waste Handling Standards
(Chapter 173-350 Section 220, page 29 & 30)

REQUIRED TESTING	<i>As of 01/26/09</i> WAC 173-350-220 Standard	Cedar Grove 1/2"-7/16th" Compost
Table A	Limit	As of 01/26/09
Metals	<i>(mg/kg dry weight)</i>	
Arsenic	<=20	6.6
Cadmium	<=10	1.6
Copper	<=750	45
Lead	<=150	37
Mercury	<=8	<1.0
Molybdenum	<=9	1.1
Nickel	<=210	21
Selenium	<=18	<1.0
Zinc	<=1400	170
Table B		
Other Parameters	Limit	Cedar Grove
pH	5-10 (range)	7.60
Salmonella	< 3 Most Probable Number per 4 grams of total solids	<0.3
Sharps	0 percent	ND
Manufactured Inerts	< 1 percent	<0.5
Total Nitrogen	report every 10,000 yds	1.3
Stability	Very Stable, Stable, or Moderately Unstable	Very Stable

**Type 1 Feedstock as defined by the WAC means source separated yard and garden waste, wood wastes, agricultural crop residue, wax-coated cardboard, and pre-consumer food wastes. *Type 3 Feedstock as defined by WAC means meat and post-consumer source separated food wastes.*

Chart 2. Cedar Grove Composting Voluntary Testing
(Performed Quarterly by Outside Laboratory)

VOLUNTARY TESTING	
Table C	As of 01/26/09
Nutrients -Primary & Secondary	
Ammonia	72
Nitrate	430
Phosphorus	2300
Potassium	6000
Sulfate	240
Calcium	1.9
Magnesium	0.49
Trace Elements	
Copper	45
Zinc	170
Iron	13000
Manganese	400
Boron	14
Salts, Bulk Density, Etc.	
Sodium	0.10
Chloride	0.18
Organic Nitrogen	1.2
Organic Matter	45.2
Organic Carbon	18.0
Moisture	52.1
Bulk Density	19
Carbon to Nitrogen Ratio	14
Electrical Conductivity	2.8