



Annual Biosolids Report

Calendar year covered by this report: 2008.

An annual biosolids report is required for all facilities in Washington that treat, store, use, or dispose of biosolids, sewage sludge, or septage and that require a biosolids permit.

If you have more than one separately permitted facility, you must complete a report for each facility.

This report form is also available on the internet at:

Complete this form according to the type of facility you have:

If you need additional space anywhere on this form, either add it to the form or provide attachments.

The due date for the annual report is

SECTION A: FACILITY INFORMATION

(1) Facility information.

(a) Name: Yakima Regional Wastewater Treatment Facility Owner: City of Yakima

(b) Physical address: 2220 E. Viola St. Yakima WA 98901. Latitude: 46 degrees 34' 48" N.
Longitude: 120 degrees 27' 52 W

(c) Mailing address: 2220 E. Viola St. Yakima WA 98901

(2) Facility operator.

(a) Name: Mike Price. Title: Process Control Supervisor

(b) Phone: (509) 249-6824. Email: _____

(3) Primary contact.

(a) Name: Daryl Bullard. Title: Wastewater Treatment Chief Operator

(b) Phone: (509) 249-6830. Email: _____

(4) Responsible official.

(a) Name: Scott Schafer. Title: Acting Wastewater Manager

(b) Phone: (509) 575-6077. Email: _____

(5) Facility type. Please check all that apply.

(a) Major sewage treatment facility (*design flow of ≥ 1 mgd or serving a population of $\geq 10,000$*).

(b) Minor sewage treatment facility (*design flow of < 1 mgd and serving a population of $< 10,000$*).

(c) Class I sewage treatment facility (*have an industrial pretreatment program or designated as Class I*).

(d) Composting facility (*receive biosolids or sewage sludge from others for composting*).

(e) Septage management facility (*land apply septage or prepare septage for land application*).

(f) Beneficial use facility (*receive biosolids from others for direct land application*).

(g) Other. Please describe: _____

**SECTION B: WASTEWATER TREATMENT PLANTS, COMPOSTING FACILITIES,
AND OTHERS WHO TREAT BIOSOLIDS OR SEWAGE SLUDGE**

(1) **Biosolids or sewage sludge production and management.** Please enter amounts in *dry U.S. tons*.

- (a) Produced by your facility: 1606 dry tons.
- (b) Received from another facility: 0. Facility name: _____
- (c) Sent to another facility for further treatment: 0. Facility name: _____
- (d) Sent to a municipal solid waste landfill for disposal: 0. Landfill name: _____
- (e) Sent to an incinerator: 0. Incinerator name: _____
- (f) Stored (*do not include amount stored in a lagoon*): _____
- (g) Accumulated or stored in a lagoon (*include amount in treatment and storage lagoons*): _____
- (h) Sent to a beneficial use facility for land application: 1606 dt. Facility name: Natural Selection Farms
- (i) Total land applied or sold/given away: _____. Please enter subtotals in the table below.

Applied to an agricultural site: <u>1606 dry tons</u> .	Applied to a forest site: _____.	Applied to a public contact site: _____.	Applied to a reclamation site: _____.
Applied to a lawn or home garden: _____.	Sold/given away in bulk: _____.	Sold/given away in a bag/other container: _____.	Sold/given away in compost/blended product: _____.

(2) **Land application site information** (*not required if your land applier will be submitting the information*).

- (a) Location: _____ Dry tons applied: _____. Acres applied to: _____.
Vegetation grown: _____. Pounds of nitrogen/acre/year needed for vegetation: _____.
- (b) Location: _____ Dry tons applied: _____. Acres applied to: _____.
Vegetation grown: _____. Pounds of nitrogen/acre/year needed for vegetation: _____.

(3) **Solid waste feedstocks used for composting.** Please enter amounts in *dry U.S. tons* in the table below.

Feedstock: _____ Amount: _____. County: _____.	Feedstock: _____ Amount: _____. County: _____.
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(4) **Pollutants** (*see WAC 173-308-160*).

- (a) How many monitoring events for pollutants did your facility carry out during the past year? 6
- (b) Did the monthly average of any pollutant ever exceed the Table 3 value? If yes, explain: No
- (c) Did the concentration of any pollutant ever exceed the Table 1 value? If yes, explain: No
- (d) **Pathogen reduction** (*see WAC 173-308-170*). Please check all that apply in the table below.

<input type="checkbox"/> Class A-Alt. 1 (Time/Temperature)	<input type="checkbox"/> Class A-Alt. 2 (pH/Time/Temperature/% Solids)	<input type="checkbox"/> Class A-Alt. 3 (PFRP): <input type="checkbox"/> Composting. <input type="checkbox"/> Heat drying. <input type="checkbox"/> Heat treatment. <input type="checkbox"/> Thermophilic aerobic digestion. <input type="checkbox"/> Beta ray irradiation. <input type="checkbox"/> Gamma ray irradiation. <input type="checkbox"/> Pasteurization.	
<input type="checkbox"/> Class A-Alt. 4 (Equivalency)	<input type="checkbox"/> Class B-Alt. 1 (7 Samples)	<input checked="" type="checkbox"/> Class B-Alt. 2 (PSRP): <input type="checkbox"/> Aerobic digestion. <input type="checkbox"/> Air drying. <input checked="" type="checkbox"/> Anaerobic digestion. <input type="checkbox"/> Composting. <input type="checkbox"/> Liming.	<input type="checkbox"/> Class B-Alt. 3 (Equivalency)

(5) **Vector attraction reduction** (*see WAC 173-308-180*). Please check all that apply in the table below.

<input checked="" type="checkbox"/> Alt. 1 (38% VSR)	<input type="checkbox"/> Alt. 1a (Bench test-anaerobic)	<input type="checkbox"/> Alt. 1b (Bench test-aerobic)	<input type="checkbox"/> Alt. 2 (SOUR)	<input type="checkbox"/> Alt. 3 (Aerobic process)
<input type="checkbox"/> Alt. 4 (pH adjustment)	<input type="checkbox"/> Alt. 5 ($\geq 75\%$ solids)	<input type="checkbox"/> Alt. 6 ($\geq 90\%$ solids)	<input type="checkbox"/> Alt. 7 (Injection)	<input type="checkbox"/> Alt. 8 (Incorporation)

SECTION C: SEPTAGE MANAGEMENT FACILITIES

(1) **Septage production and management.** Please enter amounts in *gallons*.

- (a) Received/pumped: 0 .
- (b) Land applied: 0 .
- (c) Stored: 0 .
- (d) Managed in another manner: 0 . Please describe: _____

(2) **Pathogen and vector attraction reduction** (see WAC 173-308-270(3)). Please check all that apply in the table below.

<input type="checkbox"/> Immediate injection.	<input type="checkbox"/> Incorporation with 6 hours.	<input type="checkbox"/> pH stabilization.
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(3) **Land application site information.**

- (a) Location: _____ . Gallons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (b) Location: _____ . Gallons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (c) Location: _____ . Gallons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .

SECTION D: BIOSOLIDS BENEFICIAL USE FACILITIES

(1) **Biosolids received and managed.** Please enter amounts in *dry U.S. tons*.

(a) Total received by your facility 0 . Please enter subtotals in the table below.

Facility Name: _____ . Amount: _____ .	Facility Name: _____ . Amount: _____ .
Facility Name: _____ . Amount: _____ .	Facility Name: _____ . Amount: _____ .
Facility Name: _____ . Amount: _____ .	Facility Name: _____ . Amount: _____ .

- (b) Land applied: _____ .
- (c) Stored: _____ .
- (d) Managed in another manner: _____ . Please describe: _____ .

(2) **Land application site information.**

- (a) Location: _____ . Dry tons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (b) Location: _____ . Dry tons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (c) Location: _____ . Dry tons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (d) Location: _____ . Dry tons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (e) Location: _____ . Dry tons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (f) Location: _____ . Gallons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .
- (g) Location: _____ . Dry tons applied: _____ . Acres applied to: _____ .
Vegetation grown: _____ . Pounds of nitrogen/acre/year needed for vegetation: _____ .

SECTION E: ATTACHMENTS, CERTIFICATION STATEMENTS, AND SUBMITTING YOUR REPORT

(1) Attachments.

- (a) Analytical data for pollutant concentrations if testing was required.
- (b) Analytical data for pathogen reduction if testing was required.
- (c) Analytical data for vector attraction reduction if testing was required.
- (d) Other. Please describe: Pollutant Summary, Production Record.

(2) Certification statement (*must be signed by the Responsible Official listed in Section A or by a duly authorized representative*).

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." Signature: [Signature] Title: ACTING WASTEWATER MANAGER Date: 1/13/09

(3) Submitting your annual report.

- (a) Original, in hardcopy form, to Ecology headquarters.
- (b) Copy to any Ecology region where your biosolids, sewage sludge, or septage will be treated, stored, disposed, or applied to the land. Ecology encourages you to submit your report electronically.
- (c) Copy to any local health jurisdiction where your biosolids, sewage sludge, or septage will be treated, stored, disposed, or applied to the land. If you wish to submit your report electronically, you must get approval to do so from the local health jurisdiction.
- (d) Copy to EPA Region 10 by _____ if your facility is a "Major" or "Class I" facility. If you wish to submit your report electronically, you must get approval to do so from EPA Region 10.

(4) Mailing addresses (*for email addresses or other information, contact your regional biosolids coordinator*).

Department of Ecology—Central Regional Office 15 West Yakima Avenue Suite 200 Yakima WA 98902 ATTN: Biosolids Coordinator Reception Phone: (509) 575-2490	Department of Ecology—Eastern Regional Office North 4601 Monroe Spokane WA 99205-1295 ATTN: Biosolids Coordinator Reception Phone: (509) 329-3400
Department of Ecology—Northwest Regional Office 3190 – 160 th Avenue S.E. Bellevue WA 98008-5452 ATTN: Biosolids Coordinator Reception Phone: (425) 649-7000	Department of Ecology—Southwest Regional Office PO Box 47775 Olympia WA 98504-7775 ATTN: Biosolids Coordinator Reception Phone: (360) 407-6300
Department of Ecology—Headquarters Office PO Box 47600 Olympia WA 98504-7600 ATTN: Biosolids Coordinator Reception Phone: (360) 407-6000	USEPA Region 10—NPDES Compliance Unit 1200 Sixth Avenue, OCE-133 Seattle WA 98101 ATTN: Biosolids Reports Reception Phone: (800) 424-4372

If you require this publication in an alternate format, please contact the Solid Waste & Financial Assistance Program at 360-407-6900. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS #6
Sample Description: CENTRIFUGE CONVEYOR COMPOSITE
Matrix: BIOSOLIDS
Date Received by Lab: 12/4/2008
Lab Sample No.: 2008 BS #6

A) Pollutants	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments	
Arsenic	SM3030D/SM3113B	ND	ND	mg/kg	2	12/18/2008	75, 41		
Cadmium	SM3030D/SM3113B	0.922	0.922	mg/kg	0.2	12/18/2008	85, 39		
Chromium	SM3030D/SM3113B	25.9	25.9	mg/kg	0.4	12/30/2008			
Copper	SM3030D/SM3113B	269	269	mg/kg	1		4300, 1500		
Lead	SM3030D/SM3113B	63.6	63.6	mg/kg	0.5	12/10/2008	840, 300		
Mercury	SM3112B	0.278	0.278	mg/kg	0.5	12/12/2008	57, 17		
Molybdenum	SM3030D/SM3113B	8.69	8.69	mg/kg	5	12/26/2008	75, -		
Nickel	SM3030D/SM3113B	5.87	5.87	mg/kg	5	12/30/2008	420, 420		
Selenium	SM3030D/SM3113B	ND	ND	mg/kg	5	12/30/2008	100, 100		
Sodium	SM3030D/SM3113B	1,597	1,597	mg/kg	400	12/11/2008			
Zinc	SM3030D/SM3113B	673	673	mg/kg	5	1/7/2009	7500, 2800		
B) Nutrients									
Ammonia nitrogen (total)	SM4500-NH3N	4.570	4.570	mg/kg		12/4/2008			
Ammonium nitrogen (total)									
Nitrate Nitrogen	SM4500NO3-E	8.76	8.76	mg/kg		12/4/2008		Not Performed	
Total Kjeldahl nitrogen	SM4500NorgC	70,100	70,100	mg/kg		12/4/2008			
Organic Nitrogen									
Phosphorous (total)	EPA 200.7	15,700	15,700	mg/kg	51.5	12/4/2008		Not Performed	
C) Conventionals									
Total solids	SM2540B	19.4	19.4	%	0.01%			Not Performed	
Total volatile solids (% of TS)				%					

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
D) Bacteriological								
Fecal coliform								
MPN/gm								
E) Recommended Nutrients								
mg/kg								
Boron (total/extractable)								
Calcium (total/extractable)	SW846 6010	21,254	21,254	mg/kg	625	12/12/2008		Not Performed
Chloride (total/extractable)				mg/kg				
Iron (total/extractable)	SW846 6010	9,914	9,914	mg/kg	125	12/9/2008		Not Performed
Magnesium (total/extractable)	SW846 6010	3,644	3,644	mg/kg	250	12/10/2008		
Manganese (total/extractable)	SW846 6010	158	158	mg/kg	75			
Potassium (total/extractable)	SW846 6010	1,831	1,831	mg/kg	50	12/10/2008		Not Performed
Sulfur (total/extractable)				mg/kg				
F) Alternative Pathogens								
MPN/4 gms								
Salmonella				PFU/4 gms				Not Performed
Viruses				viable ova/4 gms				Not Performed
Helminths								Not Performed

G) Additional Analyses

	Analytical Method	Results	Results	std units	Detection Limit	Date Analyzed	Limits	Comments
std units								
pH								
Conductivity				dS/m				Not Performed
Total carbon				mg/kg				Not Performed
Silver	SM3030D/SM3113B	10.1	10.1	mg/kg	1	12/31/2008		Not Performed

NOTES:

Analytical Methods are prescribed per federal requirements in WAC 173-308-140. See also 40 CFR 503.8

A) Pollutant limits from WAC 173-308-160. Table 1 - Ceiling Concentration Limits, Table 3 - Pollutant Concentration Limits. See also 40CFR 503.13

For B) Nutrient analyses, see "Managing Nitrogen From Biosolids", Ecology publication #99-508, Ch. 9

Analysis for A) Pollutants, B) Nutrients, C) Conventional, and D) Bacteriological are all required for land application.

Analysis for E) Recommended Nutrients, F) Alternative Pathogens, and G) Additional Analyses are optional.

Analysis for E) Recommended Nutrients can be either total (for environmental purposes) or extractable (for agronomic purposes). Please specify.

Results for F) Alternative Pathogens are reported per 4 grams of total solids.

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS #5
Sample Description: CENTRIFUGE CONVEYOR COMPOSITE
Matrix: BIOSOLIDS
Date Received by Lab: 10/16/2008
Lab Sample No: 2008 BS #5

A) Pollutants	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments	
Arsenic	SM3030D/SM3113B	ND	ND	mg/kg	12.63	11/20/2008	75, 41		
Cadmium	SM3030D/SM3113B	2.40	2.40	mg/kg	1.52	11/20/2008	85, 39		
Chromium	SM3030D/SM3113B	15.7	15.7	mg/kg	1.14	11/20/2008			
Copper	SM3030D/SM3113B	318	318	mg/kg	1.52	11/20/2008	4300, 1500		
Lead	SM3030D/SM3113B	46.7	46.7	mg/kg	13.1	11/20/2008	840, 300		
Mercury	SM3112B	0.677	0.677	mg/kg	0.076	11/21/2001	57, 17		
Molybdenum	SM3030D/SM3113B	20.6	20.6	mg/kg	5.05	11/20/2008	75, -		
Nickel	SM3030D/SM3113B	12.1	12.1	mg/kg	3.79	11/20/2008	420, 420		
Selenium	SM3030D/SM3113B	ND	ND	mg/kg	12.6	11/20/2008	100, 100		
Sodium	SM3030D/SM3113B	970	970	mg/kg	88.4	11/20/2008			
Zinc	SM3030D/SM3113B	732	732	mg/kg	2.53	11/20/2008	7500, 2800		
B) Nutrients									
Ammonia nitrogen (total)	SM4500-NH3N	6.320	6.320	mg/kg		10/23/2008			
Nitrate Nitrogen	SM4500NO3-E	17.2	17.2	mg/kg		10/24/2008		Not Performed	
Total Kjeldahl nitrogen	SM4500NorgC	60,300	60,300	mg/kg		10/21/2008			
Organic Nitrogen				mg/kg					
Phosphorus (total)	EPA 200.7	16,200	16,200	mg/kg	12.3	10/23/2008		Not Performed	
C) Conventionals									
Total solids	SM2540B	20.4	20.4	%	0.01%	10/21/2008		Not Performed	
Total volatile solids (% of TS)				%					

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

D) Bacteriological	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
E) Recommended Nutrients								
Boron (total/extractable)								
				mg/kg				
Calcium (total/extractable)	SW846 6010	23,200	23,200	mg/kg	50.5	11/20/2008		Not Performed
Chloride (total/extractable)				mg/kg				
Iron (total/extractable)	SW846 6010	9,190	9,190	mg/kg	5.05	11/20/2008		Not Performed
Magnesium (total/extractable)	SW846 6010	3,940	3,940	mg/kg	10.1	11/20/2008		
Manganese (total/extractable)	SW846 6010	224	224	mg/kg	1	11/20/2008		
Potassium (total/extractable)	SW846 6010	1,520	1,520	mg/kg	75.8	11/20/2008		
Sulfur (total/extractable)				mg/kg				Not Performed
F) Alternative Pathogens								
Salmonella								
Viruses				MPN/4 gms				Not Performed
Helminths				PFU/4 gms				Not Performed
				viable ova/4 gms				Not Performed

G) Additional Analyses

				std units				
Conductivity				dS/m				Not Performed
Total carbon				mg/kg				Not Performed
Silver	SM3030D/SM3113B	9.60	9.60	mg/kg	1.26	11/20/2008		Not Performed

NOTES:
 Analytical Methods are prescribed per federal requirements in WAC 173-308-140. See also 40 CFR 503.8
 A) Pollutant limits from WAC 173-308-160. Table 1 - Ceiling Concentration Limits. Table 3 - Pollutant Concentration Limits. See also 40CFR 503.13
 For B) Nutrient analyses, see "Managing Nitrogen From Biosolids", Ecology publication #99-508, Ch. 9
 Analysis for A) Pollutants, B) Nutrients, C) Conventional, and D) Bacteriological are all required for land application.
 Analysis for E) Recommended Nutrients, F) Alternative Pathogens, and G) Additional Analyses are optional.
 Analysis for E) Recommended Nutrients can be either total (for environmental purposes) or extractable (for agronomic purposes). Please specify.
 Results for F) Alternative Pathogens are reported per 4 grams of total solids.

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS PRIORITY POLLUTANT METALS
Sample Description: CENTRIFUGE CONVEYOR GRAB
Matrix: BIOSOLIDS
Date Received by Lab: 10/6/2008
Lab Sample No: 2008 Q4 BS PP

A) Pollutants	Analytical Method	Results (Dry wt.)	Units	Detection Limit	Date Analyzed
Antimony	SM3030D/SM3113B	ND	mg/kg	11.4	11/20/2008
Arsenic	SM3030D/SM3113B	ND	mg/kg	14.2	11/20/2008
Beryllium	SM3030D/SM3113B	ND	mg/kg	0.284	11/20/2008
Cadmium	SM3030D/SM3113B	2.47	mg/kg	1.70	11/20/2008
Chromium	SM3030D/SM3113B	16.3	mg/kg	1.28	11/20/2008
Copper	SM3030D/SM3113B	307	mg/kg	1.70	11/20/2008
Lead	SM3030D/SM3113B	48.9	mg/kg	14.8	11/20/2008
Mercury	SM3112B	0.434	mg/kg	0.085	11/21/2008
Nickel	SM3030D/SM3113B	11.2	mg/kg	4.26	11/20/2008
Selenium	SM3030D/SM3113B	ND	mg/kg	14.2	11/20/2008
Silver	SM3030D/SM3113B	10.0	mg/kg	1.42	11/20/2008
Thallium	SM3030D/SM3113B	ND	mg/kg	11.4	11/20/2008
Zinc	SM3030D/SM3113B	727	mg/kg	2.84	11/20/2008

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS PRIORITY POLLUTANT METALS
Sample Description: CENTRIFUGE CONVEYOR GRAB
Matrix: BIOSOLIDS
Date Received by Lab: 9/23/2008
Lab Sample No: 2008 Q3 BS PP

A) Pollutants	Analytical Method	Results (Dry wt.)	Units	Detection Limit	Date Analyzed
Antimony	SM3030D/SM3113B	ND	mg/kg	9.71	10/30/2008
Arsenic	SM3030D/SM3113B	ND	mg/kg	12.1	10/30/2008
Beryllium	SM3030D/SM3113B	ND	mg/kg	0.243	10/30/2008
Cadmium	SM3030D/SM3113B	2.43	mg/kg	1.46	10/30/2008
Chromium	SM3030D/SM3113B	24.5	mg/kg	1.09	10/30/2008
Copper	SM3030D/SM3113B	294	mg/kg	1.46	10/30/2008
Lead	SM3030D/SM3113B	57.3	mg/kg	12.6	10/30/2008
Mercury	SM3112B	0.935	mg/kg	0.291	10/31/2008
Nickel	SM3030D/SM3113B	17.0	mg/kg	3.64	10/30/2008
Selenium	SM3030D/SM3113B	ND	mg/kg	12.1	10/30/2008
Silver	SM3030D/SM3113B	10.5	mg/kg	1.21	10/30/2008
Thallium	SM3030D/SM3113B	ND	mg/kg	9.71	10/30/2008
Zinc	SM3030D/SM3113B	752	mg/kg	2.43	10/30/2008

YAKIMA REGIONAL WASTE..ATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS #4
Sample Description: CENTRIFUGE CONVEYOR COMPOSITE
Matrix: BIOSOLIDS
Date Received by Lab: 8/11/2008
Lab Sample No: 2008 BS #4

	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments	
A) Pollutants									
Arsenic	SM3030D/SM3113B	ND	ND	mg/kg	2	8/22/2008	75, 41		
Cadmium	SM3030D/SM3113B	1.11	1.11	mg/kg	0.2	8/17/2008	85, 39		
Chromium	SM3030D/SM3113B	35.3	35.3	mg/kg	0.4	9/11/2008			
Copper	SM3030D/SM3113B	367	367	mg/kg	1	8/23/2008	4300, 1500		
Lead	SM3030D/SM3113B	55.3	55.3	mg/kg	0.5	9/4/2008	840, 300		
Mercury	SM3112B	0.712	0.712	mg/kg	0.5	9/3/2008	57, 17		
Molybdenum	SM3030D/SM3113B	16.3	16.3	mg/kg	5	8/17/2008	75, -		
Nickel	SM3030D/SM3113B	12.2	12.2	mg/kg	5	8/18/2008	420, 420		
Selenium	SM3030D/SM3113B	ND	ND	mg/kg	5	8/18/2008	100, 100		
Sodium	SM3030D/SM3113B	1,953	1,953	mg/kg	400	8/25/2008			
Zinc	SM3030D/SM3113B	859	859	mg/kg	5	8/22/2008	7500, 2800		
B) Nutrients									
Ammonia nitrogen (total)	SM4500-NH3N	7,540	7,540	mg/kg		8/18/2008			
Ammonium nitrogen (total)				mg/kg					
Nitrate Nitrogen	SM4500NO3-E	64.0	64.0	mg/kg		8/18/2008		Not Performed	
Total Kjeldahl nitrogen	SM4500NorgC	62,100	62,100	mg/kg		8/19/2008			
Organic Nitrogen				mg/kg					
Phosphorous (total)	EPA 200.7	16,700	16,700	mg/kg	49.3	8/20/2008		Not Performed	
C) Conventional									
Total solids	SM2540B	20.3	20.3	%	0.01%	8/19/2008		Not Performed	
Total volatile solids (% of TS)				%					

YAKIMA REGIONAL WASTE WATER TREATMENT PLANT
ANALYTICAL RESULTS

D) Bacteriological	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
Fecal coliform								
E) Recommended Nutrients								
Boron (total/extractable)								
Calcium (total/extractable)	SW846 6010	28,312	28,312	mg/kg	625	8/30/2008		Not Performed
Chloride (total/extractable)	SW846 6010	12,480	12,480	mg/kg	125	8/23/2008		Not Performed
Iron (total/extractable)	SW846 6010	3,612	3,612	mg/kg	250	8/25/2008		Not Performed
Magnesium (total/extractable)	SW846 6010	190	190	mg/kg	75	8/23/2008		Not Performed
Potassium (total/extractable)	SW846 6010	1,950	1,950	mg/kg	50	8/25/2008		Not Performed
Sulfur (total/extractable)				mg/kg				Not Performed
F) Alternative Pathogens								
Salmonella				MPN/4 gms				Not Performed
Viruses				PFU/4 gms				Not Performed
Helminths				viable ova/4 gms				Not Performed

G) Additional Analyses

PH	Conductivity	Total carbon	Silver	std units	Detection Limit	Date Analyzed	Limits	Comments
				dS/m				Not Performed
				mg/kg				Not Performed
				mg/kg				Not Performed

NOTES:
 Analytical Methods are prescribed per federal requirements in WAC 173-308-140. See also 40 CFR 503.8
 A) Pollutant limits from WAC 173-308-160. Table 1 - Ceiling Concentration Limits, Table 3 - Pollutant Concentration Limits. See also 40CFR 503.13
 For B) Nutrient analyses, see "Managing Nitrogen From Biosolids", Ecology publication #99-508, Ch. 9
 Analysis for A) Pollutants, B) Nutrients, C) Conventional, and D) Bacteriological are all required for land application.
 Analysis for E) Recommended Nutrients, F) Alternative Pathogens, and G) Additional Analyses are optional.
 Analysis for E) Recommended Nutrients can be either total (for environmental purposes) or extractable (for agronomic purposes). Please specify.
 Results for F) Alternative Pathogens are reported per 4 grams of total solids.

YAKIMA REGIONAL WASTE-WATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS #3
Sample Description: CENTRIFUGE CONVEYOR COMPOSITE
Matrix: BIOSOLIDS
Date Received by Lab: 6/12/2008
Lab Sample No: 2008 BS #3

	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments	
A) Pollutants									
Arsenic	SM3030D/SM3113B	ND	ND	mg/kg	2	6/27/2008	75, 41		
Cadmium	SM3030D/SM3113B	1.46	1.46	mg/kg	0.2	6/20/2008	85, 39		
Chromium	SM3030D/SM3113B	28.4	28.4	mg/kg	0.4	6/26/2008			
Copper	SM3030D/SM3113B	259	259	mg/kg	1	6/27/2008	4300, 1500		
Lead	SM3030D/SM3113B	42.2	42.2	mg/kg	0.5	6/26/2008	840, 300		
Mercury	SM3112B	0.986	0.986	mg/kg	0.5	7/9/2008	57, 17		
Molybdenum	SM3030D/SM3113B	10.0	10.0	mg/kg	5	6/24/2008	75, -		
Nickel	SM3030D/SM3113B	7.75	7.75	mg/kg	5	6/26/2008	420, 420		
Selenium	SM3030D/SM3113B	ND	ND	mg/kg	5	6/26/2008	100, 100		
Sodium	SM3030D/SM3113B	1,462	1,462	mg/kg	400	7/1/2008			
Zinc	SM3030D/SM3113B	758	758	mg/kg	5	7/1/2008	7500, 2800		
B) Nutrients									
Ammonia nitrogen (total)	SM4500-NH3N	5,520	5,520	mg/kg		6/16/2008			
Ammonium nitrogen (total)				mg/kg					
Nitrate Nitrogen	SM4500NO3-E	3.17	3.17	mg/kg		6/16/2008		Not Performed	
Total Kjeldahl nitrogen	SM4500NorgC	62,400	62,400	mg/kg		6/17/2008			
Organic Nitrogen				mg/kg					
Phosphorous (total)	EPA 200.7	17,700	17,700	mg/kg	45.2	6/18/2008		Not Performed	
C) Conventionals									
Total solids	SM2540B	22.1	22.1	%	0.01%	6/18/2008		Not Performed	
Total volatile solids (% of TS)				%					

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
D) Bacteriological							
Fecal coliform							
E) Recommended Nutrients							
Boron (total/extractable)							
	SW846 6010	29,519	29,519	mg/kg	625	7/1/2008	Not Performed
Calcium (total/extractable)							
	SW846 6010	10,311	10,311	mg/kg	125	7/1/2008	Not Performed
Chloride (total/extractable)							
	SW846 6010	3,762	3,762	mg/kg	250	7/1/2008	Not Performed
Iron (total/extractable)							
	SW846 6010	113	113	mg/kg	75	7/1/2008	Not Performed
Magnesium (total/extractable)							
	SW846 6010	2,276	2,276	mg/kg	50	7/1/2008	Not Performed
Manganese (total/extractable)							
Potassium (total/extractable)							
Sulfur (total/extractable)							
F) Alternative Pathogens							
Salmonella							
				MPN/4 gms			Not Performed
Viruses							
				PFU/4 gms			Not Performed
Helminths							
				viable ova/4 gms			Not Performed

G) Additional Analyses

Analytical Method	Results	Results	Units	Detection Limit	Date Analyzed	Limits	Comments
PH							
Conductivity							
				std units			Not Performed
Total carbon							
				ds/m			Not Performed
Silver							
	SM3030D/SM3113B	41.1	41.1	mg/kg	1	7/2/2008	Not Performed

NOTES:

Analytical Methods are prescribed per federal requirements in WAC 173-308-140. See also 40 CFR 503.8

A) Pollutant limits from WAC 173-308-160. Table 1 - Ceiling Concentration Limits, Table 3 - Pollutant Concentration Limits. See also 40CFR 503.13

For B) Nutrient analyses, see "Managing Nitrogen From Biosolids", Ecology publication #99-508, Ch. 9

Analysis for A) Pollutants, B) Nutrients, C) Conventional, and D) Bacteriological are all required for land application.

Analysis for E) Recommended Nutrients, F) Alternative Pathogens, and G) Additional Analyses are optional.

Analysis for E) Recommended Nutrients can be either total (for environmental purposes) or extractable (for agronomic purposes). Please specify.

Results for F) Alternative Pathogens are reported per 4 grams of total solids.

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS PRIORITY POLLUTANT METALS
Sample Description: CENTRIFUGE CONVEYOR GRAB
Matrix: BIOSOLIDS
Date Received by Lab: 6/3/2008
Lab Sample No: 2008 Q2 BS PP

A) Pollutants	Analytical Method	Results (Dry wt.)	Units	Detection Limit	Date Analyzed
Antimony	SM3030D/SM3113B	ND	mg/kg	5	6/20/2008
Arsenic	SM3030D/SM3113B	ND	mg/kg	0.5	6/27/2008
Beryllium	SM3030D/SM3113B	ND	mg/kg	2	6/20/2008
Cadmium	SM3030D/SM3113B	1.74	mg/kg	0.1	6/20/2008
Chromium	SM3030D/SM3113B	30.8	mg/kg	1	6/26/2008
Copper	SM3030D/SM3113B	244	mg/kg	10	6/27/2008
Lead	SM3030D/SM3113B	59.7	mg/kg	1	6/26/2008
Mercury	SM3112B	1.77	mg/kg	0.05	7/9/2008
Nickel	SM3030D/SM3113B	9.10	mg/kg	2	6/26/2008
Selenium	SM3030D/SM3113B	2.04	mg/kg	2	6/26/2008
Silver	SM3030D/SM3113B	44.0	mg/kg	1	7/2/2008
Thallium	SM3030D/SM3113B	ND	mg/kg	10	6/26/2008
Zinc	SM3030D/SM3113B	818	mg/kg	4	7/1/2008

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS #2
Sample Description: CENTRIFUGE CONVEYOR COMPOSITE
Matrix: BIOSOLIDS
Date Received by Lab: 4/16/2008
Lab Sample No: 2008 BS #2

	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments	
A) Pollutants									
Arsenic	SM3030D/SM3113B	ND	ND	mg/kg	2	5/14/2008	75, 41		
Cadmium	SM3030D/SM3113B	0.464	0.464	mg/kg	0.2	5/23/2008	85, 39		
Chromium	SM3030D/SM3113B	21.2	21.2	mg/kg	0.4	5/21/2008			
Copper	SM3030D/SM3113B	426	426	mg/kg	1	5/5/2008	4300, 1500		
Lead	SM3030D/SM3113B	42.2	42.2	mg/kg	0.5	5/28/2008	840, 300		
Mercury	SM3112B	ND	ND	mg/kg	0.5	6/6/2008	57, 17		
Molybdenum	SM3030D/SM3113B	6.54	6.54	mg/kg	5	5/12/2008	75, -		
Nickel	SM3030D/SM3113B	29.8	29.8	mg/kg	5	5/27/2008	420, 420		
Selenium	SM3030D/SM3113B	ND	ND	mg/kg	5	5/13/2008	100, 100		
Sodium	SM3030D/SM3113B	1,328	1,328	mg/kg	400	5/5/2008			
Zinc	SM3030D/SM3113B	888	888	mg/kg	5	5/5/2008	7500, 2800		
B) Nutrients									
Ammonia nitrogen (total)	SM4500-NH3N	6,490	6,490	mg/kg		4/23/2008			
Ammonium nitrogen (total)				mg/kg					
Nitrate Nitrogen	SM4500NO3-E	51.0	51.0	mg/kg		4/23/2008		Not Performed	
Total Kjeldahl nitrogen	SM4500NorgC	66,800	66,800	mg/kg		5/2/2008			
Organic Nitrogen				mg/kg					
Phosphorous (total)	EPA 200.7	17,500	17,500	mg/kg	12.4	5/1/2008		Not Performed	
C) Conventionals									
Total solids	SM2540B	20.8	20.8	%	0.01%	4/23/2008		Not Performed	
Total volatile solids (% of TS)				%					

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
D) Bacteriological							
Fecal coliform			MPN/gm				Not Performed
E) Recommended Nutrients							
Boron (total/extractable)			mg/kg				
Calcium (total/extractable)	SW846 6010	22,166	mg/kg	625	5/6/2008		Not Performed
Chloride (total/extractable)			mg/kg				
Iron (total/extractable)	SW846 6010	13,180	mg/kg	125	5/5/2008		Not Performed
Magnesium (total/extractable)	SW846 6010	4,398	mg/kg	250	5/6/2008		
Manganese (total/extractable)	SW846 6010	139	mg/kg	75	5/5/2008		
Potassium (total/extractable)	SW846 6010	1,697	mg/kg	39.1	5/5/2008		39.6
Sulfur (total/extractable)			mg/kg				Not Performed
F) Alternative Pathogens							
Salmonella			MPN/4 gms				Not Performed
Viruses			PFU/4 gms				Not Performed
Helminths			viable ova/4 gms				Not Performed

G) Additional Analyses

			std units			
pH						
Conductivity			dS/m			Not Performed
Total carbon			mg/kg			Not Performed
Silver	SM3030D/SM3113B	13.7	mg/kg		5/5/2008	Not Performed

NOTES:

Analytical Methods are prescribed per federal requirements in WAC 173-308-140. See also 40 CFR 503.8
 A) Pollutant limits from WAC 173-308-160. Table 1 - Ceiling Concentration Limits, Table 3 - Pollutant Concentration Limits. See also 40CFR 503.13
 For B) Nutrient analyses, see "Managing Nitrogen From Biosolids", Ecology publication #99-508, Ch. 9
 Analysis for A) Pollutants, B) Nutrients, C) Conventional, and D) Bacteriological are all required for land application.
 Analysis for E) Recommended Nutrients, F) Alternative Pathogens, and G) Additional Analyses are optional.
 Analysis for E) Recommended Nutrients can be either total (for environmental purposes) or extractable (for agronomic purposes). Please specify.
 Results for F) Alternative Pathogens are reported per 4 grams of total solids.

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS PRIORITY POLLUTANT METALS
Sample Description: CENTRIFUGE CONVEYOR GRAB
Matrix: BIOSOLIDS
Date Received by Lab: 3/25/2008
Lab Sample No: 2008 Q1 BS PP

A) Pollutants	Analytical Method	Results (Dry wt.)	Units	Detection Limit
Antimony	SM3030D/SM3113B	ND	mg/kg	5
Arsenic	SM3030D/SM3113B	ND	mg/kg	0.5
Beryllium	SM3030D/SM3113B	ND	mg/kg	2
Cadmium	SM3030D/SM3113B	3.12	mg/kg	0.1
Chromium	SM3030D/SM3113B	14.7	mg/kg	1
Copper	SM3030D/SM3113B	395	mg/kg	10
Lead	SM3030D/SM3113B	43.3	mg/kg	1
Mercury	SM3112B	0.552	mg/kg	0.05
Nickel	SM3030D/SM3113B	19.2	mg/kg	2
Selenium	SM3030D/SM3113B	ND	mg/kg	2
Silver	SM3030D/SM3113B	12.6	mg/kg	1
Thallium	SM3030D/SM3113B	ND	mg/kg	10
Zinc	SM3030D/SM3113B	692	mg/kg	4

B) Nutrients

Ammonia nitrogen (total)	SM4500-NH3N	7.270	7.270	mg/kg	3/8/2007	
Ammonium nitrogen (total)				mg/kg		
Nitrate Nitrogen	SM4500NO3-E	7.1	7.1	mg/kg	2/12/2007	Not Performed
Total Kjeldahl nitrogen	SM4500NorgC	66.700	66.700	mg/kg	2/14/2007	
Organic Nitrogen				mg/kg		
Phosphorous (total)	EPA 200.7	16.900	16.900	mg/kg	2/22/2007	Not Performed

C) Conventional

Total solids	SM2540B	18.3	18.3	%	2/22/2007	
Total volatile solids (% of TS)				%	0.01%	2/22/2007

Not Performed

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

D) Bacteriological	Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
E) Recommended Nutrients								
Boron (total/extractable)								
				mg/kg				Not Performed
Calcium (total/extractable)	SW846 6010	21,567	21,567	mg/kg	625	4/11/2007		Not Performed
Chloride (total/extractable)				mg/kg				
Iron (total/extractable)	SW846 6010	10,175	10,175	mg/kg	125	4/4/2007		Not Performed
Magnesium (total/extractable)	SW846 6010	3,387	3,387	mg/kg	250	4/11/2007		
Manganese (total/extractable)	SW846 6010	337	337	mg/kg	75	4/4/2007		
Potassium (total/extractable)	SW846 6010	1,910	1,910	mg/kg	82	2/27/2007		
Sulfur (total/extractable)				mg/kg				
F) Alternative Pathogens								
Salmonella								
Viruses				MPN/4 gms				Not Performed
Helminths				PFU/4 gms				Not Performed
				viable ova/4 gms				Not Performed

G) Additional Analyses

pH	Conductivity	Total carbon	Silver	std units	Date Analyzed	Limits	Comments
				ds/m			Not Performed
				mg/kg			Not Performed
				mg/kg			Not Performed
					3/13/2007		

ANALYTICAL METHODS ARE PRESCRIBED PER FEDERAL REQUIREMENTS IN WAC 173-308-140. See also 40 CFR 503.8
 A) Pollutant limits from WAC 173-308-160. Table 1 - Ceiling Concentration Limits, Table 3 - Pollutant Concentration Limits. See also 40CFR 503.13
 For B) Nutrient analyses, see "Managing Nitrogen From Biosolids", Ecology publication #99-508, Ch. 9
 Analysis for A) Pollutants, B) Nutrients, C) Conventional, and D) Bacteriological are all required for land application.
 Analysis for E) Recommended Nutrients, F) Alternative Pathogens, and G) Additional Analyses are optional.
 Analysis for E) Recommended Nutrients can be either total (for environmental purposes) or extractable (for agronomic purposes). Please specify.
 Results for F) Alternative Pathogens are reported per 4 grams of total solids.

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Sample Origin: BIOSOLIDS #1
Sample Description: CENTRIFUGE CONVEYOR COMPOSITE
Matrix: BIOSOLIDS
Date Received by Lab: 2/12/2008
Lab Sample No: 2008 BS #1

	Analytical Method	Results (As Recvd.)		Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
		(As Recvd.)	(Dry wt.)					
A) Pollutants								
Arsenic	SM3030D/SM3113B	4.11	4.11	mg/kg	2	3/10/2008	75, 41	
Cadmium	SM3030D/SM3113B	0.857	0.857	mg/kg	0.2	3/11/2008	85, 39	
Chromium	SM3030D/SM3113B	18.7	18.7	mg/kg	0.4	3/11/2008		
Copper	SM3030D/SM3113B	369	369	mg/kg	1	3/12/2008	4300, 1500	
Lead	SM3030D/SM3113B	35.0	35.0	mg/kg	0.5	3/12/2008	840, 300	
Mercury	SM3112B	0.855	0.855	mg/kg	0.5	3/6/2008	57, 17	
Molybdenum	SM3030D/SM3113B	20.2	20.2	mg/kg	5	3/14/2008	75, -	
Nickel	SM3030D/SM3113B	22.9	22.9	mg/kg	5	3/14/2008	420, 420	
Selenium	SM3030D/SM3113B	3.67	3.67	mg/kg	2	3/18/2008	100, 100	
Sodium	SM3030D/SM3113B	1,260	1,260	mg/kg	400	3/12/2008		
Zinc	SM3030D/SM3113B	706	706	mg/kg	5	3/11/2008	7500, 2800	
B) Nutrients								
Ammonia nitrogen (total)	SM4500-NH3N	3,570	3,570	mg/kg		2/18/2008		
Ammonium nitrogen (total)								
Nitrate Nitrogen	SM4500NO3-E	2.86	2.86	mg/kg		2/18/2008		Not Performed
Total Kjeldahl nitrogen	SM4500NorgC	68,600	68,600	mg/kg		2/19/2008		
Organic Nitrogen								
Phosphorous (total)	EPA 200.7	18,000	18,000	mg/kg	47.6	2/18/2008		Not Performed
C) Conventional								
Total solids	SM2540B	21.0	21.0	%	0.01%	2/14/2008		Not Performed
Total volatile solids (% of TS)				%				

YAKIMA REGIONAL WASTEWATER TREATMENT PLANT
ANALYTICAL RESULTS

Analytical Method	Results (As Recvd.)	Results (Dry wt.)	Units	Detection Limit	Date Analyzed	Limits Tables 1,3	Comments
D) Bacteriological							
Fecal coliform							
MPN/gm							
E) Recommended Nutrients							
Boron (total/extractable)							
Calcium (total/extractable)	SW846 6010	19,850	19,850	mg/kg	625	3/11/2008	Not Performed
Chloride (total/extractable)				mg/kg			
Iron (total/extractable)	SW846 6010	10,062	10,062	mg/kg	125	3/11/2008	Not Performed
Magnesium (total/extractable)	SW846 6010	3,630	3,630	mg/kg	250	3/11/2008	
Manganese (total/extractable)	SW846 6010	286	286	mg/kg	75	3/11/2008	
Potassium (total/extractable)	SW846 6010	1,830	1,830	mg/kg	50	3/11/2008	
Sulfur (total/extractable)				mg/kg			
F) Alternative Pathogens							
Salmonella				MPN/4 gms			Not Performed
Viruses				PFU/4 gms			Not Performed
Helminths				viable ova/4 gms			Not Performed
G) Additional Analyses							
pH							
Conductivity				std units			Not Performed
Total carbon				ds/m			Not Performed
Silver	SM3030D/SM3113B	13.6	13.6	mg/kg	1	3/12/2008	Not Performed
				mg/kg			

NOTES:
 Analytical Methods are prescribed per federal requirements in WAC 173-308-140. See also 40 CFR 503.8
 A) Pollutant limits from WAC 173-308-160. Table 1 - Ceiling Concentration Limits, Table 3 - Pollutant Concentration Limits. See also 40CFR 503.13
 For B) Nutrient analyses, see "Managing Nitrogen From Biosolids", Ecology publication #99-508, Ch. 9
 Analysis for A) Pollutants, B) Nutrients, C) Conventional, and D) Bacteriological are all required for land application.
 Analysis for E) Recommended Nutrients, F) Alternative Pathogens, and G) Additional Analyses are optional.
 Analysis for E) Recommended Nutrients can be either total (for environmental purposes) or extractable (for agronomic purposes). Please specify.
 Results for F) Alternative Pathogens are reported per 4 grams of total solids.

VOLATILE SOLIDS 2008

2008									
Volatile Solids Reduction in % For Vector Attraction Reduction									
MONTH	RAW	WAS	AVERAGE IN	PRIMARY 1	PRIMARY 2	PRIMARY 3	AVERAGE OUT	PERCENT REDUCTION	TEMP. F°
January	88.2%	88.2%	88.2%	70.7%	71.0%	72.6%	71.4%	66.55%	99.0
February	85.6%	86.2%	85.9%	70.5%	70.1%	70.3%	70.3%	61.15%	98.8
March	85.7%	86.5%	86.1%	66.6%	68.7%	69.5%	68.3%	65.27%	98.9
April	84.0%	86.8%	85.4%	68.5%	68.8%	69.4%	68.9%	62.12%	98.9
May	84.9%	84.8%	84.9%	68.2%	70.5%	69.6%	69.4%	59.44%	97.7
June	83.3%	84.5%	83.9%	64.6%	68.3%	68.7%	67.2%	60.68%	99.1
July	84.3%	86.6%	85.5%	68.1%	67.8%	68.6%	68.2%	63.54%	99.4
August	83.6%	86.3%	85.0%	65.8%	68.1%	68.7%	67.5%	63.15%	99.3
September	81.9%	89.3%	85.6%	69.7%	69.2%	68.6%	69.2%	62.26%	99.2
October	83.3%	89.6%	86.5%	72.3%	71.8%	72.3%	72.1%	59.43%	98.6
November	83.7%	88.2%	86.0%	71.6%	70.2%	71.4%	71.1%	59.85%	99.2
December	85.2%	87.6%	86.4%	68.7%	70.6%	70.8%	70.0%	63.21%	98.9
							High for year	66.55%	99.4
							Low for year	59.43%	97.7
							Average	62.22%	98.9
Notes:	Arithmetic averages used to determine averages for volatile solids.								
	Percents are entered in as decimals.								
	Formula to determine percent reduction is from page 4-23 of EPA's Operational								
	Manual 430/9-76-001, "Anaerobic Sludge Digestion".								
	Percent reduction = $\frac{(IN - OUT) \times 100\%}{IN - (IN \times OUT)}$								

METALS 2008

	Biosolids #1	Biosolids #2	Biosolids #3	Biosolids #4	Biosolids #5	Biosolids #6	Averages	CFR part 40
DATES - 2008	Feb. 12	Apr. 16	Jun. 12	Aug. 11	Oct. 8	Dec. 4		503 Table 3
Arsenic	4.11	ND DL=2	ND DL=2	ND DL=2	ND DL=12.63	ND DL=2	4.11	41
Cadmium	0.857	0.464	1.46	1.11	2.40	0.92	1.06	39
Copper	369	426	259	367	318	269	329.4	1,500
Lead	35	42.2	42.2	55.3	46.7	63.6	46.60	300
Mercury	0.855	ND DL=0.5	0.986	0.712	0.677	0.278	0.65	17
Molybdenum	20.2	6.54	10.0	16.3	20.6	8.69	12.52	75
Nickel	22.9	29.8	7.75	12.2	12.1	5.9	12.89	420
Selenium	3.67	ND DL=5	ND DL=5	ND DL=5	ND DL=12.6	ND DL=5	3.67	36
Zinc	706	888	758	859	732	673	765.4	2,800
CONVENTIONALS								
	Feb. 12	Apr. 16	Jun. 12	Aug. 11	Oct. 8	Dec. 4		
Organic Nitrogen	65,027	60,259	56,877	54,496	53,863	65,521	59,158	
Ammonia Nitrogen	3,570	6,490	5,520	7,540	6,420	4,570	5,520	
Nitrite + Nitrate N	2.86	51	3.17	64	17.20	8.76	12.83	
Total Phosphorus	18,000	17,500	17,700	16,700	16,200	15,700	16,946	
Percent Solids	21.0%	20.8%	22.1%	20.3%	20.4%	19.4%	20.7%	
Note: (TKN - Ammonia) - (Nitrite+Nitrate) = Organic Nitrogen Geometric averages were used on all averages. NDs were not included in the averages units are mg/kg								

BIOSOLIDS PRODUCTION 2008

Biosolids Production for calendar year 2008							
MONTH	FEED FLOW (MG)	FEED CONC.	GROSS DRY TONS	CENTRATE CONC.	CENTRATE DRY TONS	TOTAL DRY TONS	Weighed DRY TONS
January	2.506	15,176	158.59	592	6.19	152.40	115.32
February	2.161	15,983	144.03	442	3.98	140.05	105.86
March	2.334	16,170	157.38	323	3.14	154.24	110.27
April	3.066	16,250	207.76	475	6.07	201.69	154.67
May	2.912	17,783	215.94	376	4.57	211.37	142.90
June	1.794	15,459	115.65	239	1.79	113.86	106.37
July	2.428	17,289	175.05	139	1.41	173.64	157.86
August	1.640	16,900	115.58	155	1.06	114.52	111.01
September	2.122	17,863	158.07	436	3.86	154.21	138.66
October	2.550	18,894	200.91	711	7.56	193.35	188.98
November	2.065	17,175	147.89	248	2.14	145.76	139.12
December	2.440	15,686	159.60	330	3.36	156.24	134.95
DRY TONS/YEAR						1911.31	1605.97
METRIC DRY TONS / YEAR						1733.56	1456.61
AVERAGE DRY TONS/MONTH						159.28	133.83
METRIC DRY TONS/MONTH						144.46	121.38
ADJUSTED DRY TONS PER YEAR						1605.97	
ADJUSTED METRIC DRY TONS PER YEAR						1456.61	
Adjusted dry tons = calculated dry tons minus 15.9754 percent							
Calculated amounts= (Flow (MG) X Feed Conc X 8.34) / 2000 - (Flow (MG) X Centrate Conc X 8.34) / 2000							
Calculated amounts, using feed flow calculated from pump run time X metered flow rate.							
Weighed amounts from hauling records = 15.9754 percent less than calculated amounts.							
Total dry tonnage is gross dry tons minus centrate dry tons							
Average amount is arithmetic average for the year.							
concentrations are mg/l as received from lab report.							