City of Sidney WWTP Dedicated to Improving Water Quality Today for Tomorrow's Generation

January 16, 2014

Ohio EPA, Division of Surface Waters
Attn: Betsy VanWormer
P.O. Box 1049
Columbus, Ohio 43216-1049

RE: City of Sidney's 2013 Annual Sewage Sludge Report

Ms. VanWormer:

The City of Sidney's 2013 Annual Sewage Sludge Report and supporting documentation are enclosed. The supporting documentation covers Biosolids generated from April 2012 thru July 2012 and from November 2012 thru October 2013 that was land applied in 2013.

All Biosolids generated and land applied met Pathogen Reduction alternative #1, Vector Attraction Reduction #1 and Table D-3 monthly concentration limits.

Please feel free to contact me at 937-498-8721 or BZerkle@sidneyoh.com if you have any questions or comments regarding this submittal.

Respectfully,

Barry Zerkle

Barry Zerkle
City of Sidney WWTP
WWTP Supt.

Enclosures: Summary of Nuisance Complaints
Priority Pollutants Analysis
Pathogen and Vector Attraction Reduction Results
Copies of all Certification Statements

Division of Surface Water
Annual Sewage Sludge Report 2013

Station 581 - Certification Statements

Treatment Works name: City of Sidney	Ohio NPDES permit #: 1PD00009*PD

Certification Statements

"I certify, under penalty of law, that the information that was used to determine compliance with the pathogen reduction alternative(s) identified in Table 1 of this annual report was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment;"

Barry Zerkle
Signature

1 / 22 / 14
Date

Barry Zerkle
Printed Name

Superintendent
Title

"I certify, under penalty of law, that the information that was used to determine compliance with the vector attraction reduction alternative(s) identified in Table 1 of this annual report was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment;"

Barry Zerkle
Signature

1 / 22 / 14
Date

Barry Zerkle
Printed Name

Superintendent
Title

(A representative of the treatment works shall sign this form in accordance with the instructions for this annual report)

Division of Surface Water
Annual Sewage Sludge Report 2013

Beneficial User - Certification Statement

Treatment works name: City of Sidney	Ohio NPDES permit #: 1PD00009*PD

Certification Statement

"I certify, under penalty of law, that the information that was used to determine compliance with the land application agronomic management requirements of rule 3745-40-08 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment;" and

"I certify, under penalty of law, that the information that was used to determine compliance with the site restrictions in rule 3745-40-08 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Signature _____ Date 12 / 26 / 13

Barry Zerkle — Superintendent
Printed Name — Title

(A representative of the person who beneficially used the biosolids shall sign this form in accordance with the instructions for this annual report)

Appendix C

Division of Surface Water
Annual Sewage Sludge Report 2013

General Information

Facility name: City of Sidney		
Ohio NPDES permit No: 1PD00009*PD		County: Shelby
Mailing address: 201 W. Poplar St.		
City: Sidney	State: OH	Zip:45365

☐ **Mark box with an "X" if no sewage sludge has been removed from the facility for the year 2013.**

If no sewage sludge was removed from the facility during 2013, on what date was sewage sludge last removed from the facility?

Date: ____/____/_____

☐ **Mark box with an "X" if sewage sludge has never been removed from the facility.**

Certification Statement

"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 _____ 1 / 22 / 14 Date

Barry Zerkle — 937-498-8721
Printed Name — Telephone

Superintendent
Title

Form 1

Division of Surface Water
Annual Sewage Sludge Report 2013

Station 581 – Beneficial Use of Class B Biosolids

Facility name: City of Sidney	Ohio NPDES permit #: 1PD00009*PD

Table 1 – Class B Biosolids Verification Matrix

Pathogen Reduction (PR) Alternative	Vector Attraction Reduction (VAR) Options										Sewage Sludge Weight (dry tons) DMR Reporting Code **70316**	Sewage Sludge Fee Weight (dry tons) DMR Reporting Code **51129**
	38% Volatile Solids reduction (VAR -1)	Anaerobic Bench Scale Analysis (VAR-2)	Aerobic Bench Scale Analysis (VAR-3)	Specific Oxygen Uptake Rate (VAR-4)	Aerobic Time and Temperature (VAR-5)	Alkali Addition (VAR-6)	>75% Percent Solids without Unstabilized Solids (VAR-7)	> 90 Percent Solids with Unstabilized Solids (VAR-8)	Injection (VAR-9)	Immediate Incorporation (VAR-10)		
Geometric Mean of Seven Fecal Coliform Samples (P1)	X										634.51	634.51
Aerobic Digestion (P-2)												
Air Drying (P-3)												
Anaerobic Digestion (P-4)												
Composting (P-5)												
Lime Treatment (P-6)												
Equivalent Process(P-7) (USEPA PEC Recommendation)												

Form 2

Division of Surface Water
Annual Sewage Sludge Report 2013

Sewage Sludge Monitoring

Facility name: City of Sidney	Ohio NPDES permit #: 1PD00009*PD

Table 5 – Metal Pollutant Analysis

Reporting Month		01003 As (mg/kg)	01028 Cd (mg/kg)	01043 Cu (mg/kg)	01052 Pb (mg/kg)	01068 Ni (mg/kg)	01093 Zn (mg/kg)	01148 Se (mg/kg)	71921 Hg (mg/kg)	78465 Mo (mg/kg)
Jan	Max									
	Avg									
Feb	Max	AA	4.70	369.0	31.4	121	984.0	6.01	AA	52.3
	Avg	AA	4.70	369.0	31.4	121	984.0	6.01	AA	52.3
Mar	Max									
	Avg									
Apr	Max									
	Avg									
May	Max	1.27	4.11	336.00	27.10	116.00	909.00	3.40	0.997	42.3
	Avg	1.27	4.11	336.00	27.10	116.00	909.00	3.40	0.997	42.3
Jun	Max									
	Avg									
Jul	Max	AA	4.16	371.0	26.5	105.0	862.0	3.19	0.523	64.3
	Avg	AA	4.16	371.0	26.5	105.0	862.0	3.19	0.523	64.3
Aug	Max	AA	4.74	358.00	26.20	83.20	937.00	1.96	0.842	73.7
	Avg	AA	4.74	358.00	26.20	83.20	937.00	1.96	0.842	55.12
Sep	Max	13.8	4.76	420.00	118.0	98.20	1130.0	4.82	3.41	71.60
	Avg	8.1	4.52	401.0	73.15	95.75	1070.0	4.19	1.98	60.75
Oct	Max	15.20	3.31	357.0	106.0	71.30	881.0	AA	3.98	35.80
	Avg	15.20	3.31	357.00	106.0	71.30	881.00	AA	3.98	35.80
Nov	Max									
	Avg									
Dec	Max									
	Avg									
Highest Reported Maximum Value for Year	Max	15.2	4.76	420.0	118.0	121.0	1130.0	6.01	3.98	73.7
Highest Reported Monthly Average for Year	Avg	15.2	4.74	401.0	106.0	121.0	1070.0	6.01	3.98	64.3

Form 5

Table 6 – Sewage Sludge Characteristics

Reporting Month		00627 TKN (mg/kg)	00611 NH_3-N (mg/kg)	00633 NO_2NO_3-N (mg/kg)	00668 P (mg/kg)	00938 K (mg/kg)	00400 pH (S.U.)	70318 TS (%)	70322 VS (%)
Jan	Max								
	Avg								
	Min								
Feb	Max	59300	10700		20600	1300		19.3	
	Avg	59300	10700		26000	1300		19.3	
	Min	59300	10700		20600	1300		19.3	
Mar	Max								
	Avg								
	Min								
Apr	Max								
	Avg								
	Min								
May	Max	66300	25900		18800	1390	8.31	18.81	73.30
	Avg	66300	25900		18800	1390		18.10	73.03
	Min	66300	25900		18800	1390	8.27	17.40	72.90
Jun	Max								
	Avg								
	Min								
Jul	Max	58300	10400		17500	1440		22.4	
	Avg	58300	10400		17500	1440		22.4	
	Min	58300	10400		17500	1440		22.4	
Aug	Max	55300	11800		18500	1070	8.32	27.64	68.58
	Avg	55300	11800		18500	1070		25.84	67.06
	Min	55300	11800		18500	1070	8.25	22.35	64.04
Sep	Max	56500	9800		19200	1280		21.8	
	Avg	51200	8625		18750	1190		20.65	
	Min	45900	7450		18300	1100		19.5	
Oct	Max	55700	8420		18800	967	8.75	25.49	73.14
	Avg	43800	6890		16900	864		21.40	70.17
	Min	31900	5360		15000	761	8.01	17.57	67.79
Nov	Max								
	Avg								
	Min								
Dec	Max								
	Avg								
	Min								

Form 5

Division of Surface Water
Annual Sewage Sludge Report 2013

Class B Agronomic Rates

Facility name: City of Sidney	Ohio NPDES permit #: 1PD00009*PD

Table 8 – Agronomic Rate Summary

Ohio EPA Site #	Agronomic Rate (dry tons/acre)	Soil Phosphorus (ppm)		Agronomic Rate Utilized	
75-00066	2.73	30.6	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00067	2.79	30.6	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00068	2.50	37.5	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00069	2.63	41.3	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00001	2.56	30.5	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5	☐ Single-Year P_2O_5

				☐ 256 - 500 lbs/acre P_2O_5	☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00025	**2.57**	**36**	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256- 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00083	**2.87**	**39**	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00084	**3.02**	**35.5**	☐ Bray-Kurtz P1 X☐ Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00085	**3.06**	**26.5**	☐ Bray-Kurtz P1 X Mehlich 3	☐ Nitrogen X <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index

Note: The Ohio EPA Site # is the specific identification number Ohio EPA assigned to an authorized beneficial use site. If more than nine authorized beneficial use sites were used for the beneficial use of biosolids during calendar year 2013, utilize additional copies of Form 7.

Form 7

Division of Surface Water
Annual Sewage Sludge Report 2013

Class B Agronomic Rates

Facility name: City of Sidney	Ohio NPDES permit #: 1PD00009*PD

Table 8 – Agronomic Rate Summary

Ohio EPA Site #	Agronomic Rate (dry tons/acre)	Soil Phosphorus (ppm)		Agronomic Rate Utilized	
75-00101	2.75	30.5	☐ Bray-Kurtz P1 ■ Mehlich 3	☐ Nitrogen ■ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00101	2.28	37.5	☐ Bray-Kurtz P1 ■ Mehlich 3	☐ Nitrogen ■ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00046	2.85	37	☐ Bray-Kurtz P1 ■ Mehlich 3	☐ Nitrogen ■ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
75-00003	2.24	29	☐ Bray-Kurtz P1 ■ Mehlich 3	☐ Nitrogen ■ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
			☐ Bray-Kurtz P1 ☐ Mehlich 3	☐ Nitrogen ☐ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
			☐ Bray-Kurtz P1 ☐ Mehlich 3	☐ Nitrogen ☐ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
			☐ Bray-Kurtz P1 ☐ Mehlich 3	☐ Nitrogen ☐ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
			☐ Bray-Kurtz P1 ☐ Mehlich 3	☐ Nitrogen ☐ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index
			☐ Bray-Kurtz P1 ☐ Mehlich 3	☐ Nitrogen ☐ <250 lbs/acre P_2O_5 ☐ 256 - 500 lbs/acre P_2O_5	☐ Single-Year P_2O_5 ☐ Multi-Year P_2O_5 ☐ Phosphorus Index

Note: The Ohio EPA Site # is the specific identification number Ohio EPA assigned to an authorized beneficial use site. If more than nine authorized beneficial use sites were used for the beneficial use of biosolids during calendar year 2013, utilize additional copies of Form 7.

Form 7

Summary of Nuisance Complaints / Corrective Action 2013

No complaints received in 2013.

OHIO ENVIRONMENTAL PROTECTION AGENCY
Division of Water Pollution Control

Pretreatment Priority Pollutant Reporting Form

POTW: Sidney WWTP

LABORATORY: Alloway Environmental Testing

SAMPLING:

	DATE	TIME
Influent	Composite 8/1/2013	
	Grab 8/1/2013	7:20
Effluent	Composite 8/1/2013	
	Grab 8/1/2013	7:40
Sludge	Composite 8/29/2013	

SAMPLING LOCATION:

Influent
Effluent
Sludge

TYPE OF SAMPLE: (be specific)

HEAVY METALS

Influent - Composite
Effluent - Composite
Sludge - Composite

ORGANICS
VOLATILES:

EXTRACTABLES: Influent & Effluent-Grab
Sludge - Composite

OTHER Influent & Effluent - Composite
Sludge - Composite

Cyanide-Influent & Effluent- Composite
Cyanide - Sludge - Composite

PERCENT SLUDGE SOLIDS: 28.5%

COMMENTS:

POTW PRETREATMENT CONTACT:

Barry Zerkle
Name and title (please print)

Signature

1-23-14
Date

CAS #	POLLUTANT	Influent ug/L		Final ug/L		Sludge mg/Kg dry	
	Heavy Metals (13)						
7440-36-0	Antimony	AA	(5.0)	AA	(5.0)	1.85	(1.37)
7440-38-2	Arsenic	AA	(5.0)	AA	(5.0)	AA	(1.37)
7440-41-7	Beryllium	AA	(3.)	AA	(3.)	AA	(0.972)
7440-43-9	Cadmium	AA	(3.)	AA	(3.)	4.74	(0.972)
7440-47-3	Chromium	7	(7.)	AA	(7.)	48.8	(2.27)
7440-50-8	Copper	28	(8.)	AA	(8.)	356	(2.59)
7439-92-1	Lead	AA	(10)	AA	(10)	28.2	(3.24)
7439-97-6	Mercury	AA	(0.2)	AA	(0.2)	0.842	(0.351)
7440-02-0	Nickel	20	(8.)	12	(8.)	83.2	(2.27)
7782-49-2	Selenium	AA	(4.0)	AA	(4.0)	1.96	(1.09)
7440-22-4	Silver	AA	(5.)	AA	(5.)	19.4	(1.62)
7440-28-0	Thallium	AA	(5.0)	AA	(5.0)	AA	(1.37)
7440-66-6	Zinc	126	(10.)	47	(10.)	937	(3.24)
	Volatiles (28)						
107-02-8	Acrolein	AA	(50.0)	AA	(50.0)	AA	(0.877)
107-13-1	Acrylonitrile	AA	(50.0)	AA	(50.0)	AA	(0.439)
71-43-2	Benzene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
75-25-2	Bromoform	AA	(5.0)	AA	(5.0)	AA	(0.0456)
56-23-5	Carbon Tetrachloride	AA	(5.0)	AA	(5.0)	AA	(0.0456)
108-90-7	Chlorobenzene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
124-48-1	Chlorodibromomethane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
75-00-3	Chloroethane	AA	(10.0)	AA	(10.0)	AA	(0.0878)
110-75-8	2-Chloroethyl vinyl ether	AA	(10.)	AA	(10.)	AA	(0.0878)
67-66-3	Chloroform	10	(5.0)	AA	(5.0)	AA	(0.0456)
75-27-4	Dichlorobromomethane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
75-34-3	1,1-Dichloroethane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
107-06-2	1,2-Dichloroethane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
75-35-4	1,1-Dichloroethylene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
78-87-5	1,2-Dichloropropane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
542-75-6	1,3-Dichloropropylene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
100-41-4	Ethylbenzene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
74-83-9	Methyl bromide	AA	(10.0)	AA	(10.0)	AA	(0.0878)
74-87-3	Methyl chloride	AA	(10.)	AA	(10.)	AA	(0.0878)
75-09-2	Methylene chloride	AA	(10.)	AA	(10.)	AA	(0.702)
79-34-5	1,1,2,2-Tetrachloroethane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
127-18-4	Tetrachloroethylene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
108-88-3	Toluene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
156-60-5	trans-1,2-Dichloroethylene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
71-55-6	1,1,1-Trichloroethane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
79-00-5	1,1,2-Trichloroethane	AA	(5.0)	AA	(5.0)	AA	(0.0456)
79-01-6	Trichloroethylene	AA	(5.0)	AA	(5.0)	AA	(0.0456)
75-01-4	Vinyl chloride	AA	(10.)	AA	(10.)	AA	(0.0878)
	Base Neutrals (46)						
83-32-9	Acenaphthene	AA	(10.0)	AA	(10.0)	AA	(3.51)
208-96-8	Acenaphthylene	AA	(10.0)	AA	(10.0)	AA	(3.51)
120-12-7	Anthracene	AA	(10.0)	AA	(10.0)	AA	(3.51)
92-87-5	Benzidine	AA	(50.0)	AA	(50.0)	AA	(17.5)
56-55-3	Benzo(a)anthracene	AA	(10.0)	AA	(10.0)	AA	(3.51)
50-32-8	Benzo(a)pyrene	AA	(10.0)	AA	(10.0)	AA	(3.51)
205-99-2	3,4-Benzofluoranthene	AA	(10.0)	AA	(10.0)	AA	(3.51)

CAS #	POLLUTANT	Influent ug/L		Final ug/L		Sludge mg/Kg dry	
	Base Neutrals (cont.)						
191-24-2	Benzo(g,h,i)perylene	AA	(10.0)	AA	(10.0)	AA	(3.51)
207-08-9	Benzo(k)fluoranthene	AA	(10.0)	AA	(10.0)	AA	(3.51)
111-91-1	Bis(2-chloroethoxy)methane	AA	(10.0)	AA	(10.0)	AA	(3.51)
111-44-4	Bis(2-chloroethyl)ether	AA	(10.0)	AA	(10.0)	AA	(3.51)
108-60-1	Bis(2-chloroisopropyl)ether	AA	(10.0)	AA	(10.0)	AA	(3.51)
117-81-7	Bis(2-ethylhexyl)phthalate	7.3	(5.0)	AA	(5.0)	25.4	(3.51)
101-55-3	4-Bromophenyl phenyl ether	AA	(10.0)	AA	(10.0)	AA	(3.51)
85-68-7	Butyl benzyl phthalate	AA	(10.0)	AA	(10.0)	AA	(3.51)
91-58-7	2-Chloronapthalene	AA	(10.0)	AA	(10.0)	AA	(3.51)
7005-72-3	4-Chlorophenyl phenyl ether	AA	(10.0)	AA	(10.0)	AA	(3.51)
218-01-9	Chrysene	AA	(10.0)	AA	(10.0)	AA	(3.51)
53-70-3	Dibenzo(a,h)anthracene	AA	(10.0)	AA	(10.0)	AA	(3.51)
95-50-1	1,2-Dichlorobenzene*	AA	(5.0)	AA	(5.0)	AA	(0.0456)
541-73-1	1,3-Dichlorobenzene*	AA	(5.0)	AA	(5.0)	AA	(0.0456)
106-46-7	1,4-Dichlorobenzene*	AA	(5.0)	AA	(5.0)	AA	(0.0456)
91-94-1	3,3'-Dichlorobenzidine	AA	(20.0)	AA	(20.0)	AA	(7.02)
84-66-2	Diethyl phthalate	AA	(10.0)	AA	(10.0)	AA	(3.51)
131-11-3	Dimethyl phthalate	AA	(10.0)	AA	(10.0)	AA	(3.51)
84-74-2	Di-n-butyl phthalate	AA	(10.0)	AA	(10.0)	AA	(7.02)
121-14-2	2,4-Dinitrotoluene	AA	(20.0)	AA	(20.0)	AA	(7.02)
606-20-2	2,6-Dinitrotoluene	AA	(10.0)	AA	(10.0)	AA	(3.51)
117-84-0	Di-n-octyl phthalate	AA	(10.0)	AA	(10.0)	AA	(3.51)
122-66-7	1,2-Diphenylhydrazine	AA	(10.0)	AA	(10.0)	AA	(3.51)
206-44-0	Fluoranthene	AA	(10.0)	AA	(10.0)	AA	(3.51)
86-73-7	Fluorene	AA	(10.0)	AA	(10.0)	AA	(3.51)
118-74-1	Hexachlorobenzene	AA	(10.0)	AA	(10.0)	AA	(3.51)
87-68-3	Hexachlorobutadiene	AA	(10.0)	AA	(10.0)	AA	(3.51)
77-47-4	Hexachlorocyclopentadiene	AA	(10.0)	AA	(10.0)	AA	(3.51)
67-72-1	Hexachloroethane	AA	(10.0)	AA	(10.0)	AA	(3.51)
193-39-5	Indeno(1,2,3-cd)pyrene	AA	(20.0)	AA	(20.0)	AA	(7.02)
78-59-1	Isophorone	AA	(10.0)	AA	(10.0)	AA	(3.51)
91-20-3	Naphthalene	AA	(10.0)	AA	(10.0)	AA	(3.51)
98-95-3	Nitrobenzene	AA	(10.0)	AA	(10.0)	AA	(3.51)
62-75-9	N-nitrosodimethylamine	AA	(10.0)	AA	(10.0)	AA	(3.51)
621-64-7	N-nitrosodi-n-propylamine	AA	(10.0)	AA	(10.0)	AA	(3.51)
86-30-6	N-nitrosodiphenylamine	AA	(10.0)	AA	(10.0)	AA	(3.51)
85-01-8	Phenanthrene	AA	(10.0)	AA	(10.0)	AA	(3.51)
129-00-0	Pyrene	AA	(10.0)	AA	(10.0)	AA	(3.51)
120-82-1	1,2,4-Trichlorobenzene	AA	(10.0)	AA	(10.0)	AA	(3.51)

* Analyzed by EPA Method 624 per 40 CFR part 136

	Acids (11)						
95-57-8	2-Chlorophenol	AA	(10.0)	AA	(10.0)	AA	(3.51)
120-83-2	2,4-Dichlorophenol	AA	(10.0)	AA	(10.0)	AA	(3.51)
105-67-9	2,4-Dimethylphenol	AA	(10.0)	AA	(10.0)	AA	(3.51)
534-52-1	4,6-Dinitro-o-cresol	AA	(50.0)	AA	(50.0)	AA	(17.5)
51-28-5	2,4-Dinitrophenol	AA	(50.0)	AA	(50.0)	AA	(17.5)
88-75-5	2-Nitrophenol	AA	(10.0)	AA	(10.0)	AA	(3.51)
100-02-7	4-Nitrophenol	AA	(50.0)	AA	(50.0)	AA	(17.5)
59-50-7	p-Chloro-m-cresol	AA	(50.0)	AA	(50.0)	AA	(17.5)
87-86-5	Pentachlorophenol	AA	(50.0)	AA	(50.0)	AA	(17.5)
108-95-2	Phenol	AA	(10.0)	AA	(10.0)	AA	(3.51)
88-06-2	2,4,6-Trichlorophenol	AA	(20.0)	AA	(20.0)	AA	(7.02)

Ten Most Prominent Peaks On Ion Plots: Volatile Organics

Influent	CAS #	POLLUTANT	CONCENTRATION ug/L
1.	67-62-9	Hydroxylamine, O-methyl-...	17.3
2.	3232-39-1	Diacetyl sulphide	16.3
3.	624-92-0	Disulfide, dimethyl	5.7
4.	53229-39-3	Oxirane, (1-methylbutyl)-...	12.0
5.	74630-39-0	1-Undecene, 4-methyl-...	8.3
6.			
7.			
8.			
9.			
10.			

FINAL	CAS #	POLLUTANT	CONCENTRATION ug/L
1.	7782-79-8	Hydrogen azide	8.2
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

SLUDGE	CAS #	POLLUTANT	CONCENTRATION mg/Kg dry
1.		None Detected	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Ten Most Prominent Peaks On Ion Plots: Semi-Volatile Organics

INFLUENT	CAS #	POLLUTANT	CONCENTRATION ug/L
1.	111273	1-Hexanol	110
2.	111762	Ethanol, 2-butoxy-...	103
3.	78922	2-Butanol	181
4.	544638	Tetradecanoic acid	52.8
5.	112629	9-Octadecenoic acid (Z)-...	1480
6.	116314	Vitamin A aldehyde	68.3
7.	57885	Cholesterol	72.6
8.			
9.			
10.			

FINAL	CAS #	POLLUTANT	CONCENTRATION ug/L
1.	540885	Acetic acid, 1,1-dimethylet...	39.9
2.	112447	Undecanal	36.6
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

SLUDGE	CAS #	POLLUTANT	CONCENTRATION mg/Kg dry
1.	123422	2-Pentanone, 4-hyroxy-4...	247
2.	116314	Vitamin A aldehyde	13600
3.	288948	1H-Tetrazole	27.7
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Vector Attraction Reduction Analytical Results

The enclosed operational benchsheets documents the volatile solids reduction required for Option #1 of the Vector Attraction Reduction options. Biosolids land applied in 2013 were generated from April 2012 thru July 2012 and November 2012 thru October 2013.

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Apr-12

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Digested	GM	4/02/12	1.60	67.46	M	45.2863	84.2769	45.9116	45.4898	324303	21.7	58.4	7.4
Cake	GM	4/02/12	21.36	71.18	N	45.8295	77.0344	52.4957	47.7506			50.4	8.1
Pri #1	BC	4/02/12	5.07	84.49	S	47.9376	78.9593	49.5117	48.1818				5.7
Pri #2	BC	4/02/12	2.14	83.00	O	44.7941	72.3255	45.3823	44.8941				
Land App	BC	4/02/12	23.91	70.80	H	90.6511	122.7055	98.3155	92.8890				8.3
Land App	BC	4/03/12	19.53	70.17	G	95.7000	134.5587	103.2894	97.9639				7.9
Pri #1	BC	4/03/12	4.91	84.54	P	44.5388	78.3681	46.2010	44.7957				
Pri #2	BC	4/03/12	2.08	83.19	Q	45.8318	77.6847	46.4928	45.9429				
MLSS	MC	4/04/12	0.25	61.32	U	44.0708	83.8084	44.1706	44.1094				7.14
Pri #1	MC	4/04/12	5.00	84.27	N	45.8288	89.5185	48.0128	46.1723				6.12
Pri #2	MC	4/04/12	2.14	83.30	S	47.9384	84.1263	48.7127	48.0677				
Pri #1	MC	4/05/12	4.45	85.16	M	45.2865	81.9848	46.9184	45.5286				5.94
Pri #2	MC	4/05/12	2.30	83.86	W	43.8419	76.7904	44.6004	43.9643				
Pri #1	MC	4/06/12	4.18	85.62	P	44.5383	74.0700	45.7731	44.7159				6.1
Pri #2	MC	4/06/12	2.31	83.66	N	45.8269	80.5073	46.6284	45.9579				
Pri #1	BC	4/09/12	3.75	84.70	w	43.8441	79.0235	45.1640	44.0460				5.2
Pri #2	BC	4/09/12	2.38	83.80	p	44.5413	83.6996	45.4723	44.6921				
MLSS	BC	4/10/12	0.21	66.45	u	44.0761	73.3362	44.1384	44.0970				7.3
Pri #1	MC	4/10/12	3.79	84.86	n	45.8248	81.5494	47.1785	46.0297				5.22
Pri #2	MC	4/10/12	2.32	83.68	q	45.8319	82.8805	46.6918	45.9722				
Pri #1	MC	4/11/12	3.78	84.60	T	42.7935	77.6954	44.1145	42.9970				5.15
Pri #2	MC	4/11/12	2.28	83.74	M	45.2872	75.9036	45.9865	45.4009				
Pri #1	MC	4/12/12	3.70	84.12	O	44.7946	79.9242	46.0952	45.0012				6.08
Pri #2	MC	4/12/12	2.35	84.02	R	45.4654	78.0851	46.2315	45.5878				
Pri #1	MC	4/13/12	3.81	84.28	S	47.9390	85.4293	49.3668	48.1635				4.95
Pri #2	MC	4/13/12	2.36	83.85	Z	44.8361	75.6684	45.5630	44.9535				
Digested	GM	4/14/12	1.61	69.97	M	45.2880	83.6700	45.9073	45.4740	329016	22.1	58.2	7.4
Cake	GM	4/14/12	21.39	73.25	R	45.4660	73.3727	51.4349	47.0625			50.9	7.9

Pri #1	BC	4/16/12	4.77	85.22	S	47.9407	83.6481	49.6445	48.1926				5.1
Pri #2	BC	4/16/12	2.52	84.43	T	42.7959	76.6831	43.6490	42.9287				
MLSS	MC	4/17/12	0.24	61.33	O	44.7960	76.9274	44.8741	44.8262				7.4
Pri #1	MC	4/17/12	5.09	86.03	R	45.4660	81.2572	47.2879	45.7205				4.97
Pri #2	MC	4/17/12	2.55	84.17	S	47.9413	83.2039	48.8391	48.0834				
Pri #1	MC	4/18/12	5.04	86.40	Z	44.8384	88.0427	47.0158	45.1345				6.09
Pri #2	MC	4/18/12	2.54	84.02	T	42.7976	75.2239	43.6218	42.9293				
Pri #1	MC	4/19/12	5.07	86.25	M	45.2908	82.3274	47.1681	45.5489				6.18
Pri #2	MC	4/19/12	2.56	84.33	I	71.1190	105.7165	72.0049	71.2578				
Pri #1	MC	4/20/12	5.20	86.63	W	43.8440	81.6048	45.8084	44.1066				6.28
Pri #2	MC	4/20/12	2.49	84.47	Q	45.8315	84.5218	46.7958	45.9813				
Cake	GM	4/23/12	20.96	74.02	O	44.7978	77.3089	51.6116	46.5678			47.7	8.5
Digested	GM	4/23/12	1.47	69.93	Z	44.8384	82.8375	45.3967	45.0063	252827	15.5	57.3	7.4
Pri #1	GM	4/23/12	5.48	86.93	Q	45.8402	80.1760	47.7231	46.0863				6
Pri #2	GM	4/23/12	2.41	84.35	W	43.8484	82.0824	44.7701	43.9926				
MLSS	MC	4/24/12	0.24	66.36	S	47.9416	83.6823	48.0281	47.9707				7.34
Pri #1	MC	4/24/12	5.43	86.78	M	45.2877	84.5040	47.4158	45.5690				4.82
Pri #2	MC	4/24/12	2.41	84.61	P	44.5411	82.7225	45.4629	44.6830				
Pri #1	MC	4/25/12	5.57	87.59	N	45.8246	87.1910	48.1276	46.1105				5.94
Pri #2	MC	4/25/12	2.41	84.82	T	42.7959	76.2041	43.6000	42.9180				
Pri #1	MC	4/26/12	5.56	88.02	Q	45.8343	87.4447	48.1489	46.1117				5.75
Pri #2	MC	4/26/12	2.69	85.08	O	44.7975	81.6221	45.7869	44.9451				
Pri #1	MC	4/27/12	5.70	87.68	R	45.4651	77.1214	47.2701	45.6874				5.95
Pri #2	MC	4/27/12	2.91	84.72	W	43.8470	77.8537	44.8369	43.9983				
Pri #1	BC	4/30/12	5.02	86.64	S	47.9444	85.3935	49.8250	48.1956				5
Pri #2	BC	4/30/12	2.77	84.77	R	45.4664	78.2044	46.3744	45.6047				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

May-12

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
April Primary	GM	5/01/12	2.98	84.43	Q	45.8323	81.6261	46.8995	45.9985				
Apil Digested	GM	5/01/12	1.57	69.26	T	42.7963	79.2687	43.3698	42.9726				
Pri #1	GM	5/01/12	4.96	86.21	P	44.5408	76.7905	46.1413	44.7615				5.8
Pri #2	GM	5/01/12	2.78	84.98	W	43.8466	78.5456	44.8115	43.9915				
MLSS	MC	5/02/12	0.23	67.17	Z	44.8408	76.1078	44.9142	44.8649				7.27
Pri #1	MC	5/02/12	4.83	85.74	N	45.8236	84.5444	47.6937	46.0903				6.01
Pri #2	MC	5/02/12	2.94	84.49	O	44.7970	78.4657	45.7867	44.9505				
Pri #1	MC	5/03/12	4.78	85.11	T	42.7974	81.8068	44.6623	43.0750				4.86
Pri #2	MC	5/03/12	2.94	84.52	Q	45.8322	79.4556	46.8224	45.9855				
Pri #1	MC	5/04/12	4.54	85.30	R	45.4662	80.7980	47.0717	45.7022				5.32
Pri #2	MC	5/04/12	2.84	84.57	P	44.5405	78.2179	45.4975	44.6882				
Digested	GM	5/07/12	1.45	70.31	P	44.5382	77.9733	45.0222	44.6819	337865	20.4	59	7.4
Cake	GM	5/07/12	20.44	74.60	R	45.4669	71.1286	50.7111	46.7987			49.2	7.9
Digest fecal #1	GM	5/07/12	1.59		E	1.3046	19.5876	1.5955					
Digest fecal #2	GM	5/07/12	1.58		F	1.2990	19.2655	1.5833					
Digest fecal #3	GM	5/07/12	1.56		I	1.3092	19.6227	1.5948					
Digest fecal #4	GM	5/07/12	1.53		J	1.3280	18.5680	1.5919					
Pri #1	GM	5/07/12	4.04	85.56	M	45.2887	82.0460	46.7731	45.5031				5.1
Pri #2	GM	5/07/12	2.65	84.43	W	43.8470	93.2913	45.1591	44.0513				
MLSS	MC	5/07/12	0.21	68.55	S	47.9435	83.3489	48.0195	47.9674				7.24
Pri #1	MC	5/08/12	4.84	83.66	T	42.7978	81.2939	44.6599	43.1021				5.1
Pri #2	MC	5/08/12	3.04	82.51	O	44.7987	82.7084	45.9526	45.0005				
Pri #1	BC	5/09/12	4.99	83.20	N	45.8244	86.6787	47.8618	46.1666				5.4
Pri #2	BC	5/09/12	3.07	82.35	Z	44.8409	82.7644	46.0059	45.0465				
Pri #1	MC	5/10/12	5.16	84.53	W	43.8484	85.4507	45.9945	44.1805				5
Pri #2	MC	5/10/12	3.02	83.49	O	44.7973	80.6517	45.8818	44.9763				
Pri #1	MC	5/11/12	4.73	83.49	S	47.9448	80.3028	49.4743	48.1973				4.84
Pri #2	MC	5/11/12	2.81	83.34	Q	45.8326	81.1532	46.8259	45.9981				
Digested	GM	5/14/12	1.45	71.85	N	45.8264	80.4772	46.3280	45.9676	129729	7.8	52.2	7.4
Cake	GM	5/14/12	20.12	74.73	O	44.7992	73.2844	50.5314	46.2475			44.6	7.8
Pri #1	GM	5/14/12	4.30	85.46	W	43.8506	80.7007	45.4364	44.0812				5.8
Pri #2	GM	5/14/12	2.36	83.79	Z	44.8423	87.5161	45.8473	45.0052				
MLSS	MC	5/15/12	0.24	62.86	S	47.9470	86.3346	48.0399	47.9815				7.31
Digested 0804	GM	5/15/12	1.70		BF	1.3320	18.2804	1.6198					x

Digested 0809	GM	5/15/12	1.63		A	1.5125	22.2670	1.8500					x
Digested 0814	GM	5/15/12	1.70		CS	1.2869	20.8639	1.6204					x
Pri #1	MC	5/15/12	4.55	85.94	Q	45.8336	83.2861	47.5395	46.0734				5.94
Pri #2	MC	5/15/12	2.47	84.21	R	45.4666	78.9686	46.2929	45.5971				
Pri #1	MC	5/16/12	4.80	86.71	T	42.7987	77.0795	44.4426	43.0172				5.64
Pri #2	MC	5/16/12	2.62	84.49	M	45.2887	79.3823	46.1832	45.4274				
Pri #1	MC	5/17/12	5.08	86.37	N	45.8257	83.7141	47.7522	46.0882				4.83
Pri #2	MC	5/17/12	2.59	84.09	S	47.9471	81.0128	48.8043	48.0835				
Pri #1	MC	5/18/12	5.80	88.06	O	44.7985	84.7450	47.1135	45.0749				5.53
Pri #2	MC	5/18/12	2.87	84.59	P	44.5399	78.6662	45.5180	44.6906				
Pri #1	MC	5/21/12	4.83	86.66	Q	45.8313	81.4587	47.5529	46.0609				4.87
Pri #2	MC	5/21/12	2.99	85.18	W	43.8497	87.0218	45.1391	44.0408				
Digested	GM	5/22/12	1.65	71.60	R	45.4669	77.5721	45.9972	45.6175	64840	4.5	52.9	7.4
Cake	GM	5/22/12	19.81	72.92	Z	44.8430	73.7804	50.5746	46.3954			49.7	8.5
Pri #1	GM	5/22/12	4.98	86.76	W	43.8490	78.4124	45.5708	44.0770				5.2
Pri #2	GM	5/22/12	2.92	85.27	M	45.2879	76.2347	46.1911	45.4209				
MLSS	MC	5/23/12	0.23	60.25	P	44.5355	83.0516	44.6223	44.5700				7.37
Pri #1	MC	5/23/12	4.72	86.28	Q	45.8301	83.0780	47.5871	46.0712				5.48
Pri #2	MC	5/23/12	2.80	85.20	S	47.9466	82.9684	48.9286	48.0919				
Pri #1	MC	5/24/12	4.77	87.27	N	45.8255	79.4656	47.4314	46.0299				4.84
Pri #2	MC	5/24/12	2.80	85.72	T	42.7984	79.4713	43.8243	42.9449				
Pri #1	MC	5/25/12	5.02	87.72	R	45.4676	84.1375	47.4071	45.7058				4.86
Pri #2	MC	5/25/12	2.35	85.29	P	44.5359	84.8090	45.4821	44.6751				
Digested	MC	5/28/12	1.53	72.33	W	43.8493	80.3485	44.4063	44.0034	326668	20.8	55.8	7.4
Cake	MC	5/28/12	22.14	74.67	M	45.2877	71.9300	51.1860	46.7820			50.2	7.85
MLSS	MC	5/29/12	0.21	61.64	Z	44.8416	81.9268	44.9185	44.8711				7.15
Pri #1	MC	5/29/12	4.41	86.11	Q	45.8309	81.7616	47.4159	46.0511				5.69
Pri #2	MC	5/29/12	2.04	84.72	S	47.9469	83.4784	48.6734	48.0579				
Pri #1	GM	5/30/12	4.83	85.25	P	44.5391	77.0822	46.1104	44.7709				6.25
Pri #2	GM	5/30/12	1.94	84.86	T	42.8024	75.1936	43.4300	42.8974				
May Raw Sludge	GM	5/30/12	3.22	84.56	R	45.4712	80.2495	46.5906	45.6440				x
May Digested Sludge	GM	5/30/12	1.51	71.38	N	45.8306	82.0700	46.3792	45.9876				x
Pri #1	MC	5/31/12	5.19	86.12	O	44.7982	82.7191	46.7661	45.0713				
Pri #2	MC	5/31/12	2.31	85.43	A	76.4840	110.6555	77.2738	76.5991				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Jun-12

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri #1	MC	6/01/12	5.09	85.50	R	45.4686	76.8591	47.0670	45.7004				5.35
Pri #2	MC	6/01/12	2.41	85.59	W	43.8517	77.3270	44.6581	43.9679				
Digested fecal	MC	6/02/12	1.62		CS	1.3018	7.2639	1.3985					x
Digested	MC	6/03/12	1.63	73.02	O	44.8031	72.9915	45.2623	44.9270	193698	13.2	54.20	7.37
Cake	MC	6/03/12	20.41	76.13	R	45.4740	72.1566	50.9203	46.7738			46.10	8.04
Pri #1	BC	6/04/12	4.19	79.80	M	45.2877	76.3408	46.5883	45.5504				5.4
Pri #2	BC	6/04/12	2.43	84.36	Z	44.8430	79.2250	45.6792	44.9738				
MLSS	MC	6/05/12	0.21	58.51	N	45.8275	77.7006	45.8945	45.8553				7.35
Pri #1	MC	6/05/12	4.96	85.78	T	42.8002	82.6885	44.7775	43.0813				5.22
Pri #2	MC	6/05/12	2.27	84.57	S	47.9482	82.0655	48.7239	48.0679				
Pri #1	MC	6/06/12	5.07	86.54	Q	45.8320	88.7842	48.0106	46.1252				6.09
Pri #2	MC	6/06/12	2.40	84.87	P	44.5347	78.1624	45.3416	44.6568				
Pri #1	BC	6/07/12	5.19	86.61	O	44.8005	82.8541	46.7752	45.0649				5.8
Pri #2	BC	6/07/12	2.37	84.72	S	47.9484	86.1124	48.8531	48.0866				
Pri #1	MC	6/08/12	5.02	86.85	Z	44.8434	87.7958	46.9994	45.1269				5.24
Pri #2	MC	6/08/12	2.42	84.65	R	45.4702	79.0994	46.2837	45.5951				
Digested	GM	6/11/12	1.49	72.22	Q	45.8302	79.1031	46.3252	45.9677	250943	15.6	54.10	7.4
Cake	GM	6/11/12	19.95	75.07	R	45.4701	67.3052	49.8253	46.5557			46.80	7.7
Pri #1	GM	6/11/12	4.59	83.85	O	44.8007	74.1127	46.1459	45.0179				5.6
Pri #2	GM	6/11/12	2.25	84.69	Z	44.8447	83.4866	45.7129	44.9776				
MLSS	MC	6/12/12	0.21	60.23	P	44.5333	81.8402	44.6120	44.5646				7.46
Pri #1	MC	6/12/12	4.44	85.92	T	42.8007	82.7200	44.5729	43.0502				5.26
Pri #2	MC	6/12/12	2.14	84.84	N	45.8280	80.6512	46.5729	45.9409				
Pri #1	GM	6/13/12	4.72	86.33	M	45.2883	89.2721	47.3627	45.5718				5.7
Pri #2	GM	6/13/12	2.28	85.28	S	47.9487	86.3593	48.8253	48.0777				
Pri #1	MC	6/14/12	4.86	86.25	T	42.8013	77.7491	44.5014	43.0351				5.51
Pri #2	MC	6/14/12	2.25	85.50	R	45.4701	81.7115	46.2853	45.5883				
Pri #1	MC	6/15/12	4.60	85.79	P	44.5343	86.7925	46.4797	44.8108				5.55
Pri #2	MC	6/15/12	2.15	85.01	O	44.8015	83.9637	45.6425	44.9276				
Digested	GM	6/18/12	1.54	73.17	P	44.5408	86.9158	45.1930	44.7158	184713	11.9	52.90	7.4
Cake	GM	6/18/12	19.06	75.75	R	45.4739	82.6070	52.5520	47.1905			46.00	7.8
Pri #1	BC	6/18/12	4.13	83.36	M	45.2936	75.4765	46.5407	45.5011				5.8
Pri #2	BC	6/18/12	2.17	84.70	T	42.8068	80.6966	43.6275	42.9324				
Pri #1	BC	6/19/12	4.24	84.16	S	47.9525	84.8004	49.5148	48.2000				5.3

Pri #2	BC	6/19/12	2.19	85.23	O	44.8054	77.1301	45.5149	44.9102				5.5
MLSS	BC	6/20/12	0.21	63.99	R	45.4720	80.0534	45.5431	45.4976				7.3
Pri #1	BC	6/20/12	4.19	84.56	N	45.8232	89.1168	47.6375	46.1033				5.7
Pri #2	BC	6/20/12	2.13	84.85	Z	44.8454	90.4484	45.8181	44.9928				
Pri #1	MC	6/21/12	3.69	83.88	Q	45.8319	82.5287	47.1874	46.0504				5.56
Pri #2	MC	6/21/12	2.22	84.79	T	42.8038	79.4833	43.6173	42.9275				
Pri #1	MC	6/22/12	3.91	83.62	P	44.5349	87.7847	46.2267	44.8120				5.43
Pri #2	MC	6/22/12	2.29	85.03	M	45.2902	81.7691	46.1270	45.4155				
Digested	GM	6/25/12	1.54	72.75	R	45.4841	82.6335	46.0577	45.6404	241767	15.6	50.80	7.4
Cake	GM	6/25/12	20.39	76.07	Z	44.8492	79.8760	51.9895	46.5582			41.40	7.8
Pri #1	GM	6/25/12	3.50	83.37	O	44.8058	86.3201	46.2577	45.0473				5.7
Pri #2	GM	6/25/12	2.25	84.32	Q	45.8353	91.4231	46.8595	45.9959				
MLSS	MC	6/26/12	0.20	57.20	T	42.8067	77.7628	42.8775	42.8370				7.33
Pri #1	MC	6/26/12	3.79	83.60	M	45.2919	76.9663	46.4912	45.4886				5.36
Pri #2	MC	6/26/12	2.17	84.43	S	47.9540	84.4364	48.7459	48.0773				
June Digested	GM	6/27/12	1.59	73.34	N	45.8274	76.6520	46.3172	45.9580				
June Primary	GM	6/27/12	2.77	84.74	P	44.5431	83.4052	45.6195	44.7074				
Pri #1	GM	6/27/12	4.17	84.43	A	76.4898	128.0754	78.6385	76.8243				5.7
Pri #2	GM	6/27/12	2.15	84.90	W	43.8557	83.6485	44.7106	43.9848				
Pri #1	MC	6/28/12	4.13	84.34	S	47.9498	92.5565	49.7908	48.2381				5.34
Pri #2	MC	6/28/12	2.17	84.59	R	45.4736	81.1359	46.2464	45.5927				
Pri #1	MC	6/29/12	3.64	83.19	T	42.8057	83.0197	44.2695	43.0518				5.48
Pri #2	MC	6/29/12	2.20	84.90	O	44.8030	78.5101	45.5452	44.9151				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Jul-12

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri #1	MC	7/02/12	4.49	79.03	W	43.8563	78.1008	45.3953	44.1791				5.32
Pri #2	MC	7/02/12	1.99	83.85	S	47.9529	81.3922	48.6198	48.0606				
Digested	MC	7/02/12	1.56	72.73	N	45.8265	85.3141	46.4441	45.9949	114473	7.5	50.40	7.53
Cake	MC	7/02/12	19.46	76.07	O	44.8068	77.4770	51.1657	46.3283			40.90	8.01
Pri #1	MC	7/03/12	4.19	78.20	P	44.5424	84.5853	46.2207	44.9083				5.83
Pri #2	MC	7/03/12	1.89	83.58	T	42.8125	78.4939	43.4861	42.9231				
MLSS	MC	7/04/12	0.22	61.95	R	45.4759	81.2456	45.5558	45.5063				7.29
Pri #1	MC	7/04/12	3.95	78.29	Q	45.8323	81.4160	47.2391	46.1377				5.74
Pri #2	MC	7/04/12	1.78	83.63	M	45.2901	85.4415	46.0030	45.4068				
Pri #1	MC	7/05/12	3.65	80.51	O	44.8072	79.7591	46.0816	45.0556				6.06
Pri #2	MC	7/05/12	1.83	84.15	N	45.8293	80.8643	46.4697	45.9308				
Pri #1	BC	7/06/12	3.68	79.66	W	43.8593	77.4257	45.0939	44.1104				6
Pri #2	BC	7/06/12	1.79	83.86	S	47.9538	76.9647	48.4735	48.0377				
Digested	GM	7/09/12	1.49	72.62	M	45.2891	81.5045	45.8278	45.4366	311071	19.3	47.10	7.4
Cake	GM	7/09/12	19.72	75.50	P	44.5371	71.2460	49.8045	45.8275			38.60	7.8
Pri #1	GM	7/09/12	3.57	78.10	Q	45.8324	74.6912	46.8614	46.0578				6.3
Pri #2	GM	7/09/12	1.93	84.08	T	42.8065	78.8101	43.5008	42.9170				
Pri #1	MC	7/10/12	3.40	80.47	R	45.4752	86.9313	46.8831	45.7502				5.29
Pri #2	MC	7/10/12	1.82	83.90	Z	44.8455	84.6895	45.5689	44.9620				
MLSS	MC	7/11/12	0.21	60.41	W	43.8510	78.7759	43.9250	43.8803				7.33
Pri #1	MC	7/11/12	3.02	81.91	O	44.8047	78.3976	45.8180	44.9880				5.9
Pri #2	MC	7/11/12	2.02	84.03	T	42.8045	78.5050	43.5240	42.9194				
Pri #1	MC	7/12/12	3.09	81.54	M	45.2897	82.1738	46.4276	45.4997				5.49
Pri #2	MC	7/12/12	2.04	83.79	P	44.5352	84.4690	45.3508	44.6674				
Pri #1	MC	7/13/12	2.97	82.07	S	47.9515	85.9660	49.0816	48.1541				5.11
Pri #2	MC	7/13/12	2.11	83.81	Q	45.8324	90.6554	46.7797	45.9858				
Digested	MC	7/14/12	1.51		C	1.3021	4.0733	1.3439					x
Digested	MC	7/15/12	1.44		D	1.3150	5.3038	1.3724					x
Cake	GM	7/16/12	20.90	73.14	M	45.2936	76.4570	51.8066	47.0431			42.20	7.9
Digested	GM	7/16/12	1.47	72.33	Z	44.8484	80.5196	45.3725	44.9934	244544	15.0	44.50	7.3
Pri #1	BC	7/16/12	2.78	82.46	P	44.5360	82.0555	45.5802	44.7192				6.2
Pri #2	BC	7/16/12	1.92	83.91	T	42.8069	84.4197	43.6060	42.9355				
Pri #1	MC	7/17/12	3.04	82.14	R	45.4788	79.1192	46.4998	45.6612				5.09
Pri #2	MC	7/17/12	1.90	83.73	O	44.8077	79.6841	45.4704	44.9155				

MLSS	MC	7/18/12	0.23	63.59	N	45.8200	77.8888	45.8936	45.8468				7.24
Pri #1	MC	7/18/12	3.13	83.32	S	47.9594	78.6788	48.9206	48.1197				5.9
Pri #2	MC	7/18/12	1.87	84.43	W	43.8618	79.9609	44.5381	43.9671				
Pri #1	MC	7/19/12	3.83	80.45	R	45.4763	78.2069	46.7287	45.7212				5.65
Pri #2	MC	7/19/12	2.01	82.59	P	44.5337	80.6528	45.2587	44.6599				
Pri #1	MC	7/20/12	3.41	75.83	O	44.8081	78.0877	45.9445	45.0828				5.62
Pri #2	MC	7/20/12	2.02	83.03	T	42.8054	83.0577	43.6181	42.9433				
Digested	GM	7/21/12	1.51	72.74	O	44.8112	78.0952	45.3130	44.9480	267573	16.8	43.50	7.4
Cake	GM	7/21/12	20.53	75.61	W	43.8595	70.3215	49.2918	45.1844			34.40	7.9
Pri #1	BC	7/23/12	2.89	81.99	P	44.5362	79.9500	45.5610	44.7208				
Pri #2	BC	7/23/12	1.80	84.23	R	45.4799	83.4258	46.1616	45.5874				6.1
Land App	BC	7/23/12	22.15	73.30	A	76.4931	105.9933	83.0270	78.2376				8.7
MLSS	MC	7/24/12	0.21	61.12	N	45.8279	79.1467	45.8976	45.8550				7.24
Land App	BC	7/24/12	18.36	73.01	I	71.1613	106.1621	77.5877	72.8961				8.91
Pri #1	MC	7/24/12	3.37	82.91	T	42.8084	81.4431	44.1107	43.0310				5.99
Pri #2	MC	7/24/12	1.71	83.33	S	47.9573	81.2452	48.5249	48.0519				
Pri #1	MC	7/25/12	3.47	79.97	M	45.2908	74.6746	46.3097	45.4949				5.55
Pri #2	MC	7/25/12	2.23	82.18	Z	44.8477	79.4348	45.6189	44.9851				
Pri #1	MC	7/26/12	3.57	77.87	P	44.5333	85.8759	46.0084	44.8597				5.51
Pri #2	MC	7/26/12	2.14	85.96	W	43.8539	79.8583	44.6261	43.9623				
Tank 5	MC	7/27/12	0.12		BF	1.3647	19.8534	1.3869					6.08
Pri #1	MC	7/27/12	3.80	76.69	Z	44.8485	84.6777	46.3615	45.2012				5.53
Pri #2	MC	7/27/12	2.18	81.79	M	45.2919	84.2285	46.1408	45.4465				
Digested	GM	7/28/12	1.49	73.18	O	44.8091	87.1821	45.4404	44.9784	247541	15.4	41.60	7.3
Cake	GM	7/28/12	20.04	74.90	P	44.5335	71.3637	49.9107	45.8832			36.10	7.6
Pri #1	BC	7/30/12	2.92	81.21	R	45.4782	95.9857	46.9542	45.7556				6.1
Pri #2	BC	7/30/12	1.76	82.82	Z	44.8492	88.4378	45.6181	44.9813				
Land App	BC	7/30/12	26.09	71.72	G	95.6996	127.8576	104.0900	98.0721				8.6
MLSS	MC	7/31/12	0.20	61.01	Q	45.8376	78.7328	45.9030	45.8631				7.31
Pri #1	MC	7/31/12	2.91	80.71	M	45.2926	77.1361	46.2201	45.4715				6.07
Pri #2	MC	7/31/12	1.40	82.11	W	43.8566	76.4220	44.3139	43.9384				
July Raw Sludge	GM	7/31/12	2.15	81.78	A	76.4875	116.6294	77.3498	76.6446				
July Digestd Sludge	GM	7/31/12	1.50	73.03	I	71.1202	111.3857	71.7249	71.2833				
Land App	BC	7/31/12	23.23	70.95	H	90.6498	113.7057	96.0049	92.2054				8.8

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

Nov-12

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
MLSS	MC	11/01/12	0.24	67.65	m	45.2954	86.6718	45.3940	45.3273				7.18
Pri#1	MC	11/01/12	3.35	81.25	Z	44.8604	82.5118	46.1221	45.0970				5.39
Pri#2	MC	11/01/12	2.74	85.46	Q	45.8141	88.2671	46.9782	45.9834				
Pri#1	BC	11/02/12	3.78	83.47	N	45.7937	88.9831	47.4256	46.0635				5.4
Pri#2	BC	11/02/12	2.53	85.26	R	45.4840	88.2708	46.5679	45.6438				
Pri#1	MC	11/05/12	4.19	81.78	Z	44.8601	90.0885	46.7558	45.2055				5.65
Pri#2	MC	11/05/12	2.34	84.92	P	44.5190	93.0280	45.6526	44.6899				
MLSS	MC	11/06/12	0.24	65.79	Q	45.8110	87.2976	45.9098	45.8448				7.28
PRI#1	BC	11/06/12	3.65	83.92	T	42.8140	90.7382	44.5652	43.0956				6.2
Pri#2	bc	11/06/12	2.42	85.47	W	43.8593	96.0783	45.1235	44.0430				
D APPLIED BIOSO	bc	11/06/12	20.47	72.45	F	86.6888	126.0804	94.7508	88.9095				8.4
Pri#1	bc	11/07/12	3.75	82.66	M	45.2954	86.5171	46.8423	45.5637				5.3
Pri#2	BC	11/07/12	2.56	84.98	S	47.9583	88.8400	49.0031	48.1152				
Pri#1	KM	11/08/12	4.15	82.41	O	44.8191	85.9660	46.5249	45.1191				5.8
Pri#2	KM	11/08/12	2.62	85.25	W	43.8528	89.4206	45.0454	44.0287				
Pri#1	KM	11/09/12	4.40	83.79	R	45.4842	101.7490	47.9571	45.8851				5.36
Pri#2	KM	11/09/12	2.71	85.77	N	45.7934	97.2930	47.1915	45.9924				
Digested Sludge	KM	11/12/12	1.70	72.86	T	42.8106	90.7184	43.6243	43.0314	235641	16.7	50.2	7.4
Dewatered Cake	KM	11/12/12	19.15	74.84	Q	45.8128	69.4473	50.3391	46.9514			44.8	8.1
MLSS	KM	11/12/12	0.24	68.81	P	44.5188	92.9283	44.6371	44.5557				
Pri#1	KM	11/12/12	4.67	83.06	Z	44.8615	98.1151	47.3464	45.2824				5.16
Pri#2	KM	11/12/12	2.59	85.54	U	44.0773	94.7846	45.3899	44.2671				
Pri#1	KM	11/13/12	4.14	83.43	W	43.8504	96.0737	46.0135	44.2089				5.48
Pri#2	KM	11/13/12	2.83	85.11	O	44.8193	90.1439	46.1034	45.0105				
Pri#1	KM	11/14/12	4.00	84.17	M	45.3020	92.8158	47.2010	45.6027				5.17
Pri#2	KM	11/14/12	2.71	86.03	S	47.9680	102.4884	49.4453	48.1744				
Pri#1	KM	11/15/12	4.06	84.26	O	44.8197	91.7866	46.7279	45.1201				5.1
Pri#2	KM	11/15/12	2.62	85.42	P	44.5206	84.8400	45.5763	44.6745				
Pri#1	KM	11/16/12	4.02	84.07	U	44.0784	92.6872	46.0323	44.3896				5.1
Pri#2	KM	11/16/12	2.57	85.36	Z	44.8624	100.7230	46.2995	45.0728				
Digested Sludge	KM	11/19/12	1.73	73.17	W	43.8505	79.9305	44.4729	44.0175	126717	9.1	51.2	7.4
Cake Sludge	KM	11/19/12	19.51	74.78	T	42.8114	75.9460	49.2765	44.4420			46.9	8.1
Pri#1	KM	11/19/12	3.92	85.99	N	45.7943	78.3038	47.0697	45.9730				5.8
Pri#2	KM	11/19/12	2.51	85.36	Q	45.8118	79.5360	46.6596	45.9359				

Pri#1	MC	11/21/12	4.02	86.63	P	44.5183	86.6767	46.2141	44.7451				5.44
Pri#2	MC	11/21/12	2.52	85.33	S	47.9583	86.0406	48.9184	48.0991				
Pri#1	MC	11/22/12	4.05	85.98	M	45.2954	80.7591	46.7317	45.4967				5.1
Pri#2	MC	11/22/12	2.55	85.55	R	45.4844	80.5569	46.3796	45.6138				
Pri#1	MC	11/23/12	3.59	86.01	W	43.8594	79.5305	45.1399	44.0385				5.33
Pri#2	MC	11/23/12	2.55	85.47	T	42.8116	77.7177	43.7015	42.9409				
MLSS	MC	11/26/12	0.28	72.69	N	45.8140	74.5885	45.8942	45.8359				7.23
Pri#1	KM	11/26/12	3.94	83.23	S	47.9767	81.2760	49.2888	48.1968				5.9
Pri#2	KM	11/26/12	2.53	86.25	Q	45.8317	76.1889	46.5984	45.9371				
Pri#1	KM	11/27/12	3.94	86.87	P	44.5429	84.5935	46.1228	44.7503				5.18
Pri#2	KM	11/27/12	2.53	86.19	U	44.0771	85.7164	45.1296	44.2224				
Pri#1	KM	11/28/12	3.93	86.21	N	45.7903	71.7279	46.8100	45.9309				6
Pri#2	KM	11/28/12	2.55	86.22	W	43.8503	74.0585	44.6210	43.9565				
Pri#1	KM	11/29/12	5.15	86.29	R	45.4904	74.0585	46.9624	45.6922				5.8
Pri#2	KM	11/29/12	2.49	86.54	M	45.2974	81.0423	46.1880	45.4173				
Pri#1	KM	11/30/12	3.77	86.55	O	44.8204	77.0139	46.0354	44.9838				5.8
Pri#2	KM	11/30/12	2.49	86.60	Z	44.8654	77.2610	45.6712	44.9734				
Nov Primary	GM	12/03/12	2.81	84.50	R	45.4850	81.2957	46.4923	45.6411				
Nov Digested	GM	12/03/12	1.74	72.92	W	43.8478	80.0570	44.4774	44.0183				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Dec-12

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Digested	MC	12/03/12	1.80	73.21	M	45.2954	81.9304	45.9558	45.4723	214505	16.1	56.30	7.3
Cake	MC	12/03/12	19.45	75.35	P	44.5190	76.7515	50.7870	46.0643			51.10	8
Pri #1	MC	12/03/12	3.47	86.42	N	45.7909	85.2324	47.1585	45.9766				5.71
Pri #2	MC	12/03/12	2.45	86.26	U	44.0781	86.6849	45.1201	44.2213				
MLSS	MC	12/04/12	0.27	69.75	Q	45.8092	88.1026	45.9239	45.8439				7.23
Pri #1	MC	12/04/12	3.79	87.28	S	47.9567	84.4646	49.3421	48.1329				5.55
Pri #2	MC	12/04/12	2.40	86.49	W	43.8470	80.2692	44.7224	43.9653				
Pri #1	MC	12/05/12	3.48	85.20	N	45.7908	77.2548	46.8856	45.9528				5.71
Pri #2	MC	12/05/12	2.63	86.00	O	44.8207	78.6008	45.7105	44.9453				
Pri #1	MC	12/06/12	3.54	85.51	T	42.8099	80.6659	44.1492	43.0040				5.84
Pri #2	MC	12/06/12	2.63	86.05	M	45.2944	82.7935	46.2788	45.4317				
Pri#1	MC	12/07/12	3.56	85.66	S	47.9563	85.4095	49.2907	48.1477				5.91
Pri#2	MC	12/07/12	2.58	85.92	W	43.8442	80.2191	44.7843	43.9766				
Digested	GM	12/08/12	1.59	73.63	N	45.7897	79.1175	46.3199	45.9295	251735	16.7	54.90	7.4
Cake	GM	12/08/12	19.29	76.45	T	42.8103	69.6246	47.9817	44.0282			47.60	8.1
MLSS	MC	12/08/12	0.21	71.73	P	44.5168	82.0601	44.5971	44.5395				7.14
Pri#1	MC	12/08/12	3.24	82.70	Q	45.8083	83.1689	47.0201	46.0179				5.55
Pri#2	MC	12/08/12	2.96	84.75	R	45.4852	86.6911	46.7031	45.6709				
Pri #1	MC	12/11/12	3.22	83.05	O	44.8179	76.4544	45.8353	44.9903				5.39
Pri #2	MC	12/11/12	3.07	84.34	U	44.0799	84.6478	45.3268	44.2752				
Pri #1	BB	12/12/12	3.52	82.79	W	43.8426	86.6161	45.3492	44.1019				5.9
Pri #2	BB	12/12/12	2.81	84.35	P	44.5223	77.9159	45.4613	44.6693				
Pri#1	MC	12/13/12	3.62	82.19	S	47.9560	82.6232	49.2100	48.1793				5.88
Pri#2	MC	12/13/12	2.74	83.79	N	45.7888	84.0175	46.8371	45.9587				
Pri#1	MC	12/14/12	3.61	82.67	Q	45.8077	82.6889	47.1401	46.0386				5.82
Pri#2	MC	12/14/12	2.71	83.85	R	45.4851	80.5617	46.4356	45.6386				
MLSS	MC	12/17/12	0.25	67.22	O	44.8222	85.2414	44.9247	44.8558				6.86
Digested	GM	12/17/12	1.64	73.52	N	45.7869	79.0275	46.3333	45.9316	254533	17.4	45.5	7.4
Cake	GM	12/17/12	18.68	76.47	P	44.5165	72.4678	49.7380	45.7450			36.20	8
Pri#1	KM	12/17/12	3.98	83.74	S	47.9581	79.1740	49.1991	48.1599				6
Pri#2	KM	12/17/12	2.56	84.15	T	42.8107	74.4195	43.6210	42.9391				
Pri#1	MC	12/18/12	4.22	85.91	W	43.8433	81.6872	45.4405	44.0684				5.85
Pri#2	MC	12/18/12	2.47	84.40	U	44.0801	84.3870	45.0741	44.2352				
Pri#1	MC	12/19/12	4.56	86.73	R	45.4852	86.2739	47.3471	45.7322				5.91

Pri#2	MC	12/19/12	2.49	84.48	O	44.8221	81.1769	45.7267	44.9625				5.91
Pri#1	MC	12/20/12	4.72	86.13	Z	44.8665	88.4775	46.9256	45.1520				5.36
Pri#2	MC	12/20/12	2.62	84.57	M	45.2940	82.0364	46.2550	45.4423				
Pri#1	MC	12/21/12	4.92	83.99	S	47.9568	89.3893	49.9969	48.2834				5.11
Pri#2	MC	12/21/12	3.06	82.85	T	42.8084	81.0156	43.9784	43.0091				
MLSS	MC	12/26/12	0.29	70.17	Q	45.8056	91.1710	45.9387	45.8453				7.22
Pri#1	MC	12/26/12	3.95	85.68	U	44.0804	87.3329	45.7905	44.3253				5.06
Pri#2	MC	12/26/12	2.75	83.70	R	45.4861	80.8392	46.4574	45.6444				
Pri #1	MC	12/27/12	3.89	86.21	P	44.5147	88.2105	46.2159	44.7493				5.52
Pri #2	MC	12/27/12	2.60	83.75	N	45.7856	85.6622	46.8209	45.9538				
Pri#1	MC	12/28/12	4.10	87.13	M	45.2923	88.0246	47.0434	45.5176				5.5
Pri#2	MC	12/28/12	2.61	84.12	W	43.8438	86.6367	44.9597	44.021				
Pri #1	MC	12/31/12	3.89	87.05	T	42.8082	80.4034	44.2704	42.9975				5.15
Pri #2	MC	12/31/12	2.47	84.03	R	45.4861	82.3441	46.3963	45.6315				
Dec Monthly Digest	GM		2.87	84.10	N	45.7835	72.3608	46.5464	45.9048				
Dec Monthly Prim	GM		1.60	73.14	P	44.5152	69.9186	44.9229	44.6247				

January Total Solids

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Jan-13

% Total & Volatile Solids

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri #1	MC	1/02/13	4.36	86.87	Q	45.8072	90.2284	47.7437	46.0614				4.98
Pri #2	MC	1/02/13	2.30	84.14	Z	44.8649	89.8615	45.8998	45.0290				
MLSS	MC	1/03/13	0.30	68.34	O	44.8200	86.8693	44.9476	44.8604				7.19
Pri #1	MC	1/03/13	3.98	84.55	S	47.9575	90.8545	49.6635	48.2211				5.32
Pri #2	MC	1/03/13	2.21	84.11	U	44.0823	91.3205	45.1257	44.2481				
Pri #1	MC	1/04/13	3.98	85.02	M	45.2917	87.8641	46.9864	45.5455				5.07
Pri #1	MC	1/07/13	4.07	86.68	N	45.7832	83.5181	47.3180	45.9876				4.88
Pri #1	MC	1/08/13	4.10	87.13	Z	44.8637	90.2170	46.7212	45.1027				4.97
MLSS	MC	1/09/13	0.31	68.36	T	42.8082	81.6590	42.9280	42.8461				7.18
Pri#1	MC	1/09/13	4.36	86.98	Q	45.8049	94.2245	47.9173	46.0799				5.14
Pri#2	MC	1/09/13	1.99	82.29	R	45.4858	87.523	46.3204	45.6336				
Pri#1	MC	1/10/13	4.56	86.20	Z	44.8646	87.6369	46.8136	45.1336				4.98
Pri#2	MC	1/10/13	3.19	83.24	P	44.8215	81.8627	46.0042	45.0197				
Digested	GM	1/11/13	1.81	70.92	P	44.5156	69.6374	44.9691	44.6475	109873	8.3	59.2	7.4
Cake	GM	1/11/13	19.10	73.18	W	43.8404	75.1385	49.8183	45.4438			54.3	8.5
Pri#1	KM	1/11/13	4.19	86.24	U	44.0810	74.9571	45.3735	44.2588				5.3
Pri#2	KM	1/11/13	2.69	84.04	S	47.9590	73.9792	48.6582	48.0706				
Digested	BC	1/13/13	1.75	71.90	N	45.7846	82.3657	46.4233	45.9641	157556	11.5	57.2	7.3
Cake	BC	1/13/13	19.38	73.74	F	86.6884	117.0690	92.5775	88.2350			53	
Pri#1	KM	1/14/13	3.93	81.04	Q	45.8051	76.3512	47.0058	46.0327				6
Pri#2	KM	1/14/13	1.34	82.18	M	45.2933	76.6444	45.7148	45.3684				
Pri#1	KM	1/15/13	3.59	82.09	T	42.8102	74.3009	43.9413	43.0128				6
Pri#2	KM	1/15/13	3.93	81.68	Z	44.8650	80.9076	46.2811	45.1245				
Pri#1	KM	1/16/13	3.33	82.78	R	45.4846	83.1703	46.7406	45.7009				5.8
Pri#2	KM	1/16/13	3.82	82.01	O	44.8221	75.8751	46.0082	45.0355				
MLSS	KM	1/17/13	0.34	68.32	W	43.8394	73.6090	43.9420	43.8719				7.2
Pri#1	KM	1/17/13	3.25	83.31	P	44.5140	74.9851	45.5044	44.6793				6
Pri#2	KM	1/17/13	3.43	82.66	U	44.0795	81.8796	45.3769	44.3045				
Pri#1	KM	1/18/13	3.17	83.76	S	47.9596	76.3366	48.8602	48.1059				6
Pri#2	KM	1/18/13	3.22	83.95	N	45.7920	78.9947	46.8621	45.9638				
MLSS	MC	1/21/13	0.30	67.82	Z	44.8660	78.0795	44.9670	44.8985				7.05
Digested	MC	1/21/13	1.53	71.54	O	44.8211	74.4838	45.2743	44.9501	349598	22.3	46.7	7.45
Cake	MC	1/21/13	19.77	74.36	M	45.2926	77.0955	51.5793	46.9047			38.5	8.51
Pri#1	MC	1/22/13	3.56	84.91	T	42.8108	77.4393	44.0441	42.9969				5.74
Pri#2	MC	1/22/13	3.09	83.13	R	45.4851	82.7718	46.6388	45.6797				
Pri#1	MC	1/23/13	3.89	84.67	Q	45.8054	84.9223	47.3282	46.0389				5.98
Pri#2	MC	1/23/13	3.05	83.15	N	45.7827	80.9720	46.8560	45.9636				
Pri#1	MC	1/24/13	3.96	85.51	U	44.0813	83.0131	45.6218	44.3045				6.07

January Total Solids

Pri#2	MC	1/24/13	3.22	83.31	Z	44.8685	87.3193	46.2364	45.0968				6.07
Pri#1	MC	1/25/13	3.61	85.42	S	47.9594	87.0561	49.3689	48.1649				5.56
Pri#2	MC	1/25/13	3.15	83.36	W	43.8418	83.7275	45.0964	44.0506				
Pri#1	MC	1/28/13	4.34	86.10	R	45.4855	82.2956	47.0844	45.7078				5.48
Pri#2	MC	1/28/13	2.47	83.33	T	42.8118	79.1799	43.7100	42.9615				
MLSS	MC	1/29/13	0.34	69.77	M	45.2929	81.9374	45.4176	45.3306				7.1
Pri#1	GM	1/29/13	4.78	86.13	N	45.7804	70.7753	46.9756	45.9462				5.6
Pri#2	GM	1/29/13	3.10	84.12	Q	45.8064	75.2994	46.7212	45.9517				
Digested	GM	1/30/12	1.58	71.51	O	44.8231	77.2838	45.3366	44.9694				
Pri #1	MC	1/30/12	4.94	86.36	R	45.4849	85.3945	47.4577	45.7540				5.18
Pri #2	MC	1/30/12	3.60	84.40	P	44.5159	78.8397	45.7515	44.7086				
Jan Primary	GM	1/30/12	3.44	84.52	T	42.8097	69.5809	43.7300	42.9522				
Jan Digested	GM	1/30/12	1.44	71.29	W	43.8372	72.6061	44.2503	43.9558				
Pri#1	GM	1/31/13	5.04	84.60	U	44.0819	74.4722	45.6128	44.3177				5.3
Pri#2	GM	1/31/13	4.25	83.50	S	47.9585	80.2049	49.3303	48.1848				
Digested	MC	1/31/13	1.70	70.57	Z	44.8672	82.8007	45.5131	45.0573	18914	1.3	58	
Cake	MC	1/31/13	18.93	73.77	I	71.1217	114.6476	79.3600	73.2828			50.8	

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Feb-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri#1	KM	2/01/13	4.98	84.64	P	44.5139	71.2038	45.8440	44.7182				5.5
Pri#2	KM	2/01/13	3.77	83.90	T	42.8092	72.4370	43.9251	42.9889				
Digested	BC	2/03/13	1.64		C	1.0098	4.8864	1.0733					x
Pri #1	MC	2/04/13	4.35	84.36	N	45.7788	90.2159	47.7100	46.0809				5.55
Pri #2	MC	2/04/13	3.14	84.17	S	47.9586	97.1751	49.5041	48.2032				
Digested	MC	2/04/13	1.66	71.54	W	43.8373	88.3286	44.5746	44.0471	348730	24.1	56	7.42
Cake	MC	2/04/13	19.86	74.50	R	45.4852	95.2860	55.3757	48.0072			48.8	8.09
Tank 3	MC	2/04/13	0.72	77.39	M	45.2930	87.7331	45.5995	45.3623				x
MLSS	MC	2/05/13	0.36	64.90	Z	44.8577	91.8895	45.0278	44.9174				7.19
Pri #1	MC	2/05/13	4.31	85.23	O	44.8211	72.4933	46.0146	44.9974				6.35
Pri #2	MC	2/05/13	3.12	84.34	Q	45.8044	91.5921	47.2325	46.0281				
Pri #1	MC	2/06/13	4.34	86.85	T	42.8108	80.2402	44.4348	43.0244				5.8
Pri #2	MC	2/06/13	3.11	84.36	W	43.8375	90.5725	45.2905	44.0647				
Pri#1	KM	2/07/13	4.42	84.97	R	45.4847	72.3203	46.6713	45.6630				6.2
Pri#2	KM	2/07/13	3.03	84.38	U	44.0823	77.7416	45.1014	44.2415				
Pri #1	MC	2/08/13	4.64	86.59	P	44.5148	84.1789	46.3561	44.7618				5.6
Pri #2	MC	2/08/13	3.08	84.65	M	45.2935	90.2234	46.6751	45.5056				
Fecal Digested	GM	2/11/13	1.74	73.25	W	43.8360	75.7757	44.3912	43.9845				X
Digested	GM	2/11/13	1.65	72.20	O	44.8223	79.2272	45.3885	44.9797	259581	17.8	52.9	7.4
Cake	GM	2/11/13	19.29	75.46	Z	44.8691	83.0946	52.2413	46.6779			44.3	8
Pri #1	MC	2/11/13	4.91	84.70	N	45.7793	86.5036	47.7803	46.0854				5.59
Pri #2	MC	2/11/13	2.89	84.68	S	47.9589	92.0804	49.2348	48.1544				
MLSS	MC	2/12/13	0.33	69.86	Q	45.8024	78.2038	45.9079	45.8342				7.3
Pri #1	MC	2/12/13	5.24	84.76	R	45.4862	89.2321	47.7782	45.8356				6.38
Pri #2	MC	2/12/13	2.76	84.56	T	42.8112	85.8174	43.9967	42.9943				
Pri#1	GM	2/13/13	5.42	84.92	P	44.5155	84.1768	46.6656	44.8397				6.34
Pri#2	GM	2/13/13	2.88	84.74	Z	44.8677	85.1291	46.0267	45.0446				
Pri#1	GM	2/14/13	5.38	85.03	M	45.2905	79.0794	47.1098	45.5628				6.1
Pri#2	GM	2/14/13	2.96	84.70	O	44.8215	77.4832	45.7887	44.9695				
Pri#1	KM	2/15/13	5.25	85.56	W	43.8361	70.2929	45.2249	44.0367				6.1
Pri#2	KM	2/15/13	2.84	84.68	U	44.0838	73.7387	44.9259	44.2128				
MLSS	MC	2/19/13	0.31	70.68	I	71.1215	119.5131	71.2702	71.1651				7.24
Pri #1	MC	2/19/13	4.66	85.56	R	45.4855	86.4701	47.3938	45.7611				5.39
Pri #2	MC	2/19/13	2.92	84.57	S	47.9551	91.5771	49.2269	48.1513				
Pri #1	MC	2/20/13	4.72	85.20	N	45.7786	92.8157	47.9970	46.1070				6.28
Pri #2	MC	2/20/13	2.89	84.59	P	44.5164	88.4115	45.7850	44.7119				
Digested	GM	2/21/13	1.80	72.04	Q	45.8001	81.2816	46.4404	45.9791	34325	2.6		7.4
Cake	GM	2/21/13	18.95	73.13	T	42.8088	75.6386	49.0316	44.4807				8.5

Pri#1	KM	2/21/13	4.79	85.33	M	45.2916	80.5323	46.9787	45.5391				5.9
Pri#2	KM	2/21/13	2.89	84.98	W	43.8378	73.3600	44.6900	43.9658				
Pri#1	MC	2/22/13	4.70	84.87	S	47.9548	88.9446	49.8802	48.2462				5.72
Pri#2	MC	2/22/13	2.85	84.88	R	45.4876	89.5232	46.7437	45.6775				
Digested	GM	2/25/13	1.79	72.53	P	44.5171	80.8625	45.1662	44.6954	317369	23.6	53	7.4
Cake	GM	2/25/13	18.95	74.05	W	43.8355	74.3156	49.6122	45.3344			49.2	8.2
Pri #1	MC	2/25/13	4.65	85.18	N	45.7820	82.8497	47.5046	46.0373				5.02
Pri #2	MC	2/25/13	2.74	84.91	M	45.2937	87.7072	46.4566	45.4692				
MLSS	MC	2/26/13	0.30	65.29	Z	44.8615	88.6377	44.9949	44.9078				7.22
Pri #1	MC	2/26/13	4.85	85.91	Q	45.8018	84.8604	47.6978	46.0689				5.1
Pri #2	MC	2/26/13	2.68	85.14	T	42.8096	81.5612	43.8473	42.9638				
Pri #1	MC	2/27/13	5.12	85.79	O	44.8203	86.5636	46.9580	45.1241				4.96
Pri #2	MC	2/27/13	3.25	84.03	U	44.0836	82.7523	45.3400	44.2842				
Feb Primary	GM	2/28/13	3.41	84.29	M	45.2902	78.6457	46.4273	45.4688				x
Feb Digested	GM	2/28/13	1.73	72.20	T	42.8078	71.5325	43.3060	42.9463				x
Pri #1	MC	2/28/13	5.16	85.52	N	45.7821	83.9490	47.7526	46.0675				6.06
Pri #2	MC	2/28/13	3.37	84.66	W	43.8336	82.6504	45.1428	44.0344				

Mar-13

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri#1	GM	3/01/13	4.50	85.53	P	44.5153	78.7229	46.0546	44.7381				5.40
Pri#2	GM	3/01/13	3.45	85.11	R	45.4867	82.4419	46.7626	45.6767				
Pri #1	MC	3/04/13	4.20	84.85	W	43.834	92.156	45.8613	44.1411				5.89
Pri #2	MC	3/04/13	3.05	85.01	T	42.8081	81.9668	44.001	42.9869				
MLSS	MC	3/05/13	0.31	68.67	M	45.2901	82.7342	45.405	45.3261				7.13
Pri #1	MC	3/05/13	4.08	85.33	Q	45.8012	90.1034	47.6086	46.0663				6.11
Pri #2	MC	3/05/13	2.96	85.31	Z	44.8663	87.5997	46.131	45.0521				
Pri #1	GM	3/06/13	4.16	85.08	O	44.82	84.3623	46.4667	45.0657				5.9
Pri #2	GM	3/06/13	2.88	85.28	P	44.5154	82.9753	45.6217	44.6783				
Pri #1	MC	3/07/18	3.34	84.40	R	45.4866	91.103	47.01	45.7242				5.66
Pri #2	MC	3/07/18	2.85	85.03	U	44.0824	90.869	45.4137	44.2817				
Tank 3	MC	3/08/12	0.57	74.62	I	71.1307	115.7796	71.3837	71.1949				5.87
Pri #1	MC	3/08/12	3.64	84.73	N	45.7825	89.8552	47.3878	46.0277				5.67
Pri #2	MC	3/08/12	3.54	87.94	S	47.9548	91.8902	49.5093	48.1423				
Digested	GM	3/11/13	1.70	72.05	O	44.821	85.385	45.5093	45.0134	312355	22.1	55.3	7.3
Cake	GM	3/11/13	19.11	74.99	Q	45.8013	83.3968	52.9854	47.598			48	8.1
Pri #1	MC	3/11/13	3.94	84.63	T	42.8082	83.1697	44.3987	43.0526				5.61
Pri #2	MC	3/11/13	3.24	84.05	P	44.5119	82.5459	45.7441	44.7084				
MLSS	MC	3/12/13	0.32	70.80	Z	44.8595	90.0674	45.0054	44.9021				7.12
Pri #1	MC	3/12/13	3.53	84.15	M	43.8347	84.904	45.2848	44.0645				5.85
Pri #2	MC	3/12/13	4.09	84.20	W	45.2924	87.5287	47.0194	45.5652				
Pri #1	MC	3/13/13	4.17	84.05	O	44.8211	82.6189	46.3956	45.0722				5.68
Pri #2	MC	3/13/13	3.41	84.19	R	45.4882	84.7082	46.8263	45.6998				
Tank 3	MC	3/14/13	0.70		F	0.981	6.8431	1.0218					
Pri#1	MC	3/14/13	3.95	84.56	N	45.7834	89.5851	47.5145	46.0506				5.74
Pri#2	MC	3/14/13	3.52	85.23	S	47.9526	93.1076	49.54	48.1871				
Pri #1	BC	3/15/13	3.42	84.50	I	71.1278	115.7816	72.6545	71.3644				5.7
Pri #2	BC	3/15/13	3.28	84.56	A	76.492	123.8021	78.0434	76.7316				
Digested	GM	3/18/13	1.67	72.71	Q	45.8036	73.5942	46.2678	45.9303	312813	21.8	50.6	7.4
Cake	GM	3/18/13	19.20	75.44	U	44.0838	77.6514	50.5298	45.6671			43.1	8
Pri #1	MC	3/18/13	4.33	86.38	O	44.8202	89.4085	46.7517	45.0833				6.04
Pri #2	MC	3/18/13	2.83	84.42	R	45.4883	84.8517	46.6016	45.6618				
MLSS	MC	3/19/13	0.29	69.32	Z	44.8593	92.3649	44.9949	44.9009				7.19

Pri #1	MC	3/19/13	4.44	85.40	M	45.2886	91.372	47.3344	45.5873				5.69
Pri #2	MC	3/19/13	2.94	84.36	T	42.8081	90.0851	44.1977	43.0254				
Pri #1	MC	3/20/13	4.40	85.31	W	43.8341	82.2632	45.5256	44.0826				5.98
Pri #2	MC	3/20/13	3.05	84.66	P	44.5117	89.2645	45.8771	44.7211				
Pri #1	MC	3/21/13	4.36	85.80	Q	45.8013	89.5001	47.7072	46.072				5.58
Pri #2	MC	3/21/13	3.03	84.64	S	47.9528	93.9355	49.3473	48.167				
Pri #1	MC	3/22/13	4.32	84.26	N	45.7827	86.2903	47.5313	46.058				6.05
Pri #2	MC	3/22/13	2.97	84.53	U	44.0815	91.8243	45.4988	44.3008				
Cake	KM	3/24/13	19.76	75.71	X	44.9352	65.7601	49.0503	45.9346			44.2	7.9
Digested	KM	3/24/13	1.67	73.16	L	46.291	71.8647	46.7176	46.4055	144567	10.1	51.2	7.3
Pri #1	MC	3/25/13	4.69	87.34	Z	44.8598	86.937	46.8326	45.1095				6.03
Pri #2	MC	3/25/13	2.97	84.92	M	45.2897	91.0628	46.6469	45.4944				
MLSS	MC	3/26/13	0.30	63.15	R	45.4877	84.4679	45.6044	45.5307				7.19
Pri #1	MC	3/26/13	4.72	87.14	T	42.807	78.8018	44.505	43.0253				6.14
Pri #2	MC	3/26/13	2.97	85.18	Q	45.8011	83.8344	46.9319	45.9687				
Pri #1	MC	3/27/13	4.85	87.04	O	44.821	84.6839	46.7559	45.0718				5.34
Pri #2	MC	3/27/13	3.50	85.43	W	43.8349	84.6784	45.2625	44.0429				
Pri #1	MC	3/28/13	5.02	86.05	Q	45.7981	80.5087	47.5395	46.041				5.87
Pri #2	MC	3/28/13	3.06	84.04	M	45.2872	86.975	46.564	45.491				
Digested	MC	3/31/13	1.67	72.65	L	46.289	85.4217	46.9432	46.4679	256192	17.9	54.3	7.34
Cake	GM	3/31/13	19.55	75.71	N	45.783	73.5778	51.2159	47.1028			46.4	8.09
March Primary	GM	3/31/13	3.24	84.17	T	42.8074	71.3551	43.7335	42.954				
March Digested	GM	3/31/13	1.65	71.80	X	44.9359	75.5096	45.4405	45.0782				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Apr-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri #1	MC	4/01/13	4.10	86.22	P	44.5094	91.0683	46.4183	44.7724				5.63
Pri #2	MC	4/01/13	2.86	84.74	Z	44.8588	87.8041	46.0865	45.0461				
MLSS	MC	4/02/13	0.27	67.23	R	45.4889	86.9391	45.6018	45.5259				7.14
Pri #1	MC	4/02/13	4.94	86.44	S	47.9527	82.8408	49.6777	48.1866				5.99
Pri #2	MC	4/02/13	2.94	84.81	U	44.0821	85.4235	45.2972	44.2667				
Pri #1	GM	4/03/13	5.08	86.90	M	45.2850	74.8878	46.7903	45.4822				5.9
Pri #2	GM	4/03/13	2.92	85.35	Q	45.7988	76.6700	46.7009	45.9310				
Pri #1	MC	4/04/13	5.03	87.36	L	46.2868	79.5345	47.9590	46.4982				6.2
Pri #2	MC	4/04/13	2.93	85.43	Z	44.8588	88.4655	46.1359	45.0449				
Pri #1	MC	4/05/13	4.01	86.91	W	43.8351	78.4852	45.2239	44.0169				5.1
Pri #2	MC	4/05/13	2.94	85.29	P	44.5100	93.2000	45.9432	44.7208				
New weekly sheet started below													
Digested	GM	4/08/13	1.61	72.49	Q	45.7944	84.5447	46.4193	45.9663	137763	9.3	56.7	7.3
Dig Dup	GM	4/08/13	1.60	72.25	R	45.4887	84.1225	46.1067	45.6602			49.2	
Cake	GM	4/08/13	19.42	75.59	S	47.9511	71.9104	52.6038	49.0870				8
Cake Dup	GM	4/08/13	19.49	75.62	Z	44.8561	71.6400	50.0753	46.1285				
Pri #1	MC	4/08/13	4.89	86.95	L	46.2873	81.5277	48.0123	46.5124				4.91
Pri #1 Dup	MC	4/08/13	4.80	86.53	T	42.8085	90.8343	45.1136	43.1189				
Pri #2	MC	4/08/13	2.87	85.84	U	44.0836	95.0486	45.5467	44.2908				
MLSS	MC	4/09/13	0.31	69.44	N	45.7827	79.1719	45.8874	45.8147				7.18
Pri #1	MC	4/09/13	5.42	87.17	X	44.9363	90.8546	47.4235	45.2553				4.95
Pri #2	MC	4/09/13	2.80	88.03	O	44.8515	83.1778	45.9255	44.9801				
Pri #1	MC	4/10/13	5.44	87.70	M	45.2852	83.4073	47.3594	45.5403				5.3
Pri #2	MC	4/10/13	2.81	85.65	Q	45.7997	85.0742	46.9033	45.9581				
Pri #1	MC	4/11/13	5.97	85.68	Z	44.8561	84.3515	47.2151	45.1939				5.14
Pri #2	MC	4/11/13	3.01	83.24	U	44.0827	94.2024	45.5921	44.3357				
Pri#1	KM	4/12/13	6.36	84.74	R	45.4915	74.0208	47.3066	45.7684				5.2
Pri#2	KM	4/12/13	5.14	83.89	P	44.5153	76.1151	46.1400	44.7770				
Digested grab	GM	4/12/13	1.91	76.29	S	47.9518	78.6072	48.5373	48.0906				7.4

Digested	KM	4/14/13	1.64	73.12	M	45.2852	87.2407	45.9734	45.4702	141381	9.7	54.9	7.33
Cake	KM	4/14/13	19.36	76.47	X	44.9360	69.8567	49.7612	46.0712			46.1	8.57
Dig Dup	MC	4/15/13	1.63	73.13	W	43.8393	94.7201	44.6699	44.0625				
Cake Dup	MC	4/15/13	19.08	76.22	L	46.2898	81.6375	53.0334	47.8932				
New weekly sheet started below													
Blank	MC	4/15/13			V	43.6694	92.4742						x
Pri #1	MC	4/15/13	5.16	83.32	Q	45.7970	88.2401	47.9865	46.1622				5.38
Pri #2	MC	4/15/13	3.23	84.29	T	42.8112	78.4821	43.9650	42.9925				
Pri #2 dup	MC	4/15/13	3.24	84.21	U	44.0832	93.4666	45.6825	44.3357				x
Pri #1	MC	4/16/13	4.40	84.12	N	45.7818	90.1195	47.7338	46.0917				5.42
Pri #2	MC	4/16/13	3.18	81.83	O	44.8214	85.3383	46.1093	45.0554				
MLSS	MC	4/17/13	0.28	70.00	S	47.9509	89.9038	48.0679	47.9860				7.21
MLSS dup	MC	4/17/13	0.28	70.21	R	45.4899	86.7347	45.6057	45.5244				x
Pri #1	MC	4/17/13	3.68	83.12	Z	44.8571	90.6854	46.5416	45.1415				5.59
Pri #2	MC	4/17/13	3.48	83.52	M	45.2852	84.0931	46.6371	45.5080				
Pri #1	MC	4/18/13	3.56	83.09	Q	45.7966	82.0625	47.0879	46.0150				5.65
Pri #2	MC	4/18/13	3.57	83.87	O	44.8216	85.7334	46.2830	45.0573				
Pri #1	MC	4/19/13	3.59	83.02	U	44.0845	82.0901	45.4493	44.3163				5.62
Pri #2	MC	4/19/13	3.67	83.23	T	42.8117	82.8740	44.2829	43.0584				
New weekly sheet started below													
Blank	MC	4/21/13	0.00		M	45.2850	79.2720	45.2852					x
Digested	MC	4/21/13	1.61	72.48	Q	45.7965	86.6490	46.4539	45.9774	201539	13.5	47.6	7.35
Digested dup	MC	4/21/13	1.61	72.27	R	45.4905	90.1940	46.2117	45.6905			40	x
Cake	MC	4/21/13	19.94	75.21	S	47.9526	77.3607	53.8160	49.4062				8.56
Cake dup	MC	4/21/13	19.99	75.02	Z	44.8571	78.8360	51.6509	46.5545				x
Pri #1	MC	4/22/13	3.44	83.42	O	44.8214	82.6884	46.1240	45.0374				5.56
Pri #2	MC	4/22/13	3.27	82.85	L	46.2893	84.5670	47.5415	46.5041				
Pri #2 dup	MC	4/22/13	3.29	83.09	M	45.2857	86.5267	46.6414	45.5149				x
MLSS	MC	4/23/13	0.28	67.23	Q	45.7955	87.9360	45.9139	45.8343				7.31
Pri #1	MC	4/23/13	3.66	84.03	U	44.0850	80.6348	45.4226	44.2986				5.5
Pri #2	MC	4/23/13	3.27	83.04	Z	44.8561	85.2531	46.1752	45.0798				
Pri #1	MC	4/24/13	3.93	84.76	T	42.8215	82.7927	44.3940	43.0611				5.37
Pri #2	MC	4/24/13	3.24	83.34	W	43.8389	84.6800	45.1620	44.0593				
Pri #1	MC	4/25/13	4.25	83.49	L	46.2871	82.3763	47.8214	46.5404				5.57
Pri #2	MC	4/25/13	3.25	83.27	M	45.2855	83.2356	46.5193	45.4919				
Pri #1	MC	4/26/13	3.95	83.33	O	44.8222	89.7082	46.5954	45.1178				5.45
Pri #2	MC	4/26/13	3.21	83.40	Q	45.7957	87.4052	47.1313	46.0174				

New weekly sheet started below													
Digested grab	MC	4/28/13	1.83		F	1.3113	18.5657	1.6278					
Digested comp	MC	4/28/13	1.76	72.64	N	45.7863	79.6337	46.3809	45.9490	259648	19.0	47.3	7.48
Digested dup	MC	4/28/13	1.75	72.55	S	47.9531	91.6785	48.7189	48.1633			41.9	
Cake	MC	4/28/13	20.44	74.50	P	44.5127	80.7023	51.9097	46.3986				8.34
Cake Dup	MC	4/28/13	20.32	74.55	R	45.4920	79.0652	52.3149	47.2284				
Pri#1	MC	4/28/13	3.28	83.51	Z	44.8558	83.0674	46.1090	45.0625				
Pri#1 Dup.	MC	4/28/13	3.29	83.35	V	43.6694	90.7751	45.2192	43.9274				5.36
Pri#2	MC	4/28/13	3.07	84.22	X	44.9363	84.0720	46.1360	45.1256				
Pri#1	KM	4/29/13	3.09	83.92	T	42.8130	77.6880	43.8893	42.9861				
Pri#2	KM	4/29/13	3.05	84.14	Q	45.7916	83.3260	46.9347	45.9729				5.46
Month Primary	GM	5/01/13	3.38	83.96	O	44.8268	85.8439	46.2127	45.0491				
Month Digested	GM	5/01/13	1.73	74.40	U	44.0905	84.9099	44.7971	44.2714				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

May-13

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
MLSS	MC	5/01/13	0.27	69.00	M	45.2871	81.3207	45.3829	45.3168				7.11
Pri #1	MC	5/01/13	3.51	84.53	L	46.2888	82.6238	47.5634	46.4860				5.52
Pri #2	MC	5/01/13	2.98	84.04	W	43.8383	87.4167	45.1369	44.0456				
Pri #1	MC	5/01/13	3.57	84.72	R	45.4904	85.0616	46.9035	45.7063				5.44
Pri #2	MC	5/02/13	2.85	83.87	Z	44.8569	87.2149	46.0662	45.0519				
Land App Biosolids	KM	5/02/13	18.07	72.86	N	45.7860	73.1432	50.7289	47.1275				8.27
Pri #1	MC	5/03/13	3.90	84.33	S	47.9509	91.3304	49.6415	48.2159				5.62
Pri #2	MC	5/03/13	2.90	84.04	P	44.5116	81.8097	45.5919	44.6840				
Land App Biosolids	KM	5/03/13	18.80	73.29	N	45.7857	87.4018	53.6114	47.8758				8.31
Land App Biosolids	KM	5/04/13	17.36	72.90	Z	44.8621	72.9143	49.7312	46.1816				8.29
New weekly sheet started below													
Blank	MC	5/06/12	0.00		S	47.9513	86.1964	47.9522					
Digested	MC	5/06/13	1.72	71.85	M	45.2885	92.8752	46.1070	45.5189	261229	18.7	51.8	7.3
Digested dup	MC	5/06/13	1.73	71.69	R	45.4948	94.8490	46.3463	45.7359				x
Cake	GM	5/06/13	21.56	73.38	L	46.2928	77.2344	52.9641	48.0687			47.1	7.96
Cake dup	GM	5/06/13	21.03	74.38	O	44.8256	73.2277	50.7990	46.3560				x
Pri #1	MC	5/06/13	4.71	85.26	U	44.0897	87.9368	46.1551	44.3942				5.09
Pri #2	MC	5/06/13	2.64	84.20	N	45.7830	86.1015	46.8473	45.9512				
Pri #2 dup	MC	5/06/13	2.63	84.27	W	43.8398	87.8024	44.9966	44.0218				
Pri #1	KM	5/07/13	5.16	86.52	V	43.6703	92.1669	46.1707	44.0073				6.1
Pri #2	KM	5/07/13	2.35	84.71	X	44.9402	81.9207	45.8095	45.0731				
Pri #1	KM	5/08/13	5.19	86.69	Z	44.8614	76.2743	46.4913	45.0784				5.96
Pri #2	KM	5/08/13	2.63	84.80	P	44.5099	79.2199	45.4219	44.6485				
Pri #1	MC	5/09/13	5.36	86.50	T	42.8151	80.6830	44.8447	43.0890				4.96
Pri #2	MC	5/09/13	2.63	84.75	S	47.9524	91.0235	49.0861	48.1253				
MLSS	MC	5/10/13	0.27	68.14	G	95.6982	142.3133	95.8225	95.7378				7.1
Pri #1	MC	5/10/13	5.29	87.48	R	45.4950	86.1261	47.6448	45.7641				6.03
Pri #2	MC	5/10/13	2.67	84.83	U	44.0934	86.0403	45.2148	44.2635				

New weekly sheet started below													
Blank	GM	5/13/13	0.00		L	46.2933	89.1116	46.2926					
Digested	GM	5/13/13	1.70	72.06	M	45.2872	79.7624	45.8734	45.4510	314596	22.3	56	7.4
Digested dup	GM	5/13/13	1.70	72.14	N	45.7839	79.4498	46.3557	45.9432			50.1	
Cake	GM	5/13/13	21.25	74.54	O	44.8277	72.7075	50.7532	46.3361				7.9
Cake dup	GM	5/13/13	21.09	74.62	W	43.8412	74.7285	50.3541	45.4942				
Pri #1	MC	5/13/13	4.35	85.36	V	43.6713	88.9162	45.6396	43.9595				
Pri #2	MC	5/13/13	2.77	85.20	P	44.5104	82.0451	45.5516	44.6645				5.69
Pri #2 dup	MC	5/13/13	2.65	85.08	S	47.9525	88.3021	49.0220	48.1121				
MLSS	MC	5/14/13	0.26	65.67	U	44.0925	88.2945	44.2090	44.1325				7.3
Pri #1	MC	5/14/13	4.18	86.38	R	45.4956	77.9341	46.8524	45.6804				5.86
Pri #2	MC	5/14/13	2.73	85.02	Z	44.8618	79.4136	45.8044	45.0030				
Pri #1	MC	5/15/12	4.56	86.64	S	47.9534	94.0566	50.0568	48.2344				5.58
Pri #2	MC	5/15/12	2.74	84.76	N	45.7850	81.8117	46.7723	45.9355				
Pri #1	GM	5/16/13	4.70	86.23	M	45.2887	78.6971	46.8578	45.5048				6.2
Pri #2	GM	5/16/13	2.69	84.56	V	43.6734	87.5768	44.8553	43.8559				
Pri #1	MC	5/17/13	5.22	86.54	T	42.8164	80.1868	44.7682	43.0792				5
Pri #2	MC	5/17/13	2.76	84.61	X	44.9398	84.7571	46.0389	45.1090				
New weekly sheet started below													
Blank	GM	5/19/13	0.00	50.00	L	46.2910	88.5364	46.2914	46.2912				
Digested	GM	5/19/13	1.72	72.44	N	45.7786	79.0956	46.3512	45.9364	115705	8.3	55.4	7.29
Digested dup	GM	5/19/13	1.70	72.08	O	44.8248	76.8892	45.3700	44.9770				
Cake	GM	5/19/13	20.63	73.56	P	44.5111	75.5673	50.9186	46.2051			51.2	7.79
Cake dup	GM	5/19/13	20.87	74.47	Q	45.7913	73.2097	51.5140	47.2522				
Pri #1	GM	5/20/13	5.28	86.46	R	45.4950	79.9335	47.3136	45.7413				5.99
Pri #2	GM	5/20/13	2.82	84.87	S	47.9508	88.1057	49.0830	48.1221				
Pri #2 dup	GM	5/20/13	2.82	84.90	U	44.0939	84.9470	45.2471	44.2680				
Pri #1	MC	5/21/13	5.05	86.89	W	43.8400	79.2005	45.6250	44.0741				5.7
Pri #2	MC	5/21/13	2.85	84.96	Z	44.8592	82.8310	45.9398	45.0217				
MLSS	MC	5/22/13	0.24	64.99	U	44.0925	90.0075	44.2039	44.1315				7.21
Pri #1	MC	5/22/13	6.16	85.93	N	45.7784	87.7541	48.3645	46.1422				4.75
Pri #2	MC	5/22/13	2.88	85.13	Q	45.7887	87.1407	46.9780	45.9655				
Pri #1	BWB	5/23/13	4.89	85.33	P	44.5101	87.7464	46.6246	44.8202				5.94
Pri #2	BWB	5/23/13	2.73	85.10	Z	44.8594	82.5262	45.8876	45.0126				
Pri #1	MC	5/24/13	5.58	85.90	S	47.9529	93.6839	50.5040	48.3126				5.97
Pri #2	MC	5/24/13	2.73	84.93	W	43.8404	89.2545	45.0793	44.0271				
New weekly sheet started below													

Cake	KM	5/26/13	**20.36**	**74.11**	**R**	45.4946	69.6293	50.4087	46.7667			52	8
Digested	KM	5/26/13	**1.79**	**70.98**	**L**	46.2911	75.5094	46.8139	46.4428	110889	8.3	59	7.34
Pri #1	MC	5/28/13	**4.68**	**86.70**	**P**	44.5105	84.4020	46.3755	44.7586				5.06
Pri #1 dup	MC	5/28/13	**4.63**	**86.54**	**N**	45.7792	92.0748	47.9210	46.0675				
Pri #2	MC	5/28/13	**3.18**	**84.86**	**U**	44.0956	91.0857	45.5900	44.3219				
Pri #2 dup	MC	5/28/13	**2.94**	**85.48**	**Q**	45.7887	91.4677	47.1328	45.9839				
Pri #1	GM	5/29/13	**4.52**	**86.60**	**O**	44.8248	79.1566	46.3773	45.0329				5.7
Pri #2	GM	5/29/13	**2.98**	**85.41**	**T**	42.8163	71.5653	43.6724	42.9412				
May Primary	GM	5/29/13	**3.21**	**84.79**	**X**	44.9397	82.7504	46.1549	45.1245				
May Digested	GM	5/29/13	**1.74**	**71.71**	**Z**	44.8588	83.2287	45.5250	45.0473				
Pri #1	GM	5/30/13	**4.60**	**86.13**	**W**	43.8405	77.7417	45.3996	44.0568				4.97
Pri #2	GM	5/30/13	**2.90**	**85.37**	**Q**	45.7844	78.0180	46.7199	45.9213				
MLSS	MC	5/31/13	**0.25**	**65.22**	**M**	45.2856	89.1459	45.3937	45.3232				7.1
Pri #1	MC	5/31/13	**4.62**	**84.23**	**U**	44.0935	89.0682	46.1726	44.4213				5.42
Pri #2	MC	5/31/13	**2.94**	**85.31**	**S**	47.9526	90.3600	49.2013	48.1360				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Jun-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Digested	GM	6/03/13	1.65	72.07	Q	45.7855	86.8310	46.4608	45.9741	247677	17.0	56.40	
Digested dup	GM	6/03/14	1.65	72.26	T	42.8181	84.7176	43.5074	43.0093				
Cake	GM	6/03/15	20.29	74.16	W	43.8421	70.1803	49.1857	45.2228			52.00	7.87
Cake dup	GM	6/03/16	20.12	73.94	X	44.9424	70.3133	50.0461	46.2724				
Pri #1	GM	6/03/17	3.69	81.93	L	46.2913	88.5225	47.8484	46.5727				5.78
Pri #2	GM	6/03/18	3.26	84.34	N	45.7793	90.4475	47.2348	46.0073				
Pri #2 dup	GM	6/03/19	3.24	84.28	Z	44.8614	90.6751	46.3450	45.0946				
Pri #1	MC	6/04/13	4.08	84.09	O	44.8262	84.6026	46.4489	45.0843				5.13
Pri #2	MC	6/04/13	2.99	84.27	V	43.6733	84.8277	44.9056	43.8672				
MLSS	MC	6/05/13	0.20	55.67	L	46.2909	85.1890	46.3676	46.3249				7.26
Pri #1	GM	6/05/13	4.34	83.72	N	45.7786	81.7990	47.3432	46.0333				5.89
Pri #2	GM	6/05/13	2.92	84.49	Z	44.8592	85.0877	46.0344	45.0415				
Pri #1	MC	6/06/13	4.65	83.42	S	47.9520	91.1434	49.9595	48.2848				4.73
Pri #2	MC	6/06/13	2.88	84.68	U	44.0934	91.1804	45.4489	44.3011				
Pri #1	MC	6/07/13	4.85	84.16	V	43.6769	91.5094	45.9980	44.0446				5.83
Pri #2	MC	6/07/13	2.59	84.41	O	44.8308	87.1749	45.9256	45.0015				
New weekly sheet started below													
Blank	MC	6/10/13	0.00		R	45.4955	85.4394	45.4956					x
Digested	MC	6/10/13	1.68	72.19	M	45.2864	90.9366	46.0526	45.4995	141838	9.9	51.20	7.34
Digested dup	MC	6/10/13	1.68	72.18	Z	44.8628	94.1951	45.6913	45.0933				
Cake	MC	6/10/13	20.09	73.85	T	42.8161	68.2969	47.9350	44.1549			47.10	7.84
Cake dup	MC	6/10/13	19.96	73.72	Q	45.7833	72.4942	51.1156	47.1846				
Pri #1	MC	6/10/13	4.99	85.76	N	45.7810	86.1313	47.7939	46.0676				4.7
Pri #2	MC	6/10/13	2.73	85.32	W	43.8427	86.1104	44.9983	44.0123				
Pri #2 dup	MC	6/10/13	2.73	85.36	L	46.2956	84.7493	47.3441	46.4491				
MLSS	MC	6/11/13	0.20	62.05	P	44.5101	82.5351	44.5852	44.5386				7.17
Pri #1	MC	6/11/13	5.71	84.99	R	45.4956	84.3660	47.7155	45.8287				4.93
Pri #2	MC	6/11/13	2.78	85.43	X	44.9424	86.1811	46.0872	45.1092				
Pri #1	BC	6/12/13	4.26	84.89	S	47.9550	82.0087	49.4055	48.1742				5.7
Pri #2	BC	6/12/13	2.58	85.28	O	44.8318	93.3935	46.0862	45.0164				
Pri #1	MC	6/13/13	4.74	83.73	Z	44.8624	84.2110	46.7266	45.1657				5.49
Pri #2	MC	6/13/13	3.06	83.28	W	43.8435	77.4587	44.8709	44.0153				
Pri #1	MC	6/14/13	3.62	81.89	U	44.0968	73.9449	45.1774	44.2925				5.57
Pri #2	MC	6/14/13	3.14	82.95	L	46.2953	78.2081	47.2974	46.4662				

New weekly sheet started below													
Blank	MC	6/19/13	0.00	266.67	Z	44.8618	77.5638	44.8624	44.8608				
Digested	KM	6/16/13	1.65	71.73	N	45.7811	82.7780	46.3910	45.9535	195436	13.4	52.00	7.45
Digested dup	KM	6/16/14	1.62	71.58	M	45.2905	81.7539	45.8796	45.4579				
Cake	KM	6/16/15	20.54	74.60	Q	45.7831	70.8833	50.9393	47.0929			47.70	8.08
Cake dup	KM	6/16/16	20.34	72.16	V	43.6782	84.4220	51.9662	45.9858				
Pri #1	GM	6/17/13	3.81	83.52	T	42.8162	79.3424	44.2085	43.0456				5.6
Pri #2	GM	6/17/13	2.38	84.27	G	95.7014	142.4362	96.8139	95.8764				
Pri #1	MC	6/18/13	4.33	86.68	M	45.2904	84.1531	46.9718	45.5143				5.91
Pri #2	MC	6/18/13	2.36	83.96	U	44.0972	86.0360	45.0880	44.2561				
Pri #2 dup	MC	6/18/13	2.37	84.02	Q	45.7812	84.4590	46.6984	45.9278				
MLSS	MC	6/19/13	0.20	60.27	P	44.5133	84.0710	44.5936	44.5452				7.06
Pri #1	MC	6/19/13	5.08	87.50	R	45.4963	86.4772	47.5784	45.7565				4.82
Pri #2	MC	6/19/13	2.35	83.89	X	44.9439	74.0515	45.6293	45.0543				
Pri #1	MC	6/20/13	4.39	86.70	P	44.5119	75.3816	45.8671	44.6921				6.04
Pri #2	MC	6/20/13	2.36	83.86	X	44.9445	80.2088	45.7777	45.0790				
Pri #1	MC	6/21/13	5.72	86.34	L	46.2959	72.5228	47.7969	46.5010				5.31
Pri #2	MC	6/21/13	2.41	84.62	S	47.9547	79.7321	48.7220	48.0727				
New weekly sheet started below													
Blank	MC	6/23/13	0.00	333.33	R	45.4969	80.4804	45.4972	45.4962				
Digested	MC	6/23/13	1.67	71.66	Z	44.8612	81.2370	45.4682	45.0332	189060	13.2	55.90	7.36
Digested dup	MC	6/23/13	1.67	71.66	W	43.8428	83.2354	44.4991	44.0288				
Cake	MC	6/23/13	21.08	73.76	U	44.0964	69.9027	49.5354	45.5237			51.00	7.9
Cake dup	MC	6/23/13	20.82	73.77	T	42.8162	74.7627	49.4686	44.5610				
Pri #1	BWB	6/24/13	4.51	84.12	Q	45.7830	83.9634	47.5046	46.0564				
Pri #2	BWB	6/24/13	2.11	84.73	M	45.2874	80.9611	46.0397	45.4023				5.93
Pri #1	MC	6/25/13	4.33	85.87	S	47.9549	85.6408	49.5863	48.1854				5.39
Pri #2	MC	6/25/13	1.94	84.91	U	44.0955	76.3137	44.7205	44.1898				
MLSS	MC	6/26/13	0.19	57.33	T	42.8164	78.7888	42.8839	42.8452				7.1
Pri #1	MC	6/26/13	4.53	86.58	Z	44.8628	85.5358	46.7069	45.1103				5.37
Pri #2	MC	6/26/13	1.53	84.43	P	44.5132	80.6095	45.0648	44.5991				
June Pri Sludge	GM	6/27/13	2.65	81.98	L	46.2948	77.3049	47.1168	46.4429				
June Digested	GM	6/27/13	1.61	71.39	R	45.4972	73.4901	45.9492	45.6265				
Pri#1	GM	6/27/13	4.18	85.85	W	43.8434	76.1454	45.1951	44.0347				5.48
Pri#2	GM	6/27/13	1.78	84.14	X	44.9473	77.4080	45.5242	45.0388				
Pri#1	KM	6/28/13			U	44.0939	88.9757						5.48
Pri#2	KM	6/28/13			T	42.8189	83.9757						

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Jul-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Blank	GM	7/01/13	0.00	550.00	M	45.2878	91.0257	45.2882	45.2860				
Digested	GM	7/01/13	1.55	70.77	N	45.7819	79.9767	46.3122	45.9369	255602	16.5	57.60	7.5
Digested Dup.	GM	7/01/13	1.54	70.88	O	44.8286	82.2247	45.4059	44.9967				
Cake	GM	7/01/13	21.14	73.45	Q	45.7825	74.6733	51.8907	47.4042			53.00	8
Dup.	GM	7/01/13	21.19	72.36	V	43.6778	75.7347	50.4720	45.5555				
Pri#1	GM	7/01/13	2.59	83.66	P	44.5123	82.7677	45.5045	44.6744				5.6
Pri#2	GM	7/01/13	1.91	84.44	S	47.9546	96.3580	48.8781	48.0983				
MLSS	MC	7/02/13	0.17	61.41	Z	44.8624	90.8876	44.9417	44.8930				7.15
Pri#1	MC	7/02/13	2.86	82.94	X	44.9493	91.1285	46.2684	45.1744				5.29
Pri#2	MC	7/02/13	2.59	83.94	U	44.0936	79.2400	45.0039	44.2398				
Pri #2 dup	MC	7/02/13	2.58	83.92	W	43.8431	75.3034	44.6541	43.9735				
Pri#1	MC	7/03/13	2.44	83.69	P	44.5158	80.4589	45.3939	44.6590				5.38
Pri#2	MC	7/03/13	2.12	83.62	R	45.4971	81.6290	46.2646	45.6228				
Pri#1	MC	7/05/13	2.16	84.53	W	43.8448	83.5435	44.7039	43.9777				5.54
Pri#2	MC	7/05/13	1.55	83.70	U	44.0945	85.4094	44.7355	44.1990				
New weekly sheet started below													
Blank	BC	7/08/13	0.00	100.00	X	44.9524	82.6132	44.9525	44.9524				
Digested	BC	7/08/13	1.39	69.92	M	45.2872	86.8352	45.8650	45.4610	297812	17.3	56.30	7.5
Digested Dup.	BC	7/08/13	1.39	70.17	O	44.8298	90.7518	45.4664	45.0197				
Cake	BC	7/08/13	20.67	72.33	Z	44.8661	73.4146	50.7659	46.4984			51.20	8.2
Dup.	BC	7/08/13	20.96	72.29	S	47.9556	79.6715	54.6035	49.7978				
Pri#1	MC	7/08/13	3.49	80.12	Q	45.7820	78.8210	46.9347	46.0111				5.11
Pri#2	MC	7/08/13	3.90	77.69	N	45.7825	80.4273	47.1325	46.0837				
Pri #2 dup	MC	7/08/13	3.84	77.55	V	43.6784	81.2116	45.1184	44.0017				
MLSS	MC	7/09/13	0.25	73.47	L	46.2946	86.6902	46.3960	46.3215				7.19
Pri#1	MC	7/09/13	3.87	79.37	W	43.8465	79.4418	45.2234	44.1306				5.28
Pri#2	MC	7/09/13	3.56	77.78	P	44.5166	79.9961	45.7806	44.7974				
Pri#1	MC	7/10/13	5.27	75.32	R	45.5009	91.0428	47.9023	46.0936				5.4

Pri#2	MC	7/10/13	3.59	77.78	U	44.0954	85.9510	45.5961	44.4288				5.4
Pri#1	MC	7/11/13	4.92	74.37	S	47.9548	88.9445	49.9729	48.4721				5.2
Pri#2	MC	7/11/13	3.63	76.83	N	45.7827	84.7763	47.1981	46.1107				
Pri#1	MC	7/12/13	3.72	78.43	M	45.2894	81.1790	46.6235	45.5771				5.02
Pri#2	MC	7/12/13	3.39	78.71	Q	45.7861	89.1954	47.2578	46.0994				
New weekly sheet started below													
Blank	MC	7/15/13	0.00		U	44.0957	81.0709	44.0957					
Digested	MC	7/15/13	1.36	68.77	L	46.3015	80.7228	46.7687	46.4474	262720	14.9	46.20	7.3
Digested Dup.	MC	7/15/13	1.38	69.10	W	43.8468	85.6119	44.4212	44.0243				
Cake	MC	7/15/13	22.55	71.79	R	45.5009	78.7496	52.9987	47.6161			38.30	7.95
Dup.	MC	7/15/13	21.98	71.80	P	44.5167	75.6735	51.3664	46.4484				
Pri#1	MC	7/15/13	2.80	83.72	X	44.9518	93.7740	46.3165	45.1740				5.48
Pri#2	MC	7/15/13	1.72	79.02	Z	44.8651	85.8447	45.5682	45.0126				
Pri #2 dup	MC	7/15/13	1.71	78.82	O	44.8306	83.6051	45.4950	44.9713				
Pri#1	MC	7/16/13	2.73	84.47	U	44.0961	86.1691	45.2458	44.2747				5.63
Pri#2	MC	7/16/13	1.79	79.67	V	43.6801	91.0229	44.5258	43.8520				
MLSS	MC	7/17/13	0.20	57.14	S	47.9542	88.4070	48.0333	47.9881				7.2
Pri#1	MC	7/17/13	2.70	84.91	Z	44.8652	85.3845	45.9584	45.0302				5.48
Pri#2	MC	7/17/13	1.92	80.19	W	43.8481	82.4358	44.5902	43.9951				
Pri#1	MC	7/18/13	2.48	84.79	R	45.5010	94.2281	46.7084	45.6847				5.5
Pri#2	MC	7/18/13	2.18	83.69	M	45.2908	88.6992	46.2374	45.4452				
Pri#1	MC	7/19/13	2.87	85.45	T	42.8191	74.5410	43.7293	42.9515				5.1
Pri#2	MC	7/19/13	2.09	83.50	P	44.5158	85.4935	45.3710	44.6569				
Cake	KM	7/20/13	22.36	71.19	X	44.9536	70.1150	50.5788	46.5741			51.30	8.58
Dup.	KM	7/20/13	22.33	71.08	Q	45.7862	70.6612	51.3411	47.3928				
Digested	KM	7/20/13	1.42	68.19	L	46.2997	82.6710	46.8156	46.4638	42042	2.5	57.60	7.26
New weekly sheet started below													
Blank	GM	7/22/13	0.00	-300.00	M	45.2898	94.8776	45.2897	45.2894				
Cake	GM	7/22/13	23.20	70.37	N	45.7841	74.1924	52.3736	47.7364			53.00	8.1
Dup.	GM	7/22/13	22.59	70.43	O	44.8317	68.6094	50.2034	46.4199				
Digested	GM	7/22/13	1.43	67.86	R	45.5002	90.8040	46.1486	45.7086	125759	7.5	57.90	7.5
Digested Dup.	GM	7/22/13	1.43	68.23	S	47.9575	96.5878	48.6532	48.1785				
Pri #1	MC	7/22/13	2.58	82.82	V	43.6806	87.6229	44.8137	43.8753				5.53
Pri #1 dup	MC	7/22/13	2.61	82.87	U	44.0938	91.0361	45.3175	44.3034				
Pri #2	MC	7/22/13	2.78	79.37	W	43.8472	83.9207	44.9630	44.0774				
Pri#1	MC	7/23/13	2.48	81.91	Q	45.7853	92.0109	46.9339	45.9931				5.27
Pri#2	MC	7/23/13	2.92	81.99	L	46.3004	86.8707	47.4861	46.5140				

Pri#1	MC	7/24/13	2.05	82.41	V	43.6811	84.7468	44.5241	43.8294				5.17
Pri#2	MC	7/24/13	2.70	84.30	R	45.5024	87.1243	46.6275	45.6790				
MLSS	MC	7/25/13	0.19	59.47	U	44.0959	83.3866	44.1714	44.1265				7.35
Pri#1	MC	7/25/13	2.20	82.73	W	43.8484	81.5970	44.6792	43.9919				5.37
Pri#2	MC	7/25/13	2.27	83.92	O	44.8307	81.1511	45.6537	44.9630				
Cake	GM	7/26/13	22.40	71.07	P	44.5156	79.2402	52.2949	46.7662			47.40	
Digested	GM	7/26/13	1.43	68.52	T	42.8211	86.9135	43.4526	43.0199	58382	3.5	53.40	
Pri#1	MC	7/26/13	2.21	82.97	S	47.9593	93.7461	48.9715	48.1317				5.39
Pri#2	MC	7/26/13	1.80	82.38	M	45.2899	81.9221	45.9484	45.4059				
New weekly sheet started below													
Blank	GM	7/29/13	0.00	#DIV/0!	L	46.3021	78.4233	46.3021	46.3019				
Cake	GM	7/29/13	21.90	70.68	O	44.8294	81.7566	52.9172	47.2009			48.40	7.9
Dup.	GM	7/29/13	22.01	70.67	R	45.5037	79.2693	52.9366	47.6836				
Digested	GM	7/29/13	1.28	67.79	V	43.6820	88.3627	44.2527	43.8658	264804	14.1	54.70	7.4
Digested Dup.	GM	7/29/13	1.28	68.06	X	44.9539	86.1001	45.4802	45.1220				
Pri #1	MC	7/29/13	2.18	82.06	W	43.8493	82.0989	44.6849	43.9992				5.49
Pri #1 dup	MC	7/29/13	2.20	82.23	Q	45.7858	86.8417	46.6879	45.9461				
Pri #2	MC	7/29/13	1.80	83.11	U	44.0979	94.9134	45.0112	44.2522				
Pri#1	MC	7/30/13	2.08	81.36	Z	44.8658	86.8807	45.7394	45.0286				5.44
Pri#2	MC	7/30/13	1.48	83.23	N	45.7836	80.0832	46.2910	45.8687				
Pri #1	KM	7/31/13	2.22	82.92	P	44.5150	82.8069	45.3652	44.6602				5.22
Pri #2	KM	7/31/13	1.86	84.26	X	44.9554	80.5469	45.6167	45.0595				
July Primary	GM	7/31/13	2.51	80.99	S	47.9612	80.5718	48.7813	48.1171				
July Digested	GM	7/31/13	1.40	69.66	V	43.6832	79.3576	44.1835	43.8350				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Aug-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri #1	MC	8/01/13	2.03	83.34	T	42.8224	78.3874	43.5426	42.9424				5.39
Pri #2	MC	8/01/13	1.86	84.47	R	45.5039	86.2661	46.2639	45.6219				
Pri #1	MC	8/02/13	1.88	84.22	S	47.9629	90.2855	48.7584	48.0884				5.64
Pri #2	MC	8/02/13	1.80	84.37	Z	44.8667	85.3673	45.595	44.9805				
New weekly sheet started below													
Blank	GM	8/05/13	0.00	0.00	N	45.7828	90.3238	45.7829	45.7829				
Digested	GM	8/05/13	1.64	67.84	P	44.5156	80.3071	45.1008	44.7038	234661	16.0	56.8	7.4
Digested dup	GM	8/05/13	1.63	67.76	V	43.6848	85.7309	44.3706	43.9059				
Cake	GM	8/05/13	22.26	69.17	W	43.8507	81.5225	52.237	46.4362			54.1	7.8
Cake dup	GM	8/05/13	22.51	69.04	X	44.9565	82.1549	53.3302	47.5487				
Pri #1	MC	8/05/13	2.00	84.69	L	46.2999	84.1917	47.0581	46.416				5.59
Pri #2	MC	8/05/13	1.94	84.70	M	45.2907	78.6785	45.9373	45.3896				
Pri #2 dup	MC	8/05/13	1.94	84.78	U	44.0992	83.9536	44.8731	44.217				
Pri #1	MC	8/06/13	1.88	83.53	Q	45.7882	85.8776	46.5412	45.9122				5.85
Pri #2	MC	8/06/13	1.93	85.14	O	44.8283	83.4074	45.5748	44.9392				
MLSS	MC	8/07/13	0.19	58.95	R	45.5024	78.4243	45.565	45.5281				7.14
Pri #1	MC	8/07/13	1.62	83.33	V	43.6858	84.9166	44.3527	43.797				5.52
Pri #2	MC	8/07/13	1.97	85.54	W	43.8496	75.965	44.4825	43.9411				
Pri #1	MC	8/08/13	1.74	83.68	M	45.2904	91.2723	46.089	45.4207				5.47
Pri #2	MC	8/08/13	2.05	85.62	N	45.7825	84.822	46.5837	45.8977				
Pri #1	MC	8/09/13	2.42	83.87	U	44.0959	86.5944	45.1253	44.2619				5.35
Pri #2	MC	8/09/13	1.89	85.23	Z	44.8655	84.3061	45.6121	44.9758				
New weekly sheet started below													
Blank	GM	8/12/13	0.00	100.00	L	46.3028	81.6988	46.3029	46.3028				
Digested	GM	8/12/13	1.15	68.86	M	45.2888	78.8167	45.6741	45.4088	249846	12.0	59	7.36
Digested dup	GM	8/12/13	1.15	68.76	O	44.824	79.9142	45.227	44.9499				
Cake	GM	8/12/13	21.74	71.71	P	44.5143	76.7501	51.5219	46.4971			53.1	7.67
Cake dup	GM	8/12/13	21.63	71.49	R	45.5035	80.014	52.9697	47.6321				

Pri #1	MC	8/12/13	1.49	82.23	T	42.8262	79.6888	43.3754	42.9238				5.47
Pri #2	MC	8/12/13	1.60	84.11	W	43.847	76.6799	44.3718	43.9304				
Pri #2 dup	MC	8/12/13	1.60	84.25	X	44.9584	85.9885	45.6143	45.0617				
MLSS	MC	8/13/13	0.20	58.62	N	45.779	88.469	45.8631	45.8138				7
Pri #1	MC	8/13/13	2.11	82.81	V	43.6853	86.9518	44.5965	43.8419				5.52
Pri #2	MC	8/13/13	1.27	83.01	S	47.9597	89.3549	48.4858	48.0491				
Pri #1	MC	8/14/13	2.19	81.39	M	45.2878	83.0944	46.1176	45.4422				5.67
Pri #2	MC	8/14/13	1.43	83.75	W	43.847	81.9884	44.3935	43.9358				
Pri #1	MC	8/15/13	1.96	81.57	O	44.8243	81.9966	45.5547	44.9589				5.55
Pri #2	MC	8/15/13	1.22	82.82	T	42.8227	77.3903	43.2442	42.8951				
Pri #1	KM	8/16/13	1.98	81.17	U	44.0932	88.4652	44.9732	44.2589				5.49
Pri #2	KM	8/16/13	1.60	82.46	R	45.5046	85.4964	46.1444	45.6168				
New weekly sheet started below													
Blank	GM	8/19/13	0.00	360.00	L	46.3025	77.3691	46.303	46.3012				
Digested	GM	8/19/13	1.06	69.14	P	44.5136	83.7147	44.9287	44.6417	264031	11.7	51.6	
Digested dup	GM	8/19/13	1.06	68.72	Q	45.7828	86.763	46.2153	45.9181				
Cake	GM	8/19/13	21.46	72.40	X	44.9562	79.8618	52.4462	47.0236			43.2	
Cake dup	GM	8/19/13	21.53	72.08	Z	44.8626	84.4568	53.3867	47.2429				
Pri #1	MC	8/19/13	2.44	82.75	M	45.2881	85.5603	46.2726	45.4579				5.43
Pri #1 dup	MC	8/19/13	2.44	82.89	W	43.8452	83.9857	44.8265	44.0131				
Pri #2	MC	8/19/13	1.49	80.58	T	42.8092	78.7655	43.3463	42.9135				
MLSS	MC	8/20/13	0.20	54.40	U	44.0918	82.4152	44.1668	44.126				7.06
Pri#1	MC	8/20/13	2.32	82.99	L	46.3027	78.747	47.0559	46.4308				5.46
Pri#2	MC	8/20/13	1.55	83.29	S	47.9601	85.2813	48.5376	48.0566				
Pri#1	MC	8/21/13	2.77	82.56	R	45.5032	83.3505	46.5515	45.686				5.18
Pri#2	MC	8/21/13	2.07	84.81	V	43.6867	82.1791	44.4834	43.8077				
Primary overflow	KM	8/22/13	1.35	67.68	P	44.5154	75.0191	44.9266	44.6483				
Digested	KM	8/22/13	0.66	66.92	W	43.849	73.7726	44.0467	43.9144				
Pri#1	BWB	8/22/13	3.22	83.28	X	44.957	84.5422	46.2306	45.17				5.18
Pri#2	BWB	8/22/13	2.19	85.04	Z	44.8629	83.2211	45.702	44.9884				
Pri#1	MC	8/23/13	3.44	83.93	Q	45.7866	83.4109	47.0804	45.9945				5.3
Pri#2	MC	8/23/13	2.23	84.70	T	42.8216	77.008	43.5839	42.9382				
New weekly sheet started below													
Blank	GM	8/26/13	0.00	250.00	P	44.5143	89.4017	44.5145	44.514				
Pri #1	MC	8/26/13	4.27	87.31	R	45.5038	88.739	47.3491	45.738				5.4
Pri #2	MC	8/26/13	2.12	85.27	S	47.9583	93.4414	48.9219	48.1002				
Pri #2 dup	MC	8/26/13	2.13	85.29	U	44.093	93.9581	45.1556	44.2493				

Land App	KM	8/27/13	28.27	68.55	W	43.8506	70.5882	51.4106	46.2282				8.28
MLSS	MC	8/27/13	0.19	55.31	N	45.7801	82.7919	45.8488	45.8108				7.1
Pri #1	MC	8/27/13	4.40	86.69	X	44.9576	88.41	46.8699	45.2121				5.05
Pri #1 dup	MC	8/27/13	4.56	86.86	Z	44.8591	92.4033	47.0288	45.1441				
Pri #2	MC	8/27/13	2.05	85.50	P	44.5141	81.5098	45.2716	44.6239				
Land App	MC	8/27/13	25.67	64.04	L	46.3003	85.6881	56.412	49.9361				8.25
Land App dup	MC	8/27/13	25.75	66.73	V	43.6873	69.8862	50.4334	45.9317				
Pri #1	MC	8/28/13	3.79	83.55	S	47.959	84.7765	49.3526	48.1882				5.55
Pri #2	MC	8/28/13	2.13	85.09	T	42.8237	87.8279	43.7837	42.9668				
Land App	KM	8/28/13	21.66	68.58	W	43.8485	73.3083	50.2305	45.8538				8.32
Land App dup	KM	8/28/13	22.18	67.95	N	45.7834	77.324	52.7805	48.0261				
Pri #1	MC	8/29/13	2.83	83.53	X	44.9586	79.2807	45.93	45.1186				5.61
Pri #2	MC	8/29/13	1.87	83.98	Z	44.8615	81.72	45.5496	44.9717				
Aug Primary	GM	8/30/13	2.05	82.97	Q	45.7877	84.0757	46.5718	45.9212				
Aug Digested	GM	8/30/13	1.26	68.05	R	45.5054	86.785	46.0271	45.6721				
Pri #1	MC	8/30/13	4.05	85.82	U	44.095	87.9784	45.8719	44.347				5.64
Pri #2	MC	8/30/13	2.17	81.67	O	44.8243	83.659	45.6682	44.979				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Sep-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Blank	MC	9/03/13	0.00	140.00	S	47.9586	82.4554	47.9581	47.9588				
Digested	KM	9/02/13	1.86	69.32	X	44.9588	79.1590	45.5947	45.1539	129040	10.0	59.60	7.2
Cake	KM	9/02/13	21.14	70.99	P	44.5144	70.3925	49.9850	46.1012			56.70	8.26
Cake dup	KM	9/02/13	20.80	70.62	W	43.8493	75.0954	50.3479	45.7586				
Pri #1	MC	9/03/13	4.19	87.29	V	43.6876	82.1406	45.2985	43.8924				5.81
Pri #2	MC	9/03/13	2.10	85.69	Z	44.8588	81.5034	45.6291	44.9690				
Pri #2 dup	MC	9/03/13	2.11	85.73	N	45.7811	81.4200	46.5321	45.8883				
MLSS	MC	9/04/13	0.19	58.28	W	43.8500	83.7284	43.9243	43.8810				7.07
Pri #1	MC	9/04/13	4.24	87.41	L	46.3000	81.1945	47.7794	46.4863				5.96
Pri #1 dup	MC	9/04/13	4.07	86.83	M	45.2945	81.2597	46.7582	45.4872				
Pri #2	MC	9/04/13	2.01	85.66	T	42.8213	79.1967	43.5508	42.9259				
Pri #1	MC	9/05/13	4.27	87.83	X	44.9589	83.2986	46.5953	45.1581				5.6
Pri #2	MC	9/05/13	1.89	85.65	R	45.5043	87.2215	46.2930	45.6175				
Pri #1	MC	9/06/13	3.76	86.61	P	44.5138	80.4414	45.8630	44.6945				5.03
Pri #2	MC	9/06/13	1.91	85.51	U	44.0925	85.2102	44.8785	44.2064				
New weekly sheet started below													
Blank	GM	9/09/13	0.00	-14.29	L	46.3008	83.5227	46.3001	46.3000				
Digested	GM	9/09/13	1.60	70.72	M	45.2918	87.9327	45.9734	45.4914	259498	17.3	61.50	7.4
Digested dup	GM	9/09/13	1.60	70.88	N	45.7786	78.5306	46.3020	45.9310				
Cake	GM	9/09/13	21.13	73.46	T	42.8182	75.2777	49.6776	44.6389			56.50	7.8
Cake dup	GM	9/09/13	20.77	73.11	V	43.6877	80.2750	51.2853	45.7309				
Pri #1	MC	9/09/13	3.68	86.13	W	43.8524	79.5201	45.1663	44.0346				5.08
Pri #2	MC	9/09/13	1.83	85.24	Z	44.8566	85.0680	45.5936	44.9654				
Pri #2 dup	MC	9/09/13	1.83	85.15	Q	45.7857	84.8293	46.5000	45.8918				
Pri #1	MC	9/10/13	3.96	86.40	U	44.0827	82.2120	45.5936	44.2882				5.64
Pri #2	MC	9/10/13	1.77	85.47	X	44.9609	77.5682	45.5385	45.0448				
MLSS	MC	9/11/13	0.20	55.50	Q	45.7801	84.2716	45.8565	45.8141				7.1
Pri #1	MC	9/11/13	4.13	86.08	P	44.5164	87.7799	46.3026	44.7651				5.54

Pri #2	MC	9/11/13	1.72	85.77	R	45.5059	85.3560	46.1918	45.6035				5.54
Pri #1	MC	9/12/13	4.01	86.39	L	46.3002	79.3725	47.6266	46.4807				5.76
Pri #2	MC	9/12/13	1.68	85.80	S	47.9586	94.5950	48.7425	48.0699				
Pri #1	MC	9/13/13	4.24	85.02	W	43.8498	78.1847	45.3061	44.0679				5.73
Pri #2	MC	9/13/13	1.52	85.02	N	45.7773	84.0327	46.3599	45.8646				
New weekly sheet started below													
Blank	GM	9/16/13	0.00	200.00	L	46.3026	92.8742	46.3024	46.3028				
Digested	GM	9/16/13	1.53	72.33	O	44.8234	83.1907	45.4103	44.9858	256290	16.3	56.10	7.3
Digested dup	GM	9/16/13	1.53	71.80	P	44.5159	84.4564	45.1277	44.6884				
Cake	GM	9/16/13	20.09	75.09	Q	45.7848	72.1644	51.0844	47.1049			48.40	8
Cake dup	GM	9/16/13	20.22	75.35	R	45.5060	82.9667	53.0806	47.3733				
Pri #1	MC	9/16/13	3.89	84.36	S	47.9586	90.1241	49.6003	48.2153				5.61
Pri #1 dup	MC	9/16/13	3.91	84.45	U	44.0830	88.0888	45.8020	44.3503				
Pri #2	MC	9/16/13	1.87	85.56	X	44.9623	84.2681	45.6989	45.0687				
Pri #1	MC	9/17/13	4.33	82.01	M	45.2915	85.3468	47.0242	45.6032				5.51
Pri #2	MC	9/17/13	1.88	85.61	Z	44.8534	86.1565	45.6311	44.9653				
MLSS	MC	9/18/13	0.20	57.63	W	43.8496	81.0130	43.9256	43.8818				7.08
Pri #1	MC	9/18/13	4.32	82.62	N	45.7732	78.9422	47.2049	46.0221				5.31
Pri #2	MC	9/18/13	1.88	85.52	S	47.9562	89.1033	48.7311	48.0684				
Pri #1	MC	9/19/13	4.30	82.70	T	42.8177	76.2280	44.2551	43.0664				5.72
Pri #2	MC	9/19/13	1.89	85.07	V	43.6875	78.9229	44.3533	43.7869				
Pri #1	MC	9/20/13	4.26	82.88	U	44.0805	83.8798	45.7770	44.3710				
Pri #2	MC	9/20/13	2.09	84.18	X	44.9606	87.9566	45.8582	45.1026				5.3
New weekly sheet started below													
Blank	GM	9/23/13	0.00	0.00	M	45.2917	83.5632	45.2920	45.2920				
Digested	GM	9/23/13	1.33	72.59	N	45.7735	75.1614	46.1635	45.8804	131449	7.3	50.90	7.23
Digested dup	GM	9/23/13	1.33	72.40	S	47.9548	81.3363	48.4001	48.0777				
Cake	GM	9/23/13	20.04	76.27	T	42.8185	75.6319	49.3955	44.3790			43.50	8.24
Cake dup	GM	9/23/13	20.04	74.17	V	43.6898	80.9317	51.1543	45.6181				
Pri #1	MC	9/23/13	2.67	78.60	L	46.2985	85.2523	47.3386	46.5211				5.33
Pri #2	MC	9/23/13	2.63	83.26	P	44.5135	86.1571	45.6101	44.6971				
Pri #2 dup	MC	9/23/13	2.64	83.47	Q	45.7817	90.9742	46.9739	45.9788				
MLSS	MC	9/24/13	0.21	64.17	O	44.8208	86.7558	44.9090	44.8524				7.12
Pri #1	MC	9/24/13	2.89	82.31	Z	44.8521	90.1184	46.1601	45.0835				5.43
Pri #2	MC	9/24/13	2.17	84.76	W	43.8583	93.3000	44.9298	44.0216				
Pri #1	MC	9/25/13	3.09	82.11	L	46.3004	79.7397	47.3349	46.4855				5.4
Pri #2	MC	9/25/13	2.12	84.72	M	45.2920	78.3075	45.9923	45.3990				

Pri #1	MC	9/26/13	2.96	82.99	N	45.7732	83.1545	46.8799	45.9614				5.27
Pri #2	MC	9/26/13	2.27	85.00	U	44.0830	92.7063	45.1880	44.2487				
Pri #1	MC	9/27/13	4.61	85.82	T	42.8181	79.7723	44.5230	43.0598				5.21
Pri #2	MC	9/27/13	2.36	84.93	P	44.5136	87.1303	45.5213	44.6655				
Digested	KM	9/29/13	1.29	71.89	Q	45.7797	75.6210	46.1660	45.8883	140268	7.6	50.30	7.25
Cake	KM	9/29/13	20.25	75.34	R	45.5018	71.8385	50.8362	46.8170			40.60	8.11
New weekly sheet started below													
Blank	MC	9/30/13	0.00	22.22	O	44.8251	78.7372	44.8260	44.8258				x
Pri #1	MC	9/30/13	3.78	86.01	Z	44.8535	88.4130	46.4992	45.0838				5.57
Pri #1 dup	MC	9/30/13	3.78	86.15	M	45.2923	83.8590	46.7513	45.4943				
Pri #2	MC	9/30/13	2.22	85.29	W	43.8517	88.2748	44.8376	43.9967				
Sept Primary	GM	9/30/13	2.41	84.63	S	47.9541	87.3991	48.9045	48.1002				x
Sept Digested	GM	9/30/13	1.60	71.70	V	43.6859	81.3642	44.2880	43.8563				x
Sept Digested dup	GM	9/30/13	1.60	71.88	X	44.9628	88.6687	45.6610	45.1591				x

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

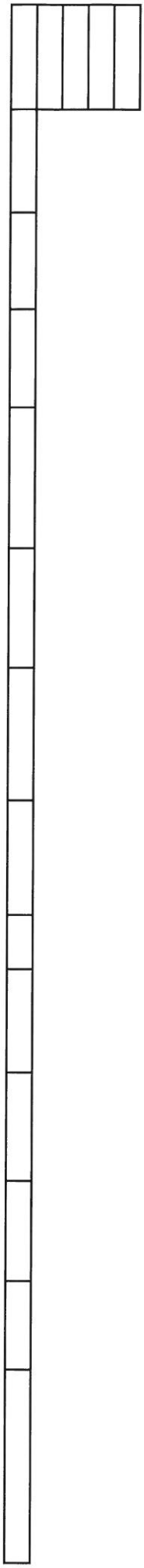
Oct-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri #1	MC	10/01/13	3.84	85.89	U	44.0831	84.2075	45.6250	44.3007				5.71
Pri #2	MC	10/01/13	2.11	85.56	L	46.3016	84.5179	47.1092	46.4182				
MLSS	MC	10/02/13	0.24	59.30	O	44.8244	83.1276	44.9158	44.8616				7.15
Pri #1	MC	10/02/13	3.87	86.20	R	45.4997	87.5445	47.1267	45.7243				5.68
Pri #2	MC	10/02/13	2.02	85.58	W	43.8471	90.5140	44.7911	43.9832				
Pri #1	MC	10/03/13	4.07	86.35	M	45.2897	84.4354	46.8837	45.5073				5.27
Pri #2	MC	10/03/13	2.00	85.22	T	42.8168	81.0528	43.5816	42.9298				
Pri #1	MC	10/04/13	4.18	86.31	W	43.8499	82.7412	45.4767	44.0726				6.27
Pri #2	MC	10/04/13	2.53	85.67	S	47.9591	92.0116	49.0716	48.1185				
New weekly sheet started below													
Blank	MC	1/06/13	0.00		V	43.6879	82.1944	43.6887					
Digested	MC	1/06/13	1.26	70.34	X	44.9643	82.2133	45.4347	45.1038				7.39
Digested dup	MC	1/06/13	1.27	70.63	L	46.3021	82.2136	46.7567	46.4356	131377	6.9	61.0	
Cake	MC	1/06/13	20.86	73.92	O	44.8233	73.2739	50.7581	46.3708			56.6	8.01
Cake dup	MC	1/06/13	20.84	71.40	U	44.0852	83.2034	52.2366	46.4164				
Pri #1	MC	10/07/13	4.47	78.31	N	45.7643	87.2641	47.6184	46.1664				4.92
Pri #2	MC	10/07/13	3.44	81.46	R	45.5026	84.6599	46.8515	45.7527				
MLSS	MC	10/08/13	0.26		V	43.6872	83.8331	43.7900					7.09
Pri #1	MC	10/09/13	2.11	83.59	U	44.0876	83.2600	44.9132	44.2231				5.3
Pri #2	MC	10/09/13	1.47	82.19	L	46.3034	84.7008	46.8682	46.4040				
Pri #1	MC	10/10/13	2.53	81.73	O	44.8196	84.8393	45.8310	45.0044				5.25
Pri #1 dup	MC	10/10/13	2.54	81.79	M	45.2922	81.1930	46.2044	45.4583				
Pri #2	MC	10/10/13	1.36	81.73	T	42.8154	85.7708	43.3995	42.9221				
Land App	GM	10/10/13	20.19	73.14	G	95.7048	126.7304	101.9686	97.3873				
Pri #1	MC	10/11/13	2.55	81.66	W	43.8516	80.3570	44.7809	44.0220				5.6
Pri #2	MC	10/11/13	1.35	81.75	Z	44.8493	93.0841	45.4981	44.9677				
Land App	KM	10/11/13	24.88	71.37	P	44.5115	71.6384	51.2607	46.4435				8.53
Land App dup	KM	10/11/13	26.10	69.13	S	47.9558	85.2444	57.6889	50.9608				

Land App	MC	10/12/13	24.20	68.73	V	43.6885	69.5230	49.9399	45.6431				
Land App dup	MC	10/12/13	20.50	66.84	R	45.5031	78.3576	52.2395	47.7370				
Land App dup	BZ	10/13/13	17.57	68.51	G	95.7002	118.1659	99.6467	96.9431				
New weekly sheet started below													
Blank	MC	10/14/13	0.00		O	44.8142	72.7046	44.8134					
Digested	MC	10/14/13	1.48	70.97	U	44.0837	84.7959	44.6858	44.2585	335851	20.7	44.5	7.33
Digested dup	MC	10/14/13	1.48	70.95	N	45.7648	88.8721	46.4019	45.9499				
Cake	MC	10/14/13	20.67	74.75	T	42.8176	69.8770	48.4097	44.2297			32.5	7.9
Cake dup	MC	10/14/13	20.82	74.88	L	46.3027	73.2745	51.9194	47.7134				
Pri #1	MC	10/14/13	2.06	82.78	P	44.5104	81.1707	45.2671	44.6407				5.99
Pri #2	MC	10/14/13	1.48	82.76	R	45.5036	84.3884	46.0797	45.6029				
Pri #2 dup	MC	10/14/13	1.48	82.67	S	47.9550	84.4327	48.4935	48.0483				
Pri #1	MC	10/15/13	2.42	83.66	X	44.9598	84.7962	45.9238	45.1173				5.52
Pri #2	MC	10/15/13	1.68	83.50	Q	45.7730	92.6584	46.5607	45.9030				
MLSS	MC	10/16/13	0.26	61.55	L	46.3020	79.0554	46.3886	46.3353				6.92
Pri #1	MC	10/16/13	2.56	83.79	O	44.8049	78.2426	45.6600	44.9435				5.73
Pri #2	MC	10/16/13	1.86	83.42	Z	44.8447	86.1988	45.6157	44.9725				
Pri #1	MC	10/17/13	2.79	84.07	N	45.7660	82.9529	46.8046	45.9314				5.44
Pri #2	MC	10/17/13	1.86	83.32	P	44.5133	79.1954	45.1601	44.6212				
Pri #1	MC	10/18/13	2.88	84.08	R	45.4996	83.2256	46.5860	45.6726				5.56
Pri #2	MC	10/18/13	1.84	83.24	S	47.9487	82.1442	48.5764	48.0539				
New weekly sheet started below													
Blank	KM	10/21/13	0.00		L	46.2984	80.4904	46.2987					
Cake	KM	10/21/13	20.25	74.48	O	44.8017	75.0836	50.9326	46.3664			40.1	8
Cake dup	KM	10/21/13	20.72	75.52	Q	45.7694	72.1786	51.2420	47.1089				
Digested	KM	10/21/13	1.36	71.68	Z	44.8432	75.0397	45.2542	44.9596	270261	15.3	49.5	7.5
Pri #1	MC	10/21/13	3.18	85.55	W	43.8443	78.5128	44.9477	44.0037				5.19
Pri #1 dup	MC	10/21/13	3.18	85.48	M	45.2902	82.7912	46.4827	45.4633				
Pri #2	MC	10/21/13	2.07	84.36	T	42.8169	78.5011	43.5558	42.9325				
Pri #2 dup	MC	10/21/13	2.07	84.49	U	44.0860	82.3388	44.8790	44.2090				
Pri #1	MC	10/22/13	3.41	85.98	L	46.2990	86.0240	47.6517	46.4886				
Pri #2	MC	10/22/13	2.13	84.62	V	43.6896	81.4471	44.4947	43.8134				5.1
MLSS	MC	10/23/13	0.27	65.48	W	43.8438	81.7188	43.9475	43.8796				7.04
Pri #1	MC	10/23/13	3.77	85.66	T	42.8130	77.2453	44.1126	42.9994				5.22
Pri #2	MC	10/23/13	2.20	84.60	Z	44.8434	89.6720	45.8302	44.9954				
Pri #1	MC	10/24/13	3.96	84.67	O	44.8002	89.1240	46.5553	45.0692				6.13
Pri #2	MC	10/24/13	2.20	84.64	R	45.4972	89.0419	46.4558	45.6444				

Pri #1	MC	10/25/13	4.13	85.13	M	45.2888	85.6507	46.9552	45.5366				
Pri #2	MC	10/25/13	2.26	84.48	U	44.0735	89.0103	45.0869	44.2308				5.3
New weekly sheet started below													
Blank	KM	10/28/13	0.00		w	43.8416	76.9354	43.8424					
Cake	KM	10/28/13	20.64	76.22	I	46.2965	68.0460	50.7862	47.3643			45.1	8.13
Cake dup	KM	10/28/13	19.95	75.02	o	44.7983	76.7990	51.1834	46.3936				
Digested	KM	10/28/13	1.49	71.96	r	45.4958	87.8100	46.1270	45.6728	270697	16.8	54.6	7.35
Pri #1	GM	10/28/13	4.03	84.56	s	47.9446	82.0130	49.3174	48.1566				6.3
Pri #2	GM	10/28/13	2.21	84.58	t	42.8127	78.7472	43.6070	42.9352				
Pri #2 dup	GM	10/28/13	2.21	84.42	v	43.7015	82.9421	44.5682	43.8365				
Pri #1	MC	10/29/13	4.17	84.86	Z	44.8423	86.7742	46.5925	45.1072				5.24
Pri #2	MC	10/29/13	2.32	84.65	Q	45.7681	88.5446	46.7619	45.9206				
MLSS	GM	10/30/13	0.28	64.15	W	43.8417	80.4420	43.9424	43.8778				7.1
Pri #1	MC	10/30/13	4.68	83.76	N	45.7639	81.5385	47.4377	46.0358				5.73
Pri #1 dup	MC	10/30/13	4.74	84.12	P	44.5095	82.7601	46.3225	44.7974				
Pri #2	MC	10/30/13	2.72	83.07	X	44.9591	84.2047	46.0285	45.1401				
Oct Primary sludge	GM	10/31/13	2.35	83.41	L	46.2955	80.6297	47.1012	46.4292				
Oct Digested sludge	GM	10/31/13	1.40	71.86	U	44.0696	82.5100	44.6090	44.2214				
Pri #1	MC	10/31/13	4.58	84.66	O	44.7978	90.3410	46.8837	45.1178				5.11
Pri #2	MC	10/31/13	2.39	84.61	R	45.4973	90.2013	46.5656	45.6617				



Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Nov-13

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Pri1	MC	11.1.13	4.79	83.27	T	42.8102	80.3431	44.6066	43.1107				5.66
Pri#2	MC	11.1.13	2.93	83.84	S	47.9450	92.7866	49.2585	48.1573				
New weekly sheet started below													
Pri#1	GM	11/04/13	4.42	86.18	N	45.7642	89.3425	47.6918	46.0305				4.95
Pri#1 Dup.	GM	11/04/13	4.51	86.30	P	44.5099	83.2612	46.2570	44.7493				
Pri#2	GM	11/04/13	2.52	84.98	U	44.0692	89.2393	45.2065	44.2400				
Pri#2 Dup.	GM	11/04/13	2.52	85.03	X	44.9607	86.7407	46.0132	45.1183				
Blank	GM	11/04/13	0.00	120.00	L	46.2960	84.5287	46.2965	46.2959				
Pri#1	KM	11/05/13	3.55	84.38	Q	45.7645	85.9543	47.1917	45.9875				5.61
Pri#2	KM	11/05/13	2.36	84.97	R	45.4968	91.8379	46.5914	45.6613				
MLSS	KM	11/05/13	0.27	63.83	U	44.0675	83.3935	44.1745	44.1062				7.31
Pri#1	GM	11/06/13	3.78	84.56	N	45.7628	89.1048	47.4010	46.0157				5.73
Pri#2	GM	11/06/13	2.27	85.17	X	44.9612	82.9270	45.8225	45.0889				
Pri#1	BWB	11/07/13	3.59	86.16	P	44.5085	81.6687	45.8418	44.6930				5.86
Pri#2	BB	11/07/13	2.13	85.25	S	47.9429	84.7832	48.7268	48.0585				
Pri#1	BB	11/08/13	3.46	86.42	L	46.2960	75.6594	47.3132	46.4341				5.56
Pri#2	BB	11/08/13	1.92	85.25	T	42.8086	80.6706	43.5365	42.9160				
New weekly sheet started below													
Blank	GM	11/11/13	0.00		M	45.2880	86.4214	45.2871					
Cake	GM	11/11/13	20.01	74.69	O	44.7976	81.1084	52.0651	46.6369			48.9	8.2
Cake dup	GM	11/11/13	19.94	74.97	V	43.6886	80.2792	50.9833	45.5148				
Digested	GM	11/11/13	1.75	71.41	W	43.8432	82.9993	44.5277	44.0389	288841	21.1	57.2	7.4
Digested dup	GM	11/11/13	1.75	71.33	Z	44.8423	90.3687	45.6392	45.0708				
Pri #1	MC	11/11/13	3.20	85.25	N	45.7619	82.6389	46.9403	45.9357				5.46
Pri #1 dup	MC	11/11/13	3.22	85.28	L	46.2947	84.2101	47.5164	46.4745				
Pri #2	MC	11/11/13	2.11	85.19	X	44.9613	81.9195	45.7417	45.0769				
Pri#1	MC	11/12/13	3.71	87.18	R	45.4951	85.6271	46.9826	45.6858				5.46
Pri#2	MC	11/12/13	2.10	85.52	Q	45.7629	83.8741	46.5645	45.8790				

MLSS	MC	11/13/13	0.28	66.54	M	45.2879	81.3830	45.3892	45.3218				7.13
Pri#1	MC	11/13/13	4.08	87.44	L	46.2964	81.8469	47.7453	46.4784				5.99
Pri#2	MC	11/13/13	2.20	85.40	Z	44.8419	94.7281	45.9402	45.0023				
Pri#1	MC	11/14/13	4.27	87.80	T	42.8064	77.8850	44.3028	42.9890				5.33
Pri#2	MC	11/14/13	2.22	85.72	P	44.5089	86.4864	45.4407	44.6420				
Pri#1	MC	11/15/13	4.20	86.62	X	44.9642	86.9255	46.7248	45.1998				5.21
Pri#2	MC	11/15/13	2.21	85.53	O	44.7974	90.2521	45.8001	44.9425				
New weekly sheet started below													
Blank	MC	11/17/13	0.00		P	44.5084	80.1176	44.5086					
Digested	MC	11/17/13	1.52	72.31	R	45.4953	85.7252	46.1070	45.6647	132057	8.4	57.6	7.34
Digested dup	MC	11/17/13	1.52	72.17	T	42.8067	82.5246	43.4115	42.9750				
Cake	MC	11/17/13	19.03	76.42	M	45.2878	74.9908	50.9416	46.6208			47.1	8.28
Cake dup	MC	11/17/13	19.10	76.51	Z	44.8397	85.9861	52.6991	46.6857				
Pri#1	MC	11/17/13	4.68	80.35	L	46.2953	83.5746	48.0387	46.6378				5.19
Pri#1DUP	MC	11/17/13	4.73	80.91	P	44.5093	92.0079	46.7564	44.9383				
Pri#2	MC	11/18/13	2.75	83.79	Q	45.7603	90.4059	46.9899	45.9596				
MLSS	MC	11/19/13	0.23	68.68	O	44.7948	87.2416	44.8909	44.8249				7.12
Pri#1	MC	11/19/13	3.49	81.33	M	45.2863	83.0140	46.6015	45.5319				5.72
Pri#2	MC	11/19/13	2.78	84.73	R	45.4945	85.4017	46.6052	45.6641				
Pri#1	BB	11/20/13	2.98	83.06	T	42.8262	86.7426	44.1344	43.0478				
Pri#2	BB	11/20/13	2.55	85.39	Z	44.8454	96.0224	46.1503	45.0361				
Pri#1	BB	11/21/13	2.84	84.99	X	44.9649	91.0097	46.2736	45.1614				5.74
Pri#2	BB	11/21/13	2.40	85.14	S	47.9410	83.1715	48.7856	48.0665				
Pri#1	BB	11/22/13	2.96	84.98	P	44.5095	87.0664	45.7686	44.6986				5.61
Pri#2	BB	11/23/13	2.32	84.87	Q	45.7596	87.4668	46.7292	45.9063				
New weekly sheet started below													
Digested	GM	11/25/13	1.48	72.62	M	45.2883	79.3350	45.7915	45.4261	277525	17.1	49.6	
DUP	GM	11/25/13	1.48	72.57	O	44.7925	80.6070	45.3211	44.9375				7.4
Cake	GM	11/25/13	19.26	76.15	R	45.4957	83.5477	52.8247	47.2439			39.5	
DUP	GM	11/25/13	19.52	76.03	T	42.8071	75.1197	49.1156	44.3193				8.5
Pri#1	GM	11/25/13			U	44.0653							
Pri#2	GM	11/25/13	2.68	85.93	Z	44.8399	84.8642	45.9108	44.9906				
Pri#2 Dup.	GM	11/25/13	2.65	85.87	W	43.8445	79.6902	44.7927	43.9785				6
Pri#1	BB	11/26/13	3.52	83.54	P	44.5092	89.5944	46.0964	44.7705				5.86
Pri#2	BB	11/26/13	2.53	85.37	X	44.9636	87.3685	46.0354	45.1204				
Pri#1	BB	11/27/13	3.59	84.95	T	42.8274	78.7090	44.1159	43.0213				5.37
Pri#2	BB	11/27/13	2.49	86.57	Z	44.8567	83.3259	45.8140	44.9853				

Pri#1	BB	11/29/13	3.56	87.23	M	45.2926	88.8032	46.8434	45.4906				5.69
Pri#2	BB	11/29/13	1.99	84.83	W	43.8458	78.3856	44.5347	43.9503				
Nov Primary	GM		2.65	84.31	L	46.2968	88.5460	47.4169	46.4725				
Nov Digested	GM		1.59	72.03	S	47.9385	90.9943	48.6234	48.1301				

Home
Inf - Eff
Chem Usage
Sludge Blanket
Removals
Aeration Data
Biosolids Dewatering
Land Application
Bypass Data
Graphs

Dec-13

% Volatile Reduction Calculator		
%In	%Out	% Reduction
		#DIV/0!

Total & Volatile Solids, %

Sample ID	Analyst	Date	TS %	Volatile %	Dish ID	Dish weight	Wet weight	Dry weight	Ash weight	Gallons	Dry Tons	% Volatile reduction	pH
Blank	GM	12/02/13	0.00		U	44.0654	80.0822	44.0654					
Cake	GM	12/02/13	19.43	76.16	O	44.7893	80.5262	51.7347	46.4451			51.40	8.35
Cake dup	GM	12/02/13	19.43	76.95	R	45.4941	80.8940	52.3737	47.0799				
Digested	MC	12/02/13	1.28	72.70	V	43.6884	88.1723	44.2565	43.8435	260198	13.9	60.40	7.44
Digested dup	MC	12/02/13	1.29	72.88	Q	45.7558	90.0901	46.3267	45.9106				
Pri #1	MC	12/02/13	4.01	87.63	M	45.2877	88.3521	47.0134	45.5012				6.62
Pri #1 dup	MC	12/02/13	3.95	87.85	P	44.5087	77.8751	45.8252	44.6686				
Pri #2	MC	12/02/13	2.07	86.11	Z	44.8383	85.8749	45.6883	44.9564				
MLSS	MC	12/03/13	0.25	65.94	W	43.8404	85.4064	43.9452	43.8761				7.1
Pri #1	MC	12/03/13	4.31	87.62	M	45.2862	78.5078	46.7187	45.4636				5.8
Pri #2	MC	12/03/13	2.22	86.16	R	45.4929	88.0139	46.4367	45.6235				
Pri #1	MC	12/04/13	4.38	88.59	V	43.6897	86.8849	45.5811	43.9055				5.85
Pri #2	MC	12/04/13	2.25	85.98	S	47.9366	87.6657	48.8293	48.0618				
Pri #1	MC	12/05/13	4.56	88.42	T	42.8058	80.7077	44.5327	43.0058				
Pri #2	MC	12/05/13	2.19	85.95	Q	45.7551	88.3472	46.6895	45.8864				
Pri #1	MC	12/06/13	4.80	88.98	O	44.7879	90.1379	46.9653	45.0278				5.2
Pri #2	MC	12/06/13	2.31	86.25	Z	44.8355	84.5549	45.7526	44.9616				
New weekly sheet started below													
Blank	GM	12/09/12	0.00		M	45.2880	80.6250	45.2895					
Digested	GM	12/09/13	1.31	72.61	R	45.4950	85.0820	46.0128	45.6368	144102	7.9	59.9	7.3
Dup.	GM	12/09/13	1.30	72.71	W	43.8435	77.6640	44.2844	43.9638				
Cake	GM	12/09/13	18.97	77.00	Q	45.7564	77.1758	51.7174	47.1276			50.20	8.6
Dup.	GM	12/09/13	18.78	76.53	P	44.5078	77.9387	50.7850	45.9810				
Pri#1	KM	12/09/13	4.35	87.10	T	42.8073	82.2751	44.5226	43.0285				5.79
Pri#2	KM	12/09/13	2.62	86.28	S	47.9368	85.8577	48.9314	48.0733				
Pri#1	KM	12/10/13	4.36	87.00	V	43.6906	86.0715	45.5403	43.9310				5.93
Pri#2	KM	12/10/13	2.51	86.43	L	46.2955	82.9133	47.2136	46.4201				
MLSS	KM	12/11/13	0.30	63.64	Z	44.8338	76.1182	44.9262	44.8674				7.2
Pri#1	KM	12/11/13	4.93	87.89	P	44.5072	86.9680	46.6014	44.7609				5.72
Pri#2	KM	12/11/13	2.56	86.33	W	43.8416	84.4108	44.8786	43.9834				
Pri#2DUP	KM	12/11/13	2.59	86.49	S	47.9350	94.6899	49.1450	48.0985				
Pri#1	KM	12/12/13	5.28	88.47	M	45.2880	89.0663	47.5986	45.5544				5.91
Pri#2	KM	12/12/13	2.62	86.21	N	45.7639	87.3934	46.8554	45.9144				
Pri#1	KM	12/13/13	4.55	88.86	U	44.0702	87.3113	46.0389	44.2895				5.47

Pri#2	KM	12/13/13	2.58	86.15	X	44.9699	81.2640	45.9061	45.0996				5.47
New weekly sheet started below													
Blank	MC	12/16/13	0.00		P	44.5073	82.7396	44.5074					
Digested	MC	12/16/13	1.73	73.00	S	47.9338	96.4217	48.7712	48.1599	134461	9.7	59.00	7.31
Dup.	MC	12/16/13	1.72	73.08	Z	44.8341	95.7092	45.7111	45.0702				
Cake	MC	12/16/13	19.13	76.68	M	45.2872	73.2673	50.6401	46.5355			50.20	8.1
Dup.	MC	12/16/13	19.10	76.69	L	46.2947	72.1450	51.2318	47.4457				
Pri #1	MC	12/16/13	4.54	86.45	N	45.7620	87.3531	47.6507	46.0179				5.19
Pri #1 dup	MC	12/16/13	4.48	86.26	W	43.8408	87.1261	45.7805	44.1074				
Pri #2	MC	12/16/13	2.65	85.88	V	43.6897	90.3648	44.9263	43.8643				
MLSS	MC	12/17/13	0.28	61.17	O	44.7878	85.0064	44.9019	44.8321				7.13
Pri#1	MC	12/17/13	4.45	87.22	R	45.4943	92.8200	47.6017	45.7636				5.6
Pri#2	MC	12/17/13	2.55	85.83	T	42.8060	84.5230	43.8691	42.9566				
Pri#1	MC	12/18/13	4.67	88.38	Q	45.7544	95.0013	48.0522	46.0213				6
Pri#2	MC	12/18/13	2.67	85.71	P	44.5078	88.9135	45.6916	44.677				
Pri#1	GM	12/19/13	4.50	88.78	M	45.2870	79.9744	46.8468	45.462				5.8
Pri#2	GM	12/19/13	2.78	85.78	V	43.6905	88.0791	44.9237	43.8659				
Pri#1	MC	12/20/13	3.59	86.50	L	46.2938	80.3250	47.5157	46.4588				5.71
Pri#2	MC	12/20/13	3.55	86.75	S	47.9338	87.4572	49.3379	48.1198				
New weekly sheet started below													
Blank	MC	12/23/13	0.00		S	47.9372	74.2270	47.9370					
Pri #1	MC	12/23/13	9.06	53.89	L	46.2999	89.8823	50.2480	48.1203				4.91
Pri #2	MC	12/23/13	4.21	72.54	X	44.9640	86.2932	46.7055	45.4423				
MLSS	MC	12/26/13	0.29	66.82	S	47.9376	84.7535	48.0452	47.9733				7.3
Pri #1	MC	12/26/13	4.12	78.46	N	45.7591	89.5286	47.5644	46.1479				6
Pri #1 dup	MC	12/26/13	4.12	78.64	Z	44.8330	88.5765	46.6338	45.2176				
Pri #2	MC	12/26/13	3.49	81.35	W	43.8399	81.9651	45.1707	44.0881				
Pri #2 dup	MC	12/26/13	3.50	81.22	U	44.0628	86.0411	45.5312	44.3386				
Pri #1	MC	12/27/13	4.35		R	45.4933	84.3855	47.1833					
Pri #2	MC	12/27/13	3.24		M	45.2867	83.0760	46.5128					
New weekly sheet started below													
Blank	MC	12/30/13	0.00		S	47.9384	85.1450	47.9388					
Digested	MC	12/30/13	1.60	71.96	U	44.0662	86.3540	44.7449	44.2565	289051	19.35		7.38
Dup.	MC	12/30/13	1.59	71.81	Z	44.8357	89.0904	45.5396	45.0341				
Cake	MC	12/30/13	18.95	75.83	N	45.7620	85.4180	53.2757	47.5782				8.22
Dup.	MC	12/30/13	18.81	75.51	W	43.8458	83.0670	51.2218	45.6521				
Pri #1	MC	12/30/13	4.64	79.47	L	46.2995	83.3240	48.0167	46.652				5.44
Pri #2	MC	12/30/13	3.22	81.28	X	44.9675	83.1692	46.1971	45.1977				
Pri#1	KM	12/31/13	4.59	82.77	S	47.9386	87.4765	49.7518	48.251				6.02
Pri#2	KM	12/31/13	3.29	81.46	P	44.5072	89.4608	45.9880	44.7818				
Dec Primary	GM		3.02	84.34	V	43.6942	89.9304	45.0923	43.9131				
Dec Digested	GM		1.44	72.59	L	46.3001	79.9509	46.7835	46.4326				

City of Sidney WWTP
Biosolids Land Application Program
Certification Statement
NPDES Permit 1PD00009*PD
1091 Childrens Home Road Sidney, Ohio 45365
Permittee of Class B Biosolids

A. Please provide pollutant concentration

NAME	*Concentration (mg/kg)* *Dry Weight*	Pollutant Concentrations (Table D-3, 3745-40-04) (Monthly Average)	Ceiling Concentrations* (Table D-1, 3745-40-04) (Daily Maximum)
ARSENIC	1.27	41 mg/kg	75 mg/kg
CADMIUM	4.11	39 mg/kg	85 mg/kg
COPPER	336	1500 mg/kg	4300 mg/kg
LEAD	27.1	300 mg/kg	840 mg/kg
MERCURY	0.997	17 mg/kg	57 mg/kg
MOLYBDENUM	42.3	N/A	75 mg/kg
NICKEL	116	420 mg/kg	420 mg/kg
SELENIUM	3.4	100 mg/kg	100 mg/kg
ZINC	909	2800 mg/kg	7500 mg/kg
AMMONIA	25900	N/A	N/A
TOTAL PHOSPHORUS	18800	N/A	N/A
TOTAL POTASSIUM	1390	N/A	N/A
TKN	66300	N/A	N/A

**** Biosolids may not be applied if any pollutant exceeds the values listed above***

B. Pathogen Reduction (3745-40-04 (B)) - Please indicate level achieved

[ ] Class A [X] Class B Method Option #1

C. Vector Attraction Reduction (3745-40-04 (C)) - Please Indicate Option Used

[X] Option 1 [ ] Option 9 [ ] Option 10

[ ] Other

D. Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen reduction requirements in rule 3745-40-04 of the Administrative Code and the Vector Attraction Reduction requirement in Option #1 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and impriosonment.

A. Name and Title (Type or Print)	B. Area Code and Telephone Number
Barry Zerkle	937-498-8721
Superintendent	
C. Signature: Barry Zerkle	D. Date Signed 6-20-13

City of Sidney Wastewater Treatment Plant

BIOSOLIDS LAND APPLICATION PROGRAM

Land Application Date: 5-4-13
Site ID: AH1, AH2, AH3, AH4, Deerpen-1, Scott-1

Preparers Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the storage requirements of rule 3745-40-07 of the Administrative Code, the beneficial use requirements of rule 3745-40-08 of the Administrative Code, and the Vector Attraction Reduction requirement of rule 3745-40-04 of the Administrative Code, was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

6-14-13

Superintendent
City of Sidney, WWTP

Date

Contract Haulers Certification Statement

I certify, under penalty of law, that I have been made fully aware that the management practices, site restrictions, and the general requirements in 3745-40 have been met for each site on which sewage sludge will be applied. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

5/24/13

Terry Eisnehauer
Mid-Ohio Sludge Management, Inc.

Date

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-11312

Received: 02/21/2013
Reported: 03/07/2013
Date Sampled: 02/21/2013
Sampled By: GM
Sampled Matrix: Sludge
Containers: 1

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Project Name: **Plant**

Sample ID: **Preliminary Land App. Biosolids 13191**
Lab Sample # **L13-11312-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	10700	mg/Kg dry	51.4	SM-4500-NH3 D	BRS		02/26/2013
Cyanide, Total	7.90	mg/Kg dry	2.59	SW-9014	KJB		02/22/2013
Phosphorus, Total	20600	mg/Kg dry	102	EPA-365.3	JS		02/26/2013
Total Kjeldahl Nitrogen	59300	mg/Kg dry	2490	SM-4500-N C	BRS		02/26/2013
Total Solids	19.3	%	0.01	SM-2540 G	LW		02/21/2013
Moisture	80.7	%	0.01	SM-2540 G	LW		02/21/2013
Arsenic, Total	<2.54	mg/Kg dry	2.54	SW-7060A	ER		03/06/2013
Cadmium, Total	4.70	mg/Kg dry	1.51	SW-6010B	BAS		02/27/2013
Copper, Total	369	mg/Kg dry	4.04	SW-6010B	BAS		02/27/2013
Lead, Total	31.4	mg/Kg dry	5.05	SW-6010B	BAS		02/28/2013
Nickel, Total	121	mg/Kg dry	3.54	SW-6010B	BAS		02/27/2013
Potassium, Total	1300	mg/Kg dry	505	SW-6010B	BAS		03/04/2013
Zinc, Total	984	mg/Kg dry	5.05	SW-6010B	BAS		02/27/2013
Mercury, Total	<0.518	mg/Kg dry	0.518	SW-7471A	ER		02/26/2013
Selenium, Total	6.01	mg/Kg dry	2.03	SW-7740	ER		03/04/2013

Analysis Certified By: Lana L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-11311

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 02/21/2013
Reported: 02/26/2013
Date Sampled: 02/21/2013
Sampled By: GM
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Preliminary Land App. Biosolids 13191**

Lab Sample # **L13-11311-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	19.3	%	0.01	SM-2540 G	LW		02/21/2013
Molybdenum, Total	52.3	mg/Kg dry	10.4	SW-6010B	BAS		02/26/2013

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP
Biosolids Land Application Summary

Start Date of Stockpile 11/10/2012 End Date of Stockpile 5/2/2013

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

Sample Date	Result	Sample Date	Result	Sample Date	Result
12/3/2013	3704				
1/30/2013	35443				
3/11/2013	3857				
3/11/2013	11765				
3/11/2013	7059				
3/11/2013	3857				
3/11/2013	13500				
3/11/2013	9643				
3/11/2013	5786				
4/8/2013	8146				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS	7123
GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS	7939

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	84.78
Volatile Solids of Land Applied Biosolids	73.03
Volatile Solids Reduction	51.4%
# of Samples Collected for Land Applied Biosolids Composite	

Comments: Nov. 10th -30th: 85.55%; Dec.: 84.88%; Jan.: 84.42%; Feb.: 84.88%

March 84.94%, April 84.57%, May 1 & 2; 84.22% Ave.84.78%

City of Sidney WWTP

Fecal coliform by membrane filtration
Standard Methods 9222 D 18th Ed.

Analyzed by: GM
Date: 12/3/12
Time in: 1050

Read by: GM
Date: 12/4/12
Time out: 0955

Incubation duration: 24 ± 2 hours

%TS 1.80

Sample Filtration

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value
12/3 Digested	0.1×10^{-2}	Ø		
	0.5×10^{-2}	Ø	~~347 x 100~~	
	1.0×10^{-2}	Ø	$(5 \times 10) \times 10^{-2} \times 1.80\%$	
	5.0×10^{-2}	~~GM 4~~ 3		
	10×10^{-2}	7	$\frac{10 \times 100}{15 \times 10^{-2} \times 1.80}$	
			= 3,704 CFU	
				dry gram

mFC Media log # 469

Membrane filter log # 202/4102

Calculations

Liquid:

Fecal coliforms per 100 mls = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$

Sludge and Cake:

Fecal coliforms per dry grams = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$

City of Sidney WWTP

Fecal coliform by membrane filtration
Standard Methods 9222 D 18th Ed.

Analyzed by: Gm
Date: 1/30/13
Time in: 1040
Incubation duration: 24 ± 2 hours

Read by: Gm
Date: 1/31/13
Time out: 0845

1.58% TS

Sample Filtration

CFU/dry gram

Sample ID	Sample volume (mls)	# colonies	~~#/100 mls~~	Reported value
1/30/13 Digested Sludge	0.1×10^{-2}	1		—
	1.0×10^{-2}	5		—
	5.0×10^{-2}	28		35,443.

mFC Media log # 469

Membrane filter log # _____

Calculations

Liquid:

Fecal coliforms per 100 mls = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$

Sludge and Cake:

Fecal coliforms per dry grams = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$

City of Sidney WWTP

Fecal coliform by membrane filtration

Analyzed by: Gm
Date: 3/11/13
Time in: 1150

Read by: GM
Date: 3/12/13
Time out: 0955

Incubation duration: 24 ± 2 hours

1.70% TS

Sample Filtration

CFU/dry gram

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value
Digested #1	0.1×10^{-2}	0		3857
	1.0×10^{-2}	1		
	5.0×10^{-2}	3		
#2	$0.1 \quad 10^{-2}$	0		11,765
	1.0	2		
	5.0	8		
#3	0.1	0		7,059
	1.0	2		
	5.0	4		
#4	0.1	0		3,857
	1.0	0		
	5.0	4		

mFC Media log # 469

Membrane filter log # 20214102

Calculations

Liquid:

Fecal coliforms per 100 mls = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$

Sludge and Cake:

Fecal coliforms per dry grams = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$

City of Sidney WWTP

Fecal coliform by membrane filtration

Analyzed by: Gm
Date: 3/11/13
Time in: 1150

Read by: Gm
Date: 3/12/13
Time out: 0955

Incubation duration: 24 ± 2 hours

1.70%TS

Sample Filtration

CFU/dry gram

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value
Digested #5	0.1×10^{-2}	0		13,500
	1.0	0		
	5.0	14		
#6	0.1	0		9,643
	1.0	0		
	5.0	10		
#7	0.1	0		5,786
	1.0	1		
	5.0	5		

mFC Media log # 469

Membrane filter log # 20214102

Calculations

Liquid:

Fecal coliforms per 100 mls = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$

Sludge and Cake:

Fecal coliforms per dry grams = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$

Sidney WWTP Biosolids Program
Fecal coliform by Quanti-Tray 2000 and Colilert-18

Sample Location	Date/Time of Analysis	Analyst	# Yellow wells Large	# Yellow wells Small	MPN #	Dilution Factor	% TS	MPN/ dry gram
Digested sludge	3/11/13 1050	GM	7	0	7.5	1000	1.70	4411.8
Digested sludge	3/11/13 1050	GM	6	1	7.4	1000	1.70	4352.9
Digested sludge	3/11/13 1050	GM	7	0	7.5	1000	1.70	4411.8
Digested sludge	3/11/13 1050	GM	6	0	6.3	1000	1.70	3705.9
Digested sludge	3/11/13 1050	GM	6	2	8.4	1000	1.70	4941.2
Digested sludge	3/11/13 1050	GM	8	0	8.6	1000	1.70	5058.8
Digested sludge	3/11/13 1050	GM	5	1	6.3	1000	1.70	3705.9

Incubate at 44.5°C ± 0.2°C for 18 - 22 hours.

Yellow wells are fecal coliform positive.

Dilution factor = 100 ÷ sample size, mls

MPN # : Read from IDEXX Quanti-Tray 2000 MPN Table

Calculation:

$$\text{MPN per dry gram} = \frac{\text{MPN per wet gram X 100}}{\text{\% TS}}$$

$$\text{where MPN per wet gram} = \frac{\text{MPN (from table) X dilution factor}}{100}$$

City of Sidney WWTP

Fecal coliform by membrane filtration

Analyzed by: Gm
Date: 4/8/13
Time in: 1245
Incubation duration: 24 ± 2 hours

Read by: Gm
Date: 4/9/13
Time out: 1215

11mls → 99
1x10^-1
↓
1ml → 99
1x10^-3

%TS = 1.61

CFU/dry gram

Sample Filtration

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value
Digested Sludge 4/8/13	1×10^{-3}	1	$\frac{8 \times 100}{6 \times 10^{-3} \times 1.61}$	
	10×10^{-3}	1		
	50×10^{-3}	6		8,146

mFC Media log # 511

Membrane filter log # A 20214102

Calculations

Liquid:

Fecal coliforms per 100 mls = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$

Sludge and Cake:

Fecal coliforms per dry grams = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$

W.P.C.
Bio-Solids Worksheet

Sample Date: 5-2-13	Collected By: Mid-Ohio	Lab Date: 5-2-13	Analyst: KM
Percent Solids: 18.1		Percent Volatiles: 72.9	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.27	S.G:	Gallons:	Lbs.:	Dry Tons: 64.32

Weight of Dish and Wet Sludge	73.1432
Weight of Dish	45.7860
Weight of Wet sludge	27.3572
Weight of Dish and Wet Sludge	73.1432
Weight of Dish and Dry Sludge	50.7389
Loss id Weight	22.4043

$\frac{\text{Loss in Weight x 100}}{\text{Weight of Wet Sludge}}$ = 81.90 %Moisture

Weight of Dish and Dry Solids	50.7389
Weight of Dish	45.7860
Weight of Dry Solids	4.9529
Weight of Dish and Dry Sludge	50.7389
Weight of Dish and Ash	47.1275
Loss id Weight	3.6114

$\frac{\text{Loss in Weight x 100}}{\text{Weight of Wet Sludge}}$ = 72.9 %Volatile
27.1 % Fixed (100-% Volatile)
18.10 % Solids (100-% Moisture)

Dry Tons (liquid) =	$\frac{\text{Gallons x 8.34 x Specific Gravity x \% Solids}}{\text{2000 Lbs.}}$
Dry Tons (cake) =	$\frac{\text{Total Lbs. x \% Solids}}{\text{2000 Lbs.}}$

Digested Volatile Reduction =	$\frac{\text{Raw Volatile In – Dig Volatile Out}}{\text{Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)}}$

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

W.P.C.
Bio-Solids Worksheet

Sample Date: 5-3-13	Collected By: Mid-Ohio	Lab Date: 5-3-13	Analyst: MC
Percent Solids: 18.81		Percent Volatiles: 73.3	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.31	S.G:	Gallons:	Lbs.:	Dry Tons: ~~112.05~~ KM 112.59

Weight of Dish and Wet Sludge	87.4018
Weight of Dish	45.7857
Weight of Wet sludge	41.6161
Weight of Dish and Wet Sludge	87.4018
Weight of Dish and Dry Sludge	53.6117
Loss id Weight	33.7901

Loss in Weight x 100 / Weight of Wet Sludge = 81.19 %Moisture

Weight of Dish and Dry Solids	53.6117
Weight of Dish	45.7857
Weight of Dry Solids	7.826
Weight of Dish and Dry Sludge	53.6117
Weight of Dish and Ash	47.8758
Loss id Weight	5.7359

Loss in Weight x 100 / Weight of Wet Sludge = 73.3 %Volatile
26.7 % Fixed (100-% Volatile)
18.81 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

W.P.C.
Bio-Solids Worksheet

Sample Date: 5-4-13	Collected By: Mid-Ohio	Lab Date: 5-5-13	Analyst: KM.
Percent Solids: 17.4		Percent Volatiles: 72.9	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.29	S.G:	Gallons:	Lbs.:	Dry Tons: 92.64

Weight of Dish and Wet Sludge	72.9143
Weight of Dish	44.8621
Weight of Wet sludge	28.0522
Weight of Dish and Wet Sludge	72.9143
Weight of Dish and Dry Sludge	49.7312
Loss id Weight	23.1831

$\frac{\text{Loss in Weight x 100}}{\text{Weight of Wet Sludge}}$ = 82.6 %Moisture

Weight of Dish and Dry Solids	49.7312
Weight of Dish	44.8621
Weight of Dry Solids	4.8691
Weight of Dish and Dry Sludge	49.7312
Weight of Dish and Ash	46.1816
Loss id Weight	3.5496

$\frac{\text{Loss in Weight x 100}}{\text{Weight of Wet Sludge}}$ = 72.9 %Volatile
27.1 % Fixed (100-% Volatile)
17.4 % Solids (100-% Moisture)

Dry Tons (liquid) =	$\frac{\text{Gallons x 8.34 x Specific Gravity x \% Solids}}{\text{2000 Lbs.}}$
Dry Tons (cake) =	$\frac{\text{Total Lbs. x \% Solids}}{\text{2000 Lbs.}}$

Digested Volatile Reduction =	$\frac{\text{Raw Volatile In – Dig Volatile Out}}{\text{Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)}}$

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-13460

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 05/09/2013
Reported: 05/30/2013
Date/Time Sampled: 05/06/2013 13:45
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Land Applied Biosolids 13380**
Lab Sample # **L13-13460-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	25900	mg/Kg dry	50.4	SM-4500-NH3 D	BRS		05/17/2013
Cyanide, Total	3.12	mg/Kg dry	2.54	SW-9014	KJB		05/14/2013
Phosphorus, Total	18800	mg/Kg dry	69.9	EPA-365.3	JS		05/14/2013
Total Kjeldahl Nitrogen	66300	mg/Kg dry	2520	SM-4500-N C	BRS		05/16/2013
Total Solids	19.7	%	0.01	SM-2540 G	JS		05/13/2013
Moisture	80.3	%	0.01	SM-2540 G	JS		05/13/2013
Cadmium, Total	4.11	mg/Kg dry	1.47	SW-6010B	BAS		05/21/2013
Copper, Total	336	mg/Kg dry	3.92	SW-6010B	BAS		05/21/2013
Lead, Total	27.1	mg/Kg dry	4.90	SW-6010B	BAS		05/21/2013
Nickel, Total	116	mg/Kg dry	3.43	SW-6010B	BAS		05/21/2013
Potassium, Total	1390	mg/Kg dry	49.0	SW-6010B	BAS		05/21/2013
Zinc, Total	909	mg/Kg dry	4.90	SW-6010B	BAS		05/22/2013
Mercury, Total	0.997	mg/Kg dry	0.507	SW-7471A	ER		05/14/2013
Arsenic, Total	1.27	mg/Kg dry	1.27	SW-6020	A-MAR		05/14/2013
Selenium, Total	3.40	mg/Kg dry	1.27	SW-6020	A-MAR		05/14/2013

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-13477

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 05/09/2013
Reported: 05/14/2013
Date/Time Sampled: 05/06/2013 13:45
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Land Applied Biosolids #13380**
Lab Sample # **L13-13477-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	20.5	%	0.01	SM-2540 G	JS		05/13/2013
Molybdenum, Total	42.3	mg/Kg dry	9.42	SW-6010B	BAS		05/14/2013

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP
Biosolids Land Application Program
Certification Statement
NPDES # 1PD00009*PD
1091 Childrens Home Road Sidney, Ohio 45365
Permittee of Class B Biosolids

A. Please provide pollutant concentration

NAME	*Concentration (mg/kg)* *Dry Weight*	Pollutant Concentrations (Table D-3, 3745-40-04) (Monthly Average)	Ceiling Concentrations* (Table D-1, 3745-40-04) (Daily Maximum)
ARSENIC	1.37	41 mg/kg	75 mg/kg
CADMIUM	4.74	39 mg/kg	85 mg/kg
COPPER	358	1500 mg/kg	4300 mg/kg
LEAD	26.2	300 mg/kg	840 mg/kg
MERCURY	0.842	17 mg/kg	57 mg/kg
MOLYBDENUM	48.05 average	N/A	75 mg/kg
NICKEL	83.2	420 mg/kg	420 mg/kg
SELENIUM	1.96	100 mg/kg	100 mg/kg
ZINC	937	2800 mg/kg	7500 mg/kg
AMMONIA	11800	N/A	N/A
TOTAL PHOSPHORUS	18500	N/A	N/A
TOTAL POTASSIUM	1070	N/A	N/A
TKN	55300	N/A	N/A

**** Biosolids may not be applied if any pollutant exceeds the values listed above***

B. Pathogen Reduction (3745-40-04 (B)) - Please indicate level achieved

[ ] Class A [X] Class B Method Option #1

C. Vector Attraction Reduction (3745-40-04 (C)) - Please Indicate Option Used

[X] Option 1 [ ] Option 9 [ ] Option 10

[ ] Other

D. Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen reduction requirements in rule 3745-40-04 of the Administrative Code and the Vector Attraction Reduction requirement in Option #1 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and impriosonment.

A. Name and Title (Type or Print)	B. Area Code and Telephone Number
Barry Zerkle	937-498-8721
Superintendent	
C. Signature: Barry Zerkle	D. Date Signed 10-23-13

City of Sidney Wastewater Treatment Plant

BIOSOLIDS LAND APPLICATION PROGRAM

Land Application Date:
Site ID: ~~LINRD-1~~ Leckey East 1, 2, 3, 4
KM.

Preparers Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the storage requirements of rule 3745-40-07 of the Administrative Code, the beneficial use requirements of rule 3745-40-08 of the Administrative Code, and the Vector Attraction Reduction requirement of rule 3745-40-04 of the Administrative Code, was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

Superintendent
City of Sidney, WWTP

9-11-13
Date

Contract Haulers Certification Statement

I certify, under penalty of law, that I have been made fully aware that the management practices, site restrictions, and the general requirements in 3745-40 have been met for each site on which sewage sludge will be applied. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

Terry Eisnehauer
Mid-Ohio Sludge Management, Inc.

9/6/13
Date

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-15093

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 07/03/2013
Reported: 07/12/2013
Date/Time Sampled: 07/02/2013 08:00
Sampled By: KMA
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Preliminary Land Applied Biosolids**
Lab Sample # **L13-15093-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	10400	mg/Kg dry	44.4	SM-4500-NH3 D	BRS		07/11/2013
Cyanide, Total	6.15	mg/Kg dry	2.23	SW-9014	KJB		07/09/2013
Phosphorus, Total	17500	mg/Kg dry	71.3	EPA-365.3	JS		07/08/2013
Total Kjeldahl Nitrogen	58300	mg/Kg dry	2440	SM-4500-N C	BRS		07/09/2013
Total Solids	22.4	%	0.01	SM-2540 G	JS		07/05/2013
Moisture	77.6	%	0.01	SM-2540 G	JS		07/05/2013
Arsenic, Total	<2.02	mg/Kg dry	2.02	SW-7060A	ER		07/10/2013
Cadmium, Total	4.16	mg/Kg dry	1.09	SW-6010B	BAS		07/09/2013
Copper, Total	371	mg/Kg dry	2.89	SW-6010B	BAS		07/09/2013
Lead, Total	26.5	mg/Kg dry	3.62	SW-6010B	BAS		07/09/2013
Nickel, Total	105	mg/Kg dry	2.53	SW-6010B	BAS		07/09/2013
Potassium, Total	1440	mg/Kg dry	36.2	SW-6010B	BAS		07/09/2013
Zinc, Total	862	mg/Kg dry	3.62	SW-6010B	BAS		07/09/2013
Mercury, Total	0.523	mg/Kg dry	0.446	SW-7471A	ER		07/09/2013
Selenium, Total	3.19	mg/Kg dry	1.61	SW-7740	MBU		07/09/2013

Analysis Certified By: Radostaw Bolch

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-15152

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 07/03/2013
Reported: 07/09/2013
Date/Time Sampled: 07/02/2013 08:00
Sampled By: KMA
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Preliminary Land Applied Biosolids**
Lab Sample # **L13-15152-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	22.4	%	0.01	SM-2540 G	JS		07/05/2013
Moisture	77.6	%	0.01	SM-2540 G	LJ		07/05/2013
Molybdenum, Total	64.3	mg/Kg dry	7.23	SW-6010B	BAS		07/08/2013

Analysis Certified By: Lana L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP
Biosolids Land Application Summary

Start Date of Stockpile 5/2/2013 End Date of Stockpile 8/26/2013

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

Sample Date	Result	Sample Date	Result	Sample Date	Result
5/6/2013	45349				
5/6/2013	38372				
5/6/2013	31395				
5/6/2013	37209				
5/6/2013	26744				
5/6/2013	34884				
5/6/2013	26163				
6/3/2013	5961				
7/22/2013	98493				
8/6/2013	76969				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS	33725
GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS	34282

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	83.82
Volatile Solids of Land Applied Biosolids	67.17
Volatile Solids Reduction	60.5%
# of Samples Collected for Land Applied Biosolids Composite	5

Comments: Primary Sludge 5-10-13 thru May 85.53, June 84.6,July 81.87, Aug 22, 83.28(ave.83.82)

Cake: 68.55, 64.04, 66.73, 68.58, 67.95 (ave. 67.17)

City of Sidney WWTP

Fecal coliform by membrane filtration

Analyzed by: Gm
Date: 5/6/13
Time in: 1040

Read by: BC
Date: 5/7/13
Time out: 1010

Incubation duration: 24 ± 2 hours

1.72% TS

Sample Filtration

CFU/dry grams

5/6/13 Samples	Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value
A	Digested 0603	1×10^{-2}	0		
AA	↓	5×10^{-2}	39		45,349
B	Digested 0608	1×10^{-2}	8		
BB	↓	5×10^{-2}	33		38,372
C	Digested 0613	1×10^{-2}	6		
CC	↓	5×10^{-2}	27		31,395
D	Digested 0618	1×10^{-2}	10		
DD	↓	5×10^{-2}	32		37,209
E	Digested 0623	1×10^{-2}	4		
EE	↓	5×10^{-2}	23		26,744
F	Digested 0628	1×10^{-2}	1		
FF	↓	5×10^{-2}	30		34,884
G	Digested 0633	1×10^{-2}	9	27	
GG	↓	5×10^{-2}	18	6×10^{-2}	26,163

Geometric Mean 33,725

mFC Media log # 511

Membrane filter log # ~~A0~~ 20214102

Calculations

Liquid:

$$\text{Fecal coliforms per 100 mls} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$$

Sludge and Cake:

$$\text{Fecal coliforms per dry grams} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$$

City of Sidney WWTP

Fecal coliform by membrane filtration

Analyzed by: GM
Date: 6/3/13
Time in: 1300

Read by: GM
Date: 6/4/13
Time out: 1100

Incubation duration: 24 ± 2 hours

%TS = 1.65

Sample Filtration

CFU/dry gram

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value
GM 0.1 Digested	0.1×10^{-2}	Ø	6 X 100	
	1.0×10^{-2}	1	6.1×10^{-2} X	1.65
	5.0×10^{-2}	5		
				5,961

mFC Media log # 511

Membrane filter log # 20214102

Calculations

Liquid:

Fecal coliforms per 100 mls = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$

Sludge and Cake:

Fecal coliforms per dry grams = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$

City of Sidney WWTP

Fecal coliform by membrane filtration

Analyzed by: Gm
Date: 7/22/13
Time in: 1015

Read by: Gm
Date: 7/23/13
Time out: 0920

Incubation duration: 24 ± 2 hours

%TS = 1.43

Sample Filtration

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value (CFU/Dry gram)
Digested Sludge	0.1×10^{-2}	1		98,493
	1.0×10^{-2}	12		
	5.0×10^{-2}	74		
dup rerun #2	1×10^{-2}	13		
sum	7.1×10^{-2}	100		
			$\frac{100 \times 100}{(7.1 \times 10^{-2}) \times 100 \times 1.43}$	
			$= 98,493$	

mFC Media log # 511

Membrane filter log # 20214102

Calculations

Liquid:

$$\text{Fecal coliforms per 100 mls} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$$

Sludge and Cake:

$$\text{Fecal coliforms per dry grams} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$$

W.P.C.
Bio-Solids Worksheet

Sample Date: 8-26-13	Ken McAlexander Collected By:	8-27-13 Lab Date:	Analyst: K.M.
Percent Solids: 28.27		Percent Volatiles: 68.55	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.28	S.G:	Gallons:	Lbs.:	Dry Tons: 67.2

Weight of Dish and Wet Sludge	70.5882
Weight of Dish	43.8506
Weight of Wet sludge	26.7376
Weight of Dish and Wet Sludge	70.5882
Weight of Dish and Dry Sludge	51.4106
Loss id Weight	19.1776

Loss in Weight x 100 / Weight of Wet Sludge = 71.73 %Moisture

Weight of Dish and Dry Solids	51.4106
Weight of Dish	43.8506
Weight of Dry Solids	7.56
Weight of Dish and Dry Sludge	51.4106
Weight of Dish and Ash	46.2282
Loss id Weight	5.1824

Loss in Weight x 100 / Weight of Wet Sludge = 68.55 %Volatile
31.45 % Fixed (100-% Volatile)
28.27 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project #	L13-16609
Received:	08/27/2013
Reported:	08/28/2013
Date Sampled:	08/26/2013
Sampled By:	KM
Sampled Matrix:	Sludge
Containers:	1

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Project Name: **IPP**

Sample ID: **Land Applied Biosolids #13686** Day 1

Lab Sample # **L13-16609-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	26.8	%	0.01	SM-2540 G	ER		08/28/2013
Molybdenum, Total	60.4	mg/Kg dry	6.75	SW-6010B	BAS		08/28/2013

Analysis Certified By: Lana L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.872.2835

W.P.C.
Bio-Solids Worksheet

8-27-13 Sample Date:	Ken McAlexander Collected By:	8-27-13 Lab Date:	Analyst: MC
Percent Solids: 25.67		Percent Volatiles: 64.04	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.25	S.G:	Gallons:	Lbs.:	Dry Tons: 94.5

Weight of Dish and Wet Sludge	85.6881
Weight of Dish	46.3003
Weight of Wet sludge	39.3878
Weight of Dish and Wet Sludge	85.6881
Weight of Dish and Dry Sludge	56.4120
Loss id Weight	29.2761

$\frac{\text{Loss in Weight x 100}}{\text{Weight of Wet Sludge}}$ = 74.33 %Moisture

Weight of Dish and Dry Solids	56.4120
Weight of Dish	46.3003
Weight of Dry Solids	10.1117
Weight of Dish and Dry Sludge	56.4120
Weight of Dish and Ash	49.9361
Loss id Weight	6.4759

$\frac{\text{Loss in Weight x 100}}{\text{Weight of ~~Wet~~ Sludge}}$ = 64.04 %Volatile
35.96 % Fixed (100-% Volatile)
25.67 % Solids (100-% Moisture)

Dry Tons (liquid) =	$\frac{\text{Gallons x 8.34 x Specific Gravity x \% Solids}}{\text{2000 Lbs.}}$
Dry Tons (cake) =	$\frac{\text{Total Lbs. x \% Solids}}{\text{2000 Lbs.}}$

Digested Volatile Reduction =	$\frac{\text{Raw Volatile In – Dig Volatile Out}}{\text{Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)}}$

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

W.P.C.
Bio-Solids Worksheet

8-27-13 Sample Date:	Ken McAlexander Collected By:	8-27-13 Lab Date:	Analyst: MC
Percent Solids: 25.75		Percent Volatiles: 66.73	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.25	S.G:	Gallons:	Lbs.:	Dry Tons: 94.5

Weight of Dish and Wet Sludge	69.8862
Weight of Dish	43.6873
Weight of Wet sludge	26.1989
Weight of Dish and Wet Sludge	69.8862
Weight of Dish and Dry Sludge	50.4334
Loss id Weight	19.4528

Loss in Weight x 100 = 74.25 %Moisture
Weight of Wet Sludge

Weight of Dish and Dry Solids	50.4334
Weight of Dish	43.6873
Weight of Dry Solids	6.7461
Weight of Dish and Dry Sludge	50.4334
Weight of Dish and Ash	45.9317
Loss id Weight	4.5017

Loss in Weight x 100= 66.73 %Volatile
Weight of Wet Sludge 33.27 % Fixed (100-% Volatile)
25.75 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-16637

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 08/28/2013
Reported: 08/29/2013
Date Sampled: 08/27/2013
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Project Name: **IPP**

Sample ID: **Land Applied Biosolids #13693** Day 2
Lab Sample # **L13-16637-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	31.5	%	0.01	SM-2540 G	ER		08/28/2013
Molybdenum, Total	45.4	mg/Kg dry	5.87	SW-6010B	BAS		08/29/2013

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

W.P.C.
Bio-Solids Worksheet

8-28-13 Sample Date:	Ken McAlexander Collected By:	8-28-13 Lab Date:	Analyst: KM
Percent Solids: 21.66		Percent Volatiles: 68.58	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.32	S.G:	Gallons:	Lbs.:	Dry Tons: 65.52

Weight of Dish and Wet Sludge	73.3083
Weight of Dish	43.8485
Weight of Wet sludge	29.4598
Weight of Dish and Wet Sludge	73.3083
Weight of Dish and Dry Sludge	50.2305
Loss id Weight	23.0778

Loss in Weight x 100 = 78.34 %Moisture
Weight of Wet Sludge

Weight of Dish and Dry Solids	50.2305
Weight of Dish	43.8485
Weight of Dry Solids	6.382
Weight of Dish and Dry Sludge	50.2305
Weight of Dish and Ash	45.8538
Loss id Weight	4.3767

Loss in Weight x 100= 68.58 %Volatile
Weight of Wet Sludge 31.42 % Fixed (100-% Volatile)
21.66 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project #	L13-16674
Received:	08/29/2013
Reported:	08/30/2013
Date Sampled:	08/28/2013
Sampled By:	GM
Sampled Matrix:	Sludge
Containers:	1

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Project Name: **IPP**

Sample ID: **Land Applied Biosolids 13694** Day 3

Lab Sample # **L13-16674-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	23.2	%	0.01	SM-2540 G	LW		08/30/2013
Molybdenum, Total	73.7	mg/Kg dry	8.61	SW-6010B	BAS		08/30/2013

Analysis Certified By: Lana L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

W.P.C.
Bio-Solids Worksheet

8-28-13 Sample Date:	Ken McAlexander Collected By:	8-28-13 Lab Date:	Analyst: KM
Percent Solids: 22.18		Percent Volatiles: 67.95	

Sample Type: Raw Digested Lagoon Cake MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.32	S.G:	Gallons:	Lbs.:	Dry Tons: 65.52

Weight of Dish and Wet Sludge	77.3240
Weight of Dish	45.7834
Weight of Wet sludge	31.5406
Weight of Dish and Wet Sludge	77.3240
Weight of Dish and Dry Sludge	52.7805
Loss id Weight	24.5435

Loss in Weight x 100 = 77.82 %Moisture
Weight of Wet Sludge

Weight of Dish and Dry Solids	52.7805
Weight of Dish	45.7834
Weight of Dry Solids	6.9971
Weight of Dish and Dry Sludge	52.7805
Weight of Dish and Ash	48.0261
Loss id Weight	4.7544

Loss in Weight x 100= 67.95 %Volatile
Weight of Wet Sludge 32.05 % Fixed (100-% Volatile)
22.18 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-16668

Received: 08/29/2013
Reported: 09/11/2013
Date Sampled: 08/29/2013
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Project Name: Plant

Sample ID: Land Applied Biosolids 13695
Lab Sample # L13-16668-01

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	11800	mg/Kg dry	35.0	SM-4500-NH3 D	BRS		09/03/2013
Cyanide, Total	8.33	mg/Kg dry	1.75	SW-9014	KJB		08/30/2013
Phosphorus, Total	18500	mg/Kg dry	47.3	EPA-365.3	JS		09/03/2013
Total Kjeldahl Nitrogen	55300	mg/Kg dry	1690	SM-4500-N C	BRS		09/05/2013
Total Solids	28.5	%	0.01	SM-2540 G	JS		08/29/2013
Moisture	71.5	%	0.01	SM-2540 G	JS		08/29/2013
Antimony, Total	1.85	mg/Kg dry	1.37	SW-7041	ER		09/10/2013
Arsenic, Total	<1.37	mg/Kg dry	1.37	SW-7060A	ER		09/05/2013
Beryllium, Total	<0.972	mg/Kg dry	0.972	SW-6010B	BAS		09/04/2013
Cadmium, Total	4.74	mg/Kg dry	0.972	SW-6010B	BAS		09/04/2013
Chromium, Total	48.8	mg/Kg dry	2.27	SW-6010B	BAS		09/04/2013
Copper, Total	358	mg/Kg dry	2.59	SW-6010B	BAS		09/04/2013
Lead, Total	26.2	mg/Kg dry	3.24	SW-6010B	BAS		09/04/2013
Nickel, Total	83.2	mg/Kg dry	2.27	SW-6010B	BAS		09/04/2013
Potassium, Total	1070	mg/Kg dry	32.4	SW-6010B	BAS		09/04/2013
Silver, Total	19.4	mg/Kg dry	1.62	SW-6010B	BAS		09/04/2013
Zinc, Total	937	mg/Kg dry	3.24	SW-6010B	BAS		09/04/2013
Mercury, Total	0.842	mg/Kg dry	0.351	SW-7471A	ER		09/03/2013
Selenium, Total	1.96	mg/Kg dry	1.09	SW-7740	ER		09/05/2013
Thallium, Total	<1.37	mg/Kg dry	1.37	SW-7841	ER		09/10/2013
Aldrin	<0.35	mg/Kg dry	0.35	SW-8080A	MBU	09/03/2013	09/04/2013
Alpha-BHC	<0.35	mg/Kg dry	0.35	SW-8080A	MBU	09/03/2013	09/04/2013
Beta-BHC	<0.35	mg/Kg dry	0.35	SW-8080A	MBU	09/03/2013	09/04/2013

Analysis Certified By: Lane L Jackson

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-16674

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 08/29/2013
Reported: 08/30/2013
Date Sampled: 08/29/2013
Sampled By: GM
Sampled Matrix: Sludge
Containers: 1

Project Name: **IPP**

Sample ID: **Land Applied Biosolids 13695** Comp
Lab Sample # **L13-16674-02**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	26.0	%	0.01	SM-2540 G	LW		08/30/2013
Molybdenum, Total	55.4	mg/Kg dry	7.17	SW-6010B	BAS		08/30/2013

Analysis Certified By: Lana L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-16673

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 08/29/2013
Reported: 08/30/2013
Date Sampled: 08/29/2013
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Land Applied Biosolids #13695** Comp
Lab Sample # **L13-16673-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	28.5	%	0.01	SM-2540 G	JS		08/29/2013
Molybdenum, Total	40.7	mg/Kg dry	6.60	SW-6010B	BAS		08/30/2013

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP
Biosolids Land Application Program
Certification Statement
NPDES # 1PD00009*PD
1091 Childrens Home Road Sidney, Ohio 45365
Permittee of Class B Biosolids

A. Please provide pollutant concentration

NAME	*Concentration (mg/kg)* *Dry Weight*	Pollutant Concentrations (Table D-3, 3745-40-04) (Monthly Average)	Ceiling Concentrations* (Table D-1, 3745-40-04) (Daily Maximum)
ARSENIC	15.2	41 mg/kg	75 mg/kg
CADMIUM	3.31	39 mg/kg	85 mg/kg
COPPER	357	1500 mg/kg	4300 mg/kg
LEAD	106	300 mg/kg	840 mg/kg
MERCURY	3.98	17 mg/kg	57 mg/kg
MOLYBDENUM	35.8	N/A	75 mg/kg
NICKEL	71.3	420 mg/kg	420 mg/kg
SELENIUM	1.38	100 mg/kg	100 mg/kg
ZINC	881	2800 mg/kg	7500 mg/kg
AMMONIA	8420	N/A	N/A
TOTAL PHOSPHORUS	15000	N/A	N/A
TOTAL POTASSIUM	761	N/A	N/A
TKN	31900	N/A	N/A

**** Biosolids may not be applied if any pollutant exceeds the values listed above***

B. Pathogen Reduction (3745-40-04 (B)) - Please indicate level achieved

[ ] Class A [X] Class B Method Option #1

C. Vector Attraction Reduction (3745-40-04 (C)) - Please Indicate Option Used

[X] Option 1 [ ] Option 9 [ ] Option 10

[ ] Other

D. Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen reduction requirements in rule 3745-40-04 of the Administrative Code and the Vector Attraction Reduction requirement in Option #1 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and impriosonment.

A. Name and Title (Type or Print)	B. Area Code and Telephone Number
Barry Zerkle	937-498-8721
Superintendent	
C. Signature: Barry Zerkle	D. Date Signed 12-17-13

City of Sidney Wastewater Treatment Plant

BIOSOLIDS LAND APPLICATION PROGRAM

Land Application Date: 10-2013
Site ID: BS1 (North&South)

Preparers Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the storage requirements of rule 3745-40-07 of the Administrative Code, the beneficial use requirements of rule 3745-40-08 of the Administrative Code, and the Vector Attraction Reduction requirement of rule 3745-40-04 of the Administrative Code, was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

12-17-13

Superintendent
City of Sidney, WWTP

Date

Contract Haulers Certification Statement

I certify, under penalty of law, that I have been made fully aware that the management practices, site restrictions, and the general requirements in 3745-40 have been met for each site on which sewage sludge will be applied. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

12 - 16 - 13

Terry Eisnehauer
Mid-Ohio Sludge Management, Inc.

Date

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-17273

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 09/19/2013
Reported: 09/25/2013
Date/Time Sampled: 09/19/2013 13:12
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Project Name: **WWTP**

Sample ID: **Preliminary Land Applied Biosolids 13791**
Lab Sample # **L13-17273-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	7450	mg/Kg dry	51.3	SM-4500-NH3 D	BRS		09/24/2013
Cyanide, Total	8.04	mg/Kg dry	2.56	SW-9014	DMN		09/25/2013
Phosphorus, Total	18300	mg/Kg dry	73.3	EPA-365.3	JS		09/23/2013
Total Kjeldahl Nitrogen	56500	mg/Kg dry	2530	SM-4500-N C	BRS		09/24/2013
Total Solids	19.5	%	0.01	SM-2540 G	ER		09/23/2013
Moisture	80.5	%	0.01	SM-2540 G	ER		09/23/2013
Arsenic, Total	13.8	mg/Kg dry	2.47	SW-7060A	ER		09/23/2013
Cadmium, Total	4.76	mg/Kg dry	1.34	SW-6010B	BAS		09/24/2013
Copper, Total	420	mg/Kg dry	3.58	SW-6010B	BAS		09/24/2013
Lead, Total	118	mg/Kg dry	22.4	SW-6010B	BAS		09/24/2013
Molybdenum, Total	49.9	mg/Kg dry	8.94	SW-6010B	BAS		09/24/2013
Nickel, Total	93.3	mg/Kg dry	3.13	SW-6010B	BAS		09/24/2013
Potassium, Total	1100	mg/Kg dry	44.7	SW-6010B	BAS		09/24/2013
Zinc, Total	1130	mg/Kg dry	4.47	SW-6010B	BAS		09/24/2013
	Analyte detected in method blank. Analyte detected in the method blank < 1/10 of the amount detected in this sample. Evaluate data accordingly.						
Mercury, Total	3.41	mg/Kg dry	0.513	SW-7471A	ER		09/24/2013
Selenium, Total	4.82	mg/Kg dry	1.98	SW-7740	ER		09/23/2013

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP
Biosolids Land Application Summary

Start Date of Stockpile 8/27/2013 End Date of Stockpile 10/10/2013

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

Sample Date	Result	Sample Date	Result	Sample Date	Result
9/9/2013	18750				
9/9/2013	4167				
9/9/2013	7292				
9/9/2013	14583				
9/9/2013	11458				
9/9/2013	13542				
9/9/2013	14583				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS	10944
GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS	10944

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	84.46
Volatile Solids of Land Applied Biosolids	73.27
Volatile Solids Reduction	49.6%
# of Samples Collected for Land Applied Biosolids Composite	14

Comments: Primary Sludge August 27 thru Aug 31, 84.48: September 84.92: October 1 - 10, 83.98 (ave. 84.46)

Cake: September ave. 73.86: October 1- 10, 72.67 (Ave. 73.27)

City of Sidney WWTP

Fecal coliform by membrane filtration

Analyzed by: Gm
Date: 9/9/13
Time in: 10.50

Read by: Gm
Date: 9/10/13
Time out: 0910

Incubation duration: 24 ± 2 hours

%TS 1.60

Sample Filtration

	Sample ID	Sample volume (mls)	# colonies	~~#/100 mls~~	CFU / dry gram Reported value
0638 A	Digested, 9/9/13	1×10^{-2}	2	$\frac{18 \times 100}{6 \times 10^{-2} \times 1.6}$	18,750
		5×10^{-2}	16		
0643 B			Ø	$\frac{4 \times 100}{6 \times 10^{-2} \times 1.6}$	4,167
			4		
0648 C			2	$\frac{7 \times 100}{6 \times 10^{-2} \times 1.6}$	7,292
			5		
0653 D			2	$\frac{14 \times 100}{6 \times 10^{-2} \times 1.6}$	14,583
			12		
0658 E			2	$\frac{11 \times 100}{6 \times 10^{-2} \times 1.6}$	11,458
			9		
0703 F			3	$\frac{13 \times 100}{6.0 \times 10^{-2} \times 1.6}$	13,542
			10		
0708 G			2	$\frac{14 \times 100}{6.0 \times 10^{-2} \times 1.6}$	14,583
			12		

Geometric Mean 10,944

mFC Media log #5.1

Membrane filter log # 20214102 Advantec

Calculations

Liquid:

$$\text{Fecal coliforms per 100 mls} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$$

Sludge and Cake:

$$\text{Fecal coliforms per dry grams} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$$

W.P.C.
Bio-Solids Worksheet

Sample Date: 10-10-13	Collected By: Ken M.	Lab Date: 10-10-13	Analyst: GM
Percent Solids: 20.19		Percent Volatiles: 73.14	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.01	S.G:	Gallons:	Lbs.:	Dry Tons: 29.22

Weight of Dish and Wet Sludge	126.7304
Weight of Dish	95.7048
Weight of Wet sludge	31.0256
Weight of Dish and Wet Sludge	126.7304
Weight of Dish and Dry Sludge	101.9686
Loss id Weight	24.7618

Loss in Weight x 100 / Weight of Wet Sludge = 79.81 %Moisture

Weight of Dish and Dry Solids	101.9686
Weight of Dish	95.7048
Weight of Dry Solids	6.2638
Weight of Dish and Dry Sludge	101.9686
Weight of Dish and Ash	97.3873
Loss id Weight	4.5813

Loss in Weight x 100 / Weight of Wet Sludge = 73.14 %Volatile
26.86 % Fixed (100-% Volatile)
20.19 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

W.P.C.
Bio-Solids Worksheet

Sample Date: 10-11-13	Collected By: Ken/Scott	Lab Date: 10-11-13	Analyst: KM
Percent Solids: 26.1		Percent Volatiles: 69.13	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.53	S.G:	Gallons:	Lbs.:	Dry Tons: 43.05

Weight of Dish and Wet Sludge	85.2444
Weight of Dish	47.9558
Weight of Wet sludge	37.2886
Weight of Dish and Wet Sludge	85.2444
Weight of Dish and Dry Sludge	57.6889
Loss id Weight	27.5555

$\frac{\text{Loss in Weight} \times 100}{\text{Weight of Wet Sludge}} =$ 73.90 %Moisture

Weight of Dish and Dry Solids	57.6889
Weight of Dish	47.9558
Weight of Dry Solids	9.7331
Weight of Dish and Dry Sludge	57.6889
Weight of Dish and Ash	50.9608
Loss id Weight	6.7281

$\frac{\text{Loss in Weight} \times 100}{\text{Weight of Wet Sludge}} =$ 69.13 %Volatile
30.87 % Fixed (100-% Volatile)
26.1 % Solids (100-% Moisture)

Dry Tons (liquid) =	$\frac{\text{Gallons} \times 8.34 \times \text{Specific Gravity} \times \text{\% Solids}}{\text{2000 Lbs.}}$
Dry Tons (cake) =	$\frac{\text{Total Lbs.} \times \text{\% Solids}}{\text{2000 Lbs.}}$

Digested Volatile Reduction =	$\frac{\text{Raw Volatile In} - \text{Dig Volatile Out}}{\text{Raw Volatile In} - (\text{Raw Volatile In} \times \text{Dig. Volatile Out})}$

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

W.P.C.
Bio-Solids Worksheet

Sample Date: 10-11-13	Collected By: KM/Scott	Lab Date: 10-11-13	Analyst: KM
Percent Solids: 24.88		Percent Volatiles: 71.37	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.53	S.G:	Gallons:	Lbs.:	Dry Tons: 43.05 from pg 1

Weight of Dish and Wet Sludge	71.6384
Weight of Dish	44.5115
Weight of Wet sludge	27.1269
Weight of Dish and Wet Sludge	71.6384
Weight of Dish and Dry Sludge	51.2607
Loss id Weight	20.3777

Loss in Weight x 100 / Weight of Wet Sludge = 75.12 %Moisture

Weight of Dish and Dry Solids	51.2607
Weight of Dish	44.5115
Weight of Dry Solids	6.7492
Weight of Dish and Dry Sludge	51.2607
Weight of Dish and Ash	~~51.2607~~ KM. 46.4435
Loss id Weight	KM ~~46~~ 4.8172

Loss in Weight x 100 / Weight of Wet Sludge = 71.37 %Volatile
28.63 % Fixed (100-% Volatile)
24.88 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-18080

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 10/17/2013
Reported: 10/25/2013
Date Sampled: 10/11/2013
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Land Applied Biosolids BS-1 13921**
Lab Sample # **L13-18080-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	8420	mg/Kg dry	37.1	SM-4500-NH3 D	BRS		10/21/2013
Cyanide, Total	21.7	mg/Kg dry	1.87	SW-9014	KJB		10/22/2013
Phosphorus, Total	15000	mg/Kg dry	60.6	EPA-365.3	JS		10/23/2013
Total Kjeldahl Nitrogen	31900	mg/Kg dry	1830	SM-4500-N C	BRS		10/22/2013
Total Solids	26.8	%	0.01	SM-2540 G	ANS		10/18/2013
Moisture	73.2	%	0.01	SM-2540 G	ANS		10/18/2013
Arsenic, Total	15.2	mg/Kg dry	1.73	SW-7060A	ER		10/23/2013
Cadmium, Total	3.31	mg/Kg dry	1.02	SW-6010B	BAS		10/23/2013
Copper, Total	357	mg/Kg dry	2.73	SW-6010B	BAS		10/23/2013
Lead, Total	106	mg/Kg dry	3.41	SW-6010B	BAS		10/23/2013
Nickel, Total	71.3	mg/Kg dry	2.39	SW-6010B	BAS		10/23/2013
Potassium, Total	761	mg/Kg dry	34.1	SW-6010B	BAS		10/23/2013
Zinc, Total	881	mg/Kg dry	3.41	SW-6010B	BAS		10/23/2013
Mercury, Total	3.98	mg/Kg dry	0.373	SW-7471A	ER		10/21/2013
Selenium, Total	<1.38	mg/Kg dry	1.38	SW-7740	MBU		10/24/2013

Analysis Certified By: Lana L Jackson

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-18081

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 10/17/2013
Reported: 10/22/2013
Date Sampled: 10/11/2013
Sampled By: GM
Sampled Matrix: Sludge
Containers: 1

Project Name: **Plant**

Sample ID: **Land Applied Biosolids BS-1 13921**
Lab Sample # **L13-18081-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Total Solids	26.7	%	0.01	SM-2540 G	ANS		10/18/2013
Molybdenum, Total	35.8	mg/Kg dry	6.85	SW-6010B	BAS		10/22/2013

Analysis Certified By: Lanie Wenning

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP
Biosolids Land Application Program
Certification Statement
NPDES # 1PD00009*PD
1091 Childrens Home Road Sidney, Ohio 45365
Permittee of Class B Biosolids

A. Please provide pollutant concentration

NAME	*Concentration (mg/kg)* *Dry Weight*	Pollutant Concentrations (Table D-3, 3745-40-04) (Monthly Average)	Ceiling Concentrations* (Table D-1, 3745-40-04) (Daily Maximum)
ARSENIC	2.4	41 mg/kg	75 mg/kg
CADMIUM	4.28	39 mg/kg	85 mg/kg
COPPER	382	1500 mg/kg	4300 mg/kg
LEAD	28.3	300 mg/kg	840 mg/kg
MERCURY	0.543	17 mg/kg	57 mg/kg
MOLYBDENUM	71.6	N/A	75 mg/kg
NICKEL	98.2	420 mg/kg	420 mg/kg
SELENIUM	3.55	100 mg/kg	100 mg/kg
ZINC	1010	2800 mg/kg	7500 mg/kg
AMMONIA	5360	N/A	N/A
TOTAL PHOSPHORUS	18800	N/A	N/A
TOTAL POTASSIUM	967	N/A	N/A
TKN	55700	N/A	N/A

**** Biosolids may not be applied if any pollutant exceeds the values listed above***

B. Pathogen Reduction (3745-40-04 (B)) - Please indicate level achieved

[ ] Class A [X] Class B Method Option #1

C. Vector Attraction Reduction (3745-40-04 (C)) - Please Indicate Option Used

[X] Option 1 [ ] Option 9 [ ] Option 10

[ ] Other

D. Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen reduction requirements in rule 3745-40-04 of the Administrative Code and the Vector Attraction Reduction requirement in Option #1 was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and impriosonment.

A. Name and Title (Type or Print)	B. Area Code and Telephone Number
Barry Zerkle	937-498-8721
Superintendent	
C. Signature: Barry Zerkle	D. Date Signed 12-17-23

City of Sidney Wastewater Treatment Plant

BIOSOLIDS LAND APPLICATION PROGRAM

Land Application Date: 10 - 2013 K.M.
Site ID: ARHome6, West 2

Preparers Certification Statement

I certify, under penalty of law, that the information that will be used to determine compliance with the storage requirements of rule 3745-40-07 of the Administrative Code, the beneficial use requirements of rule 3745-40-08 of the Administrative Code, and the Vector Attraction Reduction requirement of rule 3745-40-04 of the Administrative Code, was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

12-17-13

Superintendent
City of Sidney, WWTP

Date

Contract Haulers Certification Statement

I certify, under penalty of law, that I have been made fully aware that the management practices, site restrictions, and the general requirements in 3745-40 have been met for each site on which sewage sludge will be applied. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

12 - 16 - 13

Terry Eisnehauer
Mid-Ohio Sludge Management, Inc.

Date

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-17074

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 09/12/2013
Reported: 09/27/2013
Date Sampled: 09/11/2013
Sampled By: BC
Sampled Matrix: Sludge
Containers: 1

Project Name: **IPP for Mo**

Sample ID: **13750 Dewatered Cake** — Barricaded Area
Lab Sample # **L13-17074-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	9800	mg/Kg dry	45.8	SM-4500-NH3 D	BRS		09/19/2013
Cyanide, Total	<0.50	mg/Kg dry	0.50	SW-9014	DMN		09/18/2013
Phosphorus, Total	19200	mg/Kg dry	72.3	EPA-365.3	JS		09/19/2013
Total Kjeldahl Nitrogen	45900	mg/Kg dry	2210	SM-4500-N C	BRS		09/19/2013
Total Solids	21.8	%	0.01	SM-2540 G	ER		09/16/2013
Arsenic, Total	2.40	mg/Kg dry	1.84	SW-7060A	ER		09/19/2013
Cadmium, Total	4.28	mg/Kg dry	1.22	SW-6010B	BAS		09/26/2013
Copper, Total	382	mg/Kg dry	3.26	SW-6010B	BAS		09/26/2013
Lead, Total	28.3	mg/Kg dry	4.07	SW-6010B	BAS		09/26/2013
Molybdenum, Total	71.6	mg/Kg dry	8.15	SW-6010B	BAS		09/13/2013
Nickel, Total	98.2	mg/Kg dry	3.26	SW-6010B	BAS		09/26/2013
Potassium, Total	1280	mg/Kg dry	40.7	SW-6010B	BAS		09/26/2013
Zinc, Total	1010	mg/Kg dry	4.07	SW-6010B	BAS		09/26/2013
Mercury, Total	0.543	mg/Kg dry	0.100	SW-7471A	ER		09/19/2013
Selenium, Total	3.55	mg/Kg dry	1.47	SW-7740	ER		09/19/2013

The matrix spike fell outside method limits biased low. The result for this sample should be evaluated accordingly.

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP

Biosolids Land Application Summary

Start Date of Stockpile 7/29/2012 End Date of Stockpile 8/18/2012

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

	Sample Date	Result	Sample Date	Result	Sample Date	Result
	5/7/2012	22327	8/27/2012	543.5		
	5/7/2012	26203	10/13/2012	5840		
	5/7/2012	20064				
	5/7/2012	34575				
7231	5/15/2012	1176				
	5/15/2012	1227				
	5/15/2012	1765				
	7/14/2012	66225				
	7/15/2012	3611.11				
	9/24/2012	10376				
	9/24/2012	6225				
16915	9/24/2012	17639				
	9/24/2012	16601				
	9/24/2012	30380				
	9/24/2012	31646				
	9/24/2012	21789				
	4/2/2012	2531				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS	KM see side ~~16915~~ yellow
GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS	8748

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	81.96
Volatile Solids of Land Applied Biosolids	71.48
Volatile Solids Reduction	44.8%
# of Samples Collected for Land Applied Biosolids Composite	4

Comments: 7-30-12 thru August 18-12 = 81.96 Average

Cake: 73.18,71.36,70.52,70.89, Average= 71.48

Geometric mean for each indiviual seven samples are hand wrote to left of yellow boxes.Total fecal results average is the total of all samples over the 8.12 and 11.12 land applied results. The vector attraction is of the time period from 7/29/12 to 8/18/12.

8.12 Land Applied

City of Sidney WWTP
Biosolids Land Application Summary

Start Date of Stockpile 4/2/2012 End Date of Stockpile 8/2/2012

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

Sample Date	Result	Sample Date	Result	Sample Date	Result
4/2/2012	2531				
5/7/2012	22327				
5/7/2012	26203				
5/7/2012	20064				
5/7/2012	34575				
5/15/2012	1176				
5/15/2012	1227				
5/15/2012	1765				
7/14/2012	66225				
7/15/2012	3611.11				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS	7231
GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS	7579

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	83.8
Volatile Solids of Land Applied Biosolids	71.3
Volatile Solids Reduction	52.0%

# of Samples Collected for Land Applied Biosolids Composite

Comments:	April 2nd - 30th: 84.7 %; May: 84.96%; June: 84.76%; July: 82.42%; Aug. 1st -2nd: 82.1%
	Avg. 83.8 %

Sidney WWTP Biosolids Program
Fecal coliform by Quanti-Tray 2000 and Colilert-18

			# Yellow wells					
Sample Location	Date/Time of Analysis	Analyst	Large	Small	MPN #	Dilution Factor	% TS	MPN/ dry gram
Digested sludge	4/2/12 0842	MC	4	0	4.1	1000	1.62	2531

Incubate at 44.5°C ± 0.2°C for 18 - 22 hours.

Yellow wells are fecal coliform positive.

Dilution factor = 100 ÷ sample size, mls

MPN # : Read from IDEXX Quanti-Tray 2000 MPN Table

Calculation:

$$\text{MPN per dry gram} = \frac{\text{MPN per wet gram X 100}}{\text{\% TS}}$$

$$\text{where MPN per wet gram} = \frac{\text{MPN (from table) X dilution factor}}{100}$$

Sidney WWTP Biosolids Program
Fecal coliform by Quanti-Tray 2000 and Colilert-18

Sample Location	Date/Time of Analysis	Analyst	# Yellow wells Large	# Yellow wells Small	MPN #	Dilution Factor	% TS	MPN/ dry gram
Digested 0637	5/7/12 1320	GM	23	4	35.5	1000	1.59	22327
Digested 0642		GM	26	4	41.4	1000	1.58	26203
Digested 0647		GM	23	1	31.3	1000	1.56	20064
Digested 0652		GM	31	4	52.9	1000	1.53	34575
Digested 0804	5/15/12 1305	GM	2	0	2.0	1000	1.7	1176
Digested 0809		GM	2	0	2.0	1000	1.63	1227
Digested 0814		GM	2	1	3.0	1000	1.7	1765
						Geometric mean		7231

Incubate at 44.5°C ± 0.2°C for 18 - 22 hours.

Yellow wells are fecal coliform positive.

Dilution factor = 100 ÷ sample size, mls

MPN # : Read from IDEXX Quanti-Tray 2000 MPN Table

Calculation:

$$\text{MPN per dry gram} = \frac{\text{MPN per wet gram X 100}}{\text{\% TS}}$$

$$\text{where MPN per wet gram} = \frac{\text{MPN (from table) X dilution factor}}{100}$$

Sidney WWTP Biosolids Program
Fecal coliform by Quanti-Tray 2000 and Colilert-18

			# Yellow wells					
Sample Location	Date/Time of Analysis	Analyst	Large	Small	MPN #	Dilution Factor	% TS	MPN/ dry gram
Digested sludge	7/14/12 1115	MC	0	0	<1	100000	1.51	< 66225
Digested sludge	7/15/12 0740	MC	5	0	5.2	1000	1.44	3,611.11

Incubate at 44.5°C ± 0.2°C for 18 - 22 hours.

Yellow wells are fecal coliform positive.

Dilution factor = 100 ÷ sample size, mls

MPN # : Read from IDEXX Quanti-Tray 2000 MPN Table

Calculation:

$$\text{MPN per dry gram} = \frac{\text{MPN per wet gram X 100}}{\text{\% TS}}$$

$$\text{where MPN per wet gram} = \frac{\text{MPN (from table) X dilution factor}}{100}$$

11. 12 Land Applied

City of Sidney WWTP
Biosolids Land Application Summary

Start Date of Stockpile 7/29/2012 End Date of Stockpile 11/6/2012

FECAL COLIFORM CFU/DRY GRAM ANALYSIS

Sample Date	Result	Sample Date	Result	Sample Date	Result
8/27/2012	543.5				
9/24/2012	10376				
9/24/2012	6225				
9/24/2012	17639				
9/24/2012	16601				
9/24/2012	30380				
9/24/2012	31646				
9/24/2012	21789				
10/13/2012	5840				

GEOMETRIC MEAN OF SEVEN REQUIRED FECAL COLIFORM RESULTS	16915
GEOMETRIC MEAN OF ALL FECAL COLIFORM RESULTS	10258

VECTOR ATTRACTION

Average Volatile Solids of Primary Sludge during stockpile	83.12
Volatile Solids of Land Applied Biosolids	72.5
Volatile Solids Reduction	46.5%
# of Samples Collected for Land Applied Biosolids Composite	31

Comments: July 29-31: 82%, August: 82.61%, September: 83.13%, October: 83.37%, November 1-6: 84.50%, Average: 83.12%

Sidney WWTP Biosolids Program
Fecal coliform by Quanti-Tray 2000 and Colilert-18

			# Yellow wells					
Sample Location	Date/Time of Analysis	Analyst	Large	Small	MPN #	Dilution Factor	% TS	MPN/ dry gram
Digested sludge	8/27/12 1335	GM	1		1.0	1000	1.84	543.5

Incubate at 44.5°C ± 0.2°C for 18 - 22 hours.

Yellow wells are fecal coliform positive.

Dilution factor = 100 ÷ sample size, mls

MPN # : Read from IDEXX Quanti-Tray 2000 MPN Table

Calculation:

$$\text{MPN per dry gram} = \frac{\text{MPN per wet gram X 100}}{\text{\% TS}}$$

$$\text{where MPN per wet gram} = \frac{\text{MPN (from table) X dilution factor}}{100}$$

ANALYTICAL REPORT

Lab Project # L13-17074

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 09/12/2013
Reported: 09/27/2013
Date Sampled: 09/11/2013
Sampled By: BC
Sampled Matrix: Sludge
Containers: 1

Project Name: IPP for Mo

Sample ID: 13750 Dewatered Cake — Barricaded Area Preliminary
Lab Sample # L13-17074-01

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
* Ammonia-N	9800	mg/Kg dry	45.8	SM-4500-NH3 D	BRS		09/19/2013
* Cyanide, Total	<0.50	mg/Kg dry	0.50	SW-9014	DMN		09/18/2013
* Phosphorus, Total	19200	mg/Kg dry	72.3	EPA-365.3	JS		09/19/2013
* Total Kjeldahl Nitrogen	45900	mg/Kg dry	2210	SM-4500-N C	BRS		09/19/2013
Total Solids	21.8	%	0.01	SM-2540 G	ER		09/16/2013
Arsenic, Total	2.40	mg/Kg dry	1.84	SW-7060A	ER		09/19/2013
Cadmium, Total	4.28	mg/Kg dry	1.22	SW-6010B	BAS		09/26/2013
Copper, Total	382	mg/Kg dry	3.26	SW-6010B	BAS		09/26/2013
Lead, Total	28.3	mg/Kg dry	4.07	SW-6010B	BAS		09/26/2013
Molybdenum, Total	71.6	mg/Kg dry	8.15	SW-6010B	BAS		09/13/2013
Nickel, Total	98.2	mg/Kg dry	3.26	SW-6010B	BAS		09/26/2013
* Potassium, Total	1280	mg/Kg dry	40.7	SW-6010B	BAS		09/26/2013
Zinc, Total	1010	mg/Kg dry	4.07	SW-6010B	BAS		09/26/2013
Mercury, Total	0.543	mg/Kg dry	0.100	SW-7471A	ER		09/19/2013
Selenium, Total	3.55	mg/Kg dry	1.47	SW-7740	ER		09/19/2013

The matrix spike fell outside method limits biased low. The result for this sample should be evaluated accordingly.

* Please use values on second page.

Analysis Certified By: Lane L Jackson

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

www.alloway.com

Alloway
Your Resource for Defensible Data

ANALYTICAL REPORT

Lab Project # L13-18292

Sidney, City of
Attn: Barry Zerkle
201 W. Poplar Street
Sidney, OH 45365

Received: 10/24/2013
Reported: 11/04/2013
Date Sampled: 10/23/2013
Sampled By: KM
Sampled Matrix: Sludge
Containers: 1

Project Name: **WWTP**

Sample ID: **Land Applied Biosolids 13951**
Lab Sample # **L13-18292-01**

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Ammonia-N	5360	mg/Kg dry	46.6	SM-4500-NH3 D	BRS		10/29/2013
Cyanide, Total	2.85	mg/Kg dry	2.34	SW-9014	KJB		10/29/2013
Phosphorus, Total	18800	mg/Kg dry	73.7	EPA-365.3	JS		10/29/2013
Total Kjeldahl Nitrogen	55700	mg/Kg dry	2270	SM-4500-N C	BRS		10/29/2013
Total Solids	21.4	%	0.01	SM-2540 G	ANS		10/25/2013
Moisture	78.6	%	0.01	SM-2540 G	ANS		10/25/2013
Potassium, Total	967	mg/Kg dry	44.2	SW-6010B	BAS		10/31/2013

Analysis Certified By: Lanie Wenning

1101 N. Cole Street - Lima, Ohio 45805
419.223.1362 - Fax 419.227.3792
800.436.1243

508 Bissman Ct. - Mansfield, Ohio 44903
419.525.1644 - Fax 419.524.5575
800.635.3222

1776 Marion-Waldo Rd. - Marion, Ohio 43302
740.389.5991 - Fax 740.389.1481
800.873.2835

City of Sidney WWTP

Fecal coliform by membrane filtration
Standard Methods 9222 D 18th Ed.

Analyzed by: GM
Date: 9/24/12
Time in: 1145

Read by: GM
Date: 9/25/12
Time out: 1045

Incubation duration: 24 ± 2 hours

1.582 TS

All volumes $\times 10^{-2}$

Sample Filtration

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value
Digested 0646	0.1	1		
	1.0	5	$\frac{25 \times 100}{5.0 \times 10^{-2}}$	31,646 CFU/dry gram
	5.0	25		
0651	0.1	2	$\frac{21 \times 100}{6.1 \times 10^{-2}}$	
	1.0	3		21,789 CFU/dry gram
	5.0	16		

mFC Media log # 469

Membrane filter log # 432

Calculations

Liquid:

$$\text{Fecal coliforms per 100 mls} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$$

Sludge and Cake:

$$\text{Fecal coliforms per dry grams} = \frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$$

All Volumes $\times 10^{-2}$

Sidney WWTP Biosolids Program
Fecal coliform by Quanti-Tray 2000 and Colilert-18

			# Yellow wells					
Sample Location	Date/Time of Analysis	Analyst	Large	Small	MPN #	Dilution Factor	% TS	MPN/ dry gram
Digested sludge	10/13/12 0930	MC	5	2	7.3	1000	1.25	5840.0

Incubate at 44.5°C ± 0.2°C for 18 - 22 hours.

Yellow wells are fecal coliform positive.

Dilution factor = 100 ÷ sample size, mls

MPN # : Read from IDEXX Quanti-Tray 2000 MPN Table

Calculation:

$$\text{MPN per dry gram} = \frac{\text{MPN per wet gram X 100}}{\text{\% TS}}$$

$$\text{where MPN per wet gram} = \frac{\text{MPN (from table) X dilution factor}}{100}$$

City of Sidney WWTP

Fecal coliform by membrane filtration
Standard Methods 9222 D 18th Ed.

Analyzed by: GM
Date: 9/24/12
Time in: 1145

Read by: GM
Date: 9/25/12
Time out: 1045

Incubation duration: 24 ± 2 hours

1.58 %TS

all $\times 10^{-2}$

Geometric Mean 16,915 CFU/dry gram

Sample Filtration

Sample ID	Sample volume (mls)	# colonies	#/100 mls	Reported value	
Digested Sludge 0620	0.1×10^{-2}	Ø			
	1.0	3	$\frac{10 \times 100}{6.1 \times 10^{-2}}$	10,376	CFU / dry gram
	5.0	7			
0624	0.1	1			
	1.0	1	$\frac{6 \times 100}{6.1 \times 10^{-2}}$	6,225	CFU / dry gram
	5.0	4			
0630	0.1	1	$\frac{17 \times 100}{6.1 \times 10^{-2}}$		
	1.0	5		17,639	CFU / dry gram
	5.0	11			
0636	0.1	Ø			
	1.0	3	$\frac{16 \times 100}{6.1 \times 10^{-2}}$	16,601	CFU / dry gram
	5.0	13			
0641	0.1	Ø			
	1.0	6	$\frac{24 \times 100}{5.0 \times 10^{-2}}$	30,380	CFU / dry gram
	5.0	24			

mFC Media log # 469

Membrane filter log # 432

Calculations

Liquid:

Fecal coliforms per 100 mls = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls)}}$

Sludge and Cake:

Fecal coliforms per dry grams = $\frac{\text{\# colonies X 100}}{\text{Sample volume (mls) X \%TS}}$

all volumes $\times 10^{-2}$

W.P.C.
Bio-Solids Worksheet

Sample Date: 10-12-13	Collected By: Ken/Scott	Lab Date: 10/12/13	Analyst: MC
Percent Solids: 24.2		Percent Volatiles: 68.73	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.35	S.G:	Gallons:	Lbs.:	Dry Tons: 48.52

Weight of Dish and Wet Sludge	69.5230
Weight of Dish	43.6885
Weight of Wet sludge	25.8345
Weight of Dish and Wet Sludge	69.5230
Weight of Dish and Dry Sludge	49.9399
Loss id Weight	19.5831

$\frac{\text{Loss in Weight x 100}}{\text{Weight of Wet Sludge}}$ = 75.80 %Moisture

Weight of Dish and Dry Solids	49.9399
Weight of Dish	43.6885
Weight of Dry Solids	6.2514
Weight of Dish and Dry Sludge	49.9399
Weight of Dish and Ash	45.6431
Loss id Weight	4.2968

$\frac{\text{Loss in Weight x 100}}{\text{Weight of Wet Sludge}}$ = 68.73 %Volatile
31.27 % Fixed (100-% Volatile)
24.2 % Solids (100-% Moisture)

Dry Tons (liquid) =	$\frac{\text{Gallons x 8.34 x Specific Gravity x \% Solids}}{\text{2000 Lbs.}}$
Dry Tons (cake) =	$\frac{\text{Total Lbs. x \% Solids}}{\text{2000 Lbs.}}$

Digested Volatile Reduction =	$\frac{\text{Raw Volatile In – Dig Volatile Out}}{\text{Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)}}$

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

W.P.C.
Bio-Solids Worksheet

Sample Date: 10-12-13	Collected By: Ken/Scott	Lab Date: 10-12-13	Analyst: MC
Percent Solids: 20.50		Percent Volatiles: 66.84	

Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)

pH: 8.35	S.G:	Gallons:	Lbs.:	Dry Tons: 48.52 from pg. 1

Weight of Dish and Wet Sludge	78.3576
Weight of Dish	45.5031
Weight of Wet sludge	32.8545
Weight of Dish and Wet Sludge	78.3576
Weight of Dish and Dry Sludge	52.2395
Loss id Weight	26.1181

Loss in Weight x 100 = 79.50 %Moisture
Weight of Wet Sludge

Weight of Dish and Dry Solids	52.2395
Weight of Dish	45.5031
Weight of Dry Solids	6.7364
Weight of Dish and Dry Sludge	52.2395
Weight of Dish and Ash	47.7370
Loss id Weight	4.5025

Loss in Weight x 100= 66.84 %Volatile
Weight of Wet Sludge 33.16 % Fixed (100-% Volatile)
20.50 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)

W.P.C.
Bio-Solids Worksheet

Sample Date: 10-13-13	Collected By: Scott	Lab Date: 10-13-13	Analyst: BZ
Percent Solids: 17.57		Percent Volatiles: 68.51	
Sample Type: Raw Digested Lagoon (Cake) MLSS Supernate Grit N. Dig S.Dig (circle one)			
pH: 8.75	S.G:	Gallons:	Lbs.:	Dry Tons: 16.95

Weight of Dish and Wet Sludge	118.1659
Weight of Dish	95.7002
Weight of Wet sludge	22.4657
Weight of Dish and Wet Sludge	118.1659
Weight of Dish and Dry Sludge	99.6467
Loss id Weight	18.5192

Loss in Weight x 100 / Weight of Wet Sludge = 82.43 %Moisture

Weight of Dish and Dry Solids	99.6467
Weight of Dish	95.7002
Weight of Dry Solids	3.9465
Weight of Dish and Dry Sludge	99.6467
Weight of Dish and Ash	96.9431
Loss id Weight	2.7036

Loss in Weight x 100 / Weight of Wet Sludge = 68.51 %Volatile
31.49 % Fixed (100-% Volatile)
17.57 % Solids (100-% Moisture)

Dry Tons (liquid) =	Gallons x 8.34 x Specific Gravity x % Solids / 2000 Lbs.
Dry Tons (cake) =	Total Lbs. x % Solids / 2000 Lbs.

Digested Volatile Reduction =	Raw Volatile In – Dig Volatile Out / Raw Volatile In – (Raw Volatile In x Dig. Volatile Out)

Specific Gravity Formula= Weight of 50ml graduated cylinder
Fill to 50ml line with sludge and weight cylinder with sludge
Obtain Sludge weight (cylinder and sludge weight. minus cylinder weight).
Specific Gravity = (Weight of Sludge divided by 50mls)