



**Monthly Report of Operation
Vertical Loop Reactor
Wastewater Treatment Plant**

State Form 10829 (R/1-2005)

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Name of Facility Clay Township Regional Waste District			Permit Number IN0055760		
Month December	Year 2008	Plant Design Flow 2.55 mgd	Telephone Number (317) 873-0564		
Facility's e-mail address (if available): scot@ctrwd.org					
Certified Operator: Name Scot S. Watkins		Class III	Certificate Number WW018132	Expiration Date 6/30/2010	

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature	Precipitation - Inches	Bypass At Plant Site ('x' If Occurred)	Collection System Overflow ('x' If Occurred)	CHEMICALS USED			RAW SEWAGE								
							Chlorine - Lbs	Liquid Alum - Gallons	Lbs or Gal	Influent Flow Rate (MGD)	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Mon		36	0.05				55		1.79	7.5	251	3747.1	280	4180	7.03	32.6	
2	Tue		36	0.01				80		1.781	7.5	200	2970.7	208	3089.5	6.61	33.4	
3	Wed		43	1.68				50		1.77	7.5	206	3040.9	168	2480	6.97	33.2	
4	Thu		40	0.1				30		1.776	7.5	170	2518	156	2310.6	6.49	30.3	
5	Fri		34					16		1.869	7.5	217	3382.5	136	2119.9	6.67	34.5	
6	Sat							30		1.8								
7	Sun							110		1.64								
8	Mon		36	0.03				100		1.787	7.5	227	3383.1	180	2682.6	6.69	32.4	
9	Tue		50	1.06				40		2.063	7.5	164	2821.7	130	2236.7	5.92	26.3	
10	Wed		36	0.22				40		1.98	7.5	186	3071.5	136	2245.8	5.33	36.9	
11	Thu		36	0.01				60		1.848	7.5	174	2681.7	164	2527.6	5.77	26.7	
12	Fri		29					60		1.811	7.5	173	2612.9	120	1812.4	5.53	27	
13	Sat							60		1.881								
14	Sun			0.04				100		1.901								
15	Mon		50	0.21				50		1.755	7.5	209	3059.1	160	2341.9	7.14	28.8	
16	Tue		36					50		1.84	7.5	199	3053.8	238	3652.3	6.4	29	
17	Wed		31					60		1.834	7.5	194	2967.3	196	2997.9	6.96	30.1	
18	Thu		32					90		1.916	7.5	149	2380.9	194	3100	6.96	30.8	
19	Fri		41	1.01				40		2.775	7.5	120	2777.2	168	3888.1	4.27	17.4	
20	Sat			0.01				30		2.067								
21	Sun							65		1.934								
22	Mon		17					65		2.032	7.5	175	2965.7	162	2745.4	5.46	26	
23	Tue		33	0.19				50		2.374	7.5	262	5187.4	158	3128.3	5.28	26.2	
24	Wed		40	0.57				40		2.481	7.4	107	2214	132	2731.3	3.8	17.1	
25	Thu		32	0.01				65		1.931	7.4	205	3301.4	194	3124.3	4.29	22.8	
26	Fri		50	0.39				65		2.307	7.4	67	1289.1	152	2924.5	4.86	20.6	
27	Sat			0.63				65		2.601								
28	Sun			0.66				65		2.053								
29	Mon		48	0.01				50		2.179	7.5	164	2980.3	184	3343.8	5.11	21.1	
30	Tue		48			X		40		2.155	7.5	199	3576.6	198	3558.6	5.63	23.6	
31	Wed		48					30		1.706	7.5	294	4183	184	2618	6.3	24.6	
1	Thu	Fill in January's effluent data on page 3 as needed for weekly average calculations.										1.814						
2	Fri											1.583						
3	Sat											1.733						
Average								56.484		1.98829		187	3050.7	174	2862.6	5.89	27.45	
Maximum				1.68				110		2.775	7.5	294	5187.4	280	4180	7.14	36.9	
Minimum								16		1.64	7.4	67	1289.1	120	1812.4	3.8	17.1	
No. of Data				19	0	1	0	31	0	31	23	23	23	23	23	23	0	

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 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 OF CERTIFIED OPERATOR) (DATE)

(SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT) (DATE)

**Monthly Report of Operation
Vertical Loop Reactor
Wastewater Treatment Plant**

Name of Facility: Clay Township Regional Waste D
 Permit Number: IN0055760
 For Month Of: December
 Year: 2008

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(SIGNATURE OF CERTIFIED OPERATOR) (DATE)
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Day Of Month	Temperature in Reactors	REACTOR # 1				REACTOR # 2				REACTOR DATA			RETURN SLUDGE		FINAL EFFLUENT				
		Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	Dissolved Oxygen - mg/l	#1 Reactor ORP mV	#1 Reactor OUR mg/l/min	#2 Reactor OUR mg/l/min	Volume - MG	Susp. Solids - mg/l	Residual Chlorine - Contact Tank	Residual Chlorine - Final	E. Coli - colony/100 ml	pH	
1	16.4	46	3940	117	0.1	44	3440	128	2.0	-203			0.613	10340				7.6	
2	16.8	45	3900	115	0.1	41	3880	106	1.3	-166			0.617	10700				7.5	
3	15.8	34	4160	82	0.1	40	3080	130	1.4	-101			0.618	10800				7.5	
4	15.8	40	3540	113	0.1	39	3180	123	1.2	-85			0.617	10320				7.5	
5	15.3	45	3440	131	0.1	42	3420	123	1.0	-46			0.657	9680				7.6	
6													0.678						
7													0.624						
8	15.4	46	3520	131	0.1	47	3680	128	1.0	-139			0.491	10360				7.5	
9	15.5	51	4120	124	0.1	48	4040	119	1.3	-152			0.71	11280				7.5	
10	15.6	46	3600	128	0.1	39	3840	102	1.3	-94			0.688	11140				7.5	
11	15.3	43	2340	184	0.1	43	3340	129	1.5	-80			0.644	10000				7.5	
12	15.2	45	3200	141	0.1	44	3020	146	1.5	-49			0.631	8580				7.5	
13													0.713						
14											0.49		0.3	0.695					
15	15.4	51	4100	124	0.1	49	3900	126	2.0	-163			0.629	11860				7.5	
16	14.7	45	4220	107	0.1	45	3780	119	1.2	-157			0.691	11060				7.5	
17	14.7	51	3260	156	0.2	44	3960	111	1.6	-105			0.697	11960				7.5	
18	14.8	53	4260	124	0.1	50	4140	121	1.5	-128			0.684	11880				7.5	
19	14.8	59	3900	151	0.1	58	3960	146	0.7	-148			0.9	12160				7.5	
20													0.766						
21											0.43		0.3	0.766					
22	12.8	55	4200	131	0.1	53	4060	131	1.4	-65			0.772	11780				7.6	
23	13.4	57	4280	133	0.1	54	4280	126	0.5	-94			0.867	11540				7.5	
24	13.5	48	4300	112	0.1	50	4000	125	2.0	-55			0.864	12180				7.6	
25	13.2	59	4280	138	0.1	50	4040	124	1.6	-25			0.67	11920				7.6	
26	13.5	47	3820	123	0.1	46	3860	119	1.3	-74			0.816	11740				7.5	
27													0.987						
28											0.3		0.1	0.787					
29	13.7	28	4480	63	0.1	45	3900	115	2.0	-10			0.737	10280				7.5	
30	13.7	44	4120	107	0.1	42	3800	111	1.4	7			0.773	11420				7.5	
31	13.6	50	3560	140	0.1	50	3600	139	1.9	-9			0.598	10500				7.5	
Avg.	14.5	47	3850	125	0.121	46	3748	124	1.415		0	0.217	0.71	11021				7.6	
Max.	15.8	59	4480	184	0.15	58	4280	146	2		0.49	0.28	0.987	12180				7.6	
Min.	12.8	28	2340	63	0.12	39	3020	102	0.49		0.3	0.11	0.491	8580				7.5	
Data	20	23	23	23	23	23	23	23	23	23	3	0	3	31	23	0	0	0	23

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):
 1. 12/16 Final sample is a grab not composite. There was a problem with the sampler. 2. Collections system overflow occurred 12/30/08. An overflow report was faxed.

**Monthly Report of Operation
Vertical Loop Reactor
Wastewater Treatment Plant**

(SIGNATURE OF CERTIFIED OPERATOR) (DATE)

Name of Facility: Clay Township Regional Waste District
 Permit Number: IN0055760
 For Month Of: December
 Year: 2008

(SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT) (DATE)

Day Of Month	FINAL EFFLUENT																
	Flow		Dissolved Oxygen - mg/l	Phosphorus - mg/l	BOD				Total Suspended Solids				Ammonia				
	Effluent Flow Rate (MGD)	Effluent Flow Weekly Average			CBOD5 - mg/l	CBOD5 - mg/l Weekly Average	CBOD5 - lbs	CBOD5 - lbs/day Weekly Average	Susp. Solids - mg/l	Susp. Solids - mg/l Weekly Average	Susp. Solids - lbs	Susp. Solids - lbs/day Weekly Average	Ammonia - mg/l	Ammonia - mg/l Weekly Average	Ammonia - lbs	Ammonia - lbs/day Weekly Average	
1	2.041		8.19	0.18	2.03		34.575		0.8		13.626		0.1		1.7032		
2	2.03		8.55	0.21	1.87		31.678		4.2		71.149		0.1		1.694		
3	2.018		8.37	0.19	1.67		28.123		2.1		35.364		0.1		1.684		
4	2.025		8.09	0.16	1.03		17.406		1		16.899		0.1		1.6899		
5	2.131		8.36	0.24	1.83		32.543		3.5		62.241		0.1		1.7783		
6	2.052	2.05457				1.686		28.865		2.32		39.856		0.1		1.7099	
7	1.87																
8	2.037		8.12	0.22	1.78		30.258		1.3		22.098		0.1		1.6999		
9	2.352		7.89	0.23	1.46		28.656		3.3		64.771		0.1		1.9627		
10	2.257		7.99	0.19	1.42		26.745		1.7		32.019		0.1		1.8835		
11	2.107		7.94	0.18	1.05		18.462		1.3		22.858		0.1		1.7583		
12	2.065		8.3	0.2	1.3		22.402		1.1		18.956		0.1		1.7232		
13	2.144	2.11886				1.402		25.305		1.74		32.14		0.1		1.8055	
14	2.167																
15	2.001		8.42	0.24	1.65		27.552		2		33.397		0.1		1.6698		
16	2.098		8	0.27	1.42		24.861		4.3		75.284		0.1		1.7508		
17	2.091		7.8	0.22	1.08		18.845		1.7		29.664		0.1		1.7449		
18	2.184		7.86	0.28	1.82		33.17		4.1		74.724		0.1		1.8225		
19	3.164		8.11	0.47	3.19		84.227		9.4		248.19		0.1		2.6404		
20	2.356	2.29443				1.832		37.731		4.3		92.252		0.1		1.9257	
21	2.205																
22	2.316		8.35	0.2	1.72		33.242		2.5		48.318		0.1		1.9327		
23	2.706		8.03	0.24	1.85		41.776		3.7		83.552		0.44		9.9359		
24	2.828		8.27	0.25	1.23		29.028		2.6		61.359		0.1		2.36		
25	2.201		7.87	0.21	1.2		22.041		1.8		33.061		0.1		1.8367		
26	2.63		7.91	0.35	1.37		30.068		5.2		114.13		0.1		2.1947		
27	2.965	2.55014				1.474		31.231		3.16		68.083		0.168		3.652	
28	2.34																
29	2.484		7.93	0.32	1.91		39.592		3		62.187		0.1		2.0729		
30	2.457		8.15	0.42	2.21		45.313		6.7		137.37		0.1		2.0504		
31	1.945	2.13114	8.1	0.44	2.63	2.044	42.688	36.158	3.7	3.88	60.055	70.433	0.1	0.1	1.6231	1.7728	
1	2.015				1.37		23.03679		2.6		43.71946		0.1		1.681518		
2	1.721				2.1		30.15966		3.4		48.82993		0.1		1.436175		
3	1.956																
Avg	2.26668		8.113	0.257	1.6835		32.315		3.087		61.795		0.1148		2.2266		
Max	3.164	2.55014	8.55	0.47	3.19	2.044	84.227	37.731	9.4	4.3	248.19	92.252	0.44	0.168	9.9359	3.652	
Min	1.87	2.05457	7.8	0.16	1.03	1.402	17.406	25.305	0.8	1.74	13.626	32.14	0.1	0.1	1.6231	1.7099	
Data	31	5	23	23	23	5	23	5	23	5	23	5	23	5	23	5	0

MONTHLY REMOVAL SUMMARY					Total Monthly Flow:
	BOD5	S.S.	Ammonia	Phosphorus	(million gallons) 70.267
Percent Removal	99	98	100	95.6	
Phosphorus limit would be	1 mg/l.	(compliance achieved)			Percent Capacity (actual flow/design) 89%

**Monthly Report of Operation
Vertical Loop Reactor
Wastewater Treatment Plant**

Name of Facility Clay Township Regional Waste District	Permit Number IN0055760	For Month Of: December	Year 2008
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(SIGNATURE OF CERTIFIED OPERATOR)	(DATE)
(SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT)	(DATE)

Day Of Month	Temperature in Reactors	ORBAL #1			ORBAL #3				TOTAL RETURN SLUDGE			RETURN SLUDGE		Flow Volume					
		ORP mV	Dissolved Oxygen - mg/l	OUR mg/l/min	Dissolved Oxygen - mg/l	Settleable Solids % in 30 minutes	Susp. Solids - mg/l	Sludge Vol. Index - ml/gm	OUR mg/l/min	Volume - MG			Volume - MG	Susp. Solids - mg/l	Orbal Influent Flow - MGD				
1	15.1	-310	0.14		2.4	40	2820	142		1.333			0.721	2380	0.571				
2	15.3	-337	0.14		2.7	40	3680	109		1.287			0.67	5900	0.552				
3	14.1	-310	0.14		5.3	40	3120	128		1.271			0.653	1600	0.537				
4	15.8	-318	0.14		5.5	39	4320	90		1.264			0.647	4480	0.525				
5	13.4	-322	0.14		6.1	44	3220	137		1.365			0.708	1280	0.558				
6										1.269			0.591		0.52				
7										1.029			0.406		0.453				
8	13.3	-337	0.14		4.6	50	3640	137		1.255			0.764	2780	0.5				
9	14	-335	0.14		4.7	43	3500	123		1.291			0.581	1500	0.532				
10	14.6	-337	0.24		4.6	43	3460	124		1.255			0.567	8180	0.502				
11	14.1	-338	0.21		5.0	40	3800	105		1.146			0.502	4600	0.479				
12	13.5	-339	0.16		5.3	48	2860	168		0.979			0.347	1740	0.438				
13										1.07			0.357		0.459				
14									0.02	1.358			0.663		0.488				
15	14.3	-336	0.25		4.4	40	3280	122		1.204			0.575	7240	0.473				
16	13	-337	0.26		5.4	45	3760	120		1.217			0.526	2600	0.522				
17	12.8	-338	0.15		4.6	47	3680	128		1.226			0.529	8040	0.416				
18	13.2	-339	0.16		4.1	47	4040	116		1.187			0.503	2900	0.461				
19	13.5		0.16		3.7	53	3960	134		1.242			0.342	12160	0.641				
20										1.456			0.69		0.63				
21									0.1	1.398			0.632		0.599				
22	10.1	-335	0.28		6.8	51	4540	112		1.377			0.605	3020	0.644				
23	11.2	-335	0.24		5.7	50	4080	123		1.472			0.605	9980	0.716				
24	12.6	-333	0.23		4.2	50	3960	126		1.406			0.542	8300	0.686				
25	12	-332	0.24		5.9	45	6240	72		1.257			0.587	6240	0.593				
26	12.3	-333	0.23		5.6	43	3060	141		1.419			0.603	3060	0.698				
27										1.536			0.549		0.772				
28									0.1	1.213			0.428		0.616				
29	13	-338	0.25		5.2	40	3440	116		1.313			0.576	8320	0.69				
30	12.9	-339	0.26		5.3	41	3420	120		1.352			0.579	1640	0.691				
31	12.5	-342	0.23		5.9	48	3360	143		1.149			0.551	3800	0.579				
Avg.	13.33		0		4.9022	45	3706	123	0.0633	1			1	4858.3	0.5658				
Max.	15.8		0.28		6.81	53	6240	168	0.1	1.536			0.764	12160	0.772				
Min.	10.1		0.14		2.43	39	2820	72	0.02	0.979			0.342	1280	0.416				
Data	23	22	23	0	23	23	23	23	3	31	0	0	0	31	23	31	0	0	0