



**Monthly Report of Operation  
Vertical Loop Reactor  
Wastewater Treatment Plant**  
State Form 53341 (R / 11-08)

Name of Facility Clay Township Regional Waste District			Permit Number IN0055760		
Month March	Year 2009	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 (optional)	Total= 1.97 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 (if metered) MGD	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Sun							40	1.869									
2	Mon		23					70	2.002	7.6	268	4474.7	176	2938.6	6.6	25.1		
3	Tue		33					130	1.88	7.6	209	3277	180	2822.3	7.15	26		
4	Wed		43					110	1.985	7.6	163	2698.4	236	3907	7.02	26		
5	Thu		58					110	1.869	7.5	203	3164.3	182	2836.9	6.28	29.9		
6	Fri		70					50	1.852	7.5	184	2842	200	3089.1	6.67	30.1		
7	Sat			0.01				70	1.822									
8	Sun			0.05				20	1.832									
9	Mon		55					90	1.85	7.5	162	2499.5	208	3209.2	8.11	31.7		
10	Tue		68	0.23				20	1.82	7.5	178	2701.8	192	2914.3	6.79	31.1		
11	Wed		40					40	1.886	7.5	180	2831.3	188	2957.1	6.38	29.8		
12	Thu		35					70	1.988	7.5	235	3896.3	672	11142	20.03	26		
13	Fri		40					95	1.937	7.5	285	4604.1	234	3780.2	7.21	28.1		
14	Sat							95	1.868									
15	Sun							100	1.697									
16	Mon		62					60	1.94	7.5	240	3883.1	770	12458	18.72	28.8		
17	Tue		70					80	1.727	7.5	204	2938.2	238	3428	6.73	31.8		
18	Wed		68	0.14				40	1.824	7.5	174	2646.9	182	2768.6	7.39	33.7		
19	Thu		55					20	1.863	7.5	142	2206.3	46	714.72	5.41	32.7		
20	Fri		48					65	1.905	7.5	176	2796.2	122	1938.3	5.81	29		
21	Sat							65	2.043									
22	Sun							10	1.761									
23	Mon		60					20	1.865	7.5	199	3095.3	182	2830.8	8.59	34.7		
24	Tue		70					10	1.764	7.5	144	2118.5	110	1618.3	6.99	33.3		
25	Wed		58	0.26				80	1.843	7.5	166	2551.5	98	1506.3	6.67	32.3		
26	Thu		59					80	1.863	7.6	158	2454.9	104	1615.9	6.39	29.2		
27	Fri		48					90	1.924	7.5	195	3129	74	1187.4	6.95	27.7		
28	Sat			1				100	2.101									
29	Sun			0.06				50	1.988									
30	Mon		52					110	1.969	7.6	155	2545.3	112	1839.2	5.53	22.3		
31	Tue		62	0.22				70	1.982	7.5	123	2033.2	62	1024.9	4.77	20.8		
Average								66.452	1.88771		188	2972.2	208	3296.7	7.827	29.1		
Maximum				1				130	2.101	7.6	285	4604.1	770	12458	20.03	34.7		
Minimum								10	1.697	7.5	123	2033.2	46	714.72	4.77	20.8		
No. of Data				8	0	0		0	31	22	22	22	22	22	22	22	22	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 (month, day, year)
Signature of principal executive officer or authorized agent	Date (month, day, year)

<b>Monthly Report of Operation</b>				Signature of Certified Operator		Date (month, day, year)	
<b>Vertical Loop Reactor</b>				Signature of principal executive officer or authorized agent		Date (month, day, year)	
<b>Wastewater Treatment Plant</b>							
State Form 53341 (R / 11-08)							
Name of Facility		Permit Number	For Month Of:		Year		
Clay Township Regional Waste Di		IN0055760	March		2009		

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 - daily low (or single sample)	pH - daily high (if multiple samples)
1											0.50		0.22	0.707					
2	11.7	68	4700	145	0.2	68	4480	152	1.8	-57				0.692	12220				7.6
3	11.6	73	3620	202	0.2	70	4460	157	1.7	-42				0.656	11800				7.5
4	11.8	71	4880	145	0.2	69	4240	163	7.9	-45				0.696	12060				7.5
5	12.2	68	4580	148	0.2	67	4580	146	1.7	-42				0.665	13480				7.5
6	12.9	79	4440	178	0.2	76	4360	174	1.3	-64				0.62	13040				7.5
7														0.69					
8											0.84		0.37	0.7					
9	13.5	72	4580	157	0.2	66	4720	140	0.8	-158				0.66	12960				7.5
10	13.4	74	4600	161	0.2	65	4160	156	1.0	-113				0.67	12400				7.5
11	13.7	76	4660	163	0.2	64	4760	134	1.6	-82				0.65	12700				7.6
12	12.8	73	4280	171	0.2	65	4460	146	1.6	-12				0.8	11840				7.5
13	12	86	5180	166	0.2	84	4760	176	1.9	-33				0.69	11380				7.5
14														0.67					
15											0.63		0.36	0.59					
16	13.4	59	4280	138	0.2	55	4680	118	1.7	-105				0.77	12360				7.5
17	13.7	76	4620	165	0.2	71	4840	147	0.9	-116				0.58	11960				7.5
18	14	70	4980	141	0.2	63	4660	135	1.4	-66				0.55	12060				7.5
19	14	57	3780	151	0.2	60	4100	146	1.6	-38				0.62	10540				7.5
20	13.5	54	3900	138	0.2	56	3880	144	2.3	29				0.65	10120				7.5
21														0.81					
22											0.57		0.24	0.71					
23	13.9	65	4500	144	0.2	53	4340	122	1.5	-95				0.65	10220				7.6
24	13.8	60	4280	140	0.2	58	4320	134	1.7	-48				0.61	11460				7.6
25	14.2	51	4600	111	0.2	48	4300	112	1.6	-23				0.63	10200			1	7.5
26	14.1	58	4120	141	0.2	49	4260	115	1.3	-24	0.50		0.23	0.63	10100			1	7.5
27	14.1	62	3860	161	0.2	61	3480	175	1.7	-16				0.73	9400			1	7.5
28														0.8					
29														0.75					
30	13	74	3940	188	0.2	71	3860	184	2.0	36				0.7	10680			1	7.6
31	13.3	46	4580	100	0.2	49	3520	139	2.3	54				0.72	9660			1	7.5
Avg.	13.2	67	4407	152	0.2	63	4328	146	1.875	-48	1		0.284	1	11484			1	
Max.	14.2	86	5180	202	0.2	84	4840	184	7.85	54	0.84		0.37	0.81	13480			1	7.6
Min.	11.6	46	3620	100	0.2	48	3480	112	0.79	-158	0.5		0.22	0.55	9400			1	7.5
Data	22	22	22	22	22	22	22	22	22	22	5	0	5	31	22	0	0	5	22

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):  
Clarifier upset 3/17/09. Analysis on grab Effluent sample; CBOD5 8.05mg/l TSS 62mg/l Phos 2.09mg/l Ammonia 0.026mg/l

<b>Monthly Report of Operation</b>				Signature of Certified Operator		Date (month, day, year)	
<b>Vertical Loop Reactor</b>				Signature of principal executive officer or authorized agent		Date (month, day, year)	
<b>Wastewater Treatment Plant</b>							
State Form 53341 (R / 11-08)							
Name of Facility		Permit Number	For Month Of:	Year			
Clay Township Regional Waste District		IN0055760	March	2009			

Day Of Month	Day of Week	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	Sun	2.056																
2	Mon	2.202		8.71	0.31	2.44		44.837		7.8		143.33		0.1		1.8376		
3	Tue	2.068		7.92	0.19	1.49		25.714		3		51.772		0.1		1.7257		
4	Wed	2.184		8.54	0.22	1.43		26.062		3		54.676		0.1		1.8225		
5	Thu	2.056		7.92	0.3	1.9		32.599		7.1		121.82		0.1		1.7157		
6	Fri	2.037		7.78	0.23	1.84		31.278		4.4		74.795		0.1		1.6999		
7	Sat	2.004	2.08671					1.82	32.098		5.06		89.278		0.1		1.7603	
8	Sun	2.015																
9	Mon	2.035		8.41	0.93	10.07		171.01		48.1		816.84		0.1		1.6982		
10	Tue	2.002		7.94	0.37	1.61		26.898		5.9		98.569		0.1		1.6707		
11	Wed	2.075		8.11	0.22	1.44		24.935		3.3		57.142		0.1		1.7316		
12	Thu	2.187		8.25	0.24	0.93		16.973		3		54.752		0.1		1.8251		
13	Fri	2.131		8.02	0.19	1.1		19.562		1.6		28.453		0.1		1.7783		
14	Sat	2.055	2.07143					3.03	51.875		12.38		211.15		0.1		1.7408	
15	Sun	1.867																
16	Mon	2.134		8.44	0.33	2.25		40.069		6.9		122.88		0.1		1.7808		
17	Tue	1.9		8.17	0.64	4.54		71.984		11.3		179.17		0.1		1.5856		
18	Wed	2.006		8.05	0.29	1.87		31.304		5.7		95.418		0.1		1.674		
19	Thu	2.049		8.37	0.22	1.29		22.058		4.6		78.655		0.11		1.8809		
20	Fri	2.096		8.78	0.4	1.32		23.088		4.6		80.459		0.1		1.7491		
21	Sat	2.247	2.04271					2.254	37.7		6.62		111.32		0.102		1.7341	
22	Sun	1.937																
23	Mon	2.052		7.99	1.01	2.97		50.858		8.9		152.4		0.1		1.7124		
24	Tue	1.94		8.08	0.76	2.01		32.54		7.1		114.94		0.1		1.6189		
25	Wed	2.027		8.16	0.74	1.99		33.661		5.4		91.343		0.13		2.199		
26	Thu	2.049		8.21	0.81	1.65		28.213		7.2		123.11		0.1		1.7099		
27	Fri	2.116		7.9	0.75	1.83		32.314		5.6		98.885		0.1		1.7658		
28	Sat	2.311	2.06171					2.09	35.517		6.84		116.14		0.106		1.8012	
29	Sun	2.187																
30	Mon	2.166		9.09	0.59	3.06		55.31		9.6		173.52		0.1		1.8075		
31	Tue	2.18		7.72	0.66	2.09		38.021		6.5		118.25		0.1		1.8192		
Avg		2.07648		8.2073	0.4727	2.3236		39.968		7.7545		133.24		0.1018		1.764		
Max		2.311	2.08671	9.09	1.01	10.07		3.03	171.01	51.875	48.1	12.38	816.84	211.15	0.13	0.106	2.199	1.8012
Min		1.867	2.04271	7.72	0.19	0.93		1.82	16.973	32.098	1.6	5.06	28.453	89.278	0.1	0.1	1.5856	1.7341
Data		31	4	22	22	22		4	22	4	22	4	22	4	22	4	22	4

MONTHLY REMOVAL SUMMARY				
	BOD5	S.S.	Ammonia	Phosphorus
Percent Removal	99	96	100	94.0
Total Monthly Flow: (million gallons) 64.371				
Percent Capacity (actual flow/design) 81%				

<b>Monthly Report of Operation</b>				Signature of Certified Operator		Date (month, day, year)	
<b>Vertical Loop Reactor</b>				Signature of principal executive officer or authorized agent		Date (month, day, year)	
<b>Wastewater Treatment Plant</b>							
State Form 53341 (R / 11-08)							
Name of Facility		Permit Number	For Month Of:		Year		
Clay Township Regional Waste District		IN0055760	March		2009		

Day Of Month	SLUDGE TO DIGESTER				DIGESTER OPERATION											
	Waste Act. Sludge Gal. x 1000	Anaerobic Only			Supernatant Withdrawn hrs. or Gal. x 1000	Supernatant BOD5 mg/l or NH3-N mg/l	Total Solids in Incoming Sludge - %	Total Solids in Digested Sludge - %	Volatile Solids in Incoming Sludge - %	Volatile Solids in Digested Sludge - %	Digested Sludge Withdrawn hrs. or Gal. x 1000					
		pH	Gas Production Cubic Ft. x 1000	Temperature - F												
1																
2	26						1.4	17.2	76	76	37					
3	26						1.4		75							
4	25						1.4	17.8	75	75	46					
5	23						1.5		76							
6	42						1.5		76							
7					25											
8					24											
9	41						1.5	16.8	76	76						
10	45						1.4	17.7	76	75	23					
11	49						1.4	17.3	76	75						
12					75			17.1		67						
13	44				30		1.3		63							
14	45						1.4		76							
15	51						1.4		75							
16					116			15.8		76						
17	107						1.4	15.8	75	77	11					
18	100						1.5	16.9	75	76	55					
19	100						1.2	15.5	74	76	21					
20	64				38		1.1	17.1	75	73	10					
21					106											
22					30											
23	41				30		1.2	17	74	78	41					
24	51						1.2	15.1	74	77	35					
25	50						1.2	16	75	77	35					
26	52						1.1	16.8	75	76	39					
27							1	17.1	74	71	29					
28					131											
29																
30	85						1.2	17.3	75	76	29					
31	40						1.1	17.4	74	76	13					
Avg.		52.714				60.5	1.3091	16.761	74.545	75.167	30.286					
Max.		107				131	1.5	17.8	76	78	55					
Min.		23				24	1	15.1	63	67	10					
Data	0	0	0	21	0	0	0	10	0	22	18	22	18	14	0	0

Send completed forms by the 28th of the month to:

Indiana Department of Environmental Management  
Office of Water Quality, Mail Code 65-42  
100 North Senate Avenue  
Indianapolis, Indiana 46204-2251

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

State Form 53341 (R / 11-08)

Name of Facility	Permit Number	For Month Of:	Year
Clay Township Regional Waste District	IN0055760	March	2009

Signature of Certified Operator \_\_\_\_\_ Date (month, day, year) \_\_\_\_\_

Signature of principal executive officer or authorized agent \_\_\_\_\_ Date (month, day, year) \_\_\_\_\_

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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								0.02	0.761				0.54		0.476				
2	10.8	-317	0.28		0.0	68	4420	154	0.75				0.58	3720	0.596				
3	10.9	-184	0.3		0.0	67	4100	163	0.716				0.59	4540	0.5				
4	10.6	-330	0.28		3.8	66	4480	147	0.755				0.59	5780	0.014				
5	11.3	-336	0.27		3.1	60	4900	122	0.726				0.6	5020	0.436				
6	12.9	-337	0.25		1.5	75	4100	183	0.679				0.61	4300	0.449				
7									1.258				0.564		0.452				
8									0.20	1.284			0.576		0.439				
9	13.3	-339	0.27		0.0	69	4600	150	1.238				0.582	5220	0.473				
10	13.5	-333	0.35		4.2	60	3900	154	1.284				0.618	4560	0.778				
11	14	-333	0.39		4.4	64	4260	150	1.192				0.546	8360	0.791				
12	12.4	-283	0.4		5.7	66	4260	155	1.262				0.464	12840	0.856				
13	12.3		0.41		5.4	80	4340	184	1.259				0.573	12100	0.707				
14									1.143				0.474		0.511				
15									0.13	1.226			0.636		0.486				
16	13.3	-333	0.37		5.1	53	4380	121	1.407				0.633	3340	0.553				
17	14.2	-335	0.39		4.0	60	5060	119	1.194				0.618	3580	0.532				
18	14.6	-338	0.4		4.6	58	4400	132	1.159				0.606	5280	0.669				
19	14.5	-340	0.41		4.8	53	3800	139	1.218				0.601	9400	0.715				
20	13.6	-341	0.45		5.8	50	3860	130	1.23				0.576	7560	0.709				
21									1.465				0.65		0.772				
22									0.13	1.248			0.535		0.609				
23	14.2	-339	0.42		4.4	53	3820	139	1.228				0.574	5880	0.697				
24	13.9	-345	0.39		4.4	45	4600	98	1.208				0.594	3900	0.674				
25	14.7	-341	0.34		4.1	48	3820	126	1.191				0.556	4400	0.632				
26	14.6	-343	0.39		4.4	47	3640	129	0.10	1.207			0.572	7120	0.621				
27	14.6	-338	0.37		4.4	60	3480	172		1.323			0.593	4680	0.637				
28										1.347			0.551		0.725				
29										1.497			0.743		0.752				
30	12.7	-336	0.43		5.5	68	3540	192	1.35				0.651	5660	0.751				
31	13.5	-325	0.36		5.1	45	3680	122	1.659				0.934	5760	0.823				
Avg.	13.2	-326	0		3.8478	60	4156	145	0.116	1			1	6045.5	0.6076				
Max.	14.7	-184	0.45		5.83	80	5060	192	0.2	1.659			0.934	12840	0.856				
Min.	10.6	-345	0.25		0	45	3480	98	0.02	0.679			0.464	3340	0.014				
Data	22	21	22	0	22	22	22	22	5	31	0	0	0	31	22	31	0	0	0