Monthly Report of Operation
Vertical Loop Reactor
Wastewater Treatment Plant

State Form 10829 (R/1-2005)
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Name of Facility		Permit Number	
Clay Township Regional Waste District		IN0055760	
Month	Year	Plant Design Flow	Telephone Number
March	2008	2.55 mgd	(317) 873-0564
Facility's e-mail address (if available):	scot@ctrwd.org		
Certified Operator: Name		Class	Certificate Number / Expiration Date
Scot S. Watkins		III	WW018132 / 6/30/2008

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature	Precipitation - Inches (Total= 5.23)	Bypass At Plant Site ("x" If Occurred)	Collection System Overflow ("x" If Occurred)	CHEMICALS USED: Chlorine - Lbs	CHEMICALS USED: Liquid Alum - Gallons	CHEMICALS USED: Lbs or Gal	RAW SEWAGE: Influent Flow Rate (MGD)	RAW SEWAGE: pH	RAW SEWAGE: CBOD5 - mg/l	RAW SEWAGE: CBOD5 - lbs	RAW SEWAGE: Susp. Solids - mg/l	RAW SEWAGE: Susp. Solids - lbs	RAW SEWAGE: Phosphorus - mg/l	RAW SEWAGE: Ammonia - mg/l	
1	Sat							40		1.933								
2	Sun							50		1.913								
3	Mon		62	0.85				50		2.428	7.5	88	1782	154	3118.4	4.36	18.1	
4	Tue		34	0.03				40		2.397	7.6	99	1979.1	120	2398.9	3.53	14.1	
5	Wed		36	0.24				40		2.236	7.6	96	1790.2	156	2909.1	3.81	16.4	
6	Thu		35	0.04				50		2.065	7.6	94	1618.9	154	2652.2	4.39	18.9	
7	Fri		29					50		1.951	7.6	86	1399.3	146	2375.6	3.82	19.9	
8	Sat			0.01				50		1.848								
9	Sun			0.07				40		1.888								
10	Mon		45					50		1.792	7.5	94	1404.9	336	5021.6	5.42	22.8	
11	Tue		44					40		1.702	7.5	293	4159	208	2952.5	3.07	24.1	
12	Wed		55					50		1.709	7.4	137	1952.7	184	2622.6	5.51	25.3	
13	Thu		61	0.02				50		1.693	7.4	158	2230.9	226	3191	5.77	22.8	
14	Fri		55	0.08				55		1.833	7.5	118	1803.9	186	2843.4	5.84	21.1	
15	Sat							40		1.574								
16	Sun			0.01				35		1.462								
17	Mon		41	0.1				50		1.665	7.4	190	2638.4	252	3499.3	8.62	30.2	
18	Tue		55	1.3				40		2.556	7.5	106	2259.6	262	5585.1	6.3	22.8	
19	Wed		51	0.89		X		50		3.505	7.5	76	2221.6	146	4267.8	4.11	12.4	
20	Thu		51					55		2.007	7.5	80	1339.1	156	2611.2	4.61	17.5	
21	Fri		35	0.01		X		45		2.008	7.6	166	2780	164	2746.5	5.54	20.6	
22	Sat			0.03				50		1.961								
23	Sun							45		1.998								
24	Mon		44					50		1.987	7.6	169	2800.6	218	3612.6	7.29	27.6	
25	Tue		53	0.01				45		1.934	7.6	137	2209.7	176	2838.8	5.9	23.9	
26	Wed		58					55		1.924	7.5	144	2310.6	228	3658.5	6.4	28.9	
27	Thu		50	0.73				60		2.027	7.6	107	1808.9	150	2535.8	4.57	26.3	
28	Fri		46	0.02				65		2.165	7.6	180	3250.1	186	3358.4	5.46	23.1	
29	Sat							80		1.935								
30	Sun			0.03				70		2.573								
31	Mon		57	0.76				35		1.513	7.6	165	2082	190	2397.5	11.12	23.3	
Average								49.194		2.00587		133	2182	190	3199.9	5.497	21.91	
Maximum				1.3				80		3.505	7.6	293	4159	336	5585.1	11.12	30.2	
Minimum								35		1.462	7.4	76	1339.1	120	2375.6	3.07	12.4	
No. of Data				19	0	2	0	31	0	31	21	21	21	21	21	21	21	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

(SIGNATURE OF CERTIFIED OPERATOR) (DATE)

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

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

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		REACTOR # 1				REACTOR # 2				REACTOR DATA				RETURN SLUDGE		FINAL EFFLUENT			
Day Of Month	Temperature in Reactors	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	0	#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														0.729					
2											0.49		0.1	0.73					
3	13	77	4380	176	0.1	72	4060	177	1.7	-62				0.83	11100				7.5
4	12	72	4240	170	0.1	57	3460	165	5.3	-35				0.84	10480				7.4
5	11	61	3700	165	0.1	67	3840	174	5.3	-214				0.72	10780				7.5
6	11	60	3700	162	0.1	62	3600	172	5.0	-226				0.74	10480				7.5
7	11	59	3580	165	0.3	64	3640	176	4.2	-260				0.73	9640				7.5
8														0.7					
9											0.45		0.1	0.73					
10	12	75	3960	189	0.3	74	3900	190	3.1	-312				0.58	10240				7.5
11	12	66	3940	168	0.4	70	3720	188	3.7	50				0.58	11020				7.5
12	12	67	3720	180	0.4	69	3620	191	3.6	70				0.65	10840				7.5
13	12	67	4420	152	0.4	68	4100	166	2.8	38				0.64	10880				7.5
14	13	70	3860	181	0.3	69	4080	169	2.3	35				0.7	11180				7.4
15														0.6					
16											0.47		0.1	0.56					
17	12	77	4540	170	0.3	77	4280	180	3.2	17				0.55	11680				7.5
18	12	74	4020	184	0.3	73	3980	183	2.0	-282				0.87	11220				7.5
19	12	43	3160	136	0.3	53	3380	157	4.7	-121				1.21	7820				7.4
20	11	65	4000	163	0.3	63	4040	156	5.8	-154				0.79	9800				7.5
21	12	52	3980	131	0.3	52	3920	133	6.3	-150				0.74	11640				7.6
22														0.74					
23											0.42		0.1	0.77					
24	12	71	4360	163	0.3	77	3840	201	2.0	-325				0.65	10540				7.5
25	12	75	2760	272	0.4	75	4200	179	2.8	-15				0.63	11220				7.5
26	12	64	4000	160	0.4	64	3640	176	2.2	42				0.67	9500				7.5
27	13	60	4180	144	0.4	69	2900	238	1.3	46				0.78	10540				7.4
28	13	60	3740	160	0.5	70	3860	181	1.5	66				0.817	10560			2	7.4
29														0.73					
30											0.46		0.1	0.716				1	
31	12.3	63	5120	123	0.4	75	2900	259	1.6	0				0.857	10560				7.5
Avg.	12	66	3970	167	0.306	68	3760	181	3.351		0		0.066	1	10558.1			1	
Max.	13	77	5120	272	0.5	77	4280	259	6.3		0.49		0.08	1.21	11680			2	7.6
Min.	11	43	2760	123	0.1	52	2900	133	1.3		0.42		0.05	0.55	7820			1	7.4
Data	21	21	21	21	21	21	21	21	21	21	5	0	5	31	21	0	0	2	21

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):

1. On 03/03/08 the VLR was put into storm mode anticipating a large rain amount. We did not receive as much rain as anticipated and our clarifier #4 had solids wash out that resulted in TSS weekly and monthly violations. A letter of non compliance was sent. 2. Our new belt filter press was put online 03/12/08. 3. Collections system overflow occurred 03/19/08. An overflow report was faxed. 4. Collections system overflow occurred 03/21/08. An overflow report was faxed. 5. Phosphorus violations occured this month. A large volume of old sludge was ran through our new belt filter press resulting in higher levels. A letter of non compliance was sent.

Monthly Report of Operation
Vertical Loop Reactor
Wastewater Treatment Plant

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

(SIGNATURE OF CERTIFIED OPERATOR) (DATE)

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

FINAL EFFLUENT

	Flow				BOD				Total Suspended Solids				Ammonia			
Day Of Month	Effluent Flow Rate (MGD)	Effluent Flow Weekly Average	Dissolved Oxygen - mg/l	Phosphorus - mg/l	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	1.807															
2	1.931															
3	2.477		7.83	5.16	7.62		157.51		272		5622.4		0.24		4.9609	
4	2.368		9.42	0.39	1.34		26.48		9.8		193.66		0.1		1.9761	
5	2.12		9	0.18	0.53		9.3764		3.4		60.151		0.1		1.7691	
6	1.96		8.78	0.18	0.55		8.9959		3.5		57.247		0.1		1.6356	
7	1.869		8.62	0.2	0.59		9.2021		3		46.79		0.1		1.5597	
8	1.778	2.07186				2.126		42.313		58.34		1196		0.128		2.3803
9	1.595															
10	1.672		8.53	0.19	0.63		8.7903		3.2		44.649		0.1		1.3953	
11	1.743		8.62	0.17	1.7		24.727		2.6		37.818		0.1		1.4545	
12	1.692		8.65	0.29	1.43		20.191		2.6		36.711		0.1		1.412	
13	1.431		8.6	0.49	1.21		14.449		3		35.825		0.1		1.1942	
14	1.876		8.62	1.11	1.22		19.099		3		46.966		0.1		1.5655	
15	1.33	1.61986				1.238		17.451		2.88		40.394		0.1		1.4043
16	1.235															
17	1.407		8.31	1.14	1.91		22.426		4		46.966		0.1		1.1741	
18	2.57		8.59	1.69	2.81		60.265		9.5		203.74		0.11		2.3591	
19	3.599		9.97	4.31	9		270.3		135		4054.5		0.1		3.0034	
20	2.098		8.6	1.28	1.03		18.033		3.8		66.53		0.1		1.7508	
21	2.038		9.27	1.36	1.47		25		2.7		45.919		0.1		1.7007	
22	1.988	2.13357				3.244		79.206		31		883.54		0.102		1.9976
23	1.688															
24	1.956		8.71	1.21	1.33		21.709		2.9		47.336		0.29		4.7336	
25	1.998		8.87	0.82	1.91		31.846		3.8		63.359		0.79		13.172	
26	1.937		8.99	0.85	1.7		27.479		2.8		45.26		0.33		5.3342	
27	1.679		8.34	1.14	1.84		25.781		2.6		36.429		0.15		2.1017	
28	1.613		8.59	1.13	1.43		19.248		2.9		39.035		0.05		0.673	
29	1.635	1.78657				1.642		25.213		3		46.284		0.322		5.2029
30	2.224															
31	2.355		8.16	4.29	2.29		45.004		4.1		80.575		0.08		1.5722	
Avg	1.92481		8.7176	1.3133	2.0733		41.234		22.867		519.61		0.159		2.6904	
Max	3.599	2.13357	9.97	5.16	9	3.244	270.3	79.206	272	58.34	5622.4	1196	0.79	0.322	13.172	5.2029
Min	1.235	1.61986	7.83	0.17	0.53	1.238	8.7903	17.451	2.6	2.88	35.825	40.394	0.05	0.1	0.673	1.4043
Data	31	4	21	21	21	4	21	4	21	4	21	4	21	4	21	4

MONTHLY REMOVAL SUMMARY				
	BOD5	S.S.	Ammonia	Phosphorus
Percent Removal	98	88	99	76.1

Phosphorus limit would be 1 mg/l. (compliance not achieved)

Total Monthly Flow: (million gallons)	59.669
Percent Capacity (actual flow/design)	75%

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Vertical Loop Reactor
Wastewater Treatment Plant

Name of Facility	Permit Number	For Month Of:	Year
Clay Township Regio	IN0055760	March	2008

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 State Form 10829 (R/1-2005)

Day Of Month	SLUDGE TO DIGESTER		DIGESTER OPERATION											
			Anaerobic Only											
		Waste Act. Sludge Gal. x 1000	pH	Gas Production Cubic Ft. x 1000	Temperature - F	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		
1						19						143		
2														
3		50						1.3		76				
4														
5		51						1.2		76				
6		19						1.2		76				
7						40						74		
8						37						37		
9												25		
10		57						1.1		76				
11		43						1.2		76				
12									17.3		75	35		
13									16.5		72	35		
14						40			15.6		75	35		
15						15								
16														
17		50						1.3	15	75	78	35		
18		51						1.3	15.9	75	76	35		
19		34						0.9	16.7	73	76	33		
20									16.8		76	37		
21						27								
22						33								
23														
24		55						1.2	15.8	75	77	24		
25		51						1.3	16.2	75	76	6		
26		37						0.4	15.2	66	76	40		
27									15.8		76	35		
28									15		77	49		
29						33								
30						26								
31												33		
Avg.		45.273				30		1.1273	15.983	74.455	75.833	41.824		
Max.		57				40		1.3	17.3	76	78	143		
Min.		19				15		0.4	15	66	72	6		
Data	0	11	0	0	0	9	0	11	12	11	12	17	0	0

Send completed forms by the 28th of the month to:
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER QUALITY, DATA MANAGEMENT SECTION
P.O. BOX 6015
INDIANAPOLIS, INDIANA 46206-6015

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Vertical Loop Reactor
Wastewater Treatment Plant

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

State Form 10829 (R/1-2005)

		ORBAL #1			ORBAL #3					TOTAL RETURN SLUDGE				RETURN SLUDGE		Flow Volume				
Day Of Month	Temperature in Reactors	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										1.304				0.574		0.913				
2									0.1	1.274				0.542		0.898				
3	12	-338	0.5		1.1	70	3880	180		1.276				0.444	9220	0.543				
4	11	-340	0.5		1.5	69	4060	170		1.442				0.6	7340	1.099				
5	10	-341	0.5		4.0	55	3240	170		1.306				0.583	4740	1.007				
6	11	-342	0.5		2.7	52	2940	177		1.286				0.545	8240	0.969				
7	10	-343	0.3		1.0	64	3380	189		1.351				0.617	8780	0.957				
8										1.325				0.622		0.919				
9									0.2	1.438				0.705		0.968				
10	10	-338	0.3		2.9	67	3680	182		1.432				0.855	3360	0.865				
11	11	-340	0.3		2.8	65	3600	181		1.233				0.656	4080	0.793				
12	11	-337	0.3		0.4	68	3560	191		1.298				0.647	4500	0.807				
13	12	-342	0.3		0.5	66	3680	179		1.287				0.647	3840	0.771				
14	11	-339	0.3		0.5	65	3680	177		1.383				0.687	4800	0.859				
15										1.203				0.606		0.734				
16									0.1	1.14				0.582		0.664				
17	11	-345	0.3		1.1	74	4080	181		1.135				0.588	7140	0.671				
18	11	-346	0.4		0.6	66	3580	184		1.434				0.564	5120	0.996				
19	12	-347	0.4		2.2	50	3200	156		1.818				0.61	7820	1.403				
20	11	-344	0.3		5.2	55	3280	168		1.47				0.684	5960	0.974				
21	11	-342	0.3		3.4	50	3940	127		1.397				0.652	4920	1.033				
22										1.406				0.665		1.066				
23									0.1	1.489				0.716		1.103				
24	11	-341	0.3		1.4	67	4900	137		1.382				0.726	4940	1.038				
25	11	-340	0.3		0.5	67	4440	151		1.355				0.72	4780	1.007				
26	11	-343	0.3		2.2	64	4160	154		1.277				0.61	3400	0.891				
27	12	-346	0.3		0.6	61	3740	163		1.525				0.748	3760	1.071				
28	12	-345	0.4		0.6	60	5060	119		1.565				0.749	6920	1.096				
29										1.466				0.737		1.023				
30									0.1	1.505				0.789		1.003				
31	12.6	-344	0.4		1.7	62	4120	150		1.609				0.753	2440	1.152				
Avg.	11.171		0		1.7576	63	3819	166	0.12	1				1	5528.6	0.9449				
Max.	12.6		0.5		5.2	74	5060	191	0.2	1.818				0.855	9220	1.403				
Min.	10		0.3		0.4	50	2940	119	0.1	1.135				0.444	2440	0.543				
Data	21	21	21	0	21	21	21	21	5	31	0	0	0	31	21	31	0		0	0