Monthly Report of Operation
Vertical Loop Reactor
Wastewater Treatment Plant

Name of Facility			Permit Number
Clay Township Regional Waste District			IN0055760
Month	Year	Plant Design Flow	Telephone Number
August	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 / 6/30/2010

State Form 10829 (R/1-2005)

Day Of Month	Day of Week	Man-Hours at Plant (Plants less than 1 MGD only)	Air Temperature	Precipitation - Inches (Total= 2.57)	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)	pH	CBOD5 - mg/l	CBOD5 - lbs	Susp. Solids - mg/l	Susp. Solids - lbs	Phosphorus - mg/l	Ammonia - mg/l	
1	Fri		88					125		2.347	7.4	146	2857.8	218	4267.1	5.43	26.6	
2	Sat							155		2.26								
3	Sun							140		2.158								
4	Mon		88					130		2.352	7.4	99	1942	192	3766.2	6.78	30.1	
5	Tue		91	2.05				145		3.153	7.4	128	3365.9	178	4680.7	4.26	20	
6	Wed		86					130		2.657	7.5	129	2858.6	120	2659.1	4.67	22.9	
7	Thu		83					135		2.439	7.4	94	1912.1	198	4027.6	5.01	24.2	
8	Fri		81					160		2.394	7.4	126	2515.7	150	2994.9	5.09	24.5	
9	Sat							115		2.42								
10	Sun			0.23				155		2.327								
11	Mon		84					140		2.289	7.4	196	3741.7	260	4963.5	5	26.2	
12	Tue		80					145		2.345	7.5	146	2855.4	180	3520.3	6.45	24.4	
13	Wed		82					145		2.373	7.5	141	2790.5	210	4156.1	5.77	26.6	
14	Thu		82	0.28				135		2.466	7.4	143	2941	166	3414	5.8	25.4	
15	Fri		80					165		2.529	7.4	192	4049.6	172	3627.8	5.29	27.3	
16	Sat							145		2.322								
17	Sun							115		2.184								
18	Mon		86					145		2.299	7.4	114	2185.8	186	3566.3	6.58	27.8	
19	Tue		87					125		2.398	7.4	119	2379.9	216	4319.9	7.43	29	
20	Wed		87					140		2.399	7.4	105	2100.8	200	4001.5	8.78	29.9	
21	Thu		88					185		2.355	7.5	154	3024.7	204	4006.7	7.4	36.6	
22	Fri		87					110		2.279	7.4	112	2128.8	162	3079.1	6.51	32.9	
23	Sat							115		2.319								
24	Sun							95		2.25								
25	Mon		80					105		2.334	7.4	125	2433.2	180	3503.8	6.53	34.4	
26	Tue		82					90		2.297	7.5	101	1934.9	212	4061.3	6.5	32	
27	Wed		83					85		2.324	7.4	153	2965.5	262	5078.1	6.62	35.6	
28	Thu		84					125		2.3	7.5	129	2474.5	210	4028.2	6.18	30.4	
29	Fri		88	0.01				70		2.302	7.5	154	2956.6	202	3878.1	4.19	25.2	
30	Sat							75		2.341								
31	Sun							85		2.163								
Average								126.77		2.36694		134	2686.4	194	3885.7	6.013	28.19	
Maximum				2.05				185		3.153	7.5	196	4049.6	262	5078.1	8.78	36.6	
Minimum								70		2.158	7.4	94	1912.1	120	2659.1	4.19	20	
No. of Data				4	0	0	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

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Name of Facility	Permit Number	For Month Of:	Year
Clay Township Regional Waste Di	IN0055760	August	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	21	66	3840	172	0.2	64	3820	168	2.4	-234				0.834	11240			6	7.4
2														0.56					
3														0.83					
4	20.9	60	3760	160	0.2	56	3940	142	2.1	-260				0.83	11260			6	7.4
5	21.1	58	3960	146	0.2	54	4060	133	0.7	-260				1.11	10480			7	7.5
6	20.9	49	3840	128	0.2	44	3620	122	3.1	-127				0.93	11060			4	7.4
7	20.9	62	4020	154	0.2	46	3920	117	3.0	-177				0.85	11640			2	7.5
8	20.7	39	4320	90	0.2	42	3880	108	3.1	-178	0.78	#####	0.3	0.84	11020			1	7.5
9														0.92					
10														0.9					
11	20.3	53	3000		0.2	50	3900	128	3.2	-254				0.79	12340			5	7.5
12	20.6	50	3980	126	0.2	47	3780	124	3.0	-246				0.77	12160			1	7.4
13	20.8	49	3720	132	0.2	46	3800	121	2.8	-238				0.88	11340			1	7.4
14	21.1	74	3840	193	0.2	76	3520	216	1.7	-256				0.87	12120			1	7.4
15	21	65	3820	170	0.2	49	3680	133	1.9	-251				0.92	11320			1	7.4
16											0.91		0.3	0.88					
17														0.84					
18	20.8	40	5160	78	0.3	48	3760	128	1.9	-296				0.8	12200			10	7.5
19	21	60	3960	152	0.2	52	3500	149	1.0	-289				0.85	11020			1	7.4
20	21.2	56	4220	133	0.2	54	4020	134	0.6	-289				0.84	11580			1	7.4
21	21	52	4400	118	0.2	49	4300	114	0.8	-296	0.95	#####	0.1	0.82	12800			6	7.5
22	22	66	3940	168	0.2	55	3620	152	0.4	-292				0.78	9380			1	7.4
23														0.89					
24														0.87					
25	21	62	4540	137	0.2	46	4660	99	0.5	-300				0.81	11620			2	7.5
26	21	56	4540	123	0.2	52	4360	119	0.3	-321				0.78	11700			1	7.5
27	21	48	4720	102	0.2	51	4040	126	0.9	-304				0.8	12520			1	7.5
28	21	62	4160	149	0.2	56	3760	149	0.9	-283	0.91	#####	0.7	0.79	12560			2	7.5
29	21	45	3860	117	0.2	43	3520	122	0.8	-268				0.804	12480			1	7.5
30														0.893					
31														0.833					
Avg.	21	56	4076	137	0.227	51	3879	134	1.672		1		0.365	1	11611			2	
Max.	22	74	5160	193	0.25	76	4660	216	3.18		0.95		0.71	1.11	12800			10	7.5
Min.	20.3	39	3000	78	0.2	42	3500	99	0.3		0.78		0.12	0.56	9380			1	7.4
Data	21	21	21	20	21	21	21	21	21	21	4	3	4	31	21	0	0	21	21

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

1. Weekly Ammonia violation for the week of 08/10/08. Violation letter was sent. 2. Weekly Ammonia violation for the week of 08/17/08. Violation letter was sent. 3. Weekly Ammonia violation for the week of 08/24/08. Violation letter was sent. 4. Operational changes were made to increase the dissolved oxygen in the VLR and Orbal (increased rotor speed and adjusted level). 5. Monthly Ammonia violations for loading and concentration. Violation letter was sent.

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Vertical Loop Reactor
Wastewater Treatment Plant

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

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 State Form 10829 (R/1-2005)

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	2.525		8.1	0.22	1.05		22.125		3.9		82.177		0.2		4.2142		
2	2.386																
3	2.237																
4	2.428		8	0.25	2.64		53.491		8.3		168.17		2.26		45.791		
5	3.292		7.78	0.33	2.59		71.152		9.8		269.22		2.99		82.141		
6	2.681		8.2	0.16	1.49		33.336		2.8		62.644		0.17		3.8034		
7	2.542		8.13	0.17	0.89		18.88		5.2		110.31		0.99		21.001		
8	2.423		8.28	0.16	1.21		24.466		2.5		50.55		0.19		3.8418		
9	2.564	2.59529				1.764		40.265		5.72		132.18		1.32		31.316	
10	2.484																
11	2.326		8.34	0.19	3.07		59.59		7.5		145.58		0.93		18.052		
12	2.38		8.26	0.15	0.87		17.279		3.2		63.556		2.05		40.715		
13	2.505		7.91	0.17	1.51		31.565		3.8		79.436		3.15		65.848		
14	2.618		7.96	0.19	1.18		25.78		3.4		74.281		4.4		96.128		
15	2.698		8.25	0.19	1.12		25.217		2.7		60.79		2.81		63.267		
16	2.488	2.49986				1.55		31.886		4.12		84.728		2.668		56.802	
17	2.412																
18	2.477		8.39	0.19	1.51		31.213		4.5		93.018		2.85		58.911		
19	2.57		7.4	0.18	1.25		26.808		3.2		68.629		6.49		139.19		
20	2.649		7.29	0.22	0.95		21.001		2.9		64.107		7.56		167.12		
21	2.554		8.07	0.23	1.22		26.002		4.3		91.646		8.97		191.18		
22	2.508		8.01	0.16	0.68		14.232		1.6		33.487		6.4		133.95		
23	2.573	2.53471				1.122		23.851		3.3		70.177	5.04	6.2183	108.22	133.09	
24	2.44												4.31		87.759		
25	2.427		7.88	0.33	0.97		19.646		3.8		76.963		5.35		108.36		
26	2.393		8.16	0.27	0.79		15.776		5.4		107.84		9.11		181.92		
27	2.396		7.92	0.29	1.06		21.194		4.6		91.975		9.15		182.95		
28	2.414		7.8	0.36	1.53		30.822		6.5		130.94		6.56		132.15		
29	2.387		7.64	0.32	1.85		36.851		6.1		121.51		9.49		189.04		
30	2.51	2.42386				1.24		24.858		5.28		105.84		7.3283		147.03	
31	2.408																
Avg	2.50629		7.989	0.2252	1.4014		29.83		4.5714		97.468		4.4096		92.415		
Max	3.292	2.59529	8.39	0.36	3.07	1.764	71.152	40.265	9.8	5.72	269.22	132.18	9.49	7.3283	191.18	147.03	
Min	2.237	2.42386	7.29	0.15	0.68	1.122	14.232	23.851	1.6	3.3	33.487	70.177	0.17	1.32	3.8034	31.316	
Data	31	4	21	21	21	4	21	4	21	4	21	4	23	4	23	4	0

MONTHLY REMOVAL SUMMARY

	BOD5	S.S.	Ammonia	Phosphorus
Percent Removal	99	98	84	96.3

Total Monthly Flow: (million gallons) 77.695

Percent Capacity (actual flow/design) 98%

Phosphorus limit would be 1 mg/l. (compliance achieved)

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Clay Township Regio	IN0055760	August	2008

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	SLUDGE TO DIGESTER		DIGESTER OPERATION												
			Anaerobic Only												
Day Of Month		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		40						1.3		73				
2						33								
3						29								
4		43						1.3	18.4	73	72	43		
5		37						1.3	18.4	73	72	47		
6		41						1.2	18.6	73	72	48		
7		43						1.3		74				
8		41						1.2		73				
9						60								
10						37								
11		20						1.3		73				
12		86						1.3	17.1	70	72	79		
13		36						1.3	17.7	74	71	64		
14		29						1.3	17	74	71	74		
15								1.3	16.7	74	63	40		
16						68								
17		39				40								
18		42						1.4		74				
19		39						1.3	18.7	74	73	84		
20		40						1.3	18.4	74	69	86		
21		51						1.4	18.9	74	73	81		
22								1.3		74				
23						70								
24						54								
25		40						1.4	18.6	74	75	49		
26		51						1.4	17.2	75	68	36		
27		50						1.4	17.3	74	71	36		
28		51						1.4		75	75			
29		48						1.4		75	75			
30						106								
31						37								
Avg.		43.35				53.4		1.3238	17.923	73.667	71.467	59		
Max.		86				106		1.4	18.9	75	75	86		
Min.		20				29		1.2	16.7	70	63	36		
Data	0	20	0	0	0	10	0	21	13	21	15	13	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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Clay Township Regional Waste District	IN0055760	August	2008

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		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	21.8	-323	0.3		0.7	62	3420	181		1.9				1.061	4060	1.23				
2										1.825				0.966		1.199				
3										1.774				0.949		1.162				
4	21.5	-326	0.3		0.6	50	3600	139		1.853				1.022	2800	1.9				
5	21.7	-324	0.29		0.7	50	3100	161		2.333				1.219	5360	1.47				
6	21.7	-321	0.31		1.1	49	3200	153		1.991				1.058	4920	1.183				
7	21.6	-327	0.29		0.6	57	3520	162		1.877				1.026	4940	1.131				
8	21	-316	0.3		0.6	47	3660	128	0.4	1.841				1.005	4120	1.125				
9										1.929				1.008		1.139				
10										1.9				1.001		1.09				
11	20.5	-320	0.27		0.6	51	3720	137		1.743				0.949	3680	1.082				
12	20.7	-317	0.28		0.6	50	3700	135		1.74				0.966	3800	1.083				
13	21.1	-288	0.28		0.6	47	3780	124		1.865				0.987	2340	1.1				
14	21.5	-313	0.29		0.5	73	3520	207		1.877				1.004	5540	1.126				
15	21.3	-320	0.27		0.6	54	3420	158		1.944				1.023	4500	1.158				
16									0.5	1.823				0.939		1.091				
17										1.703				0.865		1.017				
18	21.1	-295	0.28		0.5	57	3480	164		1.722				0.921	2560	1.06				
19	21.4	-310	0.27		0.6	50	3180	157		1.728				0.877	5440	1.081				
20	21.6	-270	0.28		0.5	50	3620	138		1.781				0.944	2920	1.103				
21	21.6	-285	0.29		0.6	47	3820	123	0.4	1.741				0.926	2420	1.1				
22	22	-292	0.27		0.6	53	3340	159		1.697				0.915	2420	1.063				
23										1.804				0.917		1.115				
24										1.763				0.896		1.089				
25	21.7	-290	0.3		0.7	51	3840	133		1.721				0.912	5680	1.111				
26	21.1	-311	0.27		0.5	46	4300	107		1.529				0.745	6320	1.042				
27	21.2	-317	0.28		0.5	51	3320	154		1.738				0.943	9320	1.101				
28	21.6	-320	0.28		0.6	55	3560	154	0.8	1.544				0.757	3780	0.884				
29	22.3	-324	0.27		0.6	41	3640	113		1.463				0.659	2820	0.77				
30										1.669				0.776		0.907				
31										1.599				0.766		0.895				
Avg.	21.429		0		0.6052	52	3559	147	0.5175	2				1	4273.3	1.1164				
Max.	22.3		0.31		1.09	73	4300	207	0.8	2.333				1.219	9320	1.9				
Min.	20.5		0.27		0.5	41	3100	107	0.41	1.463				0.659	2340	0.77				
Data	21	21	21	0	21	21	21	21	4	31	0	0	0	31	21	31	0		0	0