



**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 May	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= 4.87	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	Fri		70	0.37					200		2.529	7.6	179	3775.4	164	3459.1	5.97	18.8	
2	Sat								220		2.169								
3	Sun								190		2.047								
4	Mon		71						210		1.95	7.5	248	4033.2	150	2439.5	5.37	24.9	
5	Tue		73	0.01					240		1.944	7.5	228	3696.6	248	4020.8	5.56	25.2	
6	Wed		72	0.4					220		2.033	7.5	301	5103.5	304	5154.4	7.94	24.7	
7	Thu		76	0.01					230		1.981	7.5	242	3998.2	276	4559.9	5.59	24.1	
8	Fri		72	0.52					216		2.206	7.4	185	3403.6	166	3054.1	4.39	20.7	
9	Sat								200		2.051								
10	Sun								230		1.899								
11	Mon		66						200		1.932	7.5	196	3158.1	162	2610.3	8.07	25.8	
12	Tue		70						140		1.889	7.5	212	3339.9	194	3056.3	7.72	25	
13	Wed		72	0.69					140		2.169	7.5	212	3835	188	3400.8	7.67	23.3	
14	Thu		72	0.78					140		2.757	7.6	170	3908.9	220	5058.5	5.71	19.4	
15	Fri		79						140		2.222	7.5	155	2872.4	164	3039.2	5.15	21.3	
16	Sat			0.34					110		2.16								
17	Sun								90		1.908								
18	Mon		68						130		2.039	7.5	199	3384	256	4353.3	7.89	26.5	
19	Tue		73						170		1.81	7.5	224	3381.4	214	3230.4	9.16	25.6	
20	Wed		80						170		1.966	7.5	216	3541.6	230	3771.2	8.55	26	
21	Thu		82						180		1.903	7.4	205	3253.6	140	2221.9	7.46	23.1	
22	Fri		81						190		1.972	7.5	180	2960.4	84	1381.5	8.03	25.1	
23	Sat								150		1.84								
24	Sun								160		1.736								
25	Mon		75	0.7					160		1.908	7.5	276	4391.9	310	4932.9	7.53	23.5	
26	Tue		80	0.01					180		1.97	7.5	242	3976	256	4206	6.35	24.4	
27	Wed		82						130		1.922	7.5	241	3863.1	280	4488.3	7.36	24.6	
28	Thu		73	0.49					150		1.941	7.5	255	4127.9	278	4500.2	6.94	25.2	
29	Fri		78						170		1.824	7.5	271	4122.5	188	2859.9	6.27	26.9	
30	Sat			0.55					150		1.936								
31	Sun								190		1.924								
Average									174.06		2.01732		221	3720.3	213	3609.5	6.89	24	
Maximum				0.78					240		2.757	7.6	301	5103.5	310	5154.4	9.16	26.9	
Minimum									90		1.736	7.4	155	2872.4	84	1381.5	4.39	18.8	
No. of Data				12	0	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 (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 D		IN0055760	May	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. Coll - colony/100 ml	pH - daily low (or single sample)	pH - daily high (if multiple samples)
1	15	26	3780	69	0.1	28	2800	100	0.2	-148			0.822	6580			1		7.6
2													0.816						
3											0.42	0.3	0.809						
4	14.9	38	3640	104	0.1	35	3300	106	1.5	-271			0.651	11360			1		7.5
5	15	37	3820	97	0.1	37	3580	103	1.9	-85			0.711	11100			1		7.4
6	15.9	39	4080	96	0.1	39	3380	115	0.8	-54			0.67	12140			1		7.4
7	15.4	38	4480	85	0.1	35	3520	99	0.7	-45	0.53	0.3	0.708	12020			1		7.4
8	15.8	46	3820	120	0.4	45	3500	129	2.1	55			0.828	8360			35		7.4
9													0.69						
10													0.742						
11	15.5	47	3620	130	0.4	44	3940	112	2.5	48			0.674	8540			1		7.6
12	15.5	46	4740	97	0.4	41	4140	99	6.1	68			0.644	8120			1		7.5
13	15.8	43	4580	94	0.4	46	3740	123	6.1	69			0.767	9500			1		7.5
14	16	40	3820	105	0.4	43	3900	110	5.8	93	0.4	0.5	0.93	7800			2		7.5
15	15.7	35	2980	117	1.4	40	3100	129	8.7	171			0.773	7000			11		7.5
16													0.802						
17													0.692						
18	15.6	36	3880	93	0.4	37	3520	105	2.6	-63			0.708	7960			1		7.5
19	16	32	4780	67	0.4	40	3840	104	2.0	-92			0.705	8800			2		7.4
20	16.2	41	3520	116	0.4	40	3480	115	2.0	-98			0.642	9080			1		7.4
21	16.6	43	3340	129	0.4	40	3220	124	2.6	-106			0.63	8740			1		7.4
22	17.1	40	3200	125	0.4	36	3080	117	2.2	-137	0.75	0.5	0.745	8420			1		7.4
23													0.701						
24													0.613						
25	17.2	42	3440	122	0.4	40	3160	127	2.0	-213			0.707	8260			1		7.6
26	16.8	39	3640	107	0.4	30	4560	66	2.0	-238			0.636	8340			1		7.5
27	17.6	37	3860	96	0.4	36	3600	100	2.0	-218			0.648	7280			2		7.4
28	17.8	34	3460	98	0.4	34	3580	95	2.1	-200			0.666	8260			4		7.4
29	17.3	40	3260	123	0.4	38	2600	146	2.1	-193	0.75	0.3	0.602	7880			1		7.4
30													0.746						
31													0.666						
Avg.	16.1	39	3797	104	0.36	38	3502	111	2.773		1	0.37	1	8835.2			2		
Max.	17.8	47	4780	130	1.35	46	4560	146	8.72		0.75	0.49	0.93	12140			35		7.6
Min.	14.9	26	2980	67	0.09	28	2600	66	0.24		0.4	0.28	0.602	6580			1		7.4
Data	21	21	21	21	21	21	21	21	21	21	5	5	31	21	0	0	21	21	21

Comments for the Month (major repairs, breakdowns, process upsets and their causes, inplant treatment process bypass, etc.):  
 1. New MDL for Ammonia 0.02 mg/l. 2. Plant in storm mode for 6 hours Thursday 5/14.

**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	For Month Of: May	Year 2009
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Signature of Certified Operator \_\_\_\_\_  
Date (month, day, year) \_\_\_\_\_

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

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	Fri	2.828		8.28	0.2	2.53		59.707		4.4	103.84		0.1	2.36			
2	Sat	2.484															
3	Sun	2.316															
4	Mon	2.202		8.16	0.26	4.77		87.652		7.1	130.47		0.18	3.3076			
5	Tue	2.094		8.08	0.22	3.61		63.083		6.9	120.57		0.1	1.7474			
6	Wed	2.35		8.2	0.23	2.37		46.477		4.4	86.287		0.1	1.9611			
7	Thu	2.203		8.76	0.22	2.8		51.475		7	128.69		0.05	0.9192			
8	Fri	2.534		8.73	0.18	1.97		41.658		5.2	109.96		0.07	1.4802			
9	Sat	2.304	2.28614				3.104	58.069		6.12	115.2		0.1	1.8831			
10	Sun	2.097															
11	Mon	2.091		8.14	0.32	2.79		48.684		6.5	113.42		1.25	21.812			
12	Tue	2.056		8.91	0.36	2.97		50.957		6	102.94		1.83	31.398			
13	Wed	2.483		10.29	0.39	2.29		47.45		4.7	97.387		1.76	36.468			
14	Thu	2.991		8.96	1.53	9		224.64		22.1	551.61		1.68	41.933			
15	Fri	2.433		12.14	1.05	5.08		103.14		17.5	355.31		0.06	1.2182			
16	Sat	2.419	2.36714				4.426	94.974		11.36	244.13		1.316	26.566			
17	Sun	2.003															
18	Mon	2.251		9.52	1.01	3.66		68.752		7.3	137.13		0.1	1.8785			
19	Tue	2.144		9.67	0.85	2.39		42.761		6.4	114.51		0.06	1.0735			
20	Wed	2.08		10.26	0.8	2.29		39.749		6.1	105.88		0.03	0.5207			
21	Thu	2.069		9.83	0.79	2.08		35.913		4.9	84.602		0.07	1.2086			
22	Fri	2.144		9.98	0.7	1.8		32.205		4.6	82.302		0.07	1.2524			
23	Sat	1.994	2.09786				2.444	43.876		5.86	104.88		0.066	1.1867			
24	Sun	1.885															
25	Mon	2.16		9.18	0.31	4.51		81.294		6.8	122.57		0.16	2.884			
26	Tue	2.076		9.04	0.19	2.18		37.767		3.7	64.1		0.12	2.0789			
27	Wed	2.109		11.24	0.24	2.58		45.407		5.7	100.32		0.22	3.8719			
28	Thu	2.169		8.97	0.18	2.15		38.916		3.5	63.351		0.16	2.896			
29	Fri	1.959		9.55	0.15	1.63		26.647		2.7	44.139		0.1	1.6348			
30	Sat	2.15	2.07257				2.61	46.006		4.48	78.896		0.152	2.6731			
31	Sun	1.928															
Avg		2.226		9.3281	0.4848	3.1167		60.683		6.8333	134.26		0.3938	7.8049			
Max		2.991	2.36714	12.14	1.53	9	4.426	224.64	94.974	22.1	551.61	244.13	1.83	41.933	26.566		
Min		1.885	2.07257	8.08	0.15	1.63	2.444	26.647	43.876	2.7	44.139	78.896	0.03	0.5207	1.1867		
Data		31	4	21	21	21	4	21	4	21	4	21	4	21	4		

MONTHLY REMOVAL SUMMARY					Total Monthly Flow:	
	BOD5	S.S.	Ammonia	Phosphorus	(million gallons)	69.006
Percent Removal	99	97	98	93.0	Percent Capacity	
					(actual flow/design)	87%

<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	May	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					23		1		71								
2					6												
3					13												
4		51					1.3		71								
5		64			24		1.2		72								
6		52			24		1.3	18.1	72	66	32						
7		39			31		1.3		71								
8					7		0.9	17.4	67	71	33						
9		51			24												
10					17												
11		40			17		0.9		68								
12		46			48		0.9		68								
13		44					1.1	17.8	70	65	50						
14		47			39		0.8	17.9	68	67	49						
15		41					0.8		70								
16					50												
17		43															
18		34			37		0.9	18.3	69	66	48						
19		53			50		0.9	18.9	69	62	7						
20		55					1	18.7	70	64	50						
21		56					0.9	18.9	69	66	48						
22							0.9	18.3	69	68	46						
23					50												
24		55					1		70								
25					25												
26		67					0.8	18.8	75	66	52						
27		57			36		0.8		69								
28		45			34		0.9		69								
29		53			4		0.9		69								
30					57												
31		51					1		70								
Avg.		49.714			29.333		0.9773	18.31	69.818	66.1	41.5						
Max.		67			57		1.3	18.9	75	71	52						
Min.		34			4		0.8	17.4	67	62	7						
Data	0	0	0	21	0	0	0	21	0	22	10	22	10	10	10	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**

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

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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	16.1	-314	0.07		5.7	27	2500	108		1.78			0.958	3820	0.596				
2										1.726			0.91		0.535				
3									0.1	1.716			0.907		0.488				
4	15.6	-188	0.11		4.0	30	3280	91		1.48			0.83	1980	0.446				
5	15.5	-319	0.11		3.8	33	3100	106		1.545			0.834	2300	0.447				
6	16.2	-324	0.11		3.3	33	3440	96		1.547			0.877	2500	0.46				
7	16.2		0.11		3.4	34	3420	99	0.1	1.689			0.981	4580	1.02				
8	16.2		0.16		1.1	45	3500	129		1.93			1.102	6580	1.451				
9										1.682			0.992		1.258				
10										1.698			0.956		1.225				
11	15.5	-282	0.19		0.1	46	3760	122		1.603			0.929	7880	1.252				
12	15.5	-316	0.16		0.2	45	3780	119		1.508			0.867	6660	1.247				
13	15.8	-337	0.38		0.4	45	4020	112		1.609			0.715	6240	1.322				
14	16.3	-338	0.36		0.6	37	4700	79	0.4	1.644			1.346	9400	1.368				
15	16	-337	0.33		1.3	42	3200	131		2.119			1.436	3800	1.528				
16										2.238			1.499		1.506				
17										2.191			1.128		1.37				
18	15.7	-277	4.01		4.8	38	3360	113		1.836			1.216	3000	1.342				
19	16.2	-266	0.53		0.8	40	3500	114		1.921			1.174	5540	1.289				
20	16.5	-246	0.59		4.6	41	3520	116		1.816			1.226	3720	1.208				
21	17	-333	0.59		4.0	41	3340	123		1.858			1.295	4420	1.162				
22	17.6	-334	0.59		4.0	39	3060	127	0.2	2.04			1.295	4880	1.226				
23										1.904			1.203		0.391				
24										1.814			1.201		1.165				
25	17.6	-337	4.01		0.5	44	3200	138		1.798			1.091	4680	1.235				
26	17.1	-337	4.01		0.5	39	3900	100		1.829			1.194	4320	0.976				
27	18.2	-335	4.01		0.4	39	3160	123		1.863			1.215	5140	1.468				
28		-333	4.01		0.4	35	3340	105		1.837			1.171	3500	1.209				
29		-309	4.01		0.4	39	3040	128	0.5	1.767			1.164	3880	1.112				
30										1.886			1.14		1.175				
31										1.857			1.191		1.226				
Avg.	16.358		1		2.1057	39	3434	113	0.258	1.798			1	4705.7	1.0872				
Max.	18.2		4.01		5.71	46	4700	138	0.45	2.238			1.499	9400	1.528				
Min.	15.5		0.07		0.11	27	2500	79	0.1	1.48			0.715	1980	0.391				
Data	19	19	21	0	21	21	21	21	5	31	0	0	0	31	21	31	0	0	0