



CITY OF PORTLAND ENVIRONMENTAL SERVICES



Tryon Creek Wastewater Treatment Plant

195 SW Foothills Road, Bldg 310, Lake Oswego, Oregon 97034 ■ Sam Adams, Commissioner ■ Dean Marriott, Director

April 15, 2009

Mr. Lyle Christensen
2020 SW Fourth Avenue, Suite 400
Portland OR 97201-4987



Dear Mr. Christensen:

I am enclosing the March 2009, DMR for the City of Portland's Tryon Creek Wastewater Treatment Plant (TCWTP).

The first of two annual influent flow meter calibrations was completed on March 23. Calibration worksheets are available for review in the Columbia Blvd. Instrument shop.

All measured parameters were within permit limitations during the month.

Please call me at 823-2318 if you have any questions.

Sincerely,

Greg A. Hettman
Operations Manager,
Tryon Creek WTP

STATE OF OREGON DISCHARGE MONITORING REPORT

CITY OF PORTLAND TRYON CREEK POTW
195 FOOTHILLS ROAD
LAKE OSWEGO OR 97034-3163

PLANT TYPE ACTIVATED SLUDGE
TREATMENT SYSTEM CLASS IV
COLLECTION SYSTEM CLASS IV

MAJOR BASIN
RECEIVING STREAM
COUNTY

WILLAMETTE
WILLAMETTE
CLACKAMAS

POPULATION EQUIVALENT 49,046
PERMIT NUMBER 101614
FILE NUMBER 70735
EXPIRATION 9/30/2009

DATE	FLOW			PLANT INFLUENT			PLANT EFFLUENT																	
Mar-09	INF	INF	EFF	pH	BOD mg/l	TSS mg/l	pH	BOD mg/l	BOD Wkly Avg mg/l	BOD Rem %	BOD Dis lbs	BOD Wkly Avg Dis lbs	TSS mg/l	TSS Wkly Avg mg/l	TSS Rem %	TSS Dis lbs	TSS Wkly Avg Dis lbs	EFF TEMP 0 °C	CL2 Res mg/l	E.COLI / 100ml	Total P mg/l	TKN mg/l	NH3 N mg/l	NO3+ NO2-N mg/l
	mgd	PEAK mgd	mgd																					
1	6.10	11.00	6.10		290	330		6		98	305		8		98	407		12	0.4					
2	5.98	11.00	5.96	6.9			6.9											12	0.5	4				
3	5.93	11.00	5.90	6.8	172	220	6.8	7		96	345		10		95	492		12	0.4					
4	5.59	9.50	5.56	7.0			6.9											12	0.5	2				
5	5.49	10.50	5.47	6.9	199	214	6.9	4		98	182		4		98	182		12	0.6	<1				
6	4.99	10.50	4.97	6.9			6.8											12	0.5					
7	4.89	11.20	4.89						6			278		7			361	12	0.5					
8	5.77	10.00	5.77		<100	216		6		94	289		4		98	192		12	0.6					
9	5.25	8.50	5.23	7.0			7.1											12	0.4	5				
10	5.05	9.00	5.02	7.0	240	217	7.0	6		98	251		8		96	335		12	0.3					
11	4.86	9.00	4.84	7.1			7.0											12	0.5	7				
12	4.82	9.00	4.81	7.1	240	258	7.0	6		98	240		5		98	200		12	0.3	<1				
13	4.31	9.50	4.29	7.2			7.0											12	0.5					
14	7.29	15.00	7.29						6			260		6			243	12	0.5					
15	9.73	17.50	9.73		174	190		EST 16					10		95	811		12	0.5					
16	8.23	11.50	8.20	6.8			6.7											12	0.5	13				
17	7.34	11.00	7.31	6.8	200	254	6.7	5		98	305		6		98	366		12	0.4					
18	6.43	10.00	6.40	6.8			6.9											12	0.4	18				
19	6.13	10.00	6.12	6.7	150	151	6.8	5		97	255		8		95	408		12	0.6	1				
20	5.46	10.00	5.45	6.8			6.7											12	0.5					
21	5.41	12.00	5.41						5			280		8			528	12	0.5					
22	5.53	10.00	5.53		267	320		7		97	323		8		98	369		12	0.4					
23	4.99	8.00	4.97	7.0			7.0											12	0.4	1				
24	5.00	9.50	4.97	6.9	224	255	6.9	5		98	207		6		98	249		12	0.5					
25	5.39	10.00	5.36	6.8			6.8											12	0.5	1				
26	4.79	9.50	4.77	6.9	201	190	6.8	5		98	199		4		98	159		12	0.5	1				
27	4.68	10.50	4.67	7.0			7.1											12	0.4					
28	6.58	12.50	6.58						6			243		6			259	12	0.4					
29	6.31	11.00	6.31		176	140		7		96	368		6		96	316		12	0.4					
30	5.60	9.50	5.58	6.9			6.9											12	0.5	1				
31	5.48	10.50	5.45	6.9	162	150	6.9	6		96	273		10		93	455		12	0.5					
Max	9.73	17.50	9.73	7.2	290	330	7.1	7	6	98	368	280	10	8	98	811	528	12	0.6	18				
Min	4.31		4.29	6.7	150	140	6.7	4		94	182		4		93	159		12	0.3	<1				
Avg	5.79		5.77		200	222		6		97	273		7		97	353		12	0.46	4				
Sum	179.40		178.93																					

PLANT EFFLUENT PERMIT	May 1 -> October 31	November 1 -> April 30	January 1 -> December 31	REMARKS
MONTHLY STANDARDS	BOD 20 mg/l / 1400 lbs	BOD 30 mg/l / 3100 lbs	CL2 max 0.7 mg/l	Nutrients are sampled May 1 -> October 31
	TSS 20 mg/l / 1400 lbs	TSS 30 mg/l / 3100 lbs	daily pH range 6.0 -> 9.0	Digested and TWAS sludges are hauled to Columbia Blvd Treatment Plant.
	E. COLI 126 cts/100 ml	E. COLI 126 cts/100 ml		* The BOD Effluent samples for the 15th was not used in the calculations and is reported as estimates because the seed could not be calculated.

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.

NAME Greg A. Hettman
CLASS Oregon T/TV #4600
TITLE O & M Supervisor
SIGNATURE

Greg A. Hettman

PRIMARY TREATMENT						MONTHLY REPORT SUMMARY					
Influent			Effluent			Rem %	Primary				
	mg/l	lbs/day		mg/l	lbs/day		Feed Sludge				
S S	222	10948	SS	80	3968		Flow gal/day	Total Solids %	Volatile Content %		
BOD5	200	9809	BOD5	115	5591	42	12638	6.03	84.6		
Detent Time hrs			Population Equivalent		Flow mgd	Precip "	Detention Time days		Loading lbs VS / ft3 /day		
3.0			49046		5.79	6.36	28				
SECONDARY TREATMENT											
Influent			Effluent			Rem %					
	mg/l	lbs/day		mg/l	lbs/day		Total Solids %	Volatile Content %		Vol Sol Reduct %	
S S	222	10948	SS	7	353		97	3.29		63.8	
BOD5	200	9809	BOD5	6	273	97					
F/M		SVI		SRT days	MLSS mg/l		Total Solids (TWS) %	Capture %		Filtrate Solids mg/l	
0.00		144		0.0	1513		5.58				
RAS Flow mgd		CL2 Res mg/l		CL2 Feed lbs/day							
0.81		0.5		74							
WAS Flow mgd		Aerator Detention Time hrs		Aerator DO mg/l							
.000		6.5		0.0							
						Sludge Hauled					
						gal/day lbs /day lbs/mo					
						Digst 5497 1508					
						TWS 9639 4488					
						Total 15135 5996					

Page 1									
Date Mar-09	Plant Effluent Nutrients				Flow		Weather		
	Total P	NH3-N	NO3+	TKN	Portland	Lake	Temperature		Precip
	mg/l	mg/l	mg/l	mg/l	mgd	Oswego	Max o F	Min o F	"
03/01/09					2.11	4.00	55	43	0.27
03/02/09					1.99	3.98	65	41	0.40
03/03/09					1.90	4.03	63	33	0.00
03/04/09					1.83	3.77	57	42	0.10
03/05/09					1.82	3.68	52	33	0.05
03/06/09					1.63	3.37	56	32	0.05
03/07/09					1.60	3.29	41	35	0.05
03/08/09					1.97	3.80	53	32	0.26
03/09/09					1.90	3.35	50	34	0.10
03/10/09					1.77	3.28	48	33	0.00
03/11/09					1.68	3.17	49	35	0.00
03/12/09					1.67	3.15	53	32	0.00
03/13/09					1.48	2.84	63	42	0.15
03/14/09					2.73	4.56	50	41	1.20
03/15/09					3.40	6.33	56	40	1.30
03/16/09					2.86	5.37	54	39	0.25
03/17/09					2.51	4.83	61	41	0.10
03/18/09					2.21	4.22	66	45	0.00
03/19/09					2.10	4.03	60	50	0.05
03/20/09					1.87	3.59	66	41	0.00
03/21/09					1.85	3.57	66	41	0.10
03/22/09					1.91	3.63	55	36	0.20
03/23/09					1.64	3.36	52	41	0.25
03/24/09					1.66	3.33	58	42	0.25
03/25/09					1.76	3.63	56	32	0.15
03/26/09					1.55	3.24	65	37	0.00
03/27/09					1.52	3.16	62	43	0.20
03/28/09					2.30	4.29	53	37	0.43
03/29/09					2.13	4.18	55	34	0.05
03/30/09					1.85	3.75	58	32	0.05
03/31/09					1.86	3.62	49	41	0.35
Max	0.00	0.00	0.00	0.00	3.40	6.33	66	50	1.30
Min	0.00	0.00	0.00	0.00	1.48	2.84	41	32	0.00
Avg					1.97	3.82	56	38	0.21
Sum					61.0	118.4			6.36

Page 5		AERATORS										
		FLOW		MLSS		SVI	F/M	SRT	INVENTORY	DO	D. TIME	BASINS
		Influ.	Return									
Date	MGD	MGD	mg/l	lbs			days	lbs	mg/l	hrs	#On	
Mar-09												
03/01/09	5.87	0.91	1704	20652	135	0.30		37836		5.9	2	
03/02/09	5.74	0.90	1736	21040	130			46087		6.1	2	
03/03/09	5.69	0.91	1637	19840	128	0.35		41032		6.1	2	
03/04/09	5.34	0.86	1675	20301	127			39276		6.5	2	
03/05/09	5.18	0.83	1494	18107	131	0.27		36080		6.7	2	
03/06/09	4.71	0.76	1315	15938	155			27171		7.4	2	
03/07/09	4.61	0.70	1506	18253	133			27938		7.6	2	
03/08/09	5.40	0.82	1597	19356	135	0.28		31803		6.5	2	
03/09/09	4.95	0.75	1583	19186	147			42153		7.1	2	
03/10/09	4.71	0.67	1447	17538	156	0.29		32900		7.4	2	
03/11/09	4.50	0.63	1457	17659	114			30365		7.7	2	
03/12/09	4.49	0.59	1485	17998	164	0.28		33451		7.8	2	
03/13/09	4.07	0.54	1407	17053	137			40385		8.6	2	
03/14/09	6.86	0.91	1369	16592	142			33305		5.1	2	
03/15/09	9.29	1.39	1451	17586	149	0.38		39127		3.8	2	
03/16/09	7.83	1.17	1624	19683	137			42802		4.5	2	
03/17/09	7.00	0.98	1582	19174	134	0.27		36024		5.0	2	
03/18/09	6.14	0.86	1468	17792	135			34961		5.7	2	
03/19/09	5.89	0.83	1400	16968	142	0.28		34501		5.9	2	
03/20/09	5.20	0.73	1419	17198	145			32576		6.7	2	
03/21/09	5.13	0.73	1498	18156	143			37541		6.8	2	
03/22/09	5.50	0.74	1629	19743	151	0.30		36441		6.3	2	
03/23/09	4.63	0.73	1577	19113	154			44327		7.5	2	
03/24/09	4.75	0.72	1523	18459	148	0.32		37054		7.3	2	
03/25/09	5.13	0.78	1382	16750	169			34070		6.8	2	
03/26/09	4.57	0.66	1506	18253	150	0.27		39474		7.6	2	
03/27/09	4.49	0.64	1382	16750	150			29076		7.8	2	
03/28/09	6.30	0.89	1412	17113	165			32643		5.5	2	
03/29/09	6.03	0.85	1556	18859	156	0.29		40050		5.8	2	
03/30/09	5.39	0.76	1557	18871	150			40168		6.5	2	
03/31/09	5.08	0.72	1527	18507	144	0.29		38833		6.9	2	
Max	9.29	1.39	1736	21040	169			46087		8.6	2	
Min	4.07	0.54	1315	15938	114			27171		3.8	2	
Avg	5.50	0.81	1513	18338	144			36434		6.5	2	
Sum	170.4											

Page 7	SLUDGE PROCESSING												
	Thickened Primary Sludge				WAS		Gravity Belt			TWAS			TPS + Twas
	Date	Dig	Tot	Fixed	Vol								Sludge Disp
Mar-09	Feed	Sol	Content	Content	Flow	Susp. Sols	Capture	Filtrate	Poly	Total Sols.		Gal	Off Site
	gal	%	%	%	mgd	mg/l lbs	%	mg/l	lbs	%	lbs	Hauled	MGD
03/01/09	12470									6.00		0	0.0000
03/02/09	12880									5.85	2586	5300	0.0120
03/03/09	10470	7.99	14.90	85.1								18000	0.0253
03/04/09	12660											18000	0.0363
03/05/09	13940											12000	0.0243
03/06/09	13990									5.87	8812	18000	0.0243
03/07/09	14310											0	0.0000
03/08/09	13770									5.50		0	0.0000
03/09/09	13720									5.33	5023	11300	0.0180
03/10/09	14470	4.31	17.60	82.4								18000	0.0243
03/11/09	6080											12200	0.0182
03/12/09	12740									5.48	2742	6000	0.0183
03/13/09	12550											12000	0.0183
03/14/09	14960											0	0.0000
03/15/09	15110											0	0.0000
03/16/09	14270											18000	0.0243
03/17/09	14160	6.66	16.10	83.9								18000	0.0243
03/18/09	12040									5.88	8827	18000	0.0243
03/19/09	12240											12000	0.0183
03/20/09	11720											12000	0.0183
03/21/09	10570											0	0.0000
03/22/09	12560											0	0.0000
03/23/09	12520									5.39	2697	6000	0.0186
03/24/09	12520	4.26	15.10	84.9								18000	0.0243
03/25/09	12470											18000	0.0243
03/26/09	12130											12000	0.0183
03/27/09	12210									5.01	2507	6000	0.0123
03/28/09	12180											0	0.0000
03/29/09	11950											0	0.0000
03/30/09	12090									5.52	5524	12000	0.0183
03/31/09	12030	6.94	13.30	86.7								18000	0.0243
Max	15110	7.99	17.60	86.70						6.00	8827	18000	0.036
Min	6080	4.26	13.30	82.40						5.01	2507	0	0.000
Avg	12638	6.03	15.40	84.60						5.58	4840	9639	0.015
Sum	391780											298800	0.469

Page 8	NPDES Peak Mass Limits										
Date	Total			Instantaneous		DML=9382 lbs			DML=4153 lbs		
Mar-09	Portland mgd	Lake Oswego mgd	Combined mgd	Peak mgd	Minimum mgd	"O" Limit mgd	BOD lbs	TSS lbs	"P" Limit mgd	BOD lbs	TSS lbs
03/01/09	2.1	4.0	6.1	11.0					11.0	305	407
03/02/09	2.0	4.0	6.0	11.0					11.0		
03/03/09	1.9	4.0	5.9	11.0					11.0	345	492
03/04/09	1.8	3.8	5.6	9.5					9.5		
03/05/09	1.8	3.7	5.5	10.5					10.5	182	182
03/06/09	1.6	3.4	5.0	10.5					10.5		
03/07/09	1.6	3.3	4.9	11.2					11.2		
03/08/09	2.0	3.8	5.8	10.0					10.0	289	192
03/09/09	1.9	3.3	5.2	8.5					8.5		
03/10/09	1.8	3.3	5.0	9.0					9.0	251	335
03/11/09	1.7	3.2	4.9	9.0					9.0		
03/12/09	1.7	3.2	4.8	9.0					9.0	240	200
03/13/09	1.5	2.8	4.3	9.5					9.5		
03/14/09	2.7	4.6	7.3	15.0					15.0		
03/15/09	3.4	6.3	9.7	17.5		17.5		811			
03/16/09	2.9	5.4	8.2	11.5					11.5		
03/17/09	2.5	4.8	7.3	11.0					11.0	305	366
03/18/09	2.2	4.2	6.4	10.0					10.0		
03/19/09	2.1	4.0	6.1	10.0					10.0	255	408
03/20/09	1.9	3.6	5.5	10.0					10.0		
03/21/09	1.8	3.6	5.4	12.0					12.0		
03/22/09	1.9	3.6	5.5	10.0					10.0	323	369
03/23/09	1.6	3.4	5.0	8.0					8.0		
03/24/09	1.7	3.3	5.0	9.5					9.5	207	249
03/25/09	1.8	3.6	5.4	10.0					10.0		
03/26/09	1.6	3.2	4.8	9.5					9.5	199	159
03/27/09	1.5	3.2	4.7	10.5					10.5		
03/28/09	2.3	4.3	6.6	12.5					12.5		
03/29/09	2.1	4.2	6.3	11.0					11.0	368	316
03/30/09	1.8	3.8	5.6	9.5					9.5		
03/31/09	1.9	3.6	5.5	10.5					10.5	273	455
Max	3.4	6.3	9.7	17.5		18	N/A	811	15.0	368	492
Min	1.5	2.8	4.3								
Avg	2.0	3.8	5.8								
Sum	61	118	179			N/A	N/A	N/A			

City of Portland

Tryon Creek Treatment Plant

Tryon Creek Wastewater Treatment Plant, 195 SW. Foothills Rd., Lake Oswego, OR 97034
(503) 823-2320, FAX (503) 823-2322

DATE: 4/14/2009
TO: Pat McDougal, City of Lake Oswego
FAX (503) 635-0269
FROM: City of Portland
SUBJECT: Rainfall and Flow Data

DATE	Flow		Temperature		Rain
	Portland	Lake Oswego	Maximum	Minimum	
3/1/2009	2.11	4.00	55	43	0.27
3/2/2009	1.99	3.98	65	41	0.40
3/3/2009	1.90	4.03	63	33	0.00
3/4/2009	1.83	3.77	57	42	0.10
3/5/2009	1.82	3.68	52	33	0.05
3/6/2009	1.63	3.37	56	32	0.05
3/7/2009	1.60	3.29	41	35	0.05
3/8/2009	1.97	3.80	53	32	0.26
3/9/2009	1.90	3.35	50	34	0.10
3/10/2009	1.77	3.28	48	33	0.00
3/11/2009	1.68	3.17	49	35	0.00
3/12/2009	1.67	3.15	53	32	0.00
3/13/2009	1.48	2.84	63	42	0.15
3/14/2009	2.73	4.56	50	41	1.20
3/15/2009	3.40	6.33	56	40	1.30
3/16/2009	2.86	5.37	54	39	0.25
3/17/2009	2.51	4.83	61	41	0.10
3/18/2009	2.21	4.22	66	45	0.00
3/19/2009	2.10	4.03	60	50	0.05
3/20/2009	1.87	3.59	66	41	0.00
3/21/2009	1.85	3.57	66	41	0.10
3/22/2009	1.91	3.63	55	36	0.20
3/23/2009	1.64	3.36	52	41	0.25
3/24/2009	1.66	3.33	58	42	0.25
3/25/2009	1.76	3.63	56	32	0.15
3/26/2009	1.55	3.24	65	37	0.00
3/27/2009	1.52	3.16	62	43	0.20
3/28/2009	2.30	4.29	53	37	0.43
3/29/2009	2.13	4.18	55	34	0.05
3/30/2009	1.85	3.75	58	32	0.05
3/31/2009	1.86	3.62	49	41	0.35
Max	3.40	6.33	66	50	1.30
Min	1.48	2.84	41	32	0.00
Avg	1.97	3.82	56	38	0.21
SUM	61.04	118.36			6.36