



CITY OF PORTLAND *Larry Erickson*
ENVIRONMENTAL SERVICES



Columbia Blvd. Wastewater Treatment Plant, 5001 N. Columbia Blvd., Portland, OR 97203-2098
(503) 823-2400, FAX (503) 823-2409

14 November 1994

Lyle Christensen, DEQ Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland OR 97201-4959

Dear Mr. Christensen,

I have two topics for month's NPDES permit.

First, in a previous letter, I discussed our permit violation for October 26. I am attaching a copy of that letter.

Second, we are missing 5 BOD values for 4 days of the month.

On October 14, 16, and 26, we are missing effluent BOD values due to either depletions too low or too high for the dilution ranges.

On October 27, we are missing both influent and effluent BOD values due to excessive blank depletion.

I have contacted the lab manager to discuss the missing data and to find out what they can do to better ensure a complete set of BOD data.

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

Sincerely,

Larry Erickson

Larry Erickson
Operations Manager
Tryon Creek WWTP

TRYON CREEK PLANT: CITY OF PORTLAND CLACKAMAS COUNTY
PLANT TYPE: ACTIVATED SLUDGE

PERMIT NO. 101012 (FILE 70735)

POPULATION SERVED: 31000

RECEIVING STREAM: WILLAMETTE RIVER

WASTEWATER TREATMENT PLANT MONITORING REPORT

WASTEWATER TREATMENT PROCESS CONTROL

NUTRIENTS

Date	FLOW		PLANT INFLUENT				PLANT EFFLUENT														ANAEROBIC				AERATION			Sldg Flow to	PLANT EFFLUENT					
																					DIGESTER				BASIN								Pre	Off
	Vol.	Sol.	Red. (%)	####	Sus	SVI	Sol	DO	cip	Site	Str	P	TKN	NH3	NO3+																			
	Nov-94	INF	EFF	pH	BOD		Sol	Temp	pH	DO	BOD	Rem	Dis	TSS	Rem	Dis	Fed	Res	Coli /	Fec	Wk	pH	CO2	Alk	Temp	Sol	DO	*	mgd	mgd	mg/l	mg/l	mg/l	mg/l
	mgd	mgd		mg/l	mg/l	oC	mg/l	mg/l	%	lbs	mg/l	%	lbs	lbs	mg/l	100ml	G.M.				%	mg/l	oF	mg/l	mg/l									
1	14.92	14.87		120	238	16		7.2	19	84	2357	13	95	1613	170	0.60	2							128	1257	4.4	0.80	0.047	0.00					
2	8.55	8.52	7.1	126	450	16	7.0	7.5	16	87	1136	8	98	568	150	0.34	7							116	1365	3.6	0.05	0.034	0.00					
3	6.70	6.68	7.1	120	127	16	7.0	8.2	13	89	725	8	94	446	140	0.61								118	1371	0.9	0.00	0.016	0.00					
4	7.07	7.06	7.4	306	634	16	7.1	7.5	16	95	942	10	98	589	140	0.61								114	1401	3.1	0.55	0.010	0.00					
5	6.45	6.43	7.2	120	110		7.2		14	88	750	5	95	268	140	0.41			4					110	1438	1.0	0.00	0.024	0.00					
6	5.97	5.95	7.3	132	137		7.2		10	92	496	5	96	248	130	0.48								107	1384	2.0	0.00	0.024	0.00					
7	5.70	5.67	7.5	162	162	17	7.1	7.4	14	91	662	6	96	284	120		7							113	1727	0.5	0.25	0.027	0.00					
8	5.33	5.31	7.6	198	456		7.1		11	94	487	7	98	310	150	0.56	2							104	1888	1.3	0.25	0.018	0.00					
9	6.62	6.61	7.5	155	256	16	7.2	7.2	16	90	882	7	97	386	180	0.87	2							111	1445	1.1	0.45	0.012	0.00					
10	5.62	5.58	7.4	126	150		7.1		17	87	792	7	95	326	130	0.54								110	1492	1.4	0.04	0.036	0.00					
11	5.33	5.31	7.3	162	146	15	7.1	7.4	14	91	620	8	95	354	130	0.54								110	1617	1.0	0.10	0.018	0.00					
12	5.35	5.32	7.4	144	158	15	7.2	7.2	14	90	621	7	96	311	150	0.60			3					112	1392	1.0	0.00	0.030	0.00					
13	5.14	5.12	7.2	175	192	15	7.2	6.7	12	93	512	7	96	299	170	0.54								119	1677	1.3	0.00	0.024	0.00					
14	4.83	4.81	7.7		324		7.2		12		482	6	98	241	160	0.72	2							121	1628	0.3	0.03	0.016	0.00					
15	5.18	5.15	7.6	155	178		7.2		15	90	644	7	96	300	120	0.59	3							126	1511	0.6	0.00	0.034	0.00					
16	7.14	7.11	7.2	125	219		7.2		14	89	830	7	97	415	170	0.65	14							128	1332	0.8	0.70	0.029	0.00					
17	7.35	7.33	7.2	100	114	14	7.1	7.2	11	89	672	7	94	428	140	0.64								115	1460	2.6	0.17	0.023	0.00					
18	4.89	4.85	7.3	130	116	14	7.1	7.3	11	92	445	8	93	324	130	0.57								110	1509	1.7	0.00	0.035	0.00					
19	5.78	5.76	7.4	155	160		7.2		8	95	384	6	96	288	140	0.57			4					119	1459	0.8	0.38	0.018	0.00					
20	6.58	6.56	7.2	130	167		7.1		16	88	876	6	96	328	160	0.61								124	1257	0.7	0.00	0.018	0.00					
21	6.72	6.68	7.5	170	114		7.2		10	94	558	9	92	502		0.49	4							118	1637	0.7	0.00	0.035	0.00					
22	6.54	6.52	7.5	145	142	14	7.2	7.1	11	92	598	6	96	326	100	0.78	3							118	1486	1.0	0.00	0.019	0.00					
23	7.33	7.29	7.4	275	328	14	7.2	7.3	12	96	730	7	98	426	110	0.35	10							129	1465	1.0	0.35	0.036	0.00					
24	7.56	7.54	7.3	200	171	15	7.2	7.3	15	93	943	8	95	503	170	0.55								138	1306	2.2	0.50	0.024	0.00					
25	8.35	8.32	7.2		138		8.6				9	93	625	170	0.61									152	1465	0.4	0.40	0.028	0.00					
26	8.58	8.56	7.2	105	114	14	7.2	7.1	11	90	785	9	92	643	150	0.55								168	1640	1.0	0.00	0.018	0.00					
27	8.56	8.54	7.2	100	134	14	7.2	7.6	10	90	712	8	94	570	170	0.55								167	1588	1.3	0.20	0.018	0.00					
28	7.91	7.87	7.5	130	158	15	7.2	7.4	11	92	722	8	95	525	160	0.20	2							162	1529	2.7	0.10	0.040	0.00					
29	7.75	7.72	7.5	120	175	17	7.2	8.2	10	92	644	6	97	386	130	0.27	7							152	1533	2.3	0.10	0.034	0.00					
30	15.65	15.62	7.3	80	166	16	7.1	7.4	16	80	2084	12	93	1563	230	0.74	8							151	1496	2.9	1.60	0.035	0.00					
1																																		
Max	15.65	15.62	7.7	306	634	17	8.6	8.2	19	96	2357	13	98	1613	230	0.87	14	5		0.0	0	0	0		168	1888	4.4	1.60	0.047	0.00	0.00	0.00	0.00	0.00
Min	4.83	4.81	7.1	80	110	14	7.0	6.7	8	80	384	5	92	241	100	0.20	2	3		0.0	0	0	0		104	1257	0.3	0.00	0.010	0.00	0.00	0.00	0.00	0.00
Avg	7.18	7.16		149	204	15		7.4	13	91	796	8	96	480	149	0.56	4	4		####	####	####	####		126	1492	1.5	0.23	0.026	0.00	####	####	####	####
Sum	215.45	214.67													4310													7.02	0.778	0.00				

PLANT EFFLUENT PERMIT STANDARDS: pH 6.0-9.0; Fecal Coli 200/100 CL2 Res. 1.0 (Daily Max)
*Sus Sol 20/ 30 mg/l Sus Sol Discharged 1384/ 2077 lbs
*BOD 20/ 30 mg/l BOD Discharged 1384/ 2077 lbs
*May 1 - October 31 / November 1 - April 30

I certify that I am familiar with the information contained in this report and that to the best of my knowledge such information is true and complete.

Name and Title: Larry K. Erickson
Operations Manager

Signature: *Larry K. Erickson*

Remarks: (Improvements, Operational Changes, Weed Control Programs, Etc.)

Influent BOD5 is a Blended Sample Sludge Hauled to Columbia Blvd WTP

All Test Data Subject to Variability of Test

Page 1									
Date Nov-94	Plant Effluent Nutrients				Flow		Weather		
	Total P	NH3-N	NO3 + NO2-N	TKN	Portland	Lake Oswego	Temperature		Precip
	mg/l	mg/l	mg/l	mg/l	mgd	mgd	Max o F	Min o F	"
11/1/94					5.18	9.74	52	39	0.80
11/2/94					2.93	5.62	52	34	0.05
11/3/94					2.61	4.09	52	33	0.00
11/4/94					2.60	4.47	49	39	0.55
11/5/94					2.35	4.10	55	36	0.00
11/6/94					2.24	3.73	54	34	0.00
11/7/94					2.33	3.37	55	37	0.25
11/8/94					2.10	3.23	46	33	0.25
11/9/94					2.42	4.20	59	38	0.45
11/10/94					2.03	3.59	47	35	0.04
11/11/94					2.01	3.32	44	39	0.10
11/12/94					2.02	3.33	53	40	0.00
11/13/94					1.97	3.17	56	40	0.00
11/14/94					1.82	3.01	51	42	0.03
11/15/94					2.01	3.17	55	41	0.00
11/16/94					3.19	3.95	49	39	0.70
11/17/94					3.04	4.31	46	32	0.17
11/18/94					2.20	2.69	39	30	0.00
11/19/94					2.33	3.45	47	33	0.38
11/20/94					2.57	4.01	52	32	0.00
11/21/94					3.20	3.52	44	30	0.00
11/22/94					2.21	4.33	44	30	0.00
11/23/94					2.25	5.08	45	34	0.35
11/24/94					2.32	5.24	51	42	0.50
11/25/94					3.02	5.33	47	35	0.40
11/26/94					2.57	6.01	46	35	0.00
11/27/94					2.56	6.00	50	39	0.20
11/28/94					2.36	5.55	51	39	0.10
11/29/94					2.64	5.11	53	42	0.10
11/30/94					6.81	8.84	55	48	1.60
12/1/94									
Max	0.00	0.00	0.00	0.00	6.81	9.74	59	48	1.60
Min	0.00	0.00	0.00	0.00	1.82	2.69	39	30	0.00
Avg	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	2.66	4.52	50	37	0.23
Sum					79.89	135.56			7.02

Page 2 Date Nov-94	PRIMARY TREATMENT													
	INFLUENT							EFFLUENT						
	Flow	Susp Sol.		BOD5		Pop	Temp	pH	Susp Sol.		BOD5		Det	No.
		mgd	mg/l	lbs	mg/l	lbs	Equiv	oC	mg/l	lbs	mg/l	lbs	Time hrs	Basins On
11/1/94	14.92	238	29615	120	14932	87835	16						1.5	4
11/2/94	8.55	450	32088	126	8985	52851	16	7.1					2.0	3
11/3/94	6.70	127	7097	120	6705	39443	16	7.1					2.5	3
11/4/94	7.07	634	37383	306	18043	106135	16	7.4					2.4	3
11/5/94	6.45	110	5917	120	6455	37972		7.2					2.6	3
11/6/94	5.97	137	6821	132	6572	38660		7.3					2.8	3
11/7/94	5.70	162	7701	162	7701	45301	17	7.5					4.0	4
11/8/94	5.33	456	20270	198	8802	51774		7.6					4.3	4
11/9/94	6.62	256	14134	155	8558	50339	16	7.5					4.3	5
11/10/94	5.62	150	7031	126	5906	34740		7.4					5.0	5
11/11/94	5.33	146	6490	162	7201	42360	15	7.3					4.3	4
11/12/94	5.35	158	7050	144	6425	37795	15	7.4					5.3	5
11/13/94	5.14	192	8231	175	7502	44128	15	7.2					5.5	5
11/14/94	4.83	324	13051					7.7					5.8	5
11/15/94	5.18	178	7690	155	6696	39389		7.6					5.5	5
11/16/94	7.14	219	13041	125	7443	43785		7.2					4.0	5
11/17/94	7.35	114	6988	100	6130	36058	14	7.2					3.9	5
11/18/94	4.89	116	4731	130	5302	31187	14	7.3					5.8	5
11/19/94	5.78	160	7713	155	7472	43952		7.4					4.9	5
11/20/94	6.58	167	9164	130	7134	41965		7.2					4.3	5
11/21/94	6.72	114	6389	170	9528	56045		7.5					4.2	5
11/22/94	6.54	142	7745	145	7909	46522	14	7.5					4.3	5
11/23/94	7.33	328	20051	275	16811	98890	14	7.4					3.9	5
11/24/94	7.56	171	10782	200	12610	74177	15	7.3					3.7	5
11/25/94	8.35	138	9610					7.2					2.7	4
11/26/94	8.58	114	8158	105	7514	44197	14	7.2					2.6	4
11/27/94	8.56	134	9566	100	7139	41994	14	7.2					2.6	4
11/28/94	7.91	158	10423	130	8576	50447	15	7.5					2.9	4
11/29/94	7.75	175	11311	120	7756	45625	17	7.5					2.9	4
11/30/94	15.65	166	21666	80	10442	61422	16	7.3					1.8	5
12/1/94														
Max	15.65	634	37383	306	18043	106135	17	7.7	0	0	0	0	5.8	5
Min	4.83	110	4731	80	5302	31187	14	7.1	0	0	0	0	1.5	3
Avg	7.18	204	12264	149	8652	50892	15		####	####	####	####	3.7	4
Sum	215.45		367908		242248				0		0			

Page 3												
	SECONDARY EFFLUENT											
Date	Flow	Susp Sol.		BOD5		FCSS		SBD	RSSS	Ovr-flow	pH	No.
Nov-94	mgd	mg/l	lbs	mg/l	lbs	mg/l	lbs	ft	mg/l	gpd / ft2		Basins
												On
11/1/94	14.87					2324	35278	7.2		986		2
11/2/94	8.52					1695	25730	2.4		565		2
11/3/94	6.68					1229	18656	1.8		443		2
11/4/94	7.06					1186	18003	1.5		468		2
11/5/94	6.43					2067	31377	2.3		426		2
11/6/94	5.95					1182	17943	1.6		394		2
11/7/94	5.67					1455	22087	2.2		376		2
11/8/94	5.31					1480	22466	1.6		352		2
11/9/94	6.61					1889	28675	2.8		438		2
11/10/94	5.58					1891	28705	2.5		370		2
11/11/94	5.31					1270	19279	1.6		352		2
11/12/94	5.32					1983	30102	2.1		353		2
11/13/94	5.12					1325	20114	1.9		339		2
11/14/94	4.81					1349	20478	1.8		319		2
11/15/94	5.15					1763	26762	2.3		341		2
11/16/94	7.11					1601	24303	2.5		472		2
11/17/94	7.33					1578	23954	1.7		486		2
11/18/94	4.85					1547	23483	1.9		322		2
11/19/94	5.76					1501	22785	2.1		382		2
11/20/94	6.56					1993	30254	2.1		435		2
11/21/94	6.68					1677	25457	1.8		443		2
11/22/94	6.52					1092	16577	1.2		433		2
11/23/94	7.29					837	12706	1.1		484		2
11/24/94	7.54					1132	17184	1.6		500		2
11/25/94	8.32					2005	30436	2.2		552		2
11/26/94	8.56					1083	16440	1.9		568		2
11/27/94	8.54					1455	22087	2.4		567		2
11/28/94	7.87					1451	22026	2.1		522		2
11/29/94	7.72					1687	25609	2.2		512		2
11/30/94	15.62					1462	22193	3.6		1036		2
12/1/94												
Max	15.62	0	0	0	0	2324	35278	7.2	0	1036		2
Min	4.81	0	0	0	0	837	12706	1.1	0	319		2
Avg	7.16	###	#####	###	#####	1540	23372	2.2	#DIV/0!	475		2
Sum	214.67		0		0							

											Fecal Coliform				
											Count	G Ave			
											25				
											14				
											600				
											570				
											5	35			
Page 4	PLANT EFFLUENT														
Date	FLOW	SUS SOL			BOD5			CL2					DO	Ph	FLOW
Nov-94															
	mgd	mg/l	lbs	% Rem	mg/l	lbs	% Rem	Contact hrs	Feed lbs/day	Res mg/l			mg/l	SU	mgd
11/1/94	14.87	13	1613	95	19	2357	84	1.1	170	0.60	2		7.2		0.00
11/2/94	8.52	8	568	98	16	1136	87	2.0	150	0.34	7		7.5	7.0	0.00
11/3/94	6.68	8	446	94	13	725	89	2.5	140	0.61			8.2	7.0	0.00
11/4/94	7.06	10	589	98	16	942	95	2.4	140	0.61			7.5	7.1	0.00
11/5/94	6.43	5	268	95	14	750	88	2.6	140	0.41		4		7.2	0.00
11/6/94	5.95	5	248	96	10	496	92	2.8	130	0.48				7.2	0.00
11/7/94	5.67	6	284	96	14	662	91	3.0	120		7		7.4	7.1	0.00
11/8/94	5.31	7	310	98	11	487	94	3.2	150	0.56	2		7.1		0.00
11/9/94	6.61	7	386	97	16	882	90	2.5	180	0.87	2		7.2	7.2	0.00
11/10/94	5.58	7	326	95	17	792	87	3.0	130	0.54			7.1		0.00
11/11/94	5.31	8	354	95	14	620	91	3.2	130	0.54			7.4	7.1	0.00
11/12/94	5.32	7	311	96	14	621	90	3.2	150	0.60		3	7.2	7.2	0.00
11/13/94	5.12	7	299	96	12	512	93	3.3	170	0.54			6.7	7.2	0.00
11/14/94	4.81	6	241	98	12	482		3.5	160	0.72	2		7.2		0.00
11/15/94	5.15	7	300	96	15	644	90	3.3	120	0.59	3		7.2		0.00
11/16/94	7.11	7	415	97	14	830	89	2.4	170	0.65	14		7.2		0.00
11/17/94	7.33	7	428	94	11	672	89	2.3	140	0.64			7.2	7.1	0.00
11/18/94	4.85	8	324	93	11	445	92	3.5	130	0.57			7.3	7.1	0.00
11/19/94	5.76	6	288	96	8	384	95	2.9	140	0.57		4	7.2		0.00
11/20/94	6.56	6	328	96	16	876	88	2.6	160	0.61			7.1		0.00
11/21/94	6.68	9	502	92	10	558	94	2.5		0.49	4		7.2		0.00
11/22/94	6.52	6	326	96	11	598	92	2.6	100	0.78	3		7.1	7.2	0.00
11/23/94	7.29	7	426	98	12	730	96	2.3	110	0.35	10		7.3	7.2	0.00
11/24/94	7.54	8	503	95	15	943	93	2.2	170	0.55			7.3	7.2	0.00
11/25/94	8.32	9	625	93				2.0	170	0.61				8.6	0.00
11/26/94	8.56	9	643	92	11	785	90	2.0	150	0.55		5	7.1	7.2	0.00
11/27/94	8.54	8	570	94	10	712	90	2.0	170	0.55			7.6	7.2	0.00
11/28/94	7.87	8	525	95	11	722	92	2.1	160	0.20	2		7.4	7.2	0.00
11/29/94	7.72	6	386	97	10	644	92	2.2	130	0.27	7		8.2	7.2	0.00
11/30/94	15.62	12	1563	93	16	2084	80	1.1	230	0.74	8		7.4	7.1	0.00
12/1/94															
Max	15.62	13	1613	98	19	2357	96	3.5	230	0.87	14.0	4.9	8.2	8.6	0.00
Min	4.81	5	241	92	8	384	80	1.1	100	0.20	2.0	3.0	6.7	7.0	0.00
Avg	7.16	8	480	96	13	796	91	2.5	149	0.56	4.1	4.0	7.4		0.00
Sum	214.67		14394			23092			4310						0.00

[illegible]

ater When Digesters Are Back On Line (Delete Heading Row In EL7)

Page 7	SLUDGE PROCESSING														
	Thickened Primary Sludge				WAS			Gravity Belt			TWAS			TPS + Twas	
	Date Nov-94	Dig Feed gal	Tot Sol %	Vol Sol %	Vol Content %	Flow mgd	Susp. mg/l	Sols lbs	Capture %	Filtrate mg/l	Poly lbs	Total Sols. %	lbs	Gal Hauled	Sludge Disp Off Site MGD
11/1/94					0.059	13340	6590					5.66	7921	16780	0.0468
11/2/94					0.058	16060	7811					6.06	7839	15510	0.0335
11/3/94					0.065	15770	8595					6.17	8388	16300	0.0163
11/4/94					0.036	19050	5772					4.12	3299	9600	0.0096
11/5/94					0.000		0						0	0	0.0240
11/6/94					0.000		0						0	0	0.0240
11/7/94					0.157	6252	8197					6.70	11919	21330	0.0273
11/8/94					0.000		0						0	0	0.0180
11/9/94					0.041	14480	4891					5.27	5076	11550	0.0116
11/10/94					0.037	13480	4165					5.16	4966	11540	0.0355
11/11/94					0.000	17050	0					6.64	0	0	0.0180
11/12/94					0.000		0						0	0	0.0300
11/13/94		5.26	3.61	68.6	0.000		0						0	0	0.0240
11/14/94					0.058	13053	6269					5.57	7368	15860	0.0159
11/15/94					0.054	15750	7094					5.58	7362	15820	0.0338
11/16/94					0.040	17428	5815					5.27	5024	11430	0.0294
11/17/94					0.026	14880	3237					6.23	2790	5370	0.0234
11/18/94					0.045	17640	6669					5.90	6918	14060	0.0351
11/19/94					0.000		0						0	0	0.0180
11/20/94					0.000		0						0	0	0.0180
11/21/94					0.055	15830	7288					5.34	7598	17060	0.0351
11/22/94					0.070	15808	9230					5.79	8977	18590	0.0186
11/23/94					0.074	18624	11440					5.63	8489	18080	0.0361
11/24/94					0.019	14020	2165					4.82	2307	5740	0.0237
11/25/94					0.034	14650	4144					4.87	4021	9900	0.0279
11/26/94					0.000		0						0	0	0.0180
11/27/94					0.000		0						0	0	0.0180
11/28/94					0.015	14020	1803					5.87	11005	22480	0.0405
11/29/94					0.051	16110	6913					5.95	7835	15790	0.0338
11/30/94					0.064	12564	6724					4.92	6783	16530	0.0345
12/1/94															
Max	0	5.26	3.61	68.6	.157	19050	11440	0.00	0			6.70	11919	22480	0.047
Min	0	5.26	3.61	68.6	.000	6252	0	0.00	0			4.12	0	0	0.010
Avg	#DIV/O!	5.26	3.61	68.6	.035	15041	4160	#DIV/O!	#DIV/O!			5.60	4530	9644	0.026
Sum	0				1.059		124812						135885	289320	0.778

MONTHLY REPORT SUMMARY

PRIMARY TREATMENT

Influent		Effluent		Rem	Primary			
	mg/l	lbs/ day	mg/l	lbs/ day	%	Feed Sludge		
S S	204	12264	#DIV/0!	#DIV/0!	#DIV/0!	Flow gal/ day	Total Solids %	Volatile Content %
BOD5	149	8652	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	5.26	68.6
Detent Time hrs		Population Equivalent		Flow mgd	Precip "			
3.7		50892		7.18	7.02			
SECONDARY TREATMENT								
Influent		Effluent		Rem				
	mg/l	lbs/ day	mg/l	lbs/ day	%			
S S	204	12264	8	480	96			
BOD5	149	8652	13	796	91			
F/M	SVI		SRT days		MLSS mg/l			
#DIV/0!	126		8.9		1492			
RAS Flow mgd		CL2 Res mg/l		CL2 Feed lbs/day				
0.62		0.6		149				
WAS Flow mgd		Aerator Detention Time hrs		Aerator DO mg/l				
.035		4.8		1.5				
						Vol Sol Reduct %		