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MEMORANDUM

March 5, 1975

State of Washington
Department of Ecology

TO: VERN MEINZ

FROM: HANS CREGG

SUBJECT: Ilwaco STP

On December 11, 1974, an efficiency study was conducted at the Ilwaco sewage treatment plant.

The plant is fenced and well-maintained. Lab results indicate that secondary BOD and suspended solids criteria are being met. Coliform levels were extremely high until it was suggested that the operator increase his chlorine flow. It can be readily seen (see report form) that this action resulted in a significant drop in coliform levels. Reductions on a percentage basis were not computed since it is obvious that not the influent but the returned sludge was being sampled.

HJC:bj

STP Survey Report Form

Efficiency Study

City Ilwaco Plant Type Secondary Pop. Served 600 Design Capacity 600

Receiving Water _____ Perennial _____ Intermittent _____

Date 12/11/74 Survey Period 8 hours Survey Personnel H. J. Cregg

Comp. Sampling Frequency hourly Sampling Alequot 1000 mls

Weather Conditions (24 hr) _____ Are facilities provided for complete by-pass of raw sewage? _____ Yes _____ No/Frequency of bypass _____

Reason for bypass _____ Is bypass chlorinated? _____ Yes _____ No

Was DOE Notified? _____ Discharge - Intermittent _____ Continuous _____

Plant Operation

Total flow 120,000 GPD How measured Totalizer

Maximum flow _____ Time of Max. _____

Minimum flow _____ Time of Min. _____

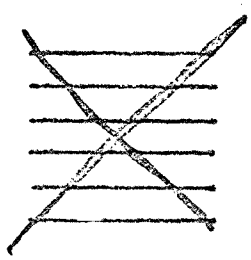
Pre Cl_2 _____ #/day Post Cl_2 _____ #/day

Field Results

	Influent				Effluent			
Determinations	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp °C	14	13		14	13			13
pH (Units)	5.5	5.0		5.3	5.4	5.2		5.2
Conductivity (µmhos/cm^2)	350	250		300	300	300		300
Settleable Solids (mls/l)	160	150	150	150	NEG	NEG	NEG	NEG

Laboratory Results on Composites

	Influent	Effluent	% Reduction
Laboratory No.	74-4843	74-4844	
5-Day BOD ppm	>810	28	
COD ppm	2650	30	
T.S. ppm	2690	215	
T.N.V.S. ppm	956	124	
T.S.S. ppm	2696	19	
N.V.S.S. ppm	894	1	
pH (Units)	6.3	6.2	
Conductivity (µmhos/cm^2)	280	280	
Turbidity (JTU's)	600	12	



Laboratory Bacteriological Results

Lab No.	Sampling Time	Colonies/100 ml (MF) Total Coliform	Fecal Coliform	Fecal Strep	Cl_2 Residual	
74-4845	1100	Est 44000	1200		.0	.1
74-4846	1200	Est 50000	1200		.0	.0
74-4847	1400	Est 120	<10		.75	<1.0
74-4848	1500	Est 20	<10		>1.0	>1.0

Additional Laboratory Results

NO_3-N ppm -	11.08
NO_2-N ppm -	0.02
NH_3-N ppm -	0.22
T. Kjeldahl-N ppm -	3.00
O-PO_4-P ppm -	1.10
T-PO_4-P ppm -	1.60

Operator's Name Larry Wallin Phone No. 642-3598

Furnish a flow diagram with sequence and relative size and points of chlorination.

Type of Collection System

__ Combined __ Separate __ Both

Estimate flow contributed by surface or ground water (infiltration)

_____ MGD

Plant Loading Information

Annual average daily flow rate(mgd)

Dry _____

Wet _____

Peak flow rate(mgd)

Dry _____

Wet _____

COMMENTS: _____

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO: H.J. Creel
COPIES TO:
LAB FILES

DATA SUMMARY

Source Ilwaco STP — Collected By HJC

Date Collected 12-11-74 — Goal, Pro./Obj.

Log Number:	74-4843	44	45	46	47	48					STORET
Station:	INF	EFF	1100	1200	1400	1500					
pH	6.3	6.2									00403
Turbidity (JTU)	600	12									00070
Conductivity (umhos/cm)@25°C	280	280									00095
COD	2650	30									00340
BOD (5 day)	>810	28									00310
Total Coliform (Col./100ml)			EST 44,000	EST 50,000	EST 120	EST 20					31504
Fecal Coliform (Col./100ml)			1200	1200	<10	<10					31616
NO3-N (Filtered)		11.08									00620
NO2-N (Filtered)		.02									00615
NH3-N (Unfiltered)		.22									00610
T. Kjeldahl-N (Unfiltered)		3.00									00625
O-PO4-P (Filtered)		1.10									00671
Total Phos.-P (Unfiltered)		1.60									00665
Total Solids	2690	215									00500
Total Non Vol. Solids	956	124									
Total Suspended Solids	2696	19		15		15					00530
Total Sus. Non Vol. Solids	894	1									

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
Convert those marked with a * to PPB (PPM X 10^3) prior to entry into STORET

Summary By Stephen D. Ball — Date 1-9-75