

MEMORANDUM

April 8, 1975

To: Jim Milton

From: Dan Glantz *DG*

Subject: Toppenish Municipal STP Efficiency Study

The study was conducted on January 14, 1975. There was some snow on the ground. The weather was cool and overcast, but not freezing.

The plant appears to be well operated with competent personnel. Performance is within the limitations of the present permit. The results are shown on the attached summary sheet.

Exception should be taken to the first (Lab #75-235) total coliform count. It was probably a poor sample or was mishandled in the process.

DG:ee  
Attachment

STP Survey Report Form

Efficiency Study

City Toppenish Plant Type Secondary Pop. Served 6,000 Design 3 MGD  
 Receiving Water Yakima River Perennial  Intermittent \_\_\_\_\_  
 Date 1/14/75 Survey Period 0930 - 1200 Survey Personnel Dan Glantz  
 Comp. Sampling Frequency 1/2 hour Sampling Alequot 1000 ML (adjusted)  
 Weather Conditions (24 hr) Overcast-cool Are facilities provided for complete by-  
 pass of raw sewage?  Yes \_\_\_\_\_ No/Frequency of bypass \_\_\_\_\_  
 Reason for bypass Power failure Is bypass chlorinated? \_\_\_\_\_ Yes \_\_\_\_\_ No  
 Was DOE Notified? \_\_\_\_\_ Discharge - Intermittent \_\_\_\_\_ Continuous \_\_\_\_\_

Plant Operation

Total flow 2,165,000 (4 hr) How measured Recorder  
 Maximum flow 562,000 Time of Max. 1100  
 Minimum flow 523,000 Time of Min. 0930  
 Pre Cl<sub>2</sub> \_\_\_\_\_ #/day Post Cl<sub>2</sub> \_\_\_\_\_ #/day

Field Results

Influent

Effluent

<u>4</u> Determinations	<u>Influent</u>			<u>Effluent</u>				
	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp °C	13°	13°		13°	10°	6°		7.5°
pH (Units)	7.8	7.4		7.7	6.9	6.8		6.7
Conductivity (µmhos/cm <sup>2</sup> )	850	775		790	775	740		745
Settleable Solids (mls/l)	1.1	1.1	1.1	1.1	TR	TR	TR	TR

Laboratory Results on Composites

Laboratory No.	<u>Influent</u>	<u>Effluent</u>	% Reduction
	<u>75-233</u>	<u>75-234</u>	
5-Day BOD ppm	<u>160</u>	<u>54</u>	<u>66%</u>
COD ppm	<u>258</u>	<u>100</u>	<u>61%</u>
T.S. ppm	<u>553</u>	<u>408</u>	<u>26%</u>
T.N.V.S. ppm	<u>287</u>	<u>263</u>	<u>8%</u>
T.S.S. ppm	<u>304</u>	<u>34</u>	<u>89%</u>
N.V.S.S. ppm	<u>22</u>	<u>ND</u>	<u>100%</u>
pH (Units)	<u>8.0</u>	<u>7.7</u>	
Conductivity (µmhos/cm <sup>2</sup> )	<u>750</u>	<u>660</u>	
Turbidity (JTU's)	<u>56</u>	<u>25</u>	

Laboratory Bacteriological Results

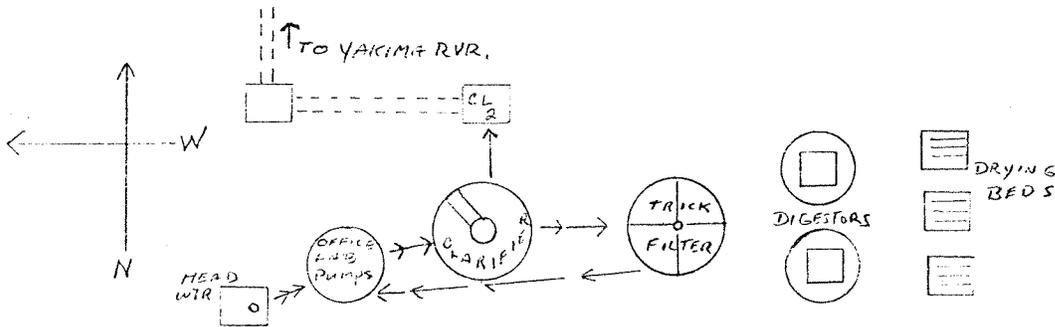
Lab No.	Sampling Time	Colonies/100 ml (MF)			Cl <sub>2</sub> Residual
		Total Coliform	Fecal Coliform	Fecal Strep	
75-235	1000	18,400	(Est) 40		.75 & 1.00
75-236	1045	(Est) 1,000	" 20		.75 & 1.00
75-237	1130	" 350	" 40		.75 & 1.00
75-238	1200	" 1,000	< 10		.75 & 1.00

Additional Laboratory Results

NO <sub>3</sub> -N ppm -	.95
NO <sub>2</sub> -N ppm -	.03
NH <sub>3</sub> -N ppm -	17.00
T. Kjeldahl-N ppm -	20.20
O-PO <sub>4</sub> -P ppm -	5.40
T-PO <sub>4</sub> -P ppm -	6.60

Operator's Name Ken Gibbons Phone No. \_\_\_\_\_

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)

Peak flow rate (mgd)

Dry \_\_\_\_\_

Dry \_\_\_\_\_

Wet \_\_\_\_\_

Wet \_\_\_\_\_

COMMENTS: \_\_\_\_\_

