

M E M O R A N D U M

February 18, 1975

State of
Washington
Department
of Ecology



TO: VERN MEINZ
FROM: HANS CREGG
SUBJECT: Toledo ~~STP~~ LAGOON

On December 11, 1974, effluent grab samples were taken at the Toledo sewage treatment lagoon. No influent samples could be taken, because the sampling area proved to be inaccessible.

Laboratory results show low coliform levels--total <20, fecal <10--and a BOD of 47 ppm. Total solids are 269 ppm of which 152 ppm can be attributed to T.N.V.S.

STP Survey Report Form

Efficiency Study

City Toledo Plant Type lagoon Pop. Served _____ Design Capacity _____
 Receiving Water _____ Perennial _____ Intermittent _____
 Date Dec 11, 1974 Survey Period _____ Survey Personnel Hans Creutz
 Comp. Sampling Frequency _____ Sampling Alequot _____
 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 _____ How measured _____
 Maximum flow _____ Time of Max. _____
 Minimum flow _____ Time of Min. _____
 Pre Cl₂ _____ #/day Post Cl₂ _____ #/day

Field Results

Determinations	Influent				Effluent			
	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp °C					9.0	9.0		9.0
pH (Units)					7.0	6.8		7.0
Conductivity (µmhos/cm ²)					350	300		300
Settleable Solids (mls/l)					NEG	NEG	NEG	NEG

Laboratory Results on Composites

	Influent	Effluent	% Reduction
Laboratory No.	_____	<u>74-4838</u>	
5-Day BOD ppm	_____	<u>47</u>	_____
COD ppm	_____	<u>92</u>	_____
T.S. ppm	_____	<u>269</u>	_____
T.N.V.S. ppm	_____	<u>152</u>	_____
T.S.S. ppm	_____	<u>32</u>	_____
N.V.S.S. ppm	_____	<u>N.D.</u>	_____
pH (Units)	_____	<u>7.5</u>	_____
Conductivity (µmhos/cm ²)	_____	<u>370</u>	_____
Turbidity (JTU's)	_____	<u>15</u>	_____

Laboratory Bacteriological Results

Lab No.	Sampling Time	Colonies/100 ml (MF)			Cl ₂ Residual	
		Total Coliform	Fecal Coliform	Fecal Strep		
74-4839	1000	< 20	< 10		.2	1.0
74-4840	1100	< 20	< 10		.2	1.0
74-4841	1300	< 20	< 10		.15	.75
74-4842	1400	< 20	< 10		.2	.75

Additional Laboratory Results

NO ₃ -N ppm -	.06	
NO ₂ -N ppm -	N.D.	
NH ₃ -N ppm -	10	
T. Kjeldahl-N ppm -	13.4	
O-PO ₄ -P ppm -	2.80	
T-PO ₄ -P ppm -	3.20	

Operator's Name _____ 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: _____

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

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. A. W. Moore...
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.....
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LAB FILES.....

WATER QUALITY LABORATORY

DATA SUMMARY

Source Toledo STP

Collected By AWM

Date Collected 12-11-74

Goal, Pro./Obj. _____

Log Number:	<u>74-4838</u>	<u>39</u>	<u>40</u>	<u>41</u>	<u>42</u>						STORET
Station:	<u>eff.</u>	<u>1000</u>	<u>1100</u>	<u>1300</u>	<u>1400</u>						
pH	<u>7.5</u>										<u>00403</u>
Turbidity (JTU)	<u>15.</u>										<u>00070</u>
Conductivity (umhos/cm) ^{@25°C}	<u>370.</u>										<u>00095</u>
COD	<u>92.</u>										<u>00340</u>
BOD (5 day)	<u>47.</u>										<u>00310</u>
Total Coliform (Col./100ml)		<u><20</u>	<u><20</u>	<u><20</u>	<u><20</u>						<u>31504</u>
Fecal Coliform (Col./100ml)		<u><10</u>	<u><10</u>	<u><10</u>	<u><10</u>						<u>31616</u>
NO3-N (Filtered)	<u>0.06</u>										<u>00620</u>
NO2-N (Filtered)	<u>ND</u>										<u>00615</u>
NH3-N (Unfiltered)	<u>10.</u>										<u>00610</u>
T. Kjeldahl-N (Unfiltered)	<u>13.4</u>										<u>00625</u>
O-PO4-P (Filtered)	<u>2.80</u>										<u>00671</u>
Total Phos.-P (Unfiltered)	<u>3.20</u>										<u>00665</u>
Total Solids	<u>269.</u>										<u>00500</u>
Total Non Vol. Solids	<u>152.</u>										
Total Suspended Solids	<u>32.</u>										<u>00530</u>
Total Sus. Non Vol. Solids	<u>ND.</u>										

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
Convert those marked with a * to PPB (PPM X 10³) prior to entry into STORET

Summary By I. Taylor D. Roll Date 1-6-75