October 7, 1974

## Publication No. 74-e18

WA-37-1020

Memo to: James Milton

From: Hans Cregg

Subject: Mabton STP

On February 27, 1974, an efficiency study was conducted at the Mabton Sewage Treatment Plant. The plant is operated in an efficient and conscientious manner. The operator, although he possesses very little test equipment, makes good use of those items and methods at his disposal. Lab results indicate a 76% reduction in BOD and an extremely low coliform count (see data summary). There is very little reduction in total solids and COD. Any recommendations for improvement should focus upon these two parameters.

HC:jmh



## Efficiency Sty

City Mabton P	lant Type Prima	ry Pop	Served	_1056I	)esign <u>l</u> 'apacity	050		
Receiving Water Ya	kima River	Perenni	al <u>X</u>	Intermittent		analysis a statisticant and statistical second and		
Date 2/27/74 Surv	ey Period	B hours	Survey Pe	ersonnel <u>Har</u>	<u>is Cregg</u>	<b></b>		
Comp. Sampling Freq	uency 1/2 hour	Sampl	ing Aleque	ot <u>1000</u>	mls.			
Weather Conditions	(24 hr) <u>Fair</u>	Are f	acilities	provided fo	or complet	te b <u>r</u> -		
pass of raw sewage?	YesX	_No/Frequ	ency of by	pass <u>Never</u>	occurred	<u>11 (1 </u>		
Reason for bypass		Is by	pass chlor	rinated?	Yes	No		
Was DOE Notified?	Discharg	ge - Inter	mittent	Conti	.nuous			
	Plant	Operation	1					
Total flow		_ How mea	sured					
Maximum flow		_ Time of	Max	na an a				
Minimum flow		_ Time of	<u>Min.</u>			Mit Course of the Course of th		
Pre Cl <sub>2</sub>	#/day	Post Cl	2	15	15 #/day			
	Field	l Results						
		lent		Ff	luent			
Determinations			Modian	Max. Min. Mean Mediar				
Temp °C	13.0 12.0	medii	13.0	14.0 12.0	4	13.0		
pH (Units)	7.6 7.0		7.4	7.2 6.4		7.2		
Conductivity (µmhos/cm <sup>2</sup> )	1400 1200			1400 1250		1300		
Settleahle Scilas mls,'l)	6 5	5.5	5	.7 .3				
	Laboratory Res	sults on C	omposites					
	Influent	Efflu	ent	% Reduct	ion			
Laboratory No.	74-584	74-58	35					
5-Day BOD ppn	180		13	76				
COP ppn I	<u> </u>	33	7]	12				
T.N.V.C. ppn T.S.S. ppn	<u> </u>		30 92	4 50	and the second			
N.V.S.S. pph pH (Units)	32		3 7.3	60				
Conductivity (µmhos/cm <sup>2</sup> )	910							
Turbidity (JTU's)	81		55					

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the second contract		 · · · · · · · · · · · · · · · · · · ·		· · · ·	 

Lap	am,/1111	ೆ ರಿಂ	piona(-s/10) m	$Cl_2$ Reside	LAL	
	'1 ⊥M⊂	Totai	Fecal	Fecal	÷	
		Coliform	Coliform	Strep	15 sec	3 min.
74-586	0900	< 20	<10	1	.2	1.0 *
587	1100	<b>≺</b> 20	<10		.3	1.0
588	1330	< 20	<10		.1	.75
589	1430	<b>≺</b> 20	< 10		1	.75
590	1500	<b>&lt;</b> 20	<10		.1	.75
591	1530	<b>≺</b> 20	<u> &lt;10</u>		.3	1.0

## Additional Laboratory Results

NO3-N ppm -		
NO <sub>2</sub> -N ppm -		
NH <sub>3</sub> -N ppm -	21.3	
T. Kjeldahl-N ppm -	28.9	
O-PO4-P ppm -		
T-PO <sub>4</sub> -P ppm -		

Operator's Name\_\_\_\_\_\_Phone No.\_\_\_\_\_

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

## Type of Collection System

Compined Separate Both	Estimate tlov .t face of grou					
<u>Plant Loading In</u>	formation					
era e delli flow rate(mgd)	Peak flow rate (mgd)					
	Dry					
	Wet					

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		WATE	R QUAL	ITY LA	BORATC	RY			• • • •	• • • • • • • • • • • • • • • •
	DATA SUMMARY								ILES	
Source MASTON ST		-				Co	llecte	d By	ANS C	REG.g
Date Collected $2/27/74$ Goal, Pro./Obj										
Log Number: 74-	584	585	586	587	588	539	590	591		STORET
Station:	INE	EFF	2700	1100	1330	1430	1500	1530		
рН	7.5	7.3		ļ						00403
Turbidity (JTU)	81	55					 			00070
Conductivity (umhos/cm)@25C	910	360								00095
COD	307	<u>33/</u>								00340
BOD (5 day)	180	43								00310
Total Coliform (Col./100m1)			<u> </u>	120	120	120	<u> </u>	120		31504
Fecal Coliform (Col./100m1)		· ·	<u> 10</u>	<u> &lt;10</u>	<u> &lt;10</u>	<10	210	~10		31616
NO3-N (Filtered)						. <u> </u>		·		00620
NO2-N (Filtered)										00615
NH3-N (Unfiltered)		21.3				-				00610
<u>T. Kjeldahl-N (Unfiltered)</u>		28.9								00625
O-PO4-P (Filtered)										00671
Total PhosP (Unfiltered)										00665
Total Solids	648	571						·		00500
Total Non Vol. Solids	396	380								
Total Suspended Solids	184	92								00530
Total Sus. Non Vol. Solids	32_	_ <u></u>								
							[			
					<b> </b>		[			_
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Note: All results are in PPM unless otherwise specified. ND is 'None Detected'' Convert those marked with a \* to PPB (PPM X 10<sup>3</sup>) prior to entry into STORET

Summary By Mary Kilcom Date 3/26/74