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M E M O R A N D U M

January 13, 1976

To: Mark Premo

From: Allen Moore

Subject: North Bend STP

Grab samples were taken from the North Bend primary STP on October 27, 1975 for coliforms and on November 10, 1975 for the normal survey parameters (see attached lab sheets).

No accurate flow measurements could be taken. The only possible place for flow measurements is at the ground level next to the clarifier. The effluent is flowing very fast because of an approximate eight foot drop from the top of the clarifier to ground level. The flow is also very erratic as it takes a 90 degree turn at this point. Attempts at flow measurements were made with a Marsh-McBirney type, a Pygmy type and a portable 'V' notch weir. All were ineffective.

The parameters show typical values of this highly overloaded primary system. The BOD reduction is only 43 percent and total solids (T.S.) reduction was only 16 percent.

On October 27, chlorination, if any, was ineffective and on November 10, the chlorination apparatus had already been down since November 7.

The operator says that the sludge is never pumped from the digester.

AWM:ee

STP Survey Report Form

Efficiency Study

City North Bend Plant Type Primary Pop. Served _____ Design Capacity _____

Receiving Water Snoqualmie River Perennial X Intermittent _____

Date 11 Nov. 75 Survey Period Grab Survey Personnel Darrel Anderson

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 Cl_2 _____ #/day Post Cl_2 _____ #/day

Field Results

___Determinations	Influent Max.	Influent Min.	Influent Mean	Influent Median	Effluent Max.	Effluent Min.	Effluent Mean	Effluent Median
Temp °C								
pH (Units)								
Conductivity (µmhos/cm^2)								
Settleable Solids (mls/l)								

Laboratory Results on Composites

	Influent	Effluent	% Reduction
Laboratory No.	75-5153	75-5154	
5-Day BOD ppm	35	20	43
COD ppm	67	40	30
T.S. ppm	127	107	16
T.N.V.S. ppm	83	77	7
T.S.S. ppm	15	13	13
N.V.S.S. ppm	< 1	< 1	--
pH (Units)	6.8	6.8	
Conductivity (µmhos/cm^2)	170	150	
Turbidity (JTU's)	11	8	

Laboratory Bacteriological Results

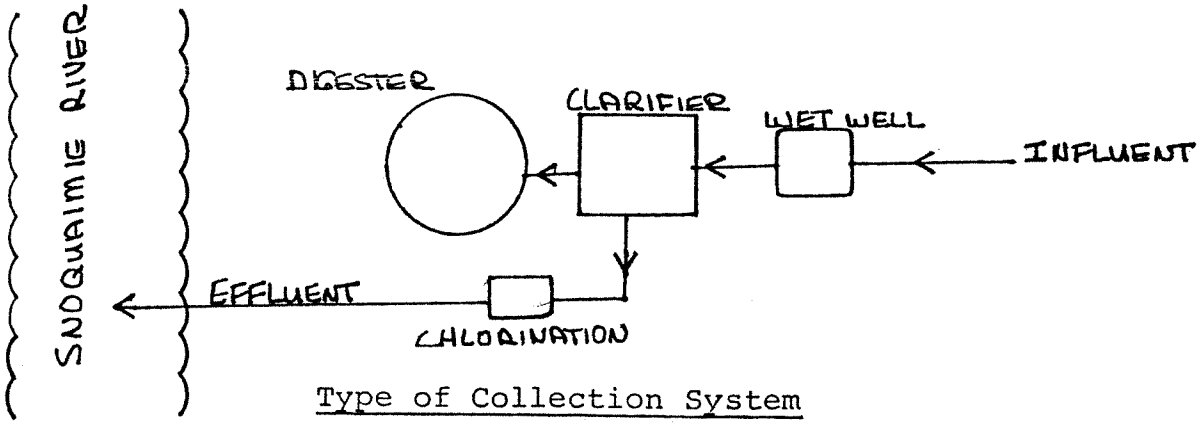
Lab No.	Sampling Time	Colonies/100 ml (MF) Total Coliform	Fecal Coliform	Fecal Strep	Cl_2 Residual
75-5018	1030 27 Oct.	>40,000	10,000 est		
75-5019	1230 27	>40,000	8,800 est		
75-5154	0930 - Nov.11	>40,000	150 est		

Additional Laboratory Results

NO_3-N ppm -	0.28
NO_2-N ppm -	0.01
NH_3-N ppm -	3.10
T. Kjeldahl-N ppm	-4.90
O-PO_4-P ppm -	0.68
T-PO_4-P ppm -	1.25

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)

50% 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: Awn

COPIES TO:

LAB FILES

DATA SUMMARY

Source North Bend STP Collected By A. Moore

Date Collected 10-27-75

Log Number: 75- 5018 19 20 21

Station:	eff 1030	eff 1230	UPST. 1400	DNST. 1400								
pH												
Turbidity (JTU)												
Conductivity (umhos/cm)@25C												
COD												
BOD (5 day)												
Total Coliform (Col./100ml)	>40,000	>40,000	580	EST 9100								
Fecal Coliform (Col./100ml)	EST 10,000	EST 8,800	EST 4	EST 140								
NO3-N (Filtered)												
NO2-N (Filtered)												
NH3-N (Unfiltered)												
T. Kjeldahl-N (Unfiltered)												
O-PO4-P (Filtered)												
Total Phos.-P (Unfiltered)												
Total Solids												
Total Non Vol. Solids												
Total Suspended Solids												
Total Sus. Non Vol. Solids												

Note: All results are in PPM unless otherwise specified. ND is "None Detected"

Summary By Taylor D. Ackl Date 11-3-75

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

DA

COPIES TO:

LAB FILES

DATA SUMMARY

Source North Bend STP

Collected By D. Andersen

Date Collected 11-10-75

Log Number: 75- 5153 54 55

Station:	INF	eff										
pH	6.8	6.8										
Turbidity (JTU)	11.	8.										
Conductivity (umhos/cm)@25C	170.	150.										
COD	67.	40.										
BOD (5 day)	35.	20.										
Total Coliform (Col./100ml)			>40,000									
Fecal Coliform (Col./100ml)			est 150									
NO3-N (Filtered)		0.28										
NO2-N (Filtered)		0.01										
NH3-N (Unfiltered)		3.1										
T. Kjeldahl-N (Unfiltered)		4.9										
O-PO4-P (Filtered)		0.68										
Total Phos.-P (Unfiltered)		1.25										
Total Solids	127	107.										
Total Non Vol. Solids	83	77.										
Total Suspended Solids	15	13										
Total Sus. Non Vol. Solids	<1.	<1.										

Note: All results are in PPM unless otherwise specified. ND is "None Detected"

Summary By Taylor D. Rell Date 11-20-75