

M E M O R A N D U M

May 5, 1976

To: Tom Coleman

From: Douglas Houck

Subject: East Wenatchee STP
Class II Inspection

On December 3 I met John Hodgson and Tom Coleman of DOE at the East Wenatchee sewage treatment plant. I arrived late due to the conditions of the passes. Composite samplers were set up to sample the influent and effluent. The location of the influent sampler was at the beginning of the head works just before the grit chamber. The location of the effluent sampler was at the end of the chlorine contact chamber. A 250 ml sample was taken every 30 minutes by both samplers. No bacteriological samples were taken since I had arrived too late to be able to bring the samples back to DOE's laboratory on time. The pH of the influent and effluent was 7.9 and 7.1 respectively.

The plant's laboratory procedures were reviewed and found to be acceptable except that outdated MF ampules were being used for the fecal coliform data. The operator said that he would order new ampules.

I returned on the 4th to pick up and split the composite samples and check their flow measuring device. The influent composite had significant amounts of wasted sludge from the last two hours of sampling. This most likely biased the composite sample resulting in the high BOD₅ and T.S.S. influent concentrations. Due to the awkward position of the plant's four foot Cippolletti weir and the fact that the flow recorder ran out of ink at the time the check was made, only a rough comparison could be made. This rough check on the plant's Sparling turbine type flow meter located just before the chlorine contact chamber showed that it was functioning correctly.

The composite samples were split and analyzed. The following table gives both DOE's and the city's results along with their NPDES weekly average effluent limitations.

(mg/l)	<u>DOE</u>		<u>E. Wenatchee</u>		<u>NPDES Permit</u>
	Influent	Effluent	Influent	Effluent	Effluent
BOD ₅	370	9	380	16	45
T.S.S.	288	28	334	23	45
NO ₃ -N (Filtered)		1.4			
NO ₂ -N (Filtered)		0.03			
NH ₃ -N (Unfiltered)		0.17			
O-PO ₄ -P (Filtered)		8.5			
T.P.-P (Unfiltered)		9.7			

As can be seen from the above table the plant is well within their effluent limitations.

DH:ee

STP Survey Report Form

Efficiency Study

City E. Wenatchee Plant Type Secondary Pop. Served _____ Design Capacity _____
 Receiving Water Columbia River Perennial Intermittent _____
 Date 12-3/4-75 Survey Period 24 hr. Survey Personnel Houck, Hodgson, Coleman
 Comp. Sampling Frequency 30 min. Sampling Alequot 250 ml
 Weather Conditions (24 hr) clear, cold 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				16.3				
pH (Units)				7.9				7.1
Conductivity (µmhos/cm ²)								
Settleable Solids (mls/l)								

Laboratory Results on Composites

	Influent	Effluent	% Reduction
Laboratory No.	_____	_____	
5-Day BOD ppm	370	9	98%
COD ppm	_____	_____	_____
T.S. ppm	_____	_____	_____
T.N.V.S. ppm	_____	_____	_____
T.S.S. ppm	288	28	90%
N.V.S.S. ppm	_____	_____	_____
pH (Units)	_____	_____	_____
Conductivity (µmhos/cm ²)	_____	_____	_____
Turbidity (JTU's)	_____	_____	_____

Laboratory Bacteriological Results

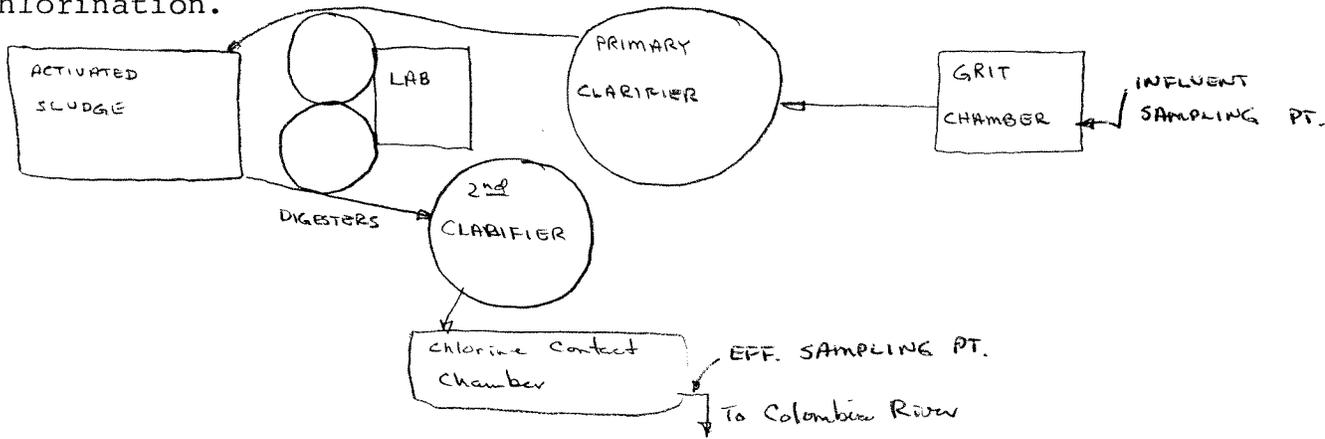
Lab No.	Sampling Time	Colonies/100 ml (MF)			Cl ₂ Residual
		Total Coliform	Fecal Coliform	Fecal Strep	

Additional Laboratory Results

NO ₃ -N ppm -	1.4
NO ₂ -N ppm -	0.03
NH ₃ -N ppm -	0.17
T. Kjeldahl-N ppm -	
O-PO ₄ -P ppm -	8.5
T-PO ₄ -P ppm -	9.7

Operator's Name Otis Phone No. 8-509-884-6111

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: _____

DEPARTMENT OF ECOLOGY

OLYMPIA LABORATORY

DATA SUMMARY

ORIGINAL TO: D.H.
 COPIES TO:

 LAB FILES.....

Source EAST WENATCHEE STP

Collected By D. Houck

Date Collected 12-31-75

Log Number: 75-5538 39

Station:	INF	EFF							
pH									
Turbidity (NTU)									
Sp. Conductivity (umhos/cm)									
COD									
BOD (5 day)	370.	9.							
Total Coliform (Col./100ml)									
Fecal Coliform (Col./100ml)									
NO3-N (Filtered)		1.4							
NO2-N (Filtered)		.03							
NH3-N (Unfiltered)		0.17							
T. Kjeldahl-N (Unfiltered)									
O-PO4-P (Filtered)		8.5							
Total Phos.-P (Unfiltered)		9.7							
Total Solids									
Total Non. Vol. Solids	33A	23							
Total Suspended Solids	288.	28.							
Total Sus. Non Vol. Solids									

Note: All results are in PPM (mg/L) unless otherwise specified. ND is "None Detected"
 "<" is "Less Than" and ">" is "Greater Than"