

MEMORANDUM

Department

Publication No. 72-e45

WA-39-1110

Check


TO: Dan Neal

DATE: May 8, 1972

FROM: Gary Rothwell

SUBJECT: Selah S.T.P.

A six hour survey was conducted at the Selah STP on April 18, 1972. There were no major problems encountered during the survey except an air lock in the digester-clarifier line which was corrected immediately. Sediment from the clarifier was stirred up, however, and sampling was discontinued for one hour (one composite sample) until the clarifier was clear.

The storm drain in the plant was sampled every halfhour and the results are listed below. The water appeared very clear all through the day except for a short period at approximately 1330. I was able to take a special coliform sample and the regular composite sample and then the water became clear again. I would suspect that any unusual values in the composite sample were due to this occurrence.

pH	Cond.	Turb.	BOD	COD	T.S.	T.S.S.	T.N.U.S.	T.N.U.S.S.	T. Colif.	F. Colif.
7.9	588	3	2	27	357	2	234	0	2500	270

GR:bj

## STP SURVEY REPORT FORM

## (EFFICIENCY STUDY)

City Selah Plant Type Act. Sludge Population 3500 Design 3000  
 Served Capacity  
 Receiving Water Yakima River Engineer Dan Neal  
 Date 4-18-72 Survey Period 0900 - 1530 Survey Personnel Gary Rothwell  
 Comp. Sampling Frequency 1/2 hour Weather Conditions Dry  
 (last 48 hours)  
 Sampling Alequot 200 ml/100,000 Gal.

## PLANT OPERATION

Total Flow 124,000 Gal. How Measured Totalizer  
 Max. (Flow) 5 mg/d Time of Max. 0930 Min. 3.5 mg/d Time of Min. 1330  
 Pre Cl<sub>2</sub> --- l/day Post Cl<sub>2</sub> 40 l/day

## FIELD RESULTS

Determinations	Influent				Effluent			
	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp. °C	18.5	17.6	18.0	18.1	11.9	9.4	11.0	11.1
pH	8.0	7.9	8.0	8.0	7.6	7.4	7.4	7.4
Conductivity (umhos/cm)	750	700	728	750	1200	1000	1100	1100
Settleable Solids	7	4	5.3	5	Nil	Nil	Nil	Nil

## LABORATORY RESULTS ON COMPOSITE IN PPM

Laboratory Number	Influent	Effluent	% Reduction
5-Day BOD	273	3	99
COD	560	42	92
T.S.	700	608	13
T.N.V.S.	401	502	Increase
T.S.S.	245	7	97
N.V.S.S.	21	1	95
pH	7.5	7.5	--
Conductivity	736	965	Increase
Turbidity	90	3	97

Selah

## BACTERIOLOGICAL RESULTS

Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> added to sample bottle After \_\_\_\_\_ min.

LAB #	SAMPLING TIME	COLONIES/100 MLS (MF)		Cl Residual	
		Total	Fecal	ppm	(after secs)
72-1115	0930	200	< 80	>1.0	15
1116	1030	<100	<200	>1.0	15
1117	1130	<200	< 80	>1.0	15
1118	1230	<100	<200	>1.0	15

Operator's Name Joe Ford Phone # \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Exhibit F

U.S. DEPARTMENT OF THE INTERIOR  
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION  
SEWAGE TREATMENT PLANT OPERATION AND MAINTENANCE  
PRACTICES QUESTIONNAIRE

FORM APPROVED  
BUDGET BUREAU NO. 42-R1527

CHECK ONE  
 1ST AUDIT  RE-AUDIT  
DATE OF AUDIT: 12/11/77  
PLANT DESCRIPTION CODE (For Official Use Only): DOMESTIC SLUDGE

A. GENERAL INFORMATION

1. PROJECT (State, Number):  
2. PLANT LOCATION (City, county): YAKIMA CO

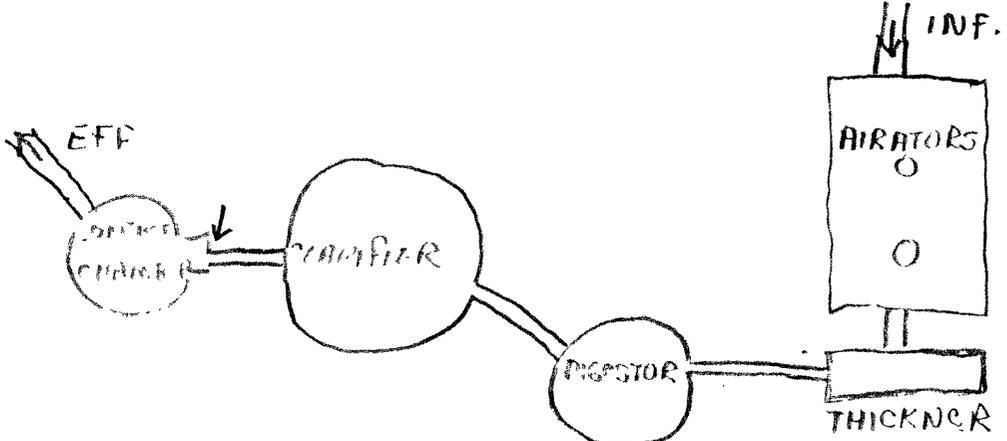
3. POPULATION  
3A. FRACTION OF AREA POPULATION SERVED (%): 100%  
3B. PLANT DESIGN (population equivalent): 3,000  
3C. SERVED BY PLANT (domestic): 3500

4. TYPE OF COLLECTION SYSTEM  
4A.  COMBINED  SEPARATE  BOTH  
4B. ESTIMATED FLOW CONTRIBUTED BY SURFACE OR GROUND WATER (infiltration, mgd):

5. YEAR COMMUNITY BEGAN SEWAGE TREATMENT: 1935  
6. YEAR PRESENT SYSTEM PLACED IN OPERATION  
6A. SEWER: 1935  
6B. PLANT: 1968  
6C. ANCILLARY WORKS:

7A. SIZE OF PLANT SITE (acres): 3.5  
7B. APPROXIMATE AREA LEFT FOR EXPANSION (acres): 3.1

8A. IN THE SPACE PROVIDED BELOW FURNISH A SIMPLIFIED FLOW DIAGRAM OR A WRITTEN DESCRIPTION OF THE PLANT UNITS IN FLOW SEQUENCE. INCLUDE THE METHOD OF ULTIMATE SLUDGE DISPOSAL. SHOW APPROXIMATE SURFACE AREA OF STABILIZATION PONDS AND NUMBER OF CELLS. INDICATE WHETHER FLOW TO AND FROM PLANT IS BY PUMPING OR GRAVITY.



8B. NOTE ANY SIGNIFICANT OR UNIQUE PROCESSING CONDITIONS.

9. RECEIVING STREAM

9A. NAME OF STREAM: YAKIMA R

9B. STREAM FLOW IS  
 PERENNIAL  INTERMITTENT  NATURAL  REGULATED  
 INTERSTATE  INTRASTATE  
 COASTAL

B. CURRENT PERFORMANCE AND PLANT LOADING INFORMATION

1A. ANNUAL AVERAGE DAILY FLOW RATE (mgd): 600,000  
1B. PEAK FLOW RATE (mgd)  
DRY WEATHER: — WET WEATHER: —  
1C. MINIMUM FLOW RATE (mgd): 200,000

2. AVERAGE BOD OF RAW SEWAGE (5 DAY 20°C) (ppm):  
3. AVERAGE SETTLEABLE SOLIDS OF RAW SEWAGE (BIOLOGICAL Solids) (mg/l):  
4. AVERAGE SUSPENDED SOLIDS OF RAW SEWAGE (mg/l):  
5. AVERAGE COLIFORM DENSITY OF RAW SEWAGE (mpn/100 ml):

6. ANNUAL AVERAGE PLANT REDUCTION %

6A. BOD (%):  
6B. SETTLEABLE SOLIDS (%):  
6C. SUSPENDED SOLIDS (%):  
6D. COLIFORM DENSITY (%):

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E. LABORATORY CONTROL

Enter test codes opposite appropriate items. If any of the below tests are used to monitor industrial wastes place an "X" in addition to the test code.

CODES

- 1 - 7 or more per week      3 - 1, 2, or 3 per week      5 - 2 or 3 per month      7 - Quarterly      9 - Annually  
 2 - 4, 5 or 6 per week      4 - as required      6 - 1 per month      8 - Semi-Annually

ITEM	RAW	PRIMARY EFFLUENT	MIXED LIQUOR	FINAL	SLUDGE		DIGESTOR	RECEIVING STREAM
					RAW	SUPER-NATANT		
1. BOD	5 X			5				
2. SUSPENDED SOLIDS	5		1	5				
3. SETTLEABLE SOLIDS	1			1				
4. SUSPENDED VOLATILE	5		1	5			5	
5. DISSOLVED OXYGEN	1 X		1	1				
6. TOTAL SOLIDS	5			5			5	
7. VOLATILE SOLIDS	5			5			5	
8. pH	1		1	1			1	
9. TEMPERATURE	1		1				1	
10. COLIFORM DENSITY								
11. RESIDUAL CHLORINE				1				
12. VOLATILE ACIDS							5	
13. M. B. STABILITY								
14. ALKALINITY								
15. C.O.D.	5 X							
16.								
17.								
18.								
19.								

F. OPERATION AND MAINTENANCE COST FOR PLANT

YEAR OF OPERATION	SALARIES/WAGES	ELECTRICITY	CHEMICALS	MAINTENANCE	OTHER ITEMS	TOTAL
MOST CURRENT YEAR 1972	\$18,120 <sup>00</sup>	\$10,800 <sup>00</sup>	800 <sup>00</sup>	\$6,400 <sup>00</sup>	4,000 <sup>00</sup>	110,120 <sup>00</sup>
PRIOR YEAR 1971	About the same					
PRIOR YEAR 1970	About the same					
PRIOR YEAR 1969	About the same					

EVALUATION PERFORMED BY	TITLE	ORGANIZATION
Carol Korman	Scientific Prod	D of Ecol.

INFORMATION FURNISHED BY	TITLE	ORGANIZATION	DATE
Joe Jones	Chief Operator	CITY OF SELAH	

5. ARE OPERATING RECORDS MAINTAINED?  YES  NO  
 (If maintained, check general items included)

REPORTED?  YES  NO  
 TO WHOM? *NY*

FREQUENCY	WEATHER	FLOW	SLUDGE HANDLED	CHEMICALS USED	DIGESTER	GRIT HANDLED	ELEC. USED	COST DATA	AIR USED	MAIN-TENANCE	OTHER
DAILY	/	/									
WEEKLY											
MONTHLY											
ANNUALLY											

6. ARE LABORATORY RECORDS MAINTAINED? (check appropriate box)

NOT AT ALL  DAILY  WEEKLY  MONTHLY  ANNUALLY

IF MAINTAINED CHECK FORM OF RECORD BELOW:

LOG BOOK  TABULAR SHEET  SEPARATE BY OPERATION  CONTROL CHARTS  GRAPHS

WHAT PLANT AND/OR LABORATORY EQUIPMENT, GAGES AND METERS ARE CALIBRATED PERIODICALLY? *pH meter*

7. IS LABORATORY TESTING ADEQUATE FOR THE CONTROL REQUIRED FOR THIS SIZE AND TYPE OF PLANT?

YES  NO (If no, explain)

B. INDUSTRIAL WASTES DISCHARGED TO MUNICIPAL SYSTEM:	A. NUMBER AND TYPES OF INDUSTRIES DISCHARGING TO SYSTEMS <i>3 MAJOR PACKERS</i>
B. POPULATION EQUIVALENT (BOD) OF INDUSTRIAL WASTES (pe)	C. POPULATION EQUIVALENT (SS) OF INDUSTRIAL WASTES (pe) <i>75% + OF LOAD TO PLANT</i>
D. VOLUME OF INDUSTRIAL WASTES (mgd)	E. COMPOSITION AND CHARACTERISTICS OF INDUSTRIAL WASTES
F. MAIN DIFFICULTY EXPERIENCED WITH INDUSTRIAL WASTE (explain) <i>FOUNN. IN DIGESTER.</i>	

8. HAVE INDUSTRIAL EFFLUENT PROBLEMS BEEN SOLVED?  YES  NO (If yes, how?)

9A. METHOD OR METHODS USED TO ASSESS INDUSTRIAL WASTE TREATMENT COST (check appropriate box)

NO CHARGE BY CITY  PROPERTY TAX  WATER USE ASSESSMENT  CHARGE BASED ON FLOW

CHARGED BASED ON BOD  CHARGE BASED ON SS  OTHER METHODS (describe)

COMMENT ON HOW CHARGE IS COLLECTED (fixed charge, sliding scale, etc.)

9B. IS INDUSTRIAL WASTE ORDINANCE IN EFFECT AND ENFORCED?  YES  NO

10. WHO PROVIDED INITIAL INSTRUCTION IN THE OPERATION OF THE PLANT?

11. IS A MANUAL OF PRACTICE OR INSTRUCTIONS AVAILABLE?  YES  NO

IF YES, WHO WROTE AND PROVIDED IT? *200 ST NEW YORK, N.Y.*

12. ESTIMATE OF MAN-HOURS PER WEEK DEVOTED TO LABORATORY WORK AND MAINTENANCE OF RECORDS AND REPORTS

D. PLANT PERSONNEL - Annual Average Staff for Most Recent Year Reported in Section "F"

JOB CATEGORY	NUMBER	TOTAL MAN-HOURS PER WEEK	TOTAL NUMBER CERTIFIED OR LICENSED	RANGE IN YEARS EMPLOYED AT PRESENT PLANT	RANGE IN YEARS OF EXPERIENCE IN TREATMENT
1. SUPERINTENDENT	<i>1</i>	<i>40</i>	<i>1</i>	<i>13-18 mos.</i>	<i>-</i>
2. OPERATORS	<i>2</i>	<i>80</i>	<i>2</i>	<i>6 mos.</i>	<i>-</i>
3. LABORATORY TECHNICIANS					
4. LABORERS					
5. PART-TIME LABORERS					
6. TOTAL					

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G. NOTATIONS BY EVALUATOR

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1. ADDITIONAL REMARKS (If remarks refer to a particular item, identify by number)

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2. GENERAL COMMENTS ON HOUSEKEEPING AND MAINTENANCE

EXCELLENT

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3. REQUIREMENTS OF HIGHER AUTHORITY

3A. DOES THE PLANT PROVIDE THE DEGREE OF TREATMENT PRESENTLY REQUIRED BY THE STATE? (If no, explain)

YES  NO

3B. ARE THERE ANY PENDING ACTIONS (enforcement conferences, change in water quality standards, etc.) THAT WOULD REQUIRE UPGRADING OF TREATMENT BY THIS PLANT?

YES  NO (If yes, explain)

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3C. NUMBER OF STATE INSPECTIONS OF PRESENT PLANT TO DATE.

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4. IS ANY FOLLOW-THRU ACTION REQUIRED TO (1) CORRECT DEFICIENCIES IN THE PLANT OR ITS OPERATION OR (2) RESOLVE INDUSTRIAL WASTE PROBLEMS? (If yes, describe required corrective action)  YES  NO

