

December 2, 1970

Mr. Dan Niel
District Engineer
105 North 3rd Street
Draper Building
Yakima, Washington 98901

Subject: Northwest Construction Company -
Siltation Problem

Dear Dan:

The water samples collected in the Naches River above and below Northwest's point source discharge on November 25, 1970, were analysed for turbidity. The results are as follows:

50 yrds upstream (Naches River)	15 JTU
Northwest Construction settling pond discharge	2700 JTU
50 yrds downstream from discharge (Naches River)	800 JTU

Sincerely,

JOHN A. BIGGS
Director

RONALD A. LEE

RAL:mg

MEMORANDUM
Department of Ecology

Information
For Action
Permit
Other

Check

TO: Dan Neal

DATE: January 27, 1972

FROM: Ron Pine

SUBJECT: Naches STP Survey

Transmitted herewith are the results of the Naches STP survey conducted on December 12, 1971.

The effluent composite sample was collected immediately after the trickling filter and prior to chlorination. As you will note there is an increase in the solids concentration across the trickling filter.

In my opinion the plant is being operated as well as can be expected. The operators are conscientious and eager to do a good job. Moisture in the control shack is a real maintenance problem that they are doing their best to solve, but it is a losing proposition. Proper insulation would help but housing the laboratory in a separate building would be a more permanent solution.

The effluent is discharged into a swampy area immediately adjacent to the Naches River and forms a small lagoon about 20 feet across. This lagoon is below a small house and is almost in their back yard. It would seem desirable to extend the outfall to the river and install an adequate diffuser section.

An effort was made to determine the source of the intermittent high pH that occasionally enters the plant. A recording pH meter was installed at a manhole immediately below the high school. A continuous pH record was obtained from 9:30 AM until 2:30 PM. High readings of 7.8 and 8.2 were recorded at approximately 10:20 AM and 12:10 PM respectively. It was suggested to Don Anderson that the plant operators schedule a day or two of sampling for pH determinations at various locations throughout the city. In this way the source of high pH could be more accurately determined.

RP:bj

STP SURVEY REPORT FORM

(EFFICIENCY STUDY)

City Naches Plant Type T. Filter Population 2400 Design Capacity
 Served
 Receiving Water Naches River Engineer Dan Neal
 Date 12-21-71 Survey Period 0700-1600 Survey Personnel Ron Pine
 Comp. Sampling Frequency 1/2 hour Weather Conditions (last 48 hours)
 Sampling Alequot Flow (gallons) / 100

PLANT OPERATION

Total Flow 42,201 gal. in nine hours How Measured _____
 Max. (Flow) 140,000 Time of Max. 1000;1230-1300 Min. 40,000 Time of Min. 0700-0730
 Pre Cl₂ ---- #/day Post Cl₂ 10 #/day
 Contact Time: 14 minutes at 120,000 GPD

FIELD RESULTS

	Influent				Effluent			
	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
9 Determinations								
Temp. °C	17.5	13.5	15.0	15.0	12.0	9.5	10.6	10.0
pH	7.6	7.4	7.6	7.6	8.3	7.8	8.1	8.1
Conductivity (umhos/cm)	ND	ND	ND	ND	ND	ND	ND	ND
Settleable Solids	ND	ND	ND	ND	ND	ND	ND	ND

LABORATORY RESULTS ON COMPOSITE IN PPM

Laboratory Number	Influent	Effluent*	% Reduction
	71-4063	71-4065	-----
5-Day BOD	170	55	68
COD	325	120	63
T.S.	588	646	---
T.N.V.S.	331	445	---
T.S.S.	138	125	9
N.V.S.S.	17	16	6
pH	7.4	7.9	---
Conductivity	695	975	---
Turbidity	45	20	---
SCS	121	109	10

* All valves before CO₂.

Naches

BACTERIOLOGICAL RESULTS

Na₂S₂O₃ added to sample In _____ After Bottle _____ min.

LAB #	SAMPLING TIME	TOTAL COLONIES/100 MLS (MF)		Cl Residual	
		TOTAL	FECAL	ppm	(after secs)
71-4071	0700	200	<100	1.0	15
71-4072	0800	<200	<100	1.0	15
71-4073	1030	750	<100	.75	15
71-4074	1300	250	<200	.75	15
71-4075	1430	200	<200	.75	15

Operator's Name Marshall Yates Phone # 653-2647

Comments: Coliform samples were also taken on influent but numbers exceeded
anticipated range as shown below:

<u>TOTAL</u>	<u>FECAL</u>	<u>TIME</u>
>16,000	6,000	0700
>80,000	>1,200	0800
>16,000	>6,000	1030
>800,000	>1,200	1300
>800,000	>6,000	1430

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

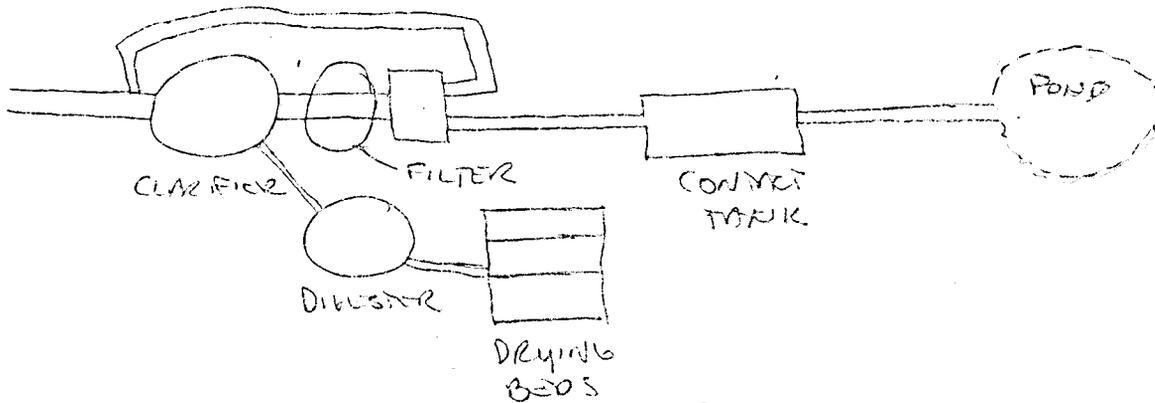
FORM APPROVED
BUDGET BUREAU NO. 42-R1527

CHECK ONE <input type="checkbox"/> 1ST AUDIT <input type="checkbox"/> RE-AUDIT	DATE OF AUDIT DEC 21, 1971	PLANT DESCRIPTION CODE (For Official Use Only)
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A. GENERAL INFORMATION

1. PROJECT (State, Number)	SCOPE OF PROJECT (new plant, additions, etc.) OLD EXISTING	
2. PLANT LOCATION (City, county) NACITES YAKIMA CO.	IDENTIFICATION OF AREAS SERVED	
3. POPULATION		
3A. FRACTION OF AREA POPULATION SERVED (%) 80%	3B. PLANT DESIGN (population equivalent)	3C. SERVED BY PLANT (domestic) 400 (EST)
4. TYPE OF COLLECTION SYSTEM		
4A. <input type="checkbox"/> COMBINED <input checked="" type="checkbox"/> SEPARATE <input type="checkbox"/> BOTH	4B. ESTIMATED FLOW CONTRIBUTED BY SURFACE OR GROUND WATER (infiltration, mgd)	
5. YEAR COMMUNITY BEGAN SEWAGE TREATMENT 1951	6. YEAR PRESENT SYSTEM PLACED IN OPERATION	
	6A. SEWER	6B. PLANT
	6C. ANCILLARY WORKS	
7A. SIZE OF PLANT SITE (acres) 2	7B. APPROXIMATE AREA LEFT FOR EXPANSION (acres) 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 NACITES RIVER			
9B. STREAM FLOW IS <input checked="" type="checkbox"/> PERENNIAL <input type="checkbox"/> INTERMITTENT		<input checked="" type="checkbox"/> NATURAL <input type="checkbox"/> REGULATED	
		<input type="checkbox"/> INTERSTATE <input checked="" type="checkbox"/> INTRASTATE	
		<input type="checkbox"/> COASTAL	

B. CURRENT PERFORMANCE AND PLANT LOADING INFORMATION

1A. ANNUAL AVERAGE DAILY FLOW RATE (mgd) 0.250 MGD (EST)		1B. PEAK FLOW RATE (mgd)		1C. MINIMUM FLOW RATE (mgd)
		DRY WEATHER 700,000	WET WEATHER 85,000	
2. AVERAGE BOD OF RAW SEWAGE (5 DAY 20°C) (ppm)		3. AVERAGE SETTLEABLE SOLIDS OF RAW SEWAGE (IMHOFF Cone) (ml/l) 12 ml/l		
4. AVERAGE SUSPENDED SOLIDS OF RAW SEWAGE (mg/l)		5. AVERAGE COLIFORM DENSITY OF RAW SEWAGE (mpn/100 ml) 1,000,000		
6. ANNUAL AVERAGE PLANT REDUCTION %				
6A. BOD (%)	6B. SETTLEABLE SOLIDS (%) 70%	6C. SUSPENDED SOLIDS (%)	6D. COLIFORM DENSITY (%)	

7A. DOES PLANT HAVE STANDBY POWER GENERATOR FOR MAJOR PUMPING FACILITIES? YES <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/>	7B. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURE? YES <input checked="" type="checkbox"/> NO <input checked="" type="checkbox"/> WILL BE INSTALLED
8A. ARE CHLORINATION FACILITIES PROVIDED? IF YES, ANSWER 8A THRU G	IF YES, IS CHLORINATION CONTINUOUS? IF NO, EXPLAIN REASON FOR INTERMITTENT CHLORINATION

8A. PURPOSE OF CHLORINATION
DISINFECTION

8B. TYPE OF CHLORINATOR
10" DIAMETER / 2" H.P.

8C. POINT OF APPLICATION OF CHLORINE
AFTER TRICKLING FILTER

8D. CAN BYPASSED SLUDGE BE CHLORINATED?
 YES NO

8E. AVERAGE FEED RATE OF CHLORINE (lb/day)
10 F.M.G. / 2" H.P.

8F. CHLORINE RESIDUAL IN EFFLUENT
1.0-2.0 PPM AT END OF 15 MINUTES

8G. MINIMUM SUPPLY OF CHLORINE STORED ON PREMISES (lb)
450 LBS

9. ARE FACILITIES PROVIDED FOR COMPLETE BYPASS OF RAW SEWAGE?
 YES NO IF YES, ANSWER A THRU G BELOW, ANSWER H IN EITHER CASE.

9A. FREQUENCY (times monthly) ABOUT 10 TIMES MONTHLY	9B. AVERAGE DURATION (hours)	9C. REASON FOR BYPASSING EQUIPMENT
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9D. ESTIMATED FLOW RATE DURING BYPASS IS
 WITHIN HYDRAULIC CAPACITY OF PLANT
 BEYOND HYDRAULIC CAPACITY OF PLANT BY

9E. DOES SEWAGE OVERFLOW IN DRY WEATHER?
 YES NO

9F. TYPE OF DIVERSION STRUCTURE
PIPELINE BYPASS

9G. AGENCIES NOTIFIED OF BYPASS ACTION
WATER DIVISION

9H. DO OPERATORS HAVE OPTION TO BYPASS INDIVIDUAL PLANT UNITS? (If no, has this caused any operational problems?)
 YES NO

10A. ARE BACK FLOW DEVICES PROVIDED AT ALL CONNECTIONS TO CITY WATER SUPPLY? (If no, explain)
 YES NO

10B. CHECK TYPE OF BACK FLOW PREVENTION DEVICE
 DOUBLE CHECK VALVE PRESSURE OPERATED PHYSICAL DISCONNECT OTHER (specify) UNKNOWN

11. USES OF TREATMENT PLANT EFFLUENT
NONE

12. USES OF RECEIVING STREAM WITHIN 10 MILES OF OUTFALL
IRRIGATION, FISHING, SWIMMING, RECREATION

13. HAVE THERE BEEN ANY ODOR COMPLAINTS BEYOND THE PLANT PROPERTY? (If yes, explain)
 YES NO

14. OBSERVED APPEARANCE AND CONDITION OF EFFLUENT, RECEIVING STREAM, OR DRAINAGE WAY
GOOD - EFFLUENT RELATIVELY CLEAR, LOW IN SOLIDS

15. STABILIZATION POND'S

A. WEEDS CLIP AND VEG. TATIVE GROWTH IN PONDS ELIMINATED? <input type="checkbox"/> YES <input type="checkbox"/> NO	B. BANKS AND DITCHES MAINTAINED (erosion etc.)? <input type="checkbox"/> YES <input type="checkbox"/> NO
C. FENCE AND WARNING - POLLUTED WATER'S GND. PRESENT AND IN GOOD REPAIR? <input type="checkbox"/> YES <input type="checkbox"/> NO	D. FREQUENCY OF INSPECTION BY OPERATOR
E. WATER DEPTH (feet) _____ HIGH _____ LOW _____ MEDIUM	
F. ADEQUATE CONTROL OF DEPTH? <input type="checkbox"/> YES <input type="checkbox"/> NO	G. SLEPAGE REPORTED? <input type="checkbox"/> YES <input type="checkbox"/> NO
H. ANY REPORTS OF GROUND WATER CONTAMINATION FROM POND (If yes, give details)? <input type="checkbox"/> YES <input type="checkbox"/> NO	

I. MOSQUITO BREEDING PROBLEM? <input type="checkbox"/> YES <input type="checkbox"/> NO	J. YES. NAME OF SPECIES IF KNOWN	K. CAN SURFACE RUN OFF ENTER POND? <input type="checkbox"/> YES <input type="checkbox"/> NO
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C. SUPERVISORY SERVICES

1. IS A CONSULTING ENGINEER RETAINED OR AVAILABLE FOR CONSULTATION ON OPERATING AND MAINTENANCE PROBLEMS?
 YES NO IF YES IS IT ON: CONTINUING BASIS OR UPON REQUEST BASIS
 IF CONTINUING BASIS, WHAT IS THE FREQUENCY OF VISITS?

2. DO OPERATORS AND OTHER PERSONNEL ROUTINELY ATTEND SHORT COURSES, SCHOOLS OR OTHER TRAINING ACTIVITIES?
 YES NO
 IF YES, CITE COURSE SPONSOR AND DATE OF LAST COURSE ATTENDED
 MAY 29/1971, MARIETTA, GA
 IF NO, DO YOU KNOW OF ANY COURSES AVAILABLE TO SERVE THIS AREA?

3A. ARE ALL EQUIPMENT AND PARTS OF THE PRESENT PLANT STILL IN OPERATION? YES NO (If no, explain)

B. ARE PROCESSING UNITS OPERATING AT DESIGN EFFICIENCY? YES NO (If no, explain)

4. HAVE THERE BEEN ANY DIFFICULTIES WITH THE SEWAGE TREATMENT PLANT?

A. STRUCTURAL YES NO (If yes explain)
 LAB IN SAME BUILDING AS PUMPS, EXCESS HUMIDITY IS A PROBLEM

B. MECHANICAL YES NO (If yes, explain)
 FLOODING OCCURRED IN 1971

C. OPERATIONAL YES NO (If yes, explain)

D. BASED ON OPERATING EXPERIENCE TO DATE WHAT IF ANY CHANGES WOULD YOU RECOMMEND TO IMPROVE OPERATION OF THE PLANT?
 GREATER CAPACITY TO TAKE CARE OF INFILTRATION DURING RAINY SEASON.

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

REPORTED? YES NO

TO WHOM? STATE DEPT. OF SOCIAL & HEALTH SERVICES

FREQUENCY	WEATHER	FLOW	SLUDGE HANDLED	CHEMICALS USED	DICESTER	GRIT HANDLED	ELEC. USED	COST DATA	AIR USED	MAINTENANCE	OTHER
DAILY		X	X			N/A					
WEEKLY						N/A					
MONTHLY						N/A					
ANNUALLY			Twice		Twice	N/A					

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?

24 MONTHS

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

YES NO (If no, explain)

8. INDUSTRIAL WASTES DISCHARGED TO MUNICIPAL SYSTEM:

A. NUMBER AND TYPES OF INDUSTRIES DISCHARGING TO SYSTEMS

B. POPULATION EQUIVALENT (BOD) OF INDUSTRIAL WASTES (pe)

C. POPULATION EQUIVALENT (SS) OF INDUSTRIAL WASTES (pe)

D. VOLUME OF INDUSTRIAL WASTES (mgd)

E. COMPOSITION AND CHARACTERISTICS OF INDUSTRIAL WASTES

F. MAIN DIFFICULTY EXPERIENCED WITH INDUSTRIAL WASTE (explain)

9. 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?

STATE OF NEW YORK DEPT. OF ENVIRONMENTAL CONSERVATION

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

20 HOUR/WK.

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					
2. OPERATORS	2	80	GRADE IV	3 MO	
3. LABORATORY TECHNICIANS					
4. LABORERS					
5. PART-TIME LABORERS					
6. TOTAL					

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								
2. SUSPENDED SOLIDS								
3. SETTLEABLE SOLIDS	1-7	1		1				
4. SUSPENDED VOLATILE								
5. DISSOLVED OXYGEN	1-7	1		1				
6. TOTAL SOLIDS								
7. VOLATILE SOLIDS								
8. pH	1-7	1		1			1	
9. TEMPERATURE	1-7	1		1			1	
10. COLIFORM DENSITY								
11. RESIDUAL CHLORINE	1-7	1		1				
12. VOLATILE ACIDS								
13. M. B. STABILITY								
14. ALKALINITY								
15.								
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 1977	1500/MO	✓	✓	✓	✓	46375
PRIOR YEAR 1970	120/MO	✓	✓	✓	✓	5300
PRIOR YEAR 19						
PRIOR YEAR 19						

EVALUATION PERFORMED BY	TITLE	ORGANIZATION
<i>[Signature]</i>	CHIEF INVESTIGATOR	DEPT OF ECOLOGY

INFORMATION FURNISHED BY	TITLE	ORGANIZATION	DATE
<i>[Signature]</i>	CHIEF OPERATOR	CITY OF MEMPHIS	12/11/77
<i>[Signature]</i>	CHIEF OPERATOR	"	"

G. NOTATIONS BY EVALUATOR

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

2. GENERAL COMMENTS ON HOUSEKEEPING AND MAINTENANCE

HOUSE KEEPING IS GENERALLY GOOD. ARE MAKING A SUBSTANTIAL EFFORT TO TAKE CARE OF MOISTURE PROBLEM. ARE DOING SOME PAINTING.

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)

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

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

OCCASIONAL HIGH PH VALUES HAVE BEEN NOTED AT THE PLANT. IT WAS SUGGESTED THAT A DAY BE SPENT SAMPLING SEWER LINES ABOVE & BELOW VARIOUS SOURCES TO PIN POINT THE SOURCE OF HIGH PH.

March 3, 1972

Mr. Don Anderson
Water Superintendent
City Hall
P. O. Box 95
Naches, Washington 98937

Subject: Sewage Treatment Plant
- Efficiency Survey - 12-21-71

Dear Mr. Anderson:

Enclosed please find the results of the Efficiency Survey that our Department personnel ran on your sewage treatment plant as stated.

At the time of the above-referenced survey it was stated that the plant was being operated as well as can be expected for an intermediate plant.

Keep up the good work, for it is needed.

A second item that was mentioned is the existing outfall line. This line is now discharging into a backwater area immediately adjacent to the Naches River. It appears in the best interest of the City to have this outfall extend to the River and adequate diffuser installed as a portion of the upgrading of the treatment plant. Please discuss this with your City Council and Engineer as to its desirability and additional cost, and then send me your comments.

Should you have any questions about the survey, please feel free to contact the Yakima District Office.

Very truly yours,

Daniel V. Neal
District Engineer

cc; D of E
Olympia
Spokane
Central Plan Review
Yakima County Health Dept. - Mr. Lockwood
Technical Services - Mr. Pine

SIT SURVEY REPORT FORM
(EFFICIENCY STUDY)

City Naches Plant Type L. Filter Population 2400 Design Capacity _____
 Served _____
 Living Water Naches River Engineer Da Neal
 Date 12-21-71 Survey Period 0700-1600 Survey Personnel Ken Pine
 Comp. Sampling Frequency 1/2 hour Weather Conditions _____
 (last 48 hours)
 Sampling Alequot Flow (gallons) / 100

PLANT OPERATION

Total Flow 42,201 gal. in nine hours How Measured _____
 Max. (Flow) 14,000 Time of Max. 000, 1230-1300 Min. 0,000 Time of Min. 10/0 222
 Pre Cl₂ _____ #/day Post Cl₂ _____ #/day
 Contact Time: 14 minutes at 120,000 GPD

FIELD RESULTS

9 Determinations	Influent				Effluent			
	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp. °C	17.5	13.5	15.0	15.0	12.0	9.5	10.0	10.0
pH	7.6	7.4	7.6	7.6	8.3	7.8	8.1	8.1
Conductivity (umhos/cm)	ND	ND	ND	ND	ND	ND	ND	ND
Settleable Solids	ND	ND	ND	ND	ND	ND	ND	ND

LABORATORY RESULTS ON COMPOSITE IN EFF

Laboratory Number	Influent	Effluent	% Reduction
	<u>71-4063</u>	<u>71-4065</u>	
5-Day BOD	170	55	68
COD	325	120	63
T.S.	588	646	
T.N.V.S.	331	445	
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				ppm	(after secs)
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71-4073	1030	200	<100	.75	15
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71-4175	1430	250	<200	.75	15

Operator's Name Marshall Yates Phone # 653-2647

Comments: Coliform samples were also taken on influent but numbers exceeded anticipated range as shown below:

<u>TOTAL</u>	<u>FECAL</u>	<u>TIME</u>
>16,000	6,000	0700
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>16,000	>6,000	1030
>800,000	>1,200	1300
>800,000	>6,000	1430

MEMORANDUM
Department of Ecology

Information
For Action
Permit
Other

Check

TO: Dan Neal

DATE: January 27, 1972

FROM: Ron Pine

SUBJECT: Naches STP Survey

Transmitted herewith are the results of the Naches STP survey conducted on December 12, 1971.

The effluent composite sample was collected immediately after the trickling filter and prior to chlorination. As you will note there is an increase in the solids concentration across the trickling filter.

In my opinion the plant is being operated as well as can be expected. The operators are conscientious and eager to do a good job. Moisture in the control shack is a real maintenance problem that they are doing their best to solve, but it is a losing proposition. Proper insulation would help but housing the laboratory in a separate building would be a more permanent solution.

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RP:bj

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(EFFICIENCY STUDY)

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 Served Capacity
 Living Water Naches River Engineer Dan Neal
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Settleable Solids	ND	ND	ND	ND	ND	ND	ND	ND

LABORATORY RESULTS ON COMPOSITE IN PPM

Laboratory Number	Influent	Effluent *	% Reduction
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BACTERIOLOGICAL RESULTS

Na₂S₂O₃ added to sample In _____ After Bottle _____ min.

LAB #	SAMPLING TIME	TOTAL COLONIES/100 MLS (MF)		Cl Residual	
		TOTAL	FECAL	ppm	(after secs)
71-4071	0700	200	<100	1.0	15
71-4072	0800	<200	<100	1.0	15
71-4073	1030	750	<100	.75	15
71-4074	1300	250	<200	.75	15
71-4075	1430	200	<200	.75	15

Operator's Name Marshall Yates Phone # 653-2647

Comments: Coliform samples were also taken on influent but numbers exceeded anticipated range as shown below:

<u>TOTAL</u>	<u>FECAL</u>	<u>TIME</u>
>16,000	6,000	0700
>80,000	>1,200	0800
>16,000	>6,000	1030
>800,000	>1,200	1300
>800,000	>6,000	1430

MEMORANDUM
Department of Ecology
P. O. Box 829
OLYMPIA, WASHINGTON
98501

Information
For Action
Permit
Other

Check

TO: Tom H., Ron Lee, and files

DATE: September 1, 1971

FROM: Daniel V. Neal

SUBJECT: Scoping - Naches STP - Efficiency Study

Set up this survey as typical sewage treatment plant survey. BOD's
COD's, pH, coliform, flow, etc.

Start by 7:00 a.m. in the morning and wrap it up after 4:00 p.m.; be
attentive to flow and compare with existing records. Have had problems
with either a local fruit warehouse or high school disinfection that has
killed the growth on the filter on numerous occasions.

DVN:kb
9-1-71

SPEED MESSAGE

TO Department of Ecology
P. O. Box 829
Clyde, Washington 98504

FROM Town of Naches
P. O. Box 95
Naches, Washington

SUBJECT
-

DATE Dec. 23

1971

Dear Mr. Pine:

The plant had a 28 min detention time at low flow on chlorine contact time.

Thank you.

collected 1-4-71

RECEIVED
DEPARTMENT OF ECOLOGY
DEC 27 1971
PM
7 8 9 10 11 12 1 2 3 4 5 6
A

SIGNED Marshall Yates
Naches Sewage Plant

MEMORANDUM
Department of Ecology
P. O. Box 829
OLYMPIA, WASHINGTON
98504

	Check
Information	<input type="checkbox"/>
For Action	<input type="checkbox"/>
Permit	<input type="checkbox"/>
Other	<input type="checkbox"/>

TO: Warren Meyers

DATE: May 15, 1972

FROM: Gary Rothwell

SUBJECT: Rimrock Cove Lagoon

In answer to your request, three grab samples were taken from the sampling ditches at the Rimrock Cove Lagoon. Water in the ditches varied greatly in appearance from one ditch to the other and they all appeared to be quite contaminated.

Rey Orquiola recalls doing a similar study in the past so questions regarding the values on the attached lab summary might be directed to him.

GR:dlb
5-17-72

Kimlock Cove

East 103 Indiana
Spokane, Washington 99207

October 16, 1972

Mr. Francis E. Horrell, R.S.
Director of Environmental
Health Service
Grant County Courthouse
Ephrata, Washington 98823

Subject: Kimrock Cove
Survey Data

Dear Mr. Horrell:

Enclosed please find a copy of the first survey that was done on this lagoon.

As we discussed with you, we will be proceeding as was suggested in Mr. Devitt's memo dated August 11, 1972. I will have to do some background work in this regard. Further, we will be sending you all future surveys.

Should you have any other questions, or if we can be of further assistance, please feel free to contact the Spokane Regional Office, East 103 Indiana, Spokane 99207, phone No. 456-2926.

Very truly yours,

Daniel V. Neal
District Engineer

DVN:glc

cc: DOE - Olympia
Ron Devitt - Olympia

enclosures 2

August 11, 1972

MEMO TO: Dan Neal
FROM: Ronald Devitt
SUBJECT: Rimrock Cove Survey

State of
Washington
Department
of Ecology



Scott Jeane and I sampled Rimrock Cove and found the sampling sites in very poor condition. The boards over the sample holes in the ground were collapsed; none of the stations were covered.

Blowing dust, etc. was free to enter the water. Other observed foreign material in the sample puddles include leaves, straw and grass seeds. These factors make the total solids, conductivity, turbidity, possibly pH, nutrients and coliform data of questionable value.

Insect and algal activities also complicate drawing any valid conclusion from the data obtained. Mike Palko suggested that if salt could be added to the lagoon without interfering with the "treatment" processes, it might be possible to monitor the conductivity of the ditches to check for seepage.

It would involve a relatively inexpensive effort on our part if the daily samples could be collected by Rimrock Cove personnel. There is little chance of biasing the sample by the collection technique.

The laboratory analyses of the samples collected on each of the previous surveys is estimated to be at least six man days. A very conservative estimate of a conductivity analysis would be less than ten minutes including preparation, testing, and cleanup.

To use salt for example, sodium chloride, enough common water-softener type rock salt could be added to the lagoon to increase the conductivity of the lagoon water by a relative factor-say 100 or 1000 greater than the ditches.

By taking a small daily sample (50-100 ml.) and bailing out the ground water from the ditches, an increase in conductivity could be detected if seepage occurred. Monitoring for a period of about two weeks should be adequate. The samples could be stored and shipped as a group. Analyses of these 14 samples would take less than an hour of our laboratory's time.

Our survey section has found that even coliform are filtered out in the types of soil we have dealt with concerning seepage. Dye such as Rhodamine also is filtered out. Because salt dissolves in ionized form it would be a good tracer.

If this method seems feasible please contact Ron Pine or myself.

RD:es
87/04

DATA REPORT FORM

Location: Rimrock Cove (north of Soap Lake)
 Station and Log number

Field Results	South Station		East Station		North Station		
	A	B	A	B	A	B	
pH	8.8	8.6	8.9	7.9	9.2	9.1	
Cond. umhos/cm	1960	2110	979	1290	953	2210	
Turbidity	2	15	30	3	5	7	
BOD	--	<16	9	<8	2	<8	
COD	14	49	31	37	21	33	
lonies/ 100 ml.	T. Colif.	--	30,000	--	14,000	--	5,000
	F. Colif.	--	20	--	<20	--	40
NO ₃ N	.12	.41	.50	.03	.14	.01	
NO ₂ N	.01	.01	.02	N.D.	.01	<.01	
NH ₃ N	--	.04	--	.04	--	.06	
Kjeldahl N	.34	.54	.94	.18	.54	.56	
Total - P	.89	.64	1.65	.31	1.05	1.04	
O-PO ₄ -P	.85	.60	1.56	.03	1.03	1.04	
Total Solids	1367	--	709	780	619	1414	
TSS	5	--	33	571	6	1180	
TNVS	1072	--	559	--	463	--	
TNVSS	1	--	28	--	3	--	

A = Data obtained by Gary Rothwell, 5-15-72

B = Data obtained by Scott Jeane & Ron Devitt, 7-27-72

Values in ppm unless noted.

