Check

Publication No. 72-e35

WA-37-1020

TO: John Hodgson

DATE: October 26, 1972

FROM: Scott Jeane

SUBJECT: Efficiency Study of Waste Treatment Facilities at Stokely Van Camp, Zillah, Washington

OBJECTIVE: To determine the efficiency of the company's primary pre-treatment system and if the non-overflow lagoon system has an effect on the water quality of adjacent water courses.

The efficiency survey took place on September 13, 1972. Composite samples represent 6 hours of sampling at 1/2 hour intervals. The grab samples were taken in the early afternoon (see Figure 1). In addition to the plant samples, the adjacent slough was sampled above and below the non-overflow lagoons. See also the Yakima River Survey completed the preceding day. (DATE OF MEMO)

Parameter Analysis

The upstream and downstream slough grab samples were analyzed for COD, BOD, total suspended solids, and total suspended nonvolatile solids (see Table 1). The analysis showed no effect of the lagoons upon the slough. The clarifier influent and effluent were sampled by grab and composite methods. Both methods of sampling agree and show no major differences. Total coliform increased from 16,000 to 780,000 colonies/100 ml while in the clarifier. The COD demonstrated 81% reduction while BOD was 57%. The solids profile revealed 93% reduction in total suspended solids while settleable solids decreased 97.6%.

The clarifier influent sampling location was compared to a sample point taken immediately below the screens. These two grab samples show no differences except for the COD. The unusually low COD on the below screen sample may have been caused by partial blockage of the sample pipe preventing larger particles from being sampled.

General Observations

While the sampling was in progress a tour of the lagoons was taken. The two lagoons marked empty on Figure 2 had a fair amount of effluent being discharged to them. Becuase of the high rate of PERCOLATION either or both evaporation and infiltration both lagoons were for the most part empty. At one place some seepage was noted (see Figure 2 and slide 1). The three stagnant sloughs located next to the back lagoons were black in color and unusually high in organic material. The septic condition of these sloughs is related to infiltration of process waste into them.

Slides of the lagoons and treatment facilities are included.

Conclusions

The pretreatment plant is operating at an efficiency level greater than reported by designing firm. As long as the effluent is confined to the non-overflow lagoons, the Yakima River water quality will not be effected. An odor problem should not develop as long as the pretreatment plant is operating correctly. If the company wished to discharge to the river they would have to increase the BOD reduction from the observed 57% to the required 85%, while the total suspended solids would have to be reduced only 2% more. The high total coliform (780,000 colonies/ml) would make chlorination necessity.

The observed lagoon design did not match the design put forth in Item F by Stokely Van Camp. The seepage (see Figure 2 and Photograph 1) I observed was small but had turned the several small stagnant sloughs into blackish odiferous sink holes. The stagnant sloughs should probably be filled and the weeping dike strengthened by the addition of more fill.

Personnel from the company were supposed to split samples with us but the person responsible for testing the samples was gone and no one else requested samples.

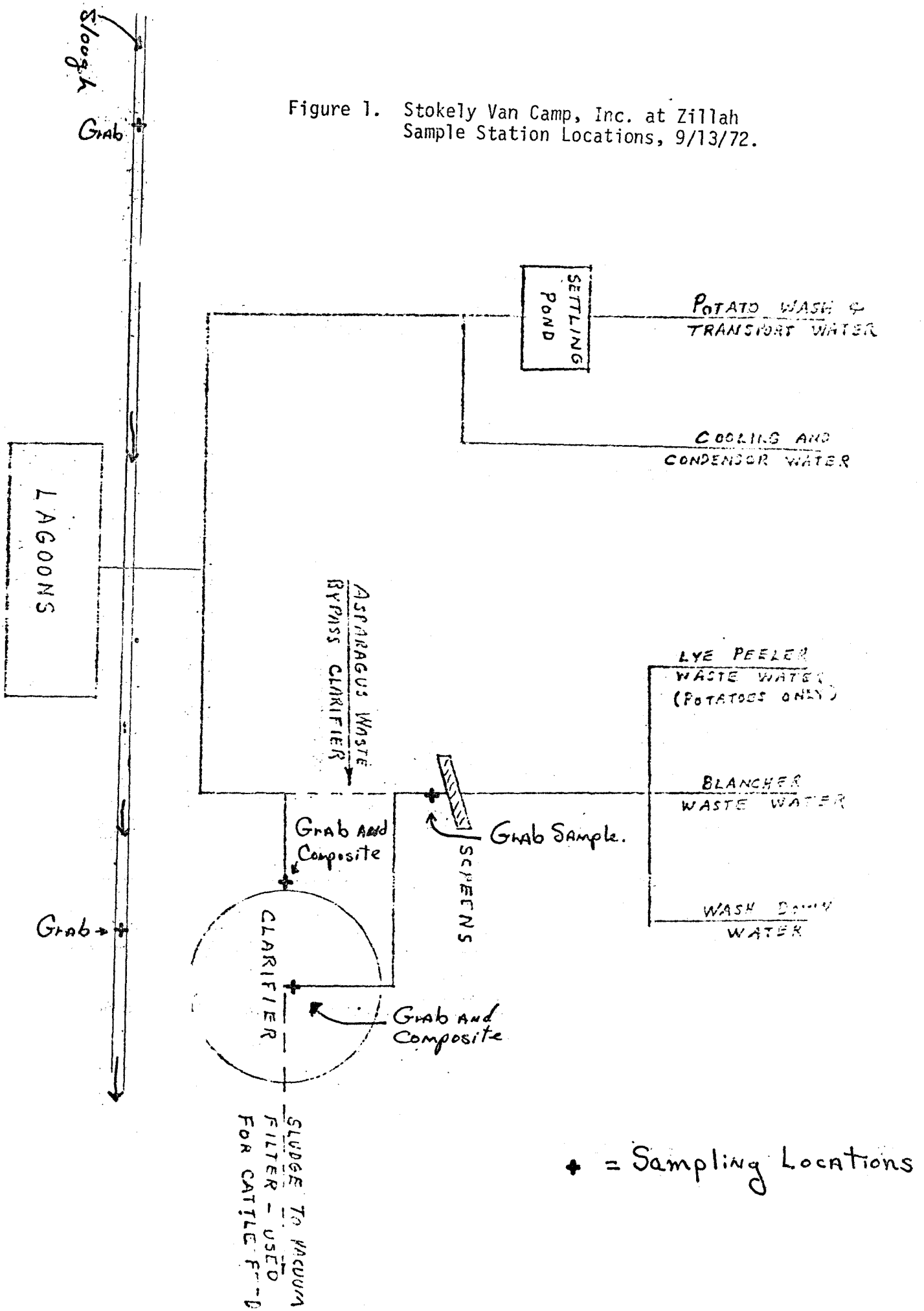
GSJ:bj

Attachments

Table 1. Stokely Van Camp at Zillah, Sample date 9/13/72.

Station	pH	COD	BOD	T. Coliform (Col./100ml)	Total Solids	TSS	TSNVS	Chlorides
Clarifier Effluent (Composite)	9.3	3500	1960	80000	3.0	555	117	160
Clarifier Effluent (Grab)		3350	2040			635	127	
Influent (Composite)	10.8	18300	4570	16000	125	7660	410	
Influent (Grab)		14900	2600			2915	385	
Influent below screen (Grab)		5500	2730			3795	315	
Slough - above lagoons (Grab)		11	2			26	21	
Slough - below lagoons (Grab)		15	2			20	15	

Figure 1. Stokely Van Camp, Inc. at Zillah
Sample Station Locations, 9/13/72.



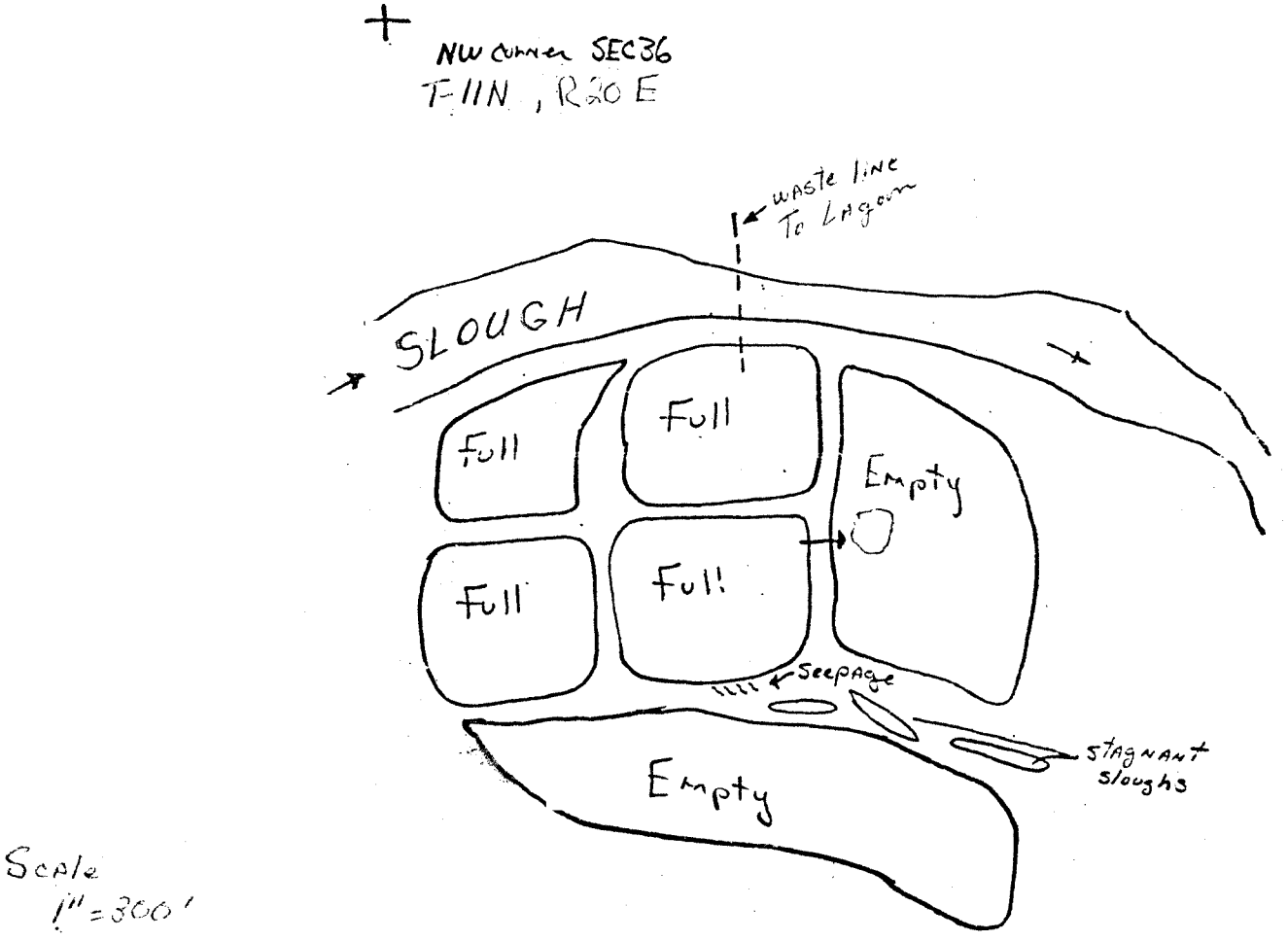
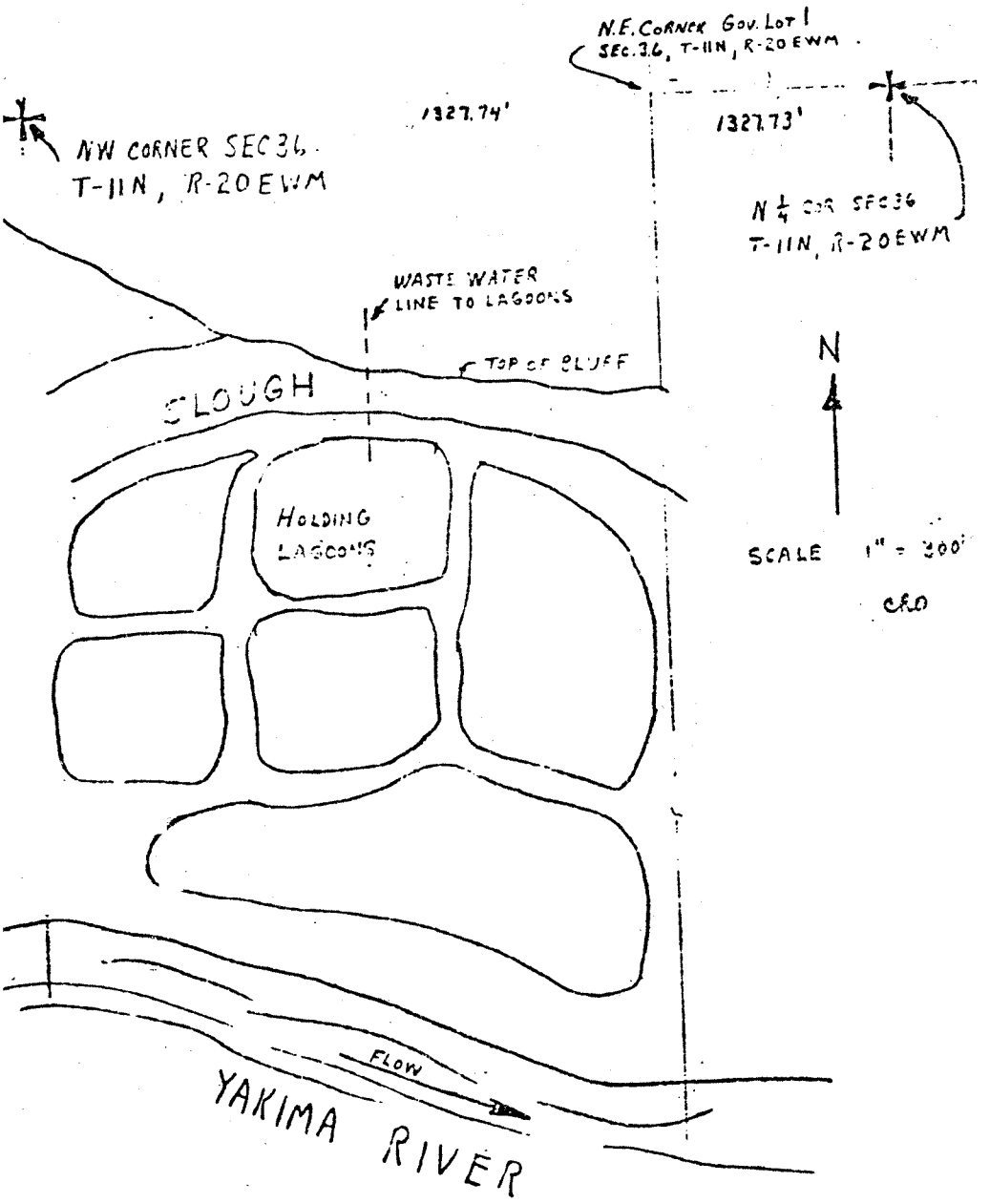


Figure 2. Lagoon condition at Stokely Van Camp, Zillah, on September 13, 1972.

Stokely Mile. Zillah

ITEM - F

LOCATION OF WASTE WATER DISCHARGE FOR STOKELY-VAN CAMP, INC., ZILLAH, WASH.



DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

COPIES TO: G.S. JEANE

LAB FILES

DATA SUMMARY

Source STOKELY-VANCAMP — Collected By G.S. JEANE

Date Collected 9/13/72 — Goal, Pro./Obj. 3.2.23

Log Number: 72-	3452	3453	3454	3455	3456	3457	3458	3459	3460		STORET
Station:	UPSTR SLOUGH	DNSTR. SLOUGH	GRAB BELOW SCREEN	GRAB INF	GRAB CLAR-	COMP- CLAR-	COMP. INF	COMP CLAR	COMP INF		
pH						9.3	16.8				00403
Turbidity (JTU)											00070
Conductivity (umhos/cm)											00095
COD	11	15	5500	14900	3350	3500	18300				00340
BOD (5 day)	<2	<2	2730	2600	2040	1960	4570				00310
Total Coliform (Col./100ml)								780000	16000		31504
Fecal Coliform (Col./100ml)											31616
NO3-N (Filtered)											00620
NO2-N (Filtered)											00615
NH3-N (Unfiltered)											00610
T. Kjeldahl-N (Unfiltered)											00625
O-PO4-P (Filtered)											00671
Total Phos.-P (Unfiltered)											00665
Total Solids						3.0	125				00500
Total Non Vol. Solids											
Total Suspended Solids	26	20	3795	2915	635	555	7660				00530
Total Sus. Non Vol. Solids	21	15	315	385	127	117	410				
CHLORIDES	—	—				160					00940

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
Convert those marked with a * to PPB (PPM X 10^3) prior to entry into STORET

72-3452, 3453 - INSUFFICIENT SAMPLE LEFT FOR CHLORIDES.

Summary By Mary F Holcomb Date 9/25/72

MEMORANDUM

Department of Ecology
Yakima District Office
504 N. Naches Avenue - Suite 10
Yakima, WA 98901
Phone No. - CH 8-0981
Scan Phone No. - 372-1213

Check	
Information	
For Action	
Permit	
Other	

TO: Ron Pine, Dan Neal and Stokely Van-Camp - Zillah Files

DATE: June 26, 1972

FROM: John M. Hodgson Jr.

SUBJECT: Treatment System Efficiency Survey and Water Quality Survey - Yakima River

Objective: To determine the efficiency of the company's primary pre-treatment system and the effect, if any, of the non-overflow lagoon system on the quality of adjacent surface water courses.

Description: Stokely Van-Camp discharges asparagus and potato processing waters through a primary treatment system to a non-overflow lagoon system which is located within the flood plain of the Yakima River. The primary treatment system consists of a circular clarifier, sludge draw off system and vacuum filter. This system was designed by Gary & Osborne in 1967 and was to provide 90% reduction in suspended solids and 30% reduction in C.O.D. . The non-overflow lagoon system consists of 6 cells and has a total surface area of approximately 14 acres. (See attached sketches of lagoon system and waste flow schematic.)

Expected Results:

1. Efficiency of primary treatment facility by testing for:
   - (a) Flow - including cooling water.
   - (b) PH. - primary influent, primary effluent
   - (c) Temperature - including cooling water if discharged seperate during survey
   - (d) Settleable solids - primary influent and effluent
   - (e) Suspended solids - primary in influent and effluent
   - (f) C.O.D. - primary influent and effluent
   - (g) B.O.D. - primary influent and effluent

2. Determine reliability of company's testing program by splitting samples b,d,e,f, and g with Mr. Dalton of Stokely Van-Camp. 4 2 grab samples

3. Determine the effects, if any, of seepage from the non-overflow lagoon by sampling the adjacent surface water source above, along side of and below the lagoon for:
   - (a) B.O.D.
   - (b) C.O.D.
   - (c) Nitrates
   - (d) Phosphates
   - (e) Dissolved Oxygen
   - (f) PH.
   - (g) Conductivity
   - (h) Visual observations of water quality and bottom organisms.
   - (i) Hydrogen sulfide - each lagoon cell.

Recommended Sampling Stations:

1. Establishing sampling stations should be co-ordinated with Mr. Tom Dalton (telephone #829-5121 Zillah) of Stokely Van-Camp. The tests specified in number 2 above are the same as those required of the industry and are performed

DALLAS ANDERSON

on a routine basis.

2. With regard to sampling the slough, a minimum of three (3) sampling stations should be used. One upstream or above the lagoons, one along side of and adjacent to the lagoons in the area of the influent line and one downstream or below the lagoons.

Time Schedule:

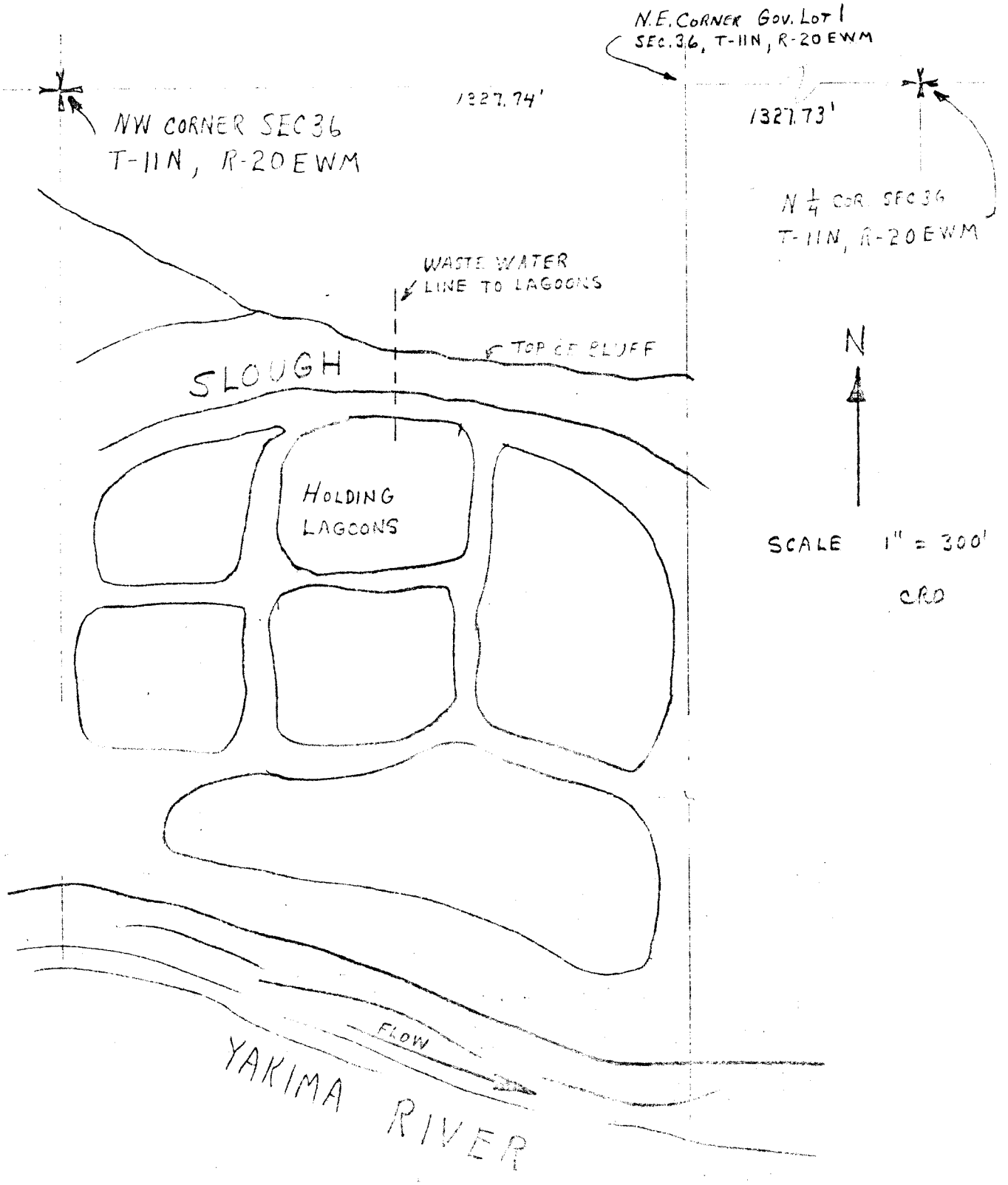
As the company processes potatoes from July 13 to November 28, the survey should be conducted during that period. I would assume the best time would be between August 1 and September 30, 1972, during the period of low stream flow and high waste water discharge volumes.

JWH:dl
6-26-72

cc: D of E - Olympia - Ron Pine
Spokane - Dan Neal
Yakima

ITEM - F

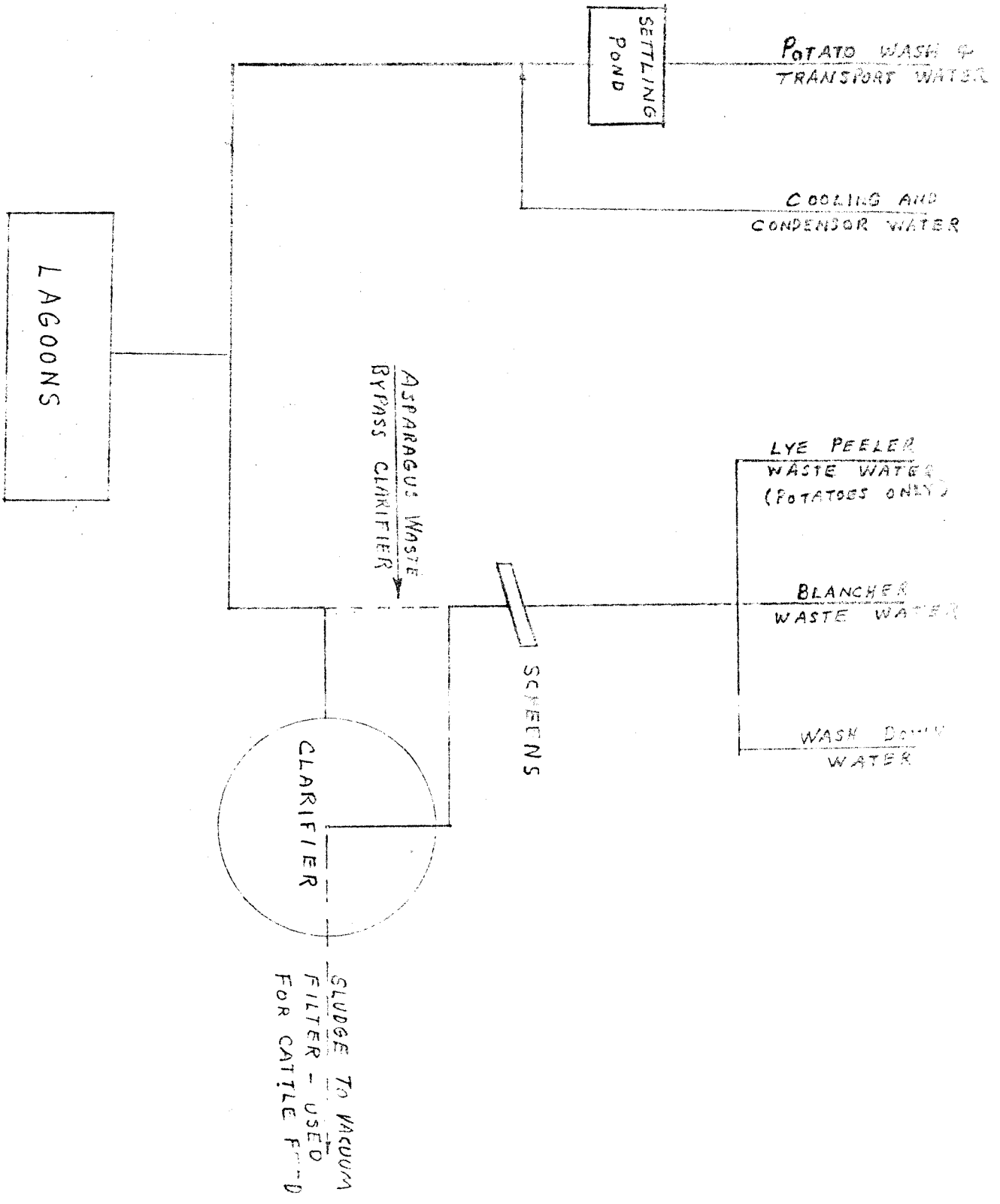
LOCATION OF WASTE WATER DISCHARGE FOR STOKELY-VAN CAMP, INC., ZILLAH, WASH.



STOKELY VAN CAMP, INC. ZILLAH, WA.

EXHIBIT 1

SCHEMATIC OF WASTE FLOW



MEMORANDUM

CHECK
INFORMATION
FOR ACTION
PERMIT
OTHER

TO John Arnquist, John Hodgson, Ron Devitt
Ron Pine and Files.

FROM Darrel Anderson

SUBJECT Zillah STP

DATE October 10, 1973

State of Washington
Department of Ecology

On September 13, 1973, I conducted an efficiency survey at the City of Zillah STP. Security at the plant is very good-general housekeeping is fair.

The new operator, Bob Cory, is a part time operator of the plant. He has had no schooling and does not understand the operation of a STP plant. The laboratory equipment at the plant is outdated and looks as if it had never been used.

The plant discharges into a slough from the Yakima River and the slough is quite turbid, but no odor or floating material is present.

The 5-day BOD reduction is 69%, COD is 60%. Total solids is 30% and T.S.V.S. is 16%. Fecal Coliform was no greater than 16,000/ 100ml.

DA:jmh

STP SURVEY REPORT FORM

(EFFICIENCY STUDY)

City Zillah Plant Type Activated Sludge Population Served 1300 Design Capacity Unknown

Receiving Water Yakima River via Pond Engineer Dee Tufts

Date Sept. 13, 1973 Survey Period 0830 Survey Personnel D.L. Anderson

Comp. Sampling Frequency 1/2 hr. Weather Conditions (last 48 hours) Clear & hot.

Sampling Alequot 600 ml.

PLANT OPERATION

Total Flow ---------- How Measured 3" parshall flume

Max. (Flow) 153,000 Time of Max. 0900 Min. 106,000 Time of Min. 1600

Pre Cl_2 ---------- #/day Post Cl_2 10 #/day

FIELD RESULTS

Determinations	Influent Max.	Influent Min.	Influent Mean	Influent Median	Effluent Max.	Effluent Min.	Effluent Mean	Effluent Median
Temp. °C	22.2	21.1	22.0	22.1	22.0	21.0	21.5	21.6
pH	8.5	7.6	7.4	7.7	7.6	7.2	7.5	7.4
Conductivity (umhos/cm)		Undetermined				Undetermined		
Settleable Solids	10.0	5.0	7.8	9.2		Trace		

LABORATORY RESULTS ON COMPOSITE IN PPM

Laboratory Number	Influent	Effluent	% Reduction
	73-3358	59	
5-Day BOD	219	69	69
COD	404	164	60
T.S.	891	629	30
T.N.V.S.	491	413	16
T.S.S.	230	73	69
N.V.S.S.	45	11	76
pH	8.0	7.9	
Conductivity	1150	1100	
Turbidity	72	33	

Zillah STP

BACTERIOLOGICAL RESULTS

$Na_2S_2O_3$ added to sample Before sample [redacted]

LAB #	SAMPLING TIME	COLONIES/100 MLS (MF)	Cl Residual ppm	[redacted]
73-60	1000	>16,000	1.0	1.5
61	1300	>14,000	.8	2.0
62	1530	>16,000	.8	1.0

erator's Name Bob Cory Phone # 829-5151

mments:

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO: D. Anderson
COPIES TO:
LAB FILES

DATA SUMMARY

Source Zillah STP — Collected By D.A.

Date Collected 9-13-73 — Goal, Pro./Obj.

Log Number:	73-3358	59	60	61	62						STORET
Station:	INF	EFF	1000	1300	1530						
pH	8.0	7.9									00403
Turbidity (JTU)	72.	33.									00070
Conductivity (umhos/cm)@25°C	1150	1100									00095
COD	404	164									00340
BOD (5 day)	219	69									00310
Total Coliform (Col./100ml)	-	-	>80,000	>80,000	>80,000						31504
Fecal Coliform (Col./100ml)	-	-	>16,000	14,000	>16,000						31616
NO3-N (Filtered)											00620
NO2-N (Filtered)											00615
NH3-N (Unfiltered)											00610
T. Kjeldahl-N (Unfiltered)											00625
O-PO4-P (Filtered)											00671
Total Phos.-P (Unfiltered)											00665
Total Solids	891	629									00500
Total Non Vol. Solids	491	413									
Total Suspended Solids	230	73									00530
Total Sus. Non Vol. Solids	45	11									

Note: All results are in PPM unless otherwise specified. ND is "None Detected"
Convert those marked with a * to PPB (PPM X 10^3) prior to entry into STORET

Summary By Stephen D Ball — Date 10-3-73

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. 43-R1527

CHECK ONE	DATE OF AUDIT	PLANT DESCRIPTION CODE (For Official Use Only)
☐ 1ST AUDIT ☑ RE-AUDIT	9-13-[illegible]	

A. GENERAL INFORMATION

1. PROJECT (State, Number)	SCOPE OF PROJECT (new plant, additions, etc.)

2. PLANT LOCATION (City, county)	IDENTIFICATION OF AREAS SERVED
[illegible] - Yakima	City of [illegible]

3. POPULATION

3A. FRACTION OF AREA POPULATION SERVED (%)	3B. PLANT DESIGN (population equivalent)	3C. SERVED BY PLANT (domestic)
100 %	1150	1300

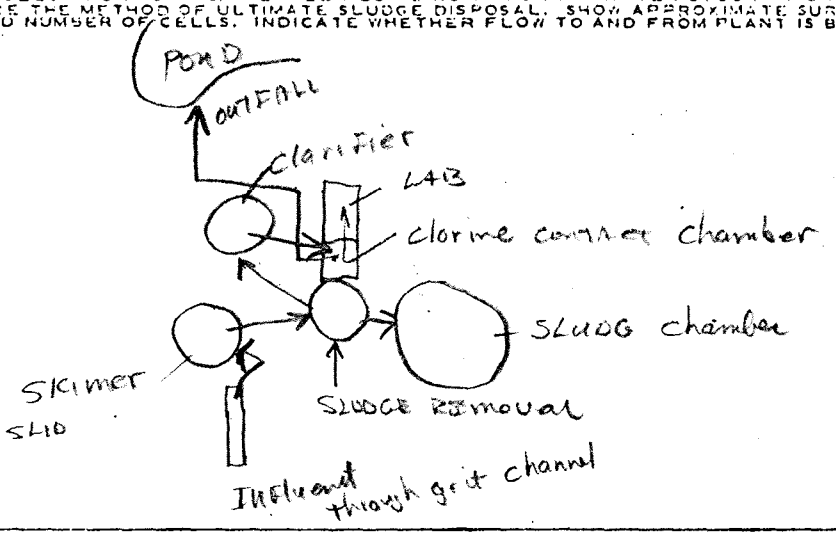
4. TYPE OF COLLECTION SYSTEM

4A.	4B. ESTIMATED FLOW CONTRIBUTED BY SURFACE OR GROUND WATER (infiltration, mgd)
☑ COMBINED ☐ SEPARATE ☐ BOTH	unk

5. YEAR COMMUNITY BEGAN SEWAGE TREATMENT	6. YEAR PRESENT SYSTEM PLACED IN OPERATION		
	6A. SEWER	6B. PLANT	6C. ANCILLARY WORKS
1937 - Remodled - 1955	1937	1937	

7A. SIZE OF PLANT SITE (acres)	7B. APPROXIMATE AREA LEFT FOR EXPANSION (acres)
1 acre	none

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 River

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)	1B. PEAK FLOW RATE (mgd)		1C. MINIMUM FLOW RATE (mgd)
	DRY WEATHER	WET WEATHER	
unk.	unk.	unk.	unk

2. AVERAGE BOD OF RAW SEWAGE (5 DAY 20°C) (ppm)	3. AVERAGE SETTLEABLE SOLIDS OF RAW SEWAGE (ml/l)
unk	unk

4. AVERAGE SUSPENDED SOLIDS OF RAW SEWAGE (mg/l)	5. AVERAGE COLIFORM DENSITY OF RAW SEWAGE (MPN per 100 ml)
unk	unk

6. ANNUAL AVERAGE PLANT REDUCTION

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

7A. DOES PLANT HAVE STANDBY POWER GENERATOR FOR MAJOR PUMPING FACILITIES? ☐ YES ☒ NO

7B. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES? ☐ YES ☒ NO

8. ARE CHLORINATION FACILITIES PROVIDED? ☒ YES ☐ NO
IF YES, ANSWER 8A THRU G

IF YES, IS CHLORINATION CONTINUOUS? ☐ YES ☐ NO
IF NO, EXPLAIN REASON FOR INTERMITTENT CHLORINATION

8A. PURPOSE OF CHLORINATION

Disinfection

8B. TYPE OF CHLORINATOR

WALLACE & TIERNAN

8C. POINT OF APPLICATION OF CHLORINE

AFTER SECOND clarifiers

8D. CAN BYPASSED SEWAGE BE CHLORINATED?

☐ YES ☒ NO

8E. AVERAGE FEED RATE OF CHLORINE (lb/day)

10

8F. CHLORINE RESIDUAL IN EFFLUENT

1.0 PPM AT END OF 3 MINUTES

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

239

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)

none

9B. AVERAGE DURATION (hours)

none

9C. REASON FOR BYPASSING

none

9D. ESTIMATED FLOW RATE DURING BYPASS IS

☐ WITHIN HYDRAULIC CAPACITY OF PLANT unk.
☐ BEYOND HYDRAULIC CAPACITY OF PLANT BY

9E. DOES SEWAGE OVERFLOW IN DRY WEATHER?

☐ YES ☐ NO

9F. TYPE OF DIVERSION STRUCTURE

unk

9G. AGENCIES NOTIFIED OF BYPASS ACTION

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

☐ YES ☐ NO unk

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)*

11. USES OF TREATMENT PLANT EFFLUENT

none

12. USES OF RECEIVING STREAM WITHIN 10 MILES OF OUTFALL

Fishing

13. HAVE THERE BEEN ANY ODOR COMPLAINTS BEYOND THE PLANT PROPERTY? *(If yes, explain)*

☒ YES ☐ NO

SLUDGE build-up - has been corrected

14. OBSERVED APPEARANCE AND CONDITION OF EFFLUENT, RECEIVING STREAM, OR DRAINAGE WAY

B. STABILIZATION PONDS

A. WEEDS CUT AND VEGETATIVE GROWTH IN PONDS ELIMINATED? ☐ YES ☐ NO

B. BANKS AND DIKES MAINTAINED (erosion etc.)? ☐ YES ☐ NO

C. FENCING AND WARNING "POLLUTED WATER" SIGNS PRESENT AND IN GOOD REPAIR? ☐ YES ☐ NO

D. FREQUENCY OF INSPECTION BY OPERATOR

E. WATER DEPTH (feet)

_____ HIGH _____ LOW _____ MEDIUM

F. ADEQUATE CONTROL OF DEPTH? ☐ YES ☐ NO

G. SEEPAGE REPORTED? ☐ YES ☐ NO

H. ANY REPORTS OF GROUND WATER CONTAMINATION FROM POND (If yes, give details)? ☐ YES ☐ NO

I. MOSQUITO BREEDING PROBLEM? ☐ YES ☐ NO IF YES, NAME OF SPECIES IF KNOWN

J. CAN SURFACE RUN-OFF ENTER POND? ☐ YES ☐ NO

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: Pr

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

Col Inspr last Course

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)

B. MECHANICAL ☐ YES ☑ NO (If yes, explain)

C. OPERATIONAL ☑ YES ☐ NO (If yes, explain)

no operator's manual

D. BASED ON OPERATING EXPERIENCE TO DATE WHAT IF ANY CHANGES WOULD YOU RECOMMEND TO IMPROVE OPERATION OF THE PLANT?

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

REPORTED? ☐ YES ☐ NO
TO WHOM?

FREQUENCY	WEATHER	FLOW	SLUDGE HANDLED	CHEMICALS USED	DIGESTER	GRIT HANDLED	ELEC. USED	COST DATA	AIR USED	MAINTENANCE	OTHER
DAILY											
WEEKLY				Lab							
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?

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)*

G. 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?

unk

11. IS A MANUAL OF PRACTICE OR INSTRUCTIONS AVAILABLE?	IF YES, WHO WROTE AND PROVIDED IT?
☐ YES ☑ NO 700 old	

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					
2. OPERATORS		none			
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								
4. SUSPENDED VOLATILE								
5. DISSOLVED OXYGEN								
6. TOTAL SOLIDS								
7. VOLATILE SOLIDS								
8. pH								
9. TEMPERATURE								
10. COLIFORM DENSITY								
11. RESIDUAL CHLORINE								
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 19						
PRIOR YEAR 19						
PRIOR YEAR 19						
PRIOR YEAR 19						

EVALUATION PERFORMED BY	TITLE	ORGANIZATION
DARREL ANDERSON	ENVIRO TECH II	DOE

INFORMATION FURNISHED BY	TITLE	ORGANIZATION	DATE
BOB CORY	PLT OPERATOR	City of ZILLAH	9-3-73

G. NOTATIONS BY EVALUATOR

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

2. GENERAL COMMENTS ON HOUSEKEEPING AND MAINTENANCE

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