

STP SURVEY REPORT FORM  
(EFFICIENCY STUDY) ? *Potholey*  
*E Canal*

Publication No. 71-e09

City Othello Plant Type Lagoons Meters Served Population 1085 WA-41-3000  
 Receiving Water Owl Creek Engineer Tom Haggarty  
 Date 11-9-71 Survey Period 1000-1700 Survey Personnel Ron C. Devitt  
 Comp. Sampling Frequency 1 hr. Weather Conditions Sunny and clear  
 (last 48 hours)  
 Sampling Alequot 1000 ml

PLANT OPERATION

Total Flow Unknown How Measured 60° "V" notch weir  
 Max. (Flow) \_\_\_\_\_ Time of Max. \_\_\_\_\_ Min. \_\_\_\_\_ Time of Min. \_\_\_\_\_  
 Pre Cl<sub>2</sub> 0 #/day \*Post Cl<sub>2</sub> 40 #/day  
 \*Maximum= 300 #/day

FIELD RESULTS

Influent

Effluent

9 Determinations

	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp. °C	15.9	15.2	15.5	15.4	6.1	5.7	5.9	5.8
pH	7.8	6.8	7.3	7.3	7.5	7.0	7.3	7.3
Conductivity (umhos/cm)	ND	----	----	----	ND	---	---	---
Settleable Solids	7.5	3.0	5.2	5.0				.1*

\*Daphnia

LABORATORY RESULTS ON COMPOSITE IN PPM

Laboratory Number	Influent	Effluent	% Reduction
	71-3626	71-3627	-----
5-Day BOD	45	10	78
COD	135	70	48
T.S.	793	685	14
T.N.V.S.	497	491	1
T.S.S.	83	27	57
N.V.S.S.	30	3	90
pH	7.3	7.6	---
Conductivity	1890	970	---
Turbidity	30	10	---
	33	24	27

110

BACTERIOLOGICAL RESULTS

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

LAB #	SAMPLING TIME	COLONIES/100 MLS (MF)	Cl Residual	
			ppm	(after secs)
71-3629	1100	< 400	1.0	360
71-3630	1130	< 400	>1.0	360
71-3631	1400	< 400	.75	360
71-3632	1500	< 400	1.0	360

Operator's Name Ed Meek Phone # HU 8-3302

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

# STP SURVEY REPORT FORM

The survey at Othello lagoons was routine.

The only unusual observation is that there is considerable discrepancy between the flow recorder and the actual discharge. The operator, by phone, reported flow from chart as 1.75 MGD with a weir (60° "V" Notch) depth of 11.75 feet, on 12-30-71. Having been serviced in the recent past, it is suggested that the chlorinator repairman may have used the wrong hydrographic table to set the level recorder.

Ed would like to be advised of what tests he should be running, what equipment will have to be purchased and some tabular sheets for recording data.

STP SURVEY REPORT FORM

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 11-9-71	PLANT DESCRIPTION CODE (For Official Use Only)
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A. GENERAL INFORMATION

1. PROJECT (State, Number) OTHELLO 0	SCOPE OF PROJECT (new plant, additions, etc.) Cl <sub>2</sub> chamber & Room + 3 <sup>rd</sup> Cell
2. PLANT LOCATION (City, county) OTHELLO GRANT	IDENTIFICATION OF AREAS SERVED CITY OF

3. POPULATION

3A. FRACTION OF AREA POPULATION SERVED (%) 99%	3B. PLANT DESIGN (population equivalent) 6,000	3C. SERVED BY PLANT (domestic) 1,085
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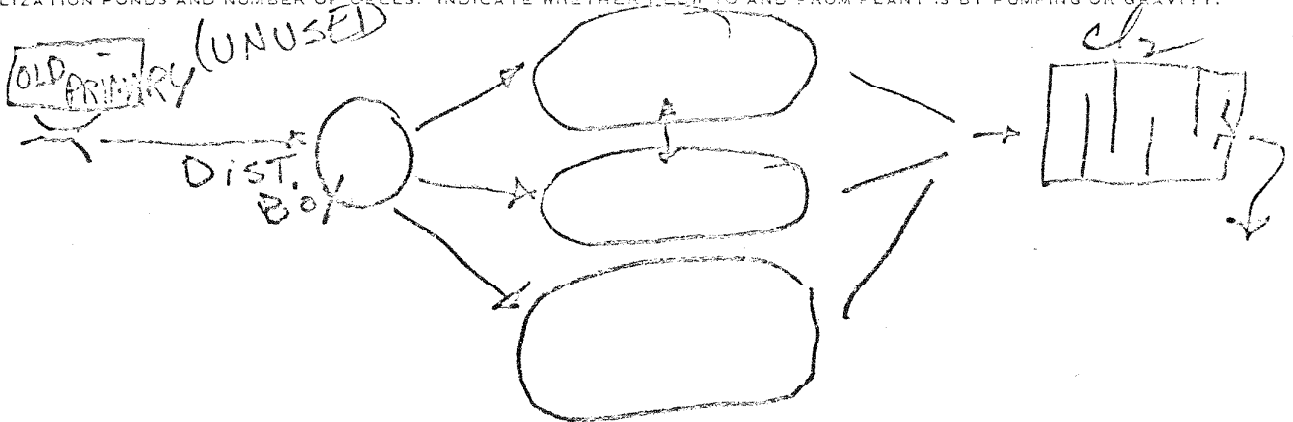
4. TYPE OF COLLECTION SYSTEM

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) 300 gpm on ground
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5. YEAR COMMUNITY BEGAN SEWAGE TREATMENT	6. YEAR PRESENT SYSTEM PLACED IN OPERATION		
	6A. SEWER 57	6B. PLANT 61	6C. ANCILLARY WORKS 1961

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

No sludge return

9. RECEIVING STREAM

9A. NAME OF STREAM OWL CR → CRAB C <sub>2</sub> → COLUMBIA R
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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)	1B. PEAK FLOW RATE (mgd) DRY WEATHER WET WEATHER N2	1C. MINIMUM FLOW RATE (mgd)
2. AVERAGE BOD OF RAW SEWAGE (5 DAY 20°C) (ppm)	3. AVERAGE SETTLEABLE SOLIDS OF RAW SEWAGE (MHOFF Cons) (ml/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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7A. DOES PLANT HAVE STANDBY POWER GENERATOR FOR MAJOR PUMPING FACILITIES? <input type="checkbox"/> YES <input type="checkbox"/> NO	7B. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES? <input type="checkbox"/> YES <input type="checkbox"/> NO
8. ARE CHLORINATION FACILITIES PROVIDED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, ANSWER 8A THRU G	IF YES, IS CHLORINATION CONTINUOUS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF NO, EXPLAIN REASON FOR INTERMITTENT CHLORINATION

8A. PURPOSE OF CHLORINATION  
DISINFECTION

8B. TYPE OF CHLORINATOR  
WALLACE AND TERMIN - GAS PROPORTIONAL V-80

8C. POINT OF APPLICATION OF CHLORINE <span style="font-size: 1.2em; font-family: cursive;">BEFORE Cl<sub>2</sub> Chamber</span>	8D. CAN BYPASSED SEWAGE BE CHLORINATED? <input type="checkbox"/> YES <input type="checkbox"/> NO
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8E. AVERAGE FEED RATE OF CHLORINE (lb/day)	8F. CHLORINE RESIDUAL IN EFFLUENT <span style="font-size: 1.2em; font-family: cursive;">1.0 PPM AT END OF 3 MINUTES</span>
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8G. MINIMUM SUPPLY OF CHLORINE STORED ON PREMISES (lb)  
TON CYLINDERS

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)	9B. AVERAGE DURATION (hours)	9C. REASON FOR BYPASSING
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9D. ESTIMATED FLOW RATE DURING BYPASS IS <input type="checkbox"/> WITHIN HYDRAULIC CAPACITY OF PLANT <input type="checkbox"/> BEYOND HYDRAULIC CAPACITY OF PLANT BY	9E. DOES SEWAGE OVERFLOW IN DRY WEATHER? <input type="checkbox"/> YES <input type="checkbox"/> NO
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9F. TYPE OF DIVERSION STRUCTURE	9G. AGENCIES NOTIFIED OF BYPASS ACTION
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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)

11. USES OF TREATMENT PLANT EFFLUENT  
CHLORINATION

12. USES OF RECEIVING STREAM WITHIN 10 MILES OF OUTFALL

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

CITY SURVEY REPORT FORM

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

REPORTED?  YES  NO

TO WHOM?

FREQUENCY	WEATHER	FLOW	SLUDGE HANDLED	CHEMICALS USED	DIGESTER	GRIT HANDLED	ELEC. USED	COST DATA	AIR USED	MAINTENANCE	OTHER
DAILY		X		Cl <sub>2</sub>							
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?

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?

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					
3. LABORATORY TECHNICIANS					
4. LABORERS					
5. PART-TIME LABORERS					
6. TOTAL					

STP SURVEY REPORT FORM

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 <i>Row D Switt</i>	TITLE	ORGANIZATION

INFORMATION FURNISHED BY <i>ED MEEK</i>	TITLE <i>City Supt</i>	ORGANIZATION <i>Ethello</i>	DATE <i>12-30</i>