

TO: Dan Neal, Ron Pine, Ron Devitt

FROM: Hans Cregg

SUBJECT: Cheney STP

DATE: July 2, 1973

State of
Washington
Department
of Ecology



On May 15, 1973, an efficiency study was conducted on Cheney STP. The plant's laboratory was immaculately clean and well organized.

At the time of the survey, the city was in the process of constructing a new chlorine contact chamber, consequently no chlorination took place. This, at least in part, accounts for the high coliform count.

Furthermore, the effluent lagoon is diked effectively on only three sides. Waste water from the lagoon is spilling over the adjacent land area forming pools of stagnant water. During the survey cattle were observed to be grazing around these pools.

Laboratory results show that the Cheney treatment plant is unable to meet the Department's waste water standards. In fact, it appears that the influent is of a higher quality than the effluent.

HC:bjj

Attachments

STP SURVEY REPORT FORM

(EFFICIENCY STUDY)

City Cheney Plant Type Lagoon Population 6600 Design Capacity
 Served _____
 Receiving Water Spokane River Engineer Gray and Osborn
 Date 5/15/73 Survey Period 8 hours Survey Personnel Hans Cregg, Jim
 Armstrong
 Comp. Sampling Frequency hourly Weather Conditions fair and warm
 (last 48 hours)
 Sampling Alequot 1000 ml

PLANT OPERATION

Total Flow 600,000 gal/day How Measured Fisher and Porter
 Max. (Flow) _____ Time of Max. _____ Min. _____ Time of Min. _____
 Pre Cl₂ _____ #/day Post Cl₂ 20 #/day (none at time of survey)

FIELD RESULTS

Determinations	Influent				Effluent			
	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp. °C	18.2	17.8	18	18	27.0	16.0	23.8	25.8
pH	8.0	7.4	7.6	7.5	9.7	8.4	9.2	9.3
Conductivity (umhos/cm)								
Settleable Solids	10	6			4.5	.1		

LABORATORY RESULTS ON COMPOSITE IN PPM

Laboratory Number	Influent	Effluent	% Reduction
	73-1787	73-1788	
5-Day BOD	196	227	-14
COD	356	650	-42
T.S.	558	786	-29
T.N.V.S.	316	346	- 9
T.S.S.	163	348	-53
N.V.S.S.	24	26	- 8
pH	7.4	9.5	
Conductivity	670	570	
Turbidity	80	45	44

Cheney STP

BACTERIOLOGICAL RESULTS

Na₂S₂O₃ added to sample before sample ~~XXXX~~ was taken ~~XXX~~.

LAB #	SAMPLING TIME	COLONIES/100 MLS (MF)		Cl Residual	
		Total	Fecal	ppm	(after secs)
73-1789	1100	120,000	7,000	No chlorination took	
73-1790	1400	130,000	3,800	place at	time of
73-1791	1600	140,000	4,300	survey	

Operator's Name Roy S. Hanson Phone # _____

Comments: Cheney does not meet any waste water standards.

