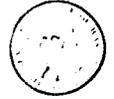


April 26, 1973

State of
Washington
Department
of Ecology



Memo to: John Hodgson

From: Ron Devitt

Subject: **Sunnyside Sewage Treatment Plants**

On ^{February} ~~January~~ 1, 1973, Hans Cregg and I sampled Sunnyside sewage treatment plant. The influent was composited immediately downstream from the comminutor. The effluent was sampled at the outlet from the secondary clarifier. Coliform samples and chlorine residuals were taken from the end of the chlorine contact chamber.

This system is unique in that it is one of the few sewage treatment plants in Washington equipped with an automatic chlorine analyzer. The chlorinator determines the chlorine residual periodically and the amount of chlorine added is based on this residual and the flow. The machine requires daily maintenance.

Mr. Knowles (the operator) determines his chlorine residual by titration instead of using a comparator. The values he obtained were considerably different than ours. I indicated that for practical field work the comparator was adequate for his laboratory control titration may be more desirable.

The operator inquired as to my personal opinion of the appearance of his effluent compared to other secondary treatment plants I have seen. I was quite honest with him and indicated that it was far from outstanding.

Mr. Knowles indicated that their industrial problems with the poultry processor had been solved but considerable amount of feathers were observed in the influent.

In summary, the personnel seem quite knowledgeable, however, the plant was failing to operate at optimal efficiency.

RD:pt
239588

STP SURVEY REPORT FORM

(EFFICIENCY STUDY)

2 Stage

City Sunnyside Plant Type T. Filter Population 7,200 Design 7,000 lbs BOD/day
 Served Capacity
 Receiving Water Sulfur Creek to Yakima River Engineer John Hodgson
 Date 1-31-73 Survey Period 0900-1600 Survey Personnel H. Cregg, Ron Devitt
 Comp. Sampling Frequency 1/2 hour Weather Conditions Snow
 (last 48 hours)
 Sampling Alequot 1,000 ml/sample

PLANT OPERATION

Total Flow .528 MGD in 7 hours 1.8 in 24 hrs How Measured Integrator
 Not working properly
 Max. (Flow) _____ Time of Max. _____ Min. _____ Time of Min. _____
 Pre Cl₂ _____ #/day *Post Cl₂ _____ #/day
 *Addition rate determined by auto analyzer.

FIELD RESULTS

Determinations	Influent				Effluent			
	Max.	Min.	Mean	Median	Max.	Min.	Mean	Median
Temp. °C	16	--	--	--	12	--	--	--
pH	8.0	7.6	7.7	7.6	7.6	7.3	7.5	7.6
Conductivity (umhos/cm)	1600	790	915	820	1030	820	900	920
Settleable Solids	5	--	--	--	.1	.1	--	--

LABORATORY RESULTS ON COMPOSITE IN PPM

Laboratory Number	Influent	Effluent	% Reduction
5-Day BOD	334	66 ✓	80
COD	594	124	79
T.S.	876	577	34
T.N.V.S.	448	190	57
T.S.S.	286	42 ✓	85
N.V.S.S.	44	6	85
pH	7.7	7.6	--
Conductivity	960	1150	--
Turbidity	85	28	--

Sunnyside

BACTERIOLOGICAL RESULTS

Na₂S₂O₃ added to sample _____ After _____ min.

LAB #	SAMPLING TIME	COLONIES/100 MLS (MF)		15 sec.	3 min.
		Total	Fecal	Cl Residual ppm	Cl Residual (after secs)
	1330	250	< 200	.2	.4
	1630	< 80	< 80		

Operator's Name Jim Knowles Phone # _____

Comments: _____

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