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State of
Washington
Department
of Ecology

April 26, 1973

Memo to: John Hodgson

From: Ron Devitt

Subject: Sunnyside Sewage Treatment Plants

On ~~January~~ February 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 then 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 processer 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
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STP SURVEY REPORT FORM

(EFFICIENCY STUDY)

City Sunnyside Plant Type 2 Stage T. Filter Population Served 7,200 Design Capacity 7,000 lbs BOD/day

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 (last 48 hours) Snow

Sampling Alequot 1,000 ml/sample

PLANT OPERATION

Total Flow .528 MGD in 7 hours ~1.8 in 24hrs How Measured Integrator

Max. (Flow) Not working properly Time of Max. Min. Time of Min.

Pre Cl_2 #/day ×Post Cl_2 #/day

×Addition rate determined by auto analyzer.

FIELD RESULTS

Determinations		Influent Max.	Influent Min.	Influent Mean	Influent Median	Effluent Max.	Effluent Min.	Effluent Mean	Effluent Median
Temp. °C	2	16	--	--	--	12	--	--	--
pH	4	8.0	7.6	7.7	7.6	7.6	7.3	7.5	7.6
Conductivity (umhos/cm)	15	1600	790	915	820	1030	820	900	920
Settleable Solids	2	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

$Na_2S_2O_3$ added to sample _____ After _____ min.

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

Operator's Name Jim Knowles Phone # _____

Comments: _____

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