STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

DANIEL J. EVANS
GOVERNOR

JOHN A. BIGGS
DIRECTOR

September 6, 1972

Publication No. 72-e10

MEMORANDUM

TO: Jim Knudson

FROM: Ron Devitt

SUBJECT: St. Regis, Tacoma - Clarifier Efficiency

On August 2, 1972, an attempt was made to obtain twenty-four hour composites on the influent to, and effluent from, St Regis' industrial clarifier using "surveyor" composite samplers. Due to a series of problems, both mechanical and electrical, representative samples were not acquired.

On August 4, 1972, samples which had been collected by the industry were split and the Department of Ecology lab duplicated the industry's analyses. St. Regis personnel had already initiated analyses before the samples were shared.

The influent was secured by a belt-cup type sampler. In my opinion, this method of sampling is as representative as any means available to our agency. The effluent is composited proportional to flow. The major source of bias would not be the collection of the samples. Rather it would be the taking of a representative portion of the samples already collected. If further data is required, it would seem both practical and valid to make arrangements with St. Regis to be in attendance and secure samples at the times when they collect theirs.

Keith V. Wadsworth reported that the total flow during the sampling period, from 0800 hours on August 3 to 0800 hours on August 4, was 27.3 MG on the effluent. Values as determined by St. Regis can be obtained from Mr. Wadsworth for comparison to our data.

RD:bj

DATA REPORT FORM

Lab Results

Location: St. Regis, Tacoma

	Influent	Effluent	% Reduction
BOD	164	155	5
COD	850	700	18
Total Solids	1040	945	9
Total Nonvolital	440	461	--
Total Suspended Solids	228	71	69
Total Suspended Nonvol. Solids	60	16	73
K	22	38	
L	189	182	
1000 hr. Total Colif., Colonies/100 ml	<100	<100	--
1000 hr. Fecal Colif., Colonies/100 ml	<100	<100	--
1100 hr. Total Coliform, Colonies/100 ml	< 200	< 200	
1100 hr. Fecal Coliform, Colonies/100 ml	< 100	< 100	
pH	9.4	8.3	

Values in ppm except coliform.

Values of K and L refer to BOD (reported by B. Bowen).

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WATER QUALITY LABORATORY

ORIGINAL TO: R. DeWitt

COPIES TO:

LAB FILES

DATA SUMMARY

Source St. Regis @ Tacoma

Collected By RcD

Date Collected 8-3-72

Goal, Pro./Obj. 3.2.23

Log Number: 7227-	93	94	95	96	2834	2835					STORET
Station:	1003 CLAR INF	1100 CLAR INF	1000 EFF. TO SILO	1130 EFF. TO SILO	CLAR. INF.	CLAR. EFF.					
pH			-		9.4	8.3					00403
Turbidity (JTU)											00070
Conductivity (umhos/cm)@25C											00095
COD					850.	700.					00340
BOD (5 day)					164.	155.					00310
Total Coliform (Col./100ml)	<100	<200	<100	<200							31504
Fecal Coliform (Col./100ml)	<100	<100	<100	<100							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					1040.	945.					00500
Total Non Vol. Solids					440.	461.					
Total Suspended Solids					228.	71.					00530
Total Sus. Non Vol. Solids					60.	16.					
K					.22	.38					
L					189.	182.					
WHATMAN 40"	INSUFFICIENT				SAMPLE						

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. Roll Date 8-16-72

Copies to: Jerry N.
Pete H.
John R. R.

SURVEY REQUEST FORM

INDUSTRIAL SECTION OF CENTRAL OPERATIONS

TO: Ron Pine FROM: Mike Palko DATE: 7/3/72

INDUSTRY: Alcoa LOCATION: Wenatchee

CONTACT & INDUSTRY: Tim Thompson TELEPHONE: (509) 663-5111

TYPE OF SURVEY: Industrial Effluent DATA NEEDED BY: 7/19/72

CONTACT US BEFORE SURVEY: YES X NO _____.

PURPOSE: The BSFW has questioned our requirement that Alcoa put in a out-diffuser and have held up the Corps section 10 permit. The also question that the effluent quality has been well characterized and want us to do this ~~before~~ a meeting with Alcoa-BSFW and us prior to on 7/19/72. I agree that we need this ~~the~~ and therefore need a survey and analyses of the industries effluents

SYSTEM CHARACTERISTICS: There are two different effluents at Alcoa, 1) The scrubber tower water
2) The anode bake scrubbing water + cast house water + STP effluent.

Page 2 →