Publication No. 72-e17

TO: Nelson Graham DATE July 10, 1972

FROM: Ron Devitt

SUBJECT: United Grain Company, Vancouver

On June 2, 1972, samples were taken of the wash water from United Grain Company at Vancouver.

Because their washing is intermittent, previous arrangements were made to insure operation on the day of the survey. However, washing did not begin until 0930 Hrs.

Samples were taken from inside the rotary screen (influent) and at the manhole south of the railroad tracks (effluent). An industrial representative said that personnel from Vancouver STP are also periodically sampling at these locations.

The influent flow was too low to sample until washing operations began. The process water was clear and probably from a rinse line. An attempt was made to insert a 90° "V" notch weir in the twelve inch pipe in the manhole, but the flow of the rinse water alone exceeded the weir capacity. There was no way to determine flow.

When washing began the appearance of the discharge changed greatly. It was decided that the constant flow rinse water did not represent the actual effluent. It was discarded, and a composite of influent and effluent was taken from 0930 - 1200.

The lab results are reported below.

	Influent	Effluent	Reduction
BOD (ppm)	10,200	2,900	72 %
COD (ppm)	1,770	770	56 %
Total Suspended Solids (ppm)	4,520	1,210	73 %
Total Suspended Non-Volitile Soilds (ppm)	350	64	64 %
Settleable Solids (ml/l)	39	8	80 %
Coliform (Colonies/100 ml)			
0820 Hrs.	---	$>4. \times 10^4$	---
0945 Hrs.	---	$6. \times 10^5$	---
1045 Hrs.	---	$7. \times 10^5$	---
1130 Hrs.	---	$7. \times 10^5$	---

RCD:bj

MEMORANDUM

Department of Ecology
P. O. Box 829
OLYMPIA, WASHINGTON
98504

Check

Information	
For Action	
Permit	
Other	

TO: Ron Pine

DATE: May 11, 1972

FROM: Nelson Graham

SUBJECT: Efficiency Studies and Survey Requests

Please eliminate General Brewing and the Carborundum both in Vancouver from my previous survey request list.

You stated that you would be running, among others, Del Monte Corporation and Diamond Fruit Growers in the month of June. I am requesting that these two plants not be run until late in the month of August of this year. As you may realize these are seasonal plants and their effluent load varies according to the produce being processed. In both cases, the maximum effluent load comes during the corn processing season in late August and September. I will forward scopings to you for these two plants and for National Fruit Canning in Chehalis later in July. National Fruit Canning should also be run this August.

The scopings for United Grain and Great Western Malting are included in this memo.

United Grain:

A. The company washes grain with water, screens the effluent and discharges it to the Columbia River. They are under orders from us to connect this waste water stream to the city's sewer system this fall. Their permit will expire this September and we need quality and quantity data on their effluent which will be discharged to city lines. The data will be used both by us, EPA and the city at arriving at a new Waste Discharge Permit.

B. We hope to conclude from this survey what removal efficiencies their existing waste treatment facilities provide and what loads and quantities can be anticipated to be discharged to the city's system.

C. One person can conduct the survey in one day.

D. Survey can be conducted on any work day before September. Grain washing, however, does not take place on a daily basis at the grain elevator. Washing is dependent upon the quality of grain that is received at the elevator. The grain elevator must be contacted ahead of time to determine when they will be washing grain. They may have grain in storage which needs cleaning and would agree to designate a day when it will be washed to coincide with your survey. Contact the elevator Superintendent, Bruce Steffan at 693-1521.

E. No special equipment is necessary to run this survey.

F. Two 8-hour composite samples should be obtained. One sample ahead of the rotary screen and one after, before the effluent goes to the river. These should be analyzed for COD, BOD, total suspended solids, suspended combustible solids and total coliform bacteria. The total flow should also be obtained for the survey period.

Great Western Malting:

A. This Company produces malt from barley for the breweries. Overflow from their Steeping Tanks is screened to remove grain particles and the effluent goes to the river. They are also under orders to connect the city's sewers by this fall. The data from the survey will serve the same purpose as that from the United Grain.

B. Same as United Grain.

C. Same as United Grain.

D. This is a continuous operation with very little if any seasonal change. They occasionally shut down for maintenance work, therefore, you should confirm a date with them for running the survey. Contact Irv Thompson, Plant Engineer, at 693-3661.

E. No special equipment is necessary for this survey.

F. Four 8-hour composite samples should be obtained. They have two separate screening facilities. One sample of the influent and effluent from both screens should be obtained and analyzed for COD, BOD, total suspended solids, suspended combustible solids and total coliform bacteria. The total flow should also be obtained for the survey period.

NG:dc

12/04-05

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

WATER QUALITY LABORATORY

ORIGINAL TO: R. Devitt

COPIES TO:

LAB FILES

DATA SUMMARY

Source United Grain

Collected By R. Devitt + G. Rothwell

Date Collected 6-8-72

Goal, Pro./Obj. 3.2.21

Log Number: 72-	1955	1956	1957	1958	1959	1960	~~1953~~	1954			STORET
Station:	United Grain Manhole #20	945	1045	→ 1130	INF	EFF					
pH											00403
Turbidity (JTU)											00070
Conductivity (umhos/cm)@25°C											00095
COD					10,200	2,900	~~42~~				00340
BOD (5 day)					1770.	700.					00310
Total Coliform (Col./100ml)	$>4\times10^6$	$6.\times10^5$	2×10^5	7×10^5							31504
Fecal Coliform (Col./100ml)	<200 *	<400 *	<2000 *	500.							31616
NO3-N (Filtered)											00620
. .-N (Filtered)											00615
NH3-N (Unfiltered)											00610
T. Kjeldahl-N (Unfiltered)											00625
O-PO4-P (Filtered)											00671
Total Phos.-P (Unfiltered)											00665
Total Solids											00500
Total Non Vol. Solids											
Total Suspended Solids					4520.	1210.	72				00530
Total Sus. Non Vol. Solids					350.	125.	64				
Settleable Solids (ml/L)					39.	8.	90				

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

* Suspended material seemed to interfere with local colony growth

Summary By Stephen D. Rell Date 6-14-72