

STATE OF WASHINGTON
DEPARTMENT OF EC
 DANIEL J. EVANS
 GOVERNOR

JOHN A.
 DIREC

Publication No. 72-e42

WA-CR-1010

June 27, 1972

MEMORANDUM

TO: Nelson Graham
 From: Gary Rothwell
 SUBJECT: Great Western Malting

On June 8, 1972 an efficiency survey was conducted at Great Western Malting Company in Vancouver, Washington, by Ron Devitt and Gary Rothwell. Four sampling points were established for composite sampling from 0800 through 1200. An influent and effluent composite was collected at each of two shaker screens. The screen referred to as the west screen was located at the back of the office building and the screen referred to as the north screen was located near the barrel screen building belonging to United Grain Growers. Total flow was requested for both screens, however, it was not feasible to determine flow at the north screen. The flow at the west screen was determined by recording the time the sump pump ran during the survey, which is the only time effluent was discharged, and multiplying this by the pump rating. In a four hour period the pump, which was rated at 1200 gallon per minute, ran for 84 minutes giving a total discharge of 100,800 gallons. The discharge also passed through a Parshall flume and using depth measurements, the discharge was determined to be 113,100 gallons during the four hour period.

The sample aliquot was taken in proportion to flow at the west screen but a constant volume sample was taken at the north screen. The results of the analyses of these samples are listed below in ppm unless otherwise indicated. There are great fluctuations in coliform values. The lower values are probably associated with intermittent chlorine usage.

	<u>North Screen</u>		<u>West Screen</u>	
	Inf.	Eff.	Inf.	Eff.
COD	3290	2190	475	438
BOD (5 day)	705	560	220	195
T.S.S.	1760	1630	57	51
T.S.N.V.S.	228	232	25	17
S.C.S.	1532	1398	32	34
Settleable ml/l	27	19	0.1	0.2

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Total Coliform Colonies/100 ml	0830	>16,000,000	0843	>40,000
	0915	1,300,000	0955	>40,000
	1115	1,400,000	1003	3,500,000
	1130	>8,000,000		
	1200	>16,000,000		

Fecal Coliform Colonies/100 ml	0830	20,000	0843	300
	0915	4,000	0955	400
	1115	>6,000	1003	<100
	1130	>6,000		
	1200	40,000		

GR: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