

HEALTH DEPARTMENT
CITY ANALYST'S OFFICE

STEWART MURRAY
M.D., D.P.H.
MEDICAL HEALTH OFFICER

JOHN F. C. B. VANCE
F.C.S. (ENG.), F.C.I.C.
CITY ANALYST



LABORATORY AND FOOD DIVISION
TELEPHONE: MARINE 1122

236 CORDOVA ST. EAST
VANCOUVER, B.C.
July 3, 1945.

Dr. Stewart Murray,
Senior Medical Health Officer,
Metropolitan Health Committee,
City Hall,
Vancouver, B. C.

Sir:

I beg to report herewith results of analyses of samples of mud, sand, etc. taken from the foreshore as described below. Inspections were also made of certain industries operating adjacent to the foreshore within the City of Vancouver. Sampling and inspections were made jointly by Inspector Devine and myself.

Results of analyses of samples taken are as follows:-

Sand, etc. - Foreshore near Lumberman's Arch, Stanley Park.

	<u>parts per 1,000,000</u>
Ammonia, free	0.032
Ammonia, albuminoid	0.026
Nitrates	0.89
Nitrites	0.08
Blood	None
Sulphuretted Hydrogen	None

Foreshore at Rock Groyne east of Naval Cadets
Barracks, English Bay

	<u>Parts per 1,000,000</u>
Ammonia, free	0.074
Ammonia, albuminoid	0.046
Nitrates	1.44
Nitrites	0.10
Blood	Trace
Sulphuretted Hydrogen	Trace

Foreshore at Stanley Park about 100 yards north
of Yacht Club

	<u>Parts per 1,000,000</u>
Ammonia, free	0.088
Ammonia, albuminoid	0.051
Nitrates	0.24
Nitrites	0.14
Blood	Trace
Sulphuretted Hydrogen	Trace

Foreshore near Wharf foot of Denman Street, Coal Harbour

	<u>Parts per 1,000,000</u>
Ammonia, free	0.341
Ammonia, albuminoid	0.142
Nitrates	1.76
Nitrites	0.39
Blood	0.009
Sulphuretted Hydrogen	0.038

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Foreshore near Gore Avenue Wharf

	<u>Parts per 1,000,000</u>
Ammonia, free	0.113
Ammonia, albuminoid	0.086
Nitrates	1.30
Nitrites	0.15
Blood	0.002
Sulphuretted Hydrogen	0.009

Foreshore at Burns & Company Abattoir
(principally paunch material)

	<u>Parts per 1,000,000</u>
Ammonia, free	0.312
Ammonia, albuminoid	0.214
Nitrates	1.81
Nitrites	0.41
Blood	0.018
Sulphuretted Hydrogen	0.016

Foreshore west of Western Chemical Industries Ltd.
Foot of Commercial Drive

	<u>Parts per 1,000,000</u>
Ammonia, free	0.204
Ammonia, albuminoid	0.112
Nitrates	1.54
Nitrites	0.25
Blood	0.006
Sulphuretted Hydrogen	0.045

Outlet from Private Sewer of Western Chemical
Industries Ltd., Foot of Commercial Drive

	<u>Parts per 1,000,000</u>
Ammonia, free	0.392
Ammonia, albuminoid	0.069
Nitrates	0.74
Nitrites	0.19
Blood	0.008
Sulphuretted Hydrogen	Trace

Foreshore at Cedar Cove west of United Fishermen's
Co-operative, Commissioner Avenue

	<u>Parts per 1,000,000</u>
Ammonia, free	0.125
Ammonia, albuminoid	0.082
Nitrates	1.12
Nitrites	0.13
Blood	0.002
Sulphuretted Hydrogen	0.010

Canadian Fishing Company, Foot of Gore Avenue

The fish oil reduction plant is of a modern type, the process being conducted under vacuum, and waste matter is discharged below low tide level. The fertilizer reduction plant is also of modern design and equipment.

The management appears anxious to do everything possible to trap and control all processing odors.

Burns & Company Abattoir, Foot of Woodland Drive

This plant, which is under Federal Government Inspection, is the first packing house of its kind to operate in the City of Vancouver. There is also a fertilizer plant operated by this firm which adjoins the abattoir. This plant should be equipped with a modern ventilating system for the proper control of odors.

The foreshore contains a considerable amount of organic matter, principally paunch material.

The practice of burning organic waste on this property just east of the Shipyard should be immediately discontinued. The management appears willing to co-operate in the control of odors, but it would appear that a modern system of mechanical control of odors and waste matters is the only solution to this problem.

Western Chemical Industries Ltd., Foot of Commercial Drive.

This is a fish liver reduction plant operating in a single storey building approximately 30' high. Ventilation is by means of open windows on the east and west sides of the building and through a cupola with openings which extends the full length of the building. The processing kettles are not covered and the steam which rises from them during the cooking process passes through the cupola openings in the roof into the open air. There is no proper system of ventilation and control of odors in this plant, and there was no suggestion or evidence that a plant deodorizer was in operation. Odour within the plant was noticeable and very unpleasant.

This firm has a private sewer emptying on to the foreshore above the low tide level. The odor from waste matter discharged from this sewer was most obnoxious. The management was notified verbally to immediately extend the sewer to a point well beyond low tide level and to institute a modern system of ventilation and odor control.

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United Fishermen's Co-operative, Commissioner Ave.

This is a two-storey building, the processing being conducted on the main floor. The retorts are completely covered and no escape of steam is possible during normal operation. All air from the lower floor goes through a vent in the ceiling to the room upstairs. Deodorizers are in operation on the lower floor and also in the room upstairs where all air from the processing room is deodorized before being forced into the outer air by means of a fan. The management state that they expend approximately \$100. per month on deodorants. The plant and equipment are modern.

Coal Harbour

This location contains a large number of launches and houseboats which are the homes of a great many people. The foreshore in this section at low tide is disgraceful.

It would appear that the National Harbours Board have a responsibility at all points below high water mark, and particularly those sections of the foreshore mentioned in this report.

Respectfully submitted,

John F. C. B. Vance
City, Provincial & Dominion Analyst
Chief Food & Dairy Inspector.

:AC