[Report of the Medical Officer of Health for Port of London].

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112

PORT HEALTH AUTHORITY

OF

THE PORT OF LONDON

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

To 31st DECEMBER, 1956.

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ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

(JOHN GREENWOOD WILSON, M.D., F.R.C.P., D.P.H., F.A.P.H.A.)

To 31st DECEMBER, 1956.

Port Health Authority of the
Port of London,
5, Church Passage,
London, E.C.2.

Telegraphic Address : "PORTELTH LONDON"
Telephone Number: MONarch 3030.

The governing body of the City of London, the Corporation of London, was originally constituted the Sanitary Authority of the Port of London by Section 20 of the Public Health Act, 1872. The cost of administration was met from the Corporation's private funds for close on fifty years, when it became rate (and grant) aided. By the Public Health (London) Act, 1936, the term "Port Sanitary" was changed to "Port Health".

The limits of the Port Health District of the Port of London are still as originally defined by a Treasury Minute dated 1st August, 1883. They commence at high water mark in the River Thames at Teddington Lock, in the County of Surrey, and extend down both sides of the said River Thames to an imaginary straight line drawn from the Pilot mark at the entrance of Havengore Creek in the County of Essex, to the Land's End at Warden Point, in the Isle of Sheppey, in the County of Kent, such point being the north-western limit of the Port of Faversham, and extend up and include both sides of the River Medway to an imaginary straight line drawn from the south-east point of land westward of Coalmouth Creek, thence across the said River Medway to the western-most point of the piece of land which forms the eastern side of Stangate Creek, or, in other words, the north-west point of Fleet Marsh and thence in a southerly direction to Iwade Church in the said County of Kent, and thence in a north-easterly direction to Elmley Chapel in the said Isle of Sheppey, a supposed direct line from Elmley Chapel to Iwade Church, being the western limit of the Port of Faversham, and the said Port of London includes the Islands of Havengore Creek aforesaid, called Potton and Rushley Islands, and so much of the said Creek and Watercourses as extends from it to the town of Rochford, and also includes all other Islands, Rivers, Streams, Creeks, Waters, Watercourses, Channels, Harbours, Docks and places within the before-mentioned limits contained.

The Port of London Authority with which the Port Health Authority works in close co-operation, was established as the administrative body of the Port of London including the docks and tideway of the River Thames, by Act of Parliament in 1909. The limits of its jurisdiction are about the same, but not quite so extensive as those of the Port Health Authority.

SECTION I—STAFF
TABLE A

Name of Officer	*Nature of Appointment*	*Date of Appointment*	*Any other Appointment held*
J. GREENWOOD WILSON	Medical Officer of Health	July, 1954	Medical Inspector of Aliens.
H. M. WILLOUGHBY	Deputy Medical Officer of Health and Medical Officer in charge at Denton Hospital.	May, 1929	ditto.
J. A. JONES	Assistant Port Medical Officer	April, 1935	ditto.
R. D. MACLEAN	ditto.	October, 1953	ditto.
W. D. L. SMITH	Do. Isle of Grain (part time)	January, 1954	ditto.
H. A. MADWAR	Do. Sheerness Boarding Station (part time).	December, 1927	–
	CLERICAL		
J. A. GILLIS	Senior Clerk	March, 1914	–
W. L. MCLORG	Assistant Senior Clerk	February, 1927	–
R. C. RATLIFF	First Class Assistant Clerk	March, 1930	–
E. V. SMITH	Clerical Officer	October, 1938	–
R. H. LOTT	Clerical Officer	May, 1947	
F. B. OSBORN	Intermediate Grade Clerk	May, 1952	
C. E. MAYOR, Miss	ditto	April, 1956	–
T. A. WOODS	Messenger	November, 1955	–
	INSPECTORIAL		
T. L. MACKIE, M.B.E.	Chief Port Health Inspector and Supervisory Engineer of Launch Service	November, 1934	–
P. W. COOMBE	Senior Port Health Inspector	December, 1924	–
E. H. JOHNSON	Port Health Inspector	August, 1929	–
T. G. EDWARDS	ditto	June, 1929	–
D. E. MADELEY	ditto	September, 1932	–
C. E. WRIGHT	ditto	July, 1931	–
J. S. BEATTIE	ditto	May, 1931	–
G. DRING	ditto	May, 1936	–
L. N. TOPE	ditto	August, 1946	–
P. A. TRAYNIER	ditto	October, 1950	–
A. C. GOOD	ditto	September, 1951	–
T. C. H. ROGERSON	ditto	October, 1951	–
A. H. MARSHALL	ditto	March, 1953	–
E. W. WARD	ditto	April, 1953	–
W. M. WALKER	ditto	October, 1954	–
H. BUTLIN	ditto	July, 1955	–
A. W. BUCHAN	ditto	July, 1955	–
	MEAT SORTERS		
G. SIMMONDS	Meat Sorter	May, 1955	–
W. H. CLATWORTHY	ditto	June, 1955	–
	RODENT INSPECTORS		
C. W. MOODY	Rodent Inspector	February, 1929	–
E. C. WATKINS	ditto	June, 1929	–
S. A. CROFT	ditto	June, 1929	–

TABLE A—*continued*

RODENT INSPECTORS—*continued*

Name of Officer	*Nature of Appointment*	*Date of Appointment*	*Any other Appointment held*
C. STOCKTON	Rodent Inspector	June, 1940	–
D. J. DAVIS	ditto	August, 1941	–
F. D. CARTMAN	ditto	September, 1943	–
G. LAMONT	ditto	March, 1945	–
(Vacant)	ditto		
	RODENT CONTROL SCHEME		
H. A. BAXTER	ditto	June, 1945	–
W. G. STIMSON	ditto	February, 1946	–
G. CLARK	ditto	January, 1949	–
A. L. SOUTHWOOD	ditto	January, 1949	–
A. T. EVANS	Rodent Operative	January, 1953	–
C. E. W. EASTMAN	ditto	April, 1954	–
A. BARLOW	ditto	January, 1956	–
J. COOK	ditto	July, 1956	–
	LAUNCHES AND HULKS		
P. J. WILKINS	Navigator (Senior)	November, 1928	–
W. S. STIMSON	Navigator (i/c Greenwich Station)	March, 1944	–
J. R. STEEN	Navigator (Deputy Senior)	March, 1926	–
W. G. A. KING	Navigator	September, 1939	–
C. R. SIMONS	ditto	August, 1938	–
H. J. MASON	ditto	August, 1946	–
S. J. CRUTCHLEY, D.S.M.	Engineer (Senior)	June, 1939	–
J. F. TRICE, M.B.E.	Engineer	September, 1947	–
E. ALEWOOD	ditto	January, 1947	–
K. GITTENS	ditto	January, 1955	–
A. R. L. POTTER	Deckhand	July, 1945	–
R. A. MANTRIPP	ditto	March, 1945	–
A. W. SUTHERLAND	ditto	November, 1955	–
B. OSENTON	Deckboy	December, 1953	
M. EAST	ditto	September, 1954	
R. WATTS	ditto	March, 1955	–
W. LAWRENCE	ditto	October, 1955	–
K. A. D. TREVENA	ditto	April, 1956	–
B. JACOBS	ditto	April, 1956	–
P. PAY	ditto	November, 1956	–
(Vacant)	ditto		–
J. F. SMEED	Steward (part time)	July, 1927	–
A. R. BURGE	Shipkeeper	August, 1945	–
A. C. CROFT	ditto	October, 1950	–
W. SIMMONS	ditto	May, 1955	–
W. J. MACE	Watchman	May, 1951	–
F. W. WOODROW	ditto	October, 1954	–

	Date acquired
LAUNCHES—	
"HOWARD DEIGHTON"	1931
"FREDERICK WHITTINGHAM"	1934
"ALFRED ROBERTSON"	1938
"ALFRED ROACH"	1948
HULKS—	
"HYGEIA" at Gravesend	1935
"UPLEES" at Greenwich	1945

(Sold August, 1956 – see page 39)

January, 1957

TO THE WORSHIPFUL

THE PORT AND CITY OF LONDON HEALTH COMMITTEE

GENTLEMEN,

I have the honour to submit my Annual Report for the year ending 31st December, 1956, as Medical Officer of Health of the Port of London.

Circular No. 16/55, dated 18th October, 1955, from the Secretary, Ministry of Health, contained a reminder that the Medical Officer of Health should prepare his Annual Report on the lines indicated in Form Port 20 enclosed with Circular 33/52 of the 6th November, 1952, adapted as may be necessary to the special needs of the Administration of the London Port Health District.

Paragraph 5 of Form Port 20 reads as follows:– "The information required by Sections I, V, VI, VIII, XIV, XV, and XVI, which has been given in an earlier report and has not since changed, need not be repeated every year. A recapitulation of all information should be made in the Report for the years 1952 and 1955 and thereafter quinquennially. For the intermediate years, only the changes which have occurred during the year covered by the Report need be mentioned in those Sections; if there is no change, "NO CHANGE" should be entered".

This Report has been prepared in accordance with the above directive.

Tonnage. The tonnage of vessels entering the Port of London during 1956 was 35,894,117 tons as compared with 35,114,943 tons during 1955. Fifteen thousand and twenty vessels arrived from foreign ports and of these 1,714 were visited by your Medical Officers. (Table B).

Communicable Diseases. Three hundred and twenty-two cases of notifiable and other infectious diseases (including malaria) were reported as having occurred on 209 vessels during the voyage, of which 148 were landed in the Port. (Table D).

Fumigations. One hundred and fifty-five vessels were either fumigated, trapped or poison baited for rodent destruction and the issue of International Certificates under the supervision of your Inspectors. Twenty-eight vessels were fumigated using hydrogen cyanide and resulted in the recovery of 581 rats and 457 mice. The remaining 127 vessels were subjected to poisoning in 121 of which "1080" was used resulting in the destruction of 1,197 rats and 450 mice.

Rodents. A total of 4,928 rats were destroyed and their bodies recovered during the course of the year, 2,655 in ships and 2,273 on shore premises in the Port. (Table E). In addition 6,120 mice were destroyed, 810 in ships and 5,310 on shore premises. Fifty-six rats were examined for plague with negative results.

Water Barges. Thirteen barges were in use during the year. The annual registration of these craft by the Port of London Authority is made conditional upon a report of your Officers as to the fitness of the barges for carrying drinking water as also upon the purity of the water thus carried.

Houseboats. The routine inspection of houseboats was continued throughout the year (see page 34).

Imported Foods. The total amount of foodstuffs seized and condemned as unfit for human consumption and either reconditioned or disposed of for animal feeding or for industrial purposes under guarantee or destroyed outright either by burning or burying was 3,992 tons 0 cwts 3 qrs 6 lbs, as compared with 5,048 tons in 1955 and 3,849 tons in 1954.

Shellfish. The routine inspection of shellfish under the Public Health (Shellfish) Regulations was continued throughout the year.

Instruction of D.P.H. and D.I.H. Classes and Visitors to the Port. A detailed account appears on page 34 of this Report.

Your Medical Officer wishes to record his appreciation of the collaboration and assistance rendered by Her Majesty's Customs, the Port of London Authority, the Shipping Federation, the Emergency Bed Service, by the Pilots, members of the staffs of Shipping Companies and Merchants and the staffs of the Central Public Health and Dreadnought Seamens Hospital Laboratories, in every aspect of the work of the Port Health Authority throughout the year.

I have the honour to be, Gentlemen,

Your obedient servant,

J. GREENWOOD WILSON.

SECTION II—AMOUNT OF SHIPPING ENTERING THE DISTRICT DURING THE YEAR.

TABLE B

Ships from	Number	Tonnage	Number Inspected		Number of ships reported as having, or having had during the voyage infectious disease on board.
			By the Port Medical Officer	By the Port Sanitary Inspector	
Foreign Ports	15,020	25,315,943	1,714	10,215	204
Coastwise	12,953	10,578,174	5	2,347	5
Total Foreign and Coastwise	27,973	35,894,117	1,719	12,562	209

SECTION III—CHARACTER OF SHIPPING AND TRADE DURING THE YEAR.

TABLE C

Passenger Traffic	Number of Passengers—Inwards	97,468
	Number of Passengers—Outwards	113,525
Cargo Traffic	Principal Imports	All types of produce and merchandise.
	Principal Exports	
Principal Ports from which ships arrive.	The Port of London trades with all parts of the world.	

SECTION IV—INLAND BARGE TRAFFIC.

Numbers and tonnage using the district and places served by the traffic.

These barges are of all types; dumb barges, mechanically-propelled barges, etc., and are registered annually with the Port of London Authority. They number approximately 7,000 and their tonnage is some 500,000 tons.

The traffic of these craft extends throughout the length of the Port while a number of them are employed carrying goods and merchandise via the canals to all parts of the country.

SECTION V—WATER SUPPLY

1. Source of supply for—
   (a) The District — No Change
   (b) Shipping — No Change

2. Reports of tests for contamination — No Change

3. Precautions taken against contamination of hydrants and hosepipes — No Change

4. Number and sanitary condition of water boats and powers of control by the Authority —

There were thirteen water boats working in the Port during the year. Water boats are registered annually by the Port of London Authority and such registration is made conditional upon the report of the Medical Officer of Health of the Port as to the fitness of the craft for the carriage of drinking water as also upon the purity of the water thus carried. To this end sampling is carried out from time to time.

SECTION VI—PUBLIC HEALTH (SHIPS) REGULATIONS, 1952

1. List of Infected Areas (Regulation 6) — No Change
2. Radio Messages — No Change
3. Notifications otherwise than by Radio (Regulation 14(1) (b)) — No Change
4. Mooring Stations (Regulations 22 to 30) — No Change

LEGISLATION

The following letter was received from the Ministry of Health :—

Ministry of Health,
Savile Row, London, W.1.

M/H. Ref. 5A93257/2/11C
5A93257/6/1B

20th June, 1956

Responsible Authorities for Customs Airports,
Port Health Authorities,
Riparian Local Authorities.

Sir,

Public Health (Aircraft) Regulations, 1952, "excepted area"
Public Health (Ships) Regulations, 1952, "excepted ports"

1. I am directed by the Minister of Health to refer to the definition of the terms "excepted area" in the Public Health (Aircraft) Regulations, 1952, and "excepted port" in the Public Health (Ships) Regulations, 1952. It will no doubt be remembered that they were devised to give effect to special reciprocal arrangements made by the original Brussels Treaty Powers and the Irish Republic for the Health control of air and sea traffic between their European territories.

2. In May, 1955, Italy and the Federal Republic of Germany joined the Brussels Treaty Powers in what thereafter became the Western European Union and subsequently expressed their willingness to extend those reciprocal arrangements to their European territories. The formal notifications of their acceptance have now been received.

3. The effect of this arrangement is that the European territory of Italy and the Federal Republic of Germany are now to be regarded as within the "excepted area" and the seaports in them as "excepted ports".

4. The Public Health (Aircraft) Regulations and the Public Health (Ships) Regulations will be suitably amended in due course. In the meantime, I am to request that the definition of "excepted area" may be read as if it included Italy and the Federal Republic of Germany and the definition "excepted port" as if it included the coast of Italy and the whole of the coast of the Federal Republic of Germany.

I am, Sir,
Your obedient servant,
(Signed) N.M. BRILLIANT.

Your Medical Officer would point out that under the Public Health (Ships) Regulations, 1952, an "excepted port" is defined as –

"A foreign port situated on the European coast of France, the coast of Belgium or Holland, or that part of the coast of Germany which is between the frontier with Holland and the River Elbe, including the east bank of that river between the entrance to the Kiel Canal and Hamburg inclusive and any place within the Kiel Canal."

Ships arriving from an "excepted port" are not required to complete a Maritime Declaration of Health on arrival in this country.

The effect of the letter from the Ministry of Health is that it will not be necessary in future for ships arriving from ports in the whole of Western Germany and Italy to furnish a Declaration of Health on arrival in the Port of London.

Her Majesty's Customs and Trinity House have been informed of this proposed amendment of the Public Health (Ships) Regulations, 1952.

SECTION VII–SMALLPOX

1. Name of Isolation Hospital to which smallpox cases are sent from the district.

Long Reach Hospital is situated on the south bank of the River Thames about eight miles above Gravesend. The hospital consists of 10 ward blocks capable of accommodating 170 patients but, except in cases of emergency, only three ward blocks (2 of 20 beds and 1, a cubicle ward of 10 beds), total 50 beds are kept available for immediate use. The hospital includes residential quarters for the staff and a laundry although the administration and staffing is carried out from Joyce Green Hospital, Dartford.

2. Arrangements for transport of such cases to that hospital by ambulance giving the name of the Authority responsible for the ambulance and the vaccinal state of the ambulance crews.

A case or cases of smallpox would be removed from the vessel by this Authority's Ambulance launch and conveyed ashore via the pontoon at Denton and from thence conveyed by road ambulance direct to Long Reach Hospital.

The Port Health Authority would be responsible for the vaccinal state of their Ambulance Launch crews while the vaccinal state of the Road Ambulance personnel would be the concern of the South-East Metropolitan Regional Hospital Board under whose jurisdiction both Joyce Green and Long Reach Hospitals fall.

3. Names of smallpox consultants available.

Dr. W. T. G. Boul	Dr. J. P. Marsden
Dr. W. J. Coughlan	Dr. M. T. Mitman
Dr. H. S. Banks	Dr. J. W. Armstrong

4. Facilities for laboratory diagnosis of smallpox.

Facilities are available at the Virus Laboratory of the Central Public Health Laboratory at Colindale.

SECTION VIII—VENEREAL DISEASES

The Venereal Diseases are not compulsorily notifiable but efforts are being made to bring to the notice of all seamen using the Port, the facilities for free treatment under the Brussels Agreement.

In October, 1956, your Medical Officer received an invitation from the World Health Organisation, division of Communicable Disease Services, to participate in a meeting of a Study Group to be convened for the purposes of examining the Brussels Agreement of 1924 relating to venereal disease treatment in ports.

This invitation having received the approval of your Worshipful Committee, your Medical Officer attended the Study Group which was held in Oslo from the 3rd to 7th December, 1956, and subsequently reported as follows :—

> "Your Medical Officer was one of five doctors who met round the table at the Ministry of Health in Norway to discuss the working of the Brussels Agreement (made in 1924) which provides for the free treatment of venereal disease in seafarers of all nationalities at major ports all over the world. The five doctors met as an informal Study Group to consider whether in the light of modern trends in medicine, public health and developments of seafaring, the Agreement needed revision.
>
> The other doctors were the Chief Medical Officers of the Public Health Services of Italy, Norway and Japan, and the International Health Representative of the Department of Health, Education and Welfare of the Public Health Service of the United States of America. The Norwegian was elected to the Chairmanship of the Study Group and the Secretariat was provided by the World Health Organisation in the person of another Norwegian, Dr. Guthe, who is Chief of the Venereal Diseases and Treponematoses Secti m, Division of Communicable Disease Services, World Health Organisation. Also present were a representative of the International Labour Office (Maritime Branch), another Norwegian, and a representative of the Legal Section of the World Health Organisation."

At the conclusion of their week's discussion the Study Group drew up a report to the World Health Organisation, Division of Communicable Disease Service, containing a number of recommendations for improving the operation of the Brussels agreement and for providing better medical treatment services generally for seafarers of all nations at major ports throughout the world.

SECTION IX—CASES OF NOTIFIABLE AND OTHER COMMUNICABLE DISEASES ON SHIPS

TABLE D

Cases landed from ships from Foreign Ports (in accordance with the "Declaration of Health").

Disease	Passengers	Crew	Number of Ships concerned
Pulmonary Tuberculosis	6	21	26
Fever of Unknown Origin	2	9	11
Pneumonia	2	5	7
Malaria	—	6	6
Chickenpox	10	13	14
Influenza	—	7	4
Typhoid Fever	1	4	5
Gastro Enteritis	3	3	5
Tonsillitis	1	2	3
Infective Hepatitis	1	6	6
Erysipelas	1	—	1
Vincent's Angina	—	1	1
Measles	18	2	6
Poliomyelitis	1	1	2
Mumps	3	3	6
Scarlet Fever	—	2	2
German Measles	—	2	2
Dysentery	1	4	5
Quinzy	—	2	2
Pleurisy	—	1	1
Glandular swelling of groin	—	1	1
Food Poisoning	—	2	2
Bronchitis	—	1	1
	50	98	119

Cases disposed of before arrival.

Disease	Passengers	Crew	Number of ships concerned
Infective Hepatitis	4	2	5
Chickenpox	13	12	16
Pneumonia	3	2	5
Measles	45	2	15
Malaria	3	17	8
Influenza	1	1	2
Fever of Unknown Origin	1	3	4
German Measles	–	1	1
Dysentery	4	3	5
Food Poisoning	–	2	2
Pulmonary Tuberculosis	3	4	6
Glandular Fever	3	1	4
Meningitis	–	2	2
Tonsillitis	2	–	2
Whooping Cough	2	–	1
Pleurisy	–	1	1
Gastro Enteritis	–	24	1
	96	78	90

s.s. "PORT PHILIP" – GASTRO-ENTERITIS – ? FOOD POISONING

The above-named vessel arrived in the Port of London on the 9th March and presented a clean Declaration of Health.

On the 23rd March your Port Health Inspector on the Royal Docks (Mr. Ward) informed your Medical Officer by telephone of the occurrence of several cases of gastro-enteritis (? food poisoning) among members of the crew using the Officers' and Engineers' mess.

Your Medical Officer, in addition to instructing Mr. Ward to draw samples of the drinking water as a precautionary measure, telephoned the Shipping Federation Medical Officer on the Royal Docks and arranged with him to obtain stools from the patients for bacteriological examination.

Unfortunately it was found that the vessel was scheduled to leave the Port of London for Liverpool by the afternoon tide of the 23rd March. Nevertheless a stool was obtained from one of the staff of the galley which served the mess affected and also samples of the drinking water, before the vessel sailed.

A letter was sent the same evening to the Medical Officer of Health of Liverpool informing him of the circumstances and of the action that had been taken in this port, with a request that he might carry on from where we had left off.

On the 29th March the Medical Officer of Health of Liverpool wrote informing your Medical Officer of the action taken on arrival of the vessel at Liverpool, reporting that the vessel would be sailing for Glasgow on the 30th March and returning to London on about the 9th April.

On receipt of this letter on the 31st March your Medical Officer telephoned the Medical Officer of Health of Glasgow informing him briefly of the circumstances and confirming the telephone conversation by a letter enclosing copies of the correspondence with the Medical Officer of Health of Liverpool and requesting that he be informed of the action taken in Glasgow in order that he might know how to deal with the ship when she returned to London.

The following is an extract from a letter dated 9th April received from the Glasgow Health Department :–

> "....When the ship arrived here on the 1st April it was boarded by Dr. Thomson and Mr. Smith of the Port Health Authority on the same day. There was no complaint of illness on board and the Master was satisfied with the state of the crew's health. Nevertheless Dr. Thomson arranged the following examinations :–
>
> (a) Specimens of motions from the catering staff, 13 in number
> (b) Specimens of motions from two galley boys who handle food
> (c) Specimen of stool from the Chief Officer, who is now feeling well
> (d) Samples of water from the four water tanks on board the ship will be subjected to bacteriological and analytical examination.
>
> You will note that 16 specimens of stools were to be examined. Fifteen were submitted and found negative. The Chief Steward did not submit a specimen. I enclose a copy of the analytical and bacteriological examinations of the fresh water samples. These are self explanatory.

Although the Master did not feel it worth while we still think that he should have his fresh water tanks cleansed and treated before proceeding on a foreign voyage.

I hope the above information will be sufficient for you to decide your subsequent course of action when the ship is with you."

Both the bacteriological and chemical analysis reports indicated that the water was suitable for dietetic purposes.

This vessel duly arrived back in the Port of London when the Shipping Company had the tanks cleansed and limewashed and the domestic water filters removed.

The above is reported as an example of the close and friendly collaboration between three major ports and as an illustration of the spirit of co-operation which animates the Port Health Service of the United Kingdom.

m.v. "SCHOOG" – GASTRO-ENTERITIS

On the 17th July, 1956, your Medical Officer received a telephone message from Dr. MacKrill, a medical practitioner, stating that he had been called to the above-named vessel which had berthed at Lawes Wharf, Barking Creek, on the 16th July (p.m.) and found that ten people on board were suffering from gastro-enteritis, though none of the cases were sufficiently serious to require admission to hospital. He also stated that the vessel was due to leave London at noon on the 17th July, for Ipswich.

It so happened that Dr. J.A. Jones, one of your Assistant Medical Officers, was in the central office when the communication was received and on my instructions immediately proceeded to the vessel. At the same time arrangements were made for the Senior Health Inspector from the Royal Docks to meet Dr. Jones at Barking Station with the Authority's motor car and convey him to Barking Creek.

Dr. Jones subsequently reported to me as follows:–

Movements of Vessel

Sailed from Antwerp 18.00 hours on 12.7.56
Berthed – Lawes Wharf, Barking Creek – 14.15 hours on 13.7.56

Ship's Company

Master, Mate, 3 Sailors Chief Engineer, Second Engineer, Cook	Total 8	Total 15
Master's wife, 3 daughters, aged 14, 10 and 5 and son aged 7 Chief Engineer's wife and daughter aged 3	Total 7	

Onset of cases

Master was 'ill' in Antwerp on 11.7.56. Headache, malaise, sweating. Some nausea but no diarrhoea or vomiting.
Cook was 'ill' on 12.7.56. Headache, lassitude, malaise. No diarrhoea or vomiting.
(The above two cases would not appear related to the rest of the outbreak).
13.7.56. One of the sailors complained of abdominal pains (08.00 hours) and later the same day had diarrhoea.
Also p.m. 13th – a.m. 14th, the other two sailors complained of abdominal pains and diarrhoea.
14.7.56. Master's daughter, aged 5, had diarrhoea. Temp. 39°C.
15.7.56. Master's wife felt 'blown up'. Some diarrhoea.
16.7.56. Master's son aged 7 had diarrhoea.
Both Engineers and the Mate also had mild diarrhoea.

Present Condition

The Master was apparently quite well. Has had no diarrhoea. The Cook has recovered. Has had no diarrhoea. The Mate states he is well again. Both Engineers state they are much better. The three sailors were not on board having gone to the King George Hospital, Ilford, on their own initiative.

The Master's wife had recovered.
The Master's son, aged 7, still had diarrhoea.
The Master's daughter, aged 5, still had diarrhoea. Temp. 38.5°C.
None of the company looked ill and were all up and about.
The four other members of the ship's company who had so far escaped, namely the Master's daughters, aged 14 and 10, the Chief Engineer's wife and daughter, were all seen and found to be well.

Investigation.

(a) **Water supply.** One tank holding about 8 tons supplies all the water used on board. Cold water is drunk from the most convenient tap, including one in the combined bath and

water closet. Water was last taken in at Antwerp on the afternoon of 11.7.56, from a pipe at Nos. 142-143 berths. A shore hose was used, the water being allowed to run first before filling the tank. The tank had not been cleaned for twelve months.

(b) **Fresh Food.** Meat, bought in Antwerp. Inspected by Senior Health Inspector and found to be sound. Vegetables – ditto.

(c) **Canned Food.** Milk. A tin was opened and found to be sound. Tinned fish and spinach had also been consumed but NOT by all the persons affected.

(d) **Ice Cream.** Bought in Purfleet and consumed by ALL the children.

The one clear factor emerging from this investigation was that the four unaffected had not drunk any cold water since leaving Antwerp. They had used instead a case of lemonade bought by the Master.

Conclusion. Any outbreak in a small and local community is likely to be explosive in nature but the evidence to date would make the water supply suspect.

Action to be taken.

(a) All drinking water to be boiled pending (b) and (c) below.
(b) Samples of water from the tank and all taps to be sent for bacteriological examination.
(c) Tank and pipes to be treated.
(d) King George Hospital, Ilford, to be requested to take specimens (stool or rectal swabs) from the three seamen presenting themselves at the hospital.

Six samples of drinking water were submitted to the Central Public Health Laboratory at Colindale together with the reason for sending them. Reports were subsequently received that all the samples submitted were satisfactory. Nevertheless, as a precautionary measure the water in the tank was chlorinated, the tank then emptied and cleaned and finally refilled with fresh water which was lightly chlorinated.

The vessel left her berth at Barking Creek for a berth at Erith where a visit was made by your Health Inspector on the Lower River District who found all on board to be well save the Master's daughter, aged 5, who still had slight diarrhoea. Your Inspector also noted that the Cook had developed some septic sores on his nose and he arranged with the Master that this man should take over 'deck duties', another member of the crew taking over the cooking and handling of foodstuffs.

The vessel left Erith on the 20th July for Grangemouth and the Medical Officer of Health of that port was advised of the circumstances and the action taken to date.

On the 21st July, Dr. Mangat of the King George Hospital, Ilford reported on the results of examination of the rectal swabs taken from the three members of the crew who had voluntarily reported at the hospital. While two of the specimens were clear, the specimen from one man showed a scanty growth of Salmonella typhi-murium.

This additional information was immediately sent to the Medical Officer of Health of Grangemouth, by whom it was in turn forwarded to the Fife County Medical Officer who wrote to your Medical Officer as follows :–

"I refer to my letter of the 24th July, 1956 and our subsequent correspondence regarding the outbreak of diarrhoea on the above ship. You will recollect that you had isolated salmonella typhi-murium from one of the ship's company and that on arrival here specimens were obtained from seven of the ship's company. Two of these proved negative and five showed an organism of the salmonella group which was referred for further investigation. A subsequent report showed that the organism from one of the five was in fact salmonella Kentucky. I have now received the reports from the Salmonella Reference Library on the organism isolated. In three of the remaining four cases it has been identified as Salmonella Dusseldorf. The organism isolated in the case of the fifth member originally thought to be positive is now reported as not belonging to the salmonella group.

"These results may be of interest to you in view of the fact that you had investigated the original outbreak of gastro-enteritis on the vessel. On the face of it the ship seems to have been visited by a somewhat remarkable conglomeration of organisms".

Although the time and trouble taken in following up this little shipborne outbreak of infectious disease has not led to the discovery of 'the villain in the piece', it has been an interesting epidemiological study which could not have been pursued fully without ready co-operation within the port health and public health services of the United Kingdom.

m.v. "TROMAAS" – ENTERITIS

The above-named vessel arrived at the Isle of Grain at midday on Sunday, 4th November, having sailed from Mena al Ahmadi (Persian Gulf) on the 14th October, direct to the United Kingdom, via the Suez Canal.

On being visited by your Health Inspector, Mr. P.A. Traynier, on the 5th November, it was found that there had been several cases of 'stomach trouble' on board during the last 14 days.

A local medical practitioner who had been called in found that 24 members of the crew of 45 were suffering from 'enteritis' to a varying degree, though none were confined to bed.

Faeces specimens were collected from 13 members of the crew and sent for bacteriological examination and in addition, two samples of the drinking water on board were submitted for examination.

In the meantime, an inspection of the vessel revealed fairly satisfactory hygienic conditions, with the exception of the food storerooms and galley. The provision rooms were also badly infested with weevils and one cabin was infested with bed bugs.

The attention of the master was called to these unsatisfactory conditions and he undertook to have the matters dealt with at the vessel's next port of call.

The vessel left the Port of London on the 6th November for Rotterdam and a letter setting out the circumstances was forwarded to the Medical Officer of that port with a promise to forward the results of the faeces and water examinations referred to above, as soon as they were received.

These reports were duly received and showed that the water samples were 'highly satisfactory' and that the bacteriological examination of the 13 faeces specimens revealed no evidence of pathogenic organisms. These reports were immediately forwarded to the Medical Officer of Health of Rotterdam.

Your Medical Officer received the following letter dated 15th November from the Medical Officer of Health of Rotterdam :–

> "Thank you for your letters of the 7th and 8th November. We inspected the m.v. "Tromaas" on November 12th. There were no more cases of enteritis or stomach trouble. I understand the Master has arranged for the insect infestation to be dealt with.
>
> Yours faithfully."

The vessel arrived back at the Isle of Grain on the 16th November and was again boarded by Mr. Traynier who reported that all the crew were fit and working, extensive insect control had been undertaken by a specialist firm in Rotterdam with satisfactory results and that the store-rooms and galley had been thoroughly cleaned and were now in a good condition.

s.s. "CORNELIA B3" – FEVER OF UNKNOWN ORIGIN

This vessel arrived from the West Coast of Africa on the 4th November and your Boarding Medical Officer, Dr. R.D. MacLean, admitted a member of the crew, a cabin boy who was suffering from fever, to Denton Hospital, for observation.

This is a small vessel of 267 tons, carrying a crew of 15 and as such need not and does not carry a surgeon.

As your Boarding Medical Officers were not satisfied about the diagnosis in this patient who was very seriously ill and had symptoms suggesting the possibility of typhoid fever, they called in your Worshipful Committee's Infectious Disease Consultant, Dr. W.T.G. Boul, who narrowed the diagnosis down to a choice of fever of unknown origin giving meningeal signs and symptoms, meningitis of unknown origin or 'cerebral' Malaria.

Dr. Boul advised removal of the patient to Thurrock Hospital for more elaborate investigations than can be carried out at Denton, and this was done.

Meanwhile results had come in from the laboratory examination of blood films that had already been taken by Dr. MacLean before the patient was transferred to Thurrock Hospital. These results showed a blood infection with malarial parasites of a malignant type.

With infections of this kind the destruction of blood corpuscles can be so great that the smaller blood vessels, the capillaries, become clogged with debris and when this happens in the cerebral capillaries, cerebral or meningeal symptoms occur.

The patient made a complete recovery and it is probably true to say that he owed his life to the diagnosis of his condition that was made at Gravesend while there was still time for rigorous anti-malarial treatment to be effective.

The case seems to represent a regrettable failure of malaria prevention – the Ship Captain's Medical Guide provided for use in our own Merchant Navy contains elaborate instructions for the prevention and treatment of malaria.

s.s. "ADJUTANT" – FEVER OF UNKNOWN ORIGIN

On the 20th November, the Marine Superintendent of the General Steam Navigation Co., reported that he had received a signal from the above-named vessel that the Boatswain was very ill and had been unable to stand on his feet since leaving Leghorn and that the vessel was due to arrive at Gravesend at 09.00 hours on the 21st November.

The message was immediately forwarded to the Medical Officer on Duty on the "Hygeia".

The vessel duly arrived at Gravesend at 09.00 hours on the 21st November and was boarded by Dr. J.A. Jones who, after examining the patient, telephoned the following history :–

"The patient started his illness on 10th November in Leghorn complaining of fever. Temp. 103°. He was seen by a doctor who diagnosed a malarial recurrence, the man having had malaria in 1942. He was treated with quinine.

11.11.56. Temp. 102.6°. Complained of aches in arms and legs.

12.11.56. Temp. 102°. Seen by a doctor in Naples who gave the same diagnosis and treatment was continued with paludrine and quinine. Since then he has had a continuous though swinging temperature with a daily peak of 102° and going down to as low as 99° in the same day. His aches became pains in the limbs, both arms and legs and moved from one to the other.

All this time he had a very strong slow pulse little above normal (72-74). Has had no cough, no rash, no diarrhoea, no vomiting and no localised symptoms until yesterday, 20.11.56, when the Chief Officer thought there was a puffiness behind the right knee and today he has got a considerable swelling of the right calf which is red and very tender but not very tense and there is no surface localisation. He has also got some swelling behind the right knee and of the right ankle but there is no redness. There is nothing in his chest and his heart seems all right and in my opinion there is no paralysis but some weakness in the right leg. This is difficult to judge owing to the pain on movement.

The original diagnosis seems reasonable on the evidence at the time. Although the anti-malarial course was not completed it is possible that the patient had enough of these drugs to affect the pyrexia if this diagnosis had been correct. Until I examined the legs, rheumatic fever did seem a possibility but this and poliomyelitis seemed to be excluded. I think he has a septicaemia with a localised lesion in the right calf. The slow pulse, is of course, suspicious of enteric but I do not think this to be the organism in this case."

The patient was allowed to remain on board since it was understood that the Shipping Company had already made arrangements for an ambulance to meet the ship on arrival in London Dock.

On telephoning the Marine Superintendent of the Shipping Company it was found that no such arrangement had been made.

Having ascertained that the vessel would be berthing at No. 19 Shed, London Dock at approximately 13.00 hours, arrangements were made with the Dreadnought Seamens Hospital, Greenwich, to admit the case, which they very kindly consented to do by sending an ambulance to the dock to arrive at 14.00 hours.

A copy of Dr. Jones' case notes reported above was sent to your Health Inspector at London Dock with instructions that the notes were to be handed to the Ambulance Driver for transmission to the Resident Medical Officer at the Seamen's Hospital, for his information.

Your Health Inspector on the dock, Mr. E.H. Johnson, reported that the patient was removed by ambulance at 14.30 hours. He also reported that between 14.00 and 14.30 hours the patient had passed a stool in a bed-pan and it was noted that the stool contained a quantity of blood. He thereupon telephoned the hospital asking that this incident should be brought to the notice of the Resident Medical Officer.

On 3rd December, 1956, the hospital reported that the final diagnosis proved to be Malignant Tertian Malaria.

s.s. "BORGSDEN" (NORWEGIAN) – INJURY TO MEMBER OF CREW

Your Medical Officer reports this incident as a further example of the smooth working arrangements between the Authority and the Emergency Bed Service.

At 16.15 hours on the 27th November, your Boarding Medical Officer, Dr. J.A. Jones, reported that at 20.00 hours the previous evening, the 3rd Officer of the above-named vessel, while going up to the Bridge for his 'watch' slipped, hitting his head and left side. The ship was pitching badly at the time. The Officer was not knocked unconscious and actually carried out his four hour watch.

At 08.00 hours the following morning when he was again due for duty, the Officer complained of a pain on breathing and was passing blood in his urine.

On arrival at Gravesend, Dr. Jones saw the patient and was of the opinion that he had an injury to his left kidney and there was quite a bit of swelling of his loin. His skull and spine seemed unaffected.

Dr. Jones reported that the vessel was proceeding to Convoys Wharf, Deptford, where she was due to arrive at about 18.00 hours, and requested that arrangements be made for the patient's admission to hospital by ambulance, the Master having expressed a preference for the Miller General Hospital, Greenwich.

The circumstances were fully explained to the Emergency Bed Service and they readily agreed agreed to co-operate to the extent of trying to obtain admission of the patient to the Miller General Hospital, Greenwich.

At 17.10 hours the Emergency Bed Service telephoned that the Miller Hospital was unable to take the case but that they had arranged for his admission to the Dreadnought Seamens Hospital, Greenwich and an ambulance would be at Convoy's Wharf at 18.15 hours to remove the patient to hospital.

In the meantime the vessel's London Agents – Messrs. Fred Dessen & Co. – were informed of the arrangements and they agreed to supervise the patient's removal to hospital on the arrival of the ambulance at Convoy's Wharf, which was duly affected at 18.30 hours.

Seamen's Hospital subsequently reported that "extensive X-ray showed nothing abnormal and since the patient was extremely anxious to go back to his own country, he was discharged on the 30th November.

s.s. "ZYPENBERG" (Outward Bound) – MULTIPLE INJURIES

Your Deputy Medical Officer, Dr. W.M. Willoughby, reported on the above incident, as follows:-

"A message was received per 'Walkie-Talkie' Radio telephone from the tug "Contest" in attendance on the outward bound Dutch vessel "Zypenberg" that a serious accident had occurred on board and that the ship was in urgent need of medical assistance.

"The message was received at 18.10 hours when the "Zypenberg" was in the vicinity of Grays. Interception was affected at the top of Northfleet Hope and I boarded the ship at approximately 18.30 hours.

"It appeared that the patient – a first voyager – had tried to cross the hatches of No. 5 Hold in the darkness and disappeared from view in the empty hold where a hatch cover had not been replaced. He fell at least 40 feet. One man only saw him disappear and nobody saw him land at the bottom of the empty hold.

"On arrival I descended the hold and found the patient lying on his face, conscious and with no obvious head injuries or signs of haemorrhage. Leg movement was normal. He had, in my opinion, a broken arm and possible internal injuries and complained of pains in his back in the lumbar region. The ship had carried an inward cargo of iron ore and there was a liberal amount of these sweepings everywhere.

"I administered ½-grain Omnopon at 18.40 hours and sent for assistance from the Kent Police, "C" Division, who arrived with commendable promptitude at 19.15 hours.

"The patient was completely splinted into immobility, turned on to his back and on to a Neil Robertson Stretcher. This in turn was placed on an ordinary stretcher and the whole outfit hoisted by 4 point suspension on the ship's main derrick, thence overside into the "Howard Deighton".

"The patient was landed at the Royal Terrace Pier, Gravesend and conveyed by ambulance to the Gravesend and North Kent Hospital.

"The present incident is a parallel one to that which I attended in the s.s. "Elm Hill" about two years ago, but today had the added difficulty of darkness and the filth of the ore sweepings which covered the decks and everything one touched.

"The prompt and skilled assistance of the Police team – incidentally the Sergeant in Charge was the same Officer who so ably assisted in the "Elm Hill" incident – is deserving of praise. I am sure the co-operation of the Police was much appreciated by myself.

Your Medical Officer, anticipating the wishes of your Worshipful Committee, wrote to the Chief Superintendent of the "C" Division, Kent County Constabulary, Gravesend, asking him to convey to the Sergeant in Charge and to the members of his team our very grateful thanks for the prompt and skilled assistance which they rendered on this occasion.

In acknowledging the receipt of my letter the Chief Superintendent stated "As you are aware, all our Officers are trained in First Aid, and we are always very anxious to give all the help we can in such cases. Nevertheless the Chief Constable will be glad to read your letter which I shall pass to him. Its contents will also be drawn to the attention of the Officers concerned."

It was subsequently ascertained from the Gravesend and North Kent Hospital that X-ray examinaction showed that the patient's only injury was a broken collar bone.

"ON GUARD AGAINST PLAGUE"

A comment under this title appeared in the "Lancet" for 29th December, 1956, and since it referred so aptly to the work of the Port Health Authorities throughout the world, copies were circulated to the members of your staff and is reproduced as follows:–

"When the Fourth World Health Assembly adopted the International Sanitary Regulations in 1951, it was a legal rather than a hygienic innovation. From that date all nations who were members of the Assembly became bound by the regulations and such member nations that wished to deviate from them in part or in whole had to submit their reservations to the Assembly. It may be a sign of the times that so little fuss was made over this victory for common sense over national prejudices. Since then the regulations have been modified in detail and will, no doubt, be modified again to meet new dangers or to remove useless impediments to commerce and travel. They are concerned with the 'quarantinable diseases' only – plague, cholera, yellow fever, smallpox, typhus and relapsing fever. In general they do no more than codify the many existing agreements, but in the process many absolute procedures have been abandoned and the recommendations limited to what now appears sound and efficacious.

"Even fifty years ago the medical officer of every port in the world knew that he was sitting on an epidemiological volcano. His first news of plague in Surabaya or smallpox in Bahia Blanca might be a ship in the roads with the yellow jack in her rigging or a dying man in his isolation hospital. Today patient clerks in Geneva sort and distribute a weekly return of infectious diseases from almost every country. The advances in the prevention and treatment of the pestilent diseases are as great as those in any branch of medicine. Active immunisation is effective not only against smallpox but against yellow fever and typhus and (perhaps) against cholera and plague. Thanks to the newer insecticides the local extermination of mosquitoes is now a reality and the louse a very rare animal indeed. The rat survives, but new ships and more subtle poisons have drawn his teeth. That travel by air might bring with it the risk of spreading disease was readily appreciated, and no traveller can doubt that every care is now taken to avoid introducing undesirable aliens – with, 2, 4 or 6 legs.

"All these technical improvements have been accompanied by a remarkable and world-wide decline in the quarantinable diseases which goes a long way to justify the optimism of a recent review of the subject from the World Health Organisation. Nevertheless a carefree faith in the certainty of continual and inevitable progress has led mankind into trouble before now and it would be foolish to forget that these diseases remai[illegible] danger so long as they are endemic in any part of this contracting world. Cholera today is almost confined to India China and the intervening countries. (It is hard to know whether India's place at the top of the table is a merited disgrace or the penalty of conscientious diagnosis and notification). Cholera is a 'simple' disease of which the cause and method of spread are well known; and yet, in spite of much thought and toil, the stimulus which converts endemic to epidenic infection is still a matter for surmise. In the future we may be able to confine the infection more closely than in the past, but the threat remains. No one knows the origin of the outbreak in Egypt in 1947 and very few are certain why it ended when it did. Much the same is true of plague. The major epidemics have been more widely spaced than those of cholera, but they lasted far longer. It is still a sporadic disease in many parts of the world and endemic foci in wild animals are known in three continents. If we knew the chain of infection from a marmot in Turkestan to a million rats in the slums of Bombay we would be better placed to forecast our immunity from the pestilence. Vaccination against yellow fever gives a lifelong immunity. This by itself should be enough, but vaccination is a costly business and it is hard to justify the expense in a poor country where antibodies in the inhabitants' blood are the only evidence of disease. In populous places it seems almost as effective to eradicate Aedes aegypti (as has been done in parts of Brazil), but 'jungle yellow fever' in monkeys and marmosets remains a threat of unknown potency. It is not entirely clear if the 'wild' disease can give rise to the urban epidemic form; some slight evidence from Trinidad suggests that it might. At any rate, during the last few years jungle yellow fever has been advancing rapidly northward along the Central American isthmus; it may invade Mexico at any time and the U.S.A. is not outside the zone of danger if the disease is transmitted to Aedes aegypti in the coastal belt. Typhus and relapsing fever are diseases of war and at the moment we enjoy peace of a sort; in any case the experience in Naples in 1943 suggests that louse-borne infection can be checked even in the middle of a war. Smallpox is everywhere less common than it was, and yet where doctors are few and money scarce it is seldom absent. No doctor anywhere in the world can be quite certain that the next patient may not show a pustular rash which will cause him some hard thinking. This seems the disease most likely to be spread by air travel, but accurate diagnosis and sufficient vaccine should ward off a major epidemic.

"It is equally a cause for thanksgiving that the combined wisdom of experts of all nations could be used in drafting these regulations and that the nations of the world accepted them with so little demur. At the moment they are sufficient, but the problems of disease are dynamic. Old diseases may assume new forms or new diseases appear to threaten us. The laws of the Medes and Persians are a poor model for medical legislation."

HOSPITAL ADMISSIONS FROM THE PORT OF LONDON

Your Medical Officer has reported from time to time upon the requests for help received by himself and his staff to deal with incidents which do not always fall strictly within the terms of your Worshipful Committee's responsibilities.

An outstanding example is the request to facilitate admission to hospital of patients from ships moored in the Port of London even though these patients are not suffering from illnesses which render them liable to be dealt with under the Public Health (Ships) Regulations, 1952.

Difficulties are seldom experienced in the Lower River district particularly because we have there the control of the Denton Isolation Hospital and also through the good relations with the Medical Officer of Health of the Thurrock Urban District Council, Dr. Boul, who readily admits all kinds of cases to the hospitals under his control on the Tilbury side of the River.

The main difficulties have been experienced within the Dock Groups serving the Middle and Upper River Districts where matters were brought to a head when a sick engineer serving one of the well known Shipping Lines was kept waiting all day for admission to hospital, which was finally achieved through the intervention of your Medical Officer.

The Vice-Chairman of the Line was extremely incensed over the incident and your Medical Officer promised him that, though not his responsibility, he would take the matter up with the Ministry of Health.

As a result of a good many discussions it was finally arranged that the Emergency Bed Service on bona fide representations from your Medical Officer would always try to arrange the admission of patients from ships in the various dock groups within the Metropolitan area.

The smooth working of the arrangement is exemplified by the following occurrences:—

(a) The s.s. "Braemar Castle" arrived on the 2nd February and proceeded to her berth in the King George V. Dock for disembarkation of passengers.

The Shipping Company telephoned the Central Office to say that the Ship's Surgeon had reported to them that two passengers, children, one aged four months and the other aged sixteen months, were suffering from gastro-enteritis and acute tonsillitis respectively and requesting their removal to hospital.

The Health Inspector on the dock was immediately instructed to visit the vessel and obtain full particulars of the cases, reporting back to your Medical Officer.

This he did and it was ascertained that the parents of the children who had hoped to proceed to accommodation in Southampton found on arrival that this arrangement had fallen through and, therefore, they would have to go on to an hotel until they were able to make other arrangements. It was for this reason, apart from any others, that the Surgeon requested that the children should be admitted to hospital.

It was at this stage that the Emergency Bed Service was called upon to render assistance and despite the difficulty experienced owing to the tender age of the patients and the fact that the mother at least should go with them, within the hour they had arranged not only for an ambulance to convey the patients but also their admission to the Eastern Hospital, Homerton, E.9.

(b) The s.s. "Warwick Castle" arrived off Gravesend at 01.00 hours on the 17th February, and was boarded by your Boarding Medical Officer, Dr. J.A. Jones.

On board was a Tourist passenger, a lady aged 46 who was reported to be suffering from gastro-enteritis. She had a temperature of 101° and still had diarrhoea.

Your Boarding Medical Officer who was of the opinion that the patient was more likely to be suffering from bacillary dysentery, considered that her condition was such that she was not a suitable case for removal in the night without a nurse and also since the diarrhoea attacks were not controlled.

He therefore, allowed the patient to proceed in the vessel to her berth in the King George V Dock, and shortly after 9.0 a.m., the same morning, notified not only the Health Inspector on the dock of the circumstances but also the Central Office with a request to arrange admission of the patient to hospital.

Here again, after explaining the circumstances to the Emergency Bed Service they readily agreed to arrange ambulance conveyance and admission of the patient to hospital. These arrangements they concluded within an hour and the patient was admitted to the Eastern Hospital, Homerton, E.9.

Admission to Hospital of Patients taken off ships at the Gravesend Quarantine Station

The growth of specialism and the increasing use of diagnostic aids in clinical work (laboratory tests, X-ray, etc.) has affected diagnosis in infectious diseases no less than in other branches of medicine and indeed because of their potential effect on the community, their prompt and accurate diagnosis is even more desirable than it is for other diseases which inflict only the individual.

Thus, when your Medical Officer investigated a small outbreak of paratyphoid fever on a vessel which arrived during the latter part of 1955, he was able to get off to a very quick start by arranging for the patient, provisionally diagnosed as a case of "Fever of unknown origin", to be admitted to the Thurrock Hospital, where modern diagnostic facilities with laboratory tests were available immediately upon admission of the patient with resulting prompt and accurate diagnosis which was telephoned to your Medical Officer as soon as made.

Experience has shown that modern diagnostic facilities are not available at Denton Hospital, It is also inconvenient, sometimes impossible, to use it in inclement weather either because of difficulty in disembarking the patient from the ship to the launch or in getting the patient from the launch to Denton Hospital pontoon. At one period during the year the pontoon was unusable owing to gale damage.

At such times, Tilbury Landing Stage has been used and the patient conveyed thence either by road to Thurrock Hospital, Essex or by car ferry and road to Denton, though in my opinion with so little difference in the road distance once the Gravesend side was reached, it would have been better to admit that patient direct to Joyce Green Hospital whence he would have to be transferred in any event, if at all seriously ill.

This led your Medical Officer to recommend to your Worshipful Committee that in future all seriously ill and/or mysteriously ill patients taken off ships in Gravesend Reach, and indeed all patients in ships arriving in gales or blizzards, be admitted direct either to Joyce Green Hospital or to Thurrock Hospital.

At Thurrock Hospital they would be under the care of Dr. W.T.C. Boul who has given the Authority many years of excellent service, officially as Smallpox Consultant to the Ministry of Health, but informally as infectious disease consultant in "mysterious" cases of infectious disease other than smallpox.

In this connection Your Worshipful Committee concurred in the further recommendations of your Medical Officer that Dr. Boul, who was already Infectious Disease Consultant to the North-East Metropolitan Hospital Board be appointed in a similar capacity to the Port Health Authority of the Port of London.

Since Dr. Boul was appointed early in 1956 his services as a Consultant have only been required on one occasion, again a patient diagnosed on arrival to be suffering from a "Fever of Unknown Origin" (see report on Duch s.s. "Cornelia B.3") and in this instance it is probably true to say that he owed his life to the prompt diagnosis of his condition that was made at Gravesend and the vigorous anti-malarial treatment he was given in Thurrock Hospital under the care of Dr. Boul.

SECTION X – Observations on the occurrence of Malaria in ships

Twenty-six cases of malaria were reported on fourteen vessels during the year under review as compared with twenty-five cases on sixteen vessels during 1955. Twenty-three of the cases occurred amongst members of the crew and three among passengers. Twenty of the cases were disposed of prior to the arrival of the vessels in this Port.

Prevention of Malaria and Mosquito Control

Although no cases of indigenous malaria have occurred in this country since the period immediately following the first world war, it has long been recognised that potentialities for infection have continued around the Thames Estuary by reason of the swampy ground and the breeding of mosquitoes there of the type which, under certain circumstances could carry malarial infection.

This danger was early recognised by the Kent Oil Refinery when they built their establishment on the Isle of Grain where, thanks to their enterprise, energetic measures have been taken to stamp out the mosquito infestation in that area.

Owing to the cordial relationship between the Port of London Health Authority and the Company over a period of years it has been possible to second the Authority's district Health Inspector for the area, Mr. P.A. Traynier, to assist the staff employed by the Kent Oil Refinery, in mosquito control measures.

A good deal of work was done during the year 1956 some details of which are given below by courtesy of Dr. W.D.L. Smith who directed the operations and who, in another capacity as an Assistant Medical Officer is seconded by the British Petroleum Company to work for the Authority as Boarding Medical Officer at Port Victoria on the Isle of Grain.

"Since the start of construction of the 'B.P. (Kent) Refinery Ltd.' at the Isle of Grain in 1950, attention has been focussed on this subject. The last epidemic of malaria in this country developed at Grain in 1920 and mosquito infestation of that area including certain species (Anopheline) capable of transmitting malaria has remained high.

"During the initial construction phase the labour force included some 2,000 residents in an adjacent labour camp. A certain percentage of this force were ex-servicemen or coloured immigrants who had recently been in parts of the world where malaria is endemic and who might, therefore be capable of introducing an infection to a local population. That the risk of transmission was real was evident from the number of employees requesting first aid for mosquito bites.

"Mr. P.G. Shute, Deputy Director of the Malaria Reference Laboratory, Horton Hospital, Epsom, drawing attention to this hazard demonstrated a large number of anopheline mosquitoes in the sleeping quarters in the camp.

"Control measures were begun by the British Petroleum Company at an early stage of construction to reduce the mosquito nuisance in the vicinity of the Refinery.

"The campaign, confined to the Refinery perimeter, was based on a treatment of all areas of water where breeding was recognised, with a larvicide (Dieldrin) and succeeded in demonstrating that a considerable degree of control can be achieved by purely local measures. Mr. P.G. Shute and his assistant, Miss Maryon who carried out all larval identification and in other ways monitored the campaign, paid tribute to the work of Mr. P.A. Traynier and the Refinery field worker, Mr. G.H. Leport."

SECTION XI. – Measures taken against ships infected or suspected of Plague

The Fourth Schedule to the Public Health (Ships) Regulations, 1952, under the heading "Additional measures in respect to the quarantinable diseases" – Part I – Plague, reads as follows:–

"(1) The Medical Officer may –

(a) require any suspect on board to be disinsected and place him under surveillance, the period of surveillance being reckoned from the date of arrival of the ship;

(b) require the disinsecting and, if necessary, disinfection of the baggage of any infected person or suspect, and of any other article on board and any part of the ship which the medical officer considers to be contaminated.

(2) If there is rodent plague on board, the medical officer shall require the ship to be deratted in a manner to be determined by him, but without prejudice to the generality of this requirement the following special provisions shall apply to any such deratting –

(a) the deratting shall be carried out as soon as the holds have been emptied;

(b) one or more preliminary derattings of the ship with the cargo in situ, or during its unloading, may be carried out to prevent the escape of infected rodents;

(c) if the complete destruction of rodents cannot be secured because only part of the cargo is due to be unloaded, a ship shall not be prevented from unloading that part, but the medical officer may apply any measure which he considers necessary to prevent the escape of infected rodents."

Plague being primarily a disease of rats all vessels are inspected immediately on arrival at their berths in the docks and river for the presence of any mortality among the rats on board which is not attributable to any known cause, such as trapping, poisoning, etc.

Incidentally one of the "Health Questions" on page 1 of the "Maritime Declaration of Health" requires the Master to answer "Yes or No" to the question "Has plague occurred or been suspected amongst the rats or mice on board during the voyage, or has been then an abnormal mortality among them?".

Any dead rats are immediately sent to the Central Public Health Laboratory at Colindale for examination for bacillus pestis, each rat being accompanied by a label on which is given precise information as to where the rat was found in order to arrive at a focus of infection should the examination prove positive. This information, is, of course, far more vital when the rat has been found ashore than when found on board a ship.

In the event of a positive result the "additional measures" referred to above are put into operation – the discharge of the cargo would be promptly stopped and arrangements made for the vessel to be fumigated throughout with hydrogen cyanide, with the cargo in situ, the vessel being moved to an approved mooring.

Following the initial fumigation and collection of dead rats resulting therefrom, further samples of such rats would be submitted for examination and the discharge of cargo would be permitted under observation. The destination of the cargo would be forwarded to the Medical Officer of Health of the district to which it was proceeding, together with an explanatory note.

If any of the cargo had already been discharged overside into lighters before the discovery of plague infection, they would be fumigated immediately they were empty.

On completion of the discharge of cargo from the vessel a second fumigation would be carried out, again using hydrogen cyanide, to destroy the residual rat population, if any.

SECTION XII – Measures against rodents in ships from foreign ports

(1) Procedure for inspection of ships for rats.

The Port Health Authority employs fifteen Rodent Operatives working in conjunction with and under the supervision of the Port Health Inspectors.

The Rodent Operative's first duty is the examination of ships in his area which are due for inspection under Article 19 of the Public Health (Ships) Regulations, 1952, relating to the granting of Deratting and Deratting Exemption Certificates.

His second duty is to visit all ships arriving in his district, to search for evidence of rats, paying particular attention to vessels which have arrived from plague infected ports and to visit such vessels during the discharge of cargo.

The Rodent Operative's third duty is the examination of shore premises for signs of rat infestation paying particular attention to premises adjoining the berths of vessels from plague infected ports.

Some sixteen years ago the Port Health Authority instituted a Rodent Control Scheme in all docks and premises of the Port of London Authority on behalf of that Authority and in the premises of the tenants of the Authority on behalf of the occupiers.

The Port of London Authority have made Bye-laws requiring the Master of every vessel to cause all ropes and mooring tackle to be fitted with guards to prevent rats passing from ship to shore. The bye-laws also prescribe that when discharge or loading of cargo is not actually proceeding, one gangway, whitened for a length of 10 feet at the end next the vessel, may be used as a communication between the ship and the shore.

(2) Arrangements for the bacteriological examination of rodents, with special reference to rodent plague, including the number of rodents sent for examination during the year.

As described in Section XI above, all rats for examination for plague, either by post mortem and subsequently, if necessary, by bacteriological examination are promptly sent to the Central Public Health Laboratory at Colindale.

The bodies are placed in polythene bags which in turn are placed inside metal boxes, sealed and labelled so that there is no risk of the escape of any rat fleas during their transit to the Laboratory. The boxes are, of course, delivered by hand.

The rat population of the Port is now so small and is under such strict control that it can be said to be almost certain that the arrival of a plague infected rat, even should it manage to get ashore, would be highly unlikely to have any serious significance. In other words, an epizootic could not be introduced into the Port for the simple reason that there are insufficient rats to enable the spread of infection. Nevertheless, fifty-six rats were sent to the Laboratory and were examined for plague with negative results.

(3) Arrangements in the district for deratting ships, the methods used, and if done by a commercial contractor, the name of the contractor.

(a) The burning of sulphur at the rate of 3-lbs. per 1,000 cubic feet of space for a period of not less than six hours.

The destruction of rats, whether it be by the open pot method or by sulphur gas in cylinders, is efficient and the great advantage is that when applied in the holds of ships, the crew need not be put ashore. Unfortunately a number of countries have, for some time past, refused to accept as valid, International Certificates, where this method of rat destruction has been employed; consequently it has fallen out of use.

(b) The generation of hydrocyanic acid gas by various methods. For the destruction of rats a concentration of HCN at the rate of 2-ozs. per 1,000 cubic feet of space is required with a minimum of two hours contact.

(c) "1080" and "Warfarin". The employment of "1080" has been used regularly throughout the docks for some time with highly satisfactory results both on shore and in ships. An increasing number of ships have been deratted by this method in preference to the use of cyanide, resulting in a considerable saving of time and cost to the shipowner.

Although satisfactory results have been obtained from the use of "Warfarin" a suitable bait has yet to be found, particularly in granaries, with which to mix the poison, so that rats will take it continuously in preference to grain and other forms of cereal on which they are normally feeding.

(d) Trapping. Trapping is seldom employed save for the destruction of isolated rats which have escaped a major poisoning operation or which have not yet established themselves.

The following are the names of the firms approved for carrying out the deratting of ships:–

Messrs. Associated Fumigators Ltd.
Messrs. London Fumigation Co. Ltd.
Messrs. Scientex (Southern) Ltd.
Messrs. Fumigation Services Ltd.
Messrs. Ridpests Ltd.
Messrs. Insecta Laboratories Ltd.

RODENT CONTROL

Arising out of a Resolution of your Worshipful Committed regarding the advisability of printing in the Monthly Reports comparative figures of the numbers of rodents (rats and mice) destroyed, both on vessels and on shore premises, it was suggested that instead of quoting the comparable figures for the previous year, an average figure for a number of preceding years should be quoted.

Acting upon this suggestion your Medical Officer investigated the figures relating to the destruction of rodents during the past five years (1951-1955) inclusive, with the following results:–

1. On Vessels

	BLACK RATS	BROWN RATS	TOTAL	RATS EXAMINED	RATS INFECTED WITH PLAGUE	MICE
1951	2,728	1	2,729	Nil.	Nil.	603
1952	2,240	27	2,267	Nil.	Nil.	958
1953	1,869	4	1,873	8	Nil.	343
1954	2.305	4	2,309	20	Nil.	808
1955	3,188	17	3,205	39	Nil.	803
Totals	12,330	53	12,383	67	Nil.	3,515
Giving a weekly average (5 x 52 – 260 weeks) as follows:–						
	47.4	0.2	47.6	0.3	Nil.	13.5

2. On shore

	BLACK RATS	BROWN RATS	TOTAL	RATS EXAMINED	RATS INFECTED WITH PLAGUE	MICE
1951	3,220	3,862	7,082	Nil.	Nil.	2,221
1952	1,626	3,381	5,007	Nil.	Nil.	2,151
1953	1,327	2,556	3,883	1	Nil.	3,564
1954	1,462	1,813	3,275	1	Nil.	4,327
1955	1,045	1,467	2,512	4	Nil.	3,836
Totals	8,680	13,079	21,759	6	Nil.	16,099
Giving a weekly average (5 x 52 – 260 weeks) as follows:–						
	33.4	50.3	83.7	.002	Nil.	61.9

An investigation of this nature produced two very interesting features, namely:–

(i) The numbers of rodents destroyed "On vessels" does not afford any criterion since they are subject to so many features such as (a) the areas from which the vessels arrive, (b) the nature of the cargoes carried, i.e., whether rat or mice attractive and (c) the number of such vessels requiring deratting.

(ii) The numbers of rodents destroyed 'On shore' however, are significant and indicate that following the day by day rat repressive measures taken by your Inspectors and Rodent Staff and the intelligent use of the most up-to-date rodenticides, the rat population has been greatly reduced.

It is significant also that with the reduction of the rat population, the mouse population appears to have increased, a situation which has not escaped the notice of your Medical Officer and Dock Staff.

It would appear, unfortunately, that the measures used for the destruction of rats are not so successful for mice and new techniques are therefore being tried out.

One factor which is receiving attention is the method of stowing cargoes in dock warehouses. Experience has shown that when a mouse attractive cargo (one which gives the mouse all the food and moisture it wants) is stacked in bulk, the mice penetrate to the centre of the pile where they live and breed undisturbed until the pile is eventually broken down.

Every effort is now being made to persuade the Port of London Authority and Stevedoring Companies to stow the bulk cargo in such a manner as to afford the Rodent Inspectors access to the centre of the stacks.

It is realised that any vacant pockets thus provided in the stowage will mean a slight reduction in the cargo capacity of the warehouse, but this would be materially compensated for by the reduced losses from depredations by mice.

*Appended are two graphs showing the number of rats and mice destroyed month by month over the past five years (1951-1955 inclusive), Graph A in relation to vessels and Graph B in relation to shore premises gives a clear indication of the contention made above that, with the reduction of the rat population in warehouses, the mouse population has apparently increased and this increase is most noticeable in the London Docks where, in recent years, large quantities of such commodities as millet seed (imported for feeding budgerigas) have been stored.

Use of Sodium Fluoracetate ("1080") in the Port of London

A question was raised by an Honourable Member of the Public Health Committee about the use of the rodenticide Sodium Fluoracetate ("1080") in the City Sewers and the precautions taken. Arising out of this question your Medical Officer thought it opportune to bring to the attention of your Worshipful Committee some details about the employment of "1080" in ships and dock premises within the Port of London and in his dual capacity of Medical Officer of Health of the Port and City of London to report similarly to the Public Health Committee about the use of "1080" in the City.

"1080" was first employed as a poison in the United States during the war. It is, with the exception of hydrogen cyanide, the most effective and rapid poison available, but it is at the same time also one of the most dangerous and, accordingly, adequate precautions must be taken.

It is a light, white, crystalline powder, odourless and tasteless and very soluble in water. One or two cubic centrimetres of a quarter per cent solution in water will put a rat out of action in a few minutes and it is quite common to find the bodies of rats lying within a few feet of the solution which they have been drinking.

The use of a solution rather than a solid bait is of great advantage since rats are great water drinkers and will not establish themselves where there is not an abundance of water. In theory, therefore, it is only necessary to lay down small quantities of the watery solution of "1080" in suitable containers at strategic points; there is no need for prebaiting and results can be expected in a matter of hours.

It is obvious that such a poison should not be made available to the general public for domestic use or in places like restaurants; but if it is used by trained personnel it is of the greatest value in destroying rats in warehouses, ships or other enclosed premises which can be safely locked or closed down for a period and to which the public do not have access. Again the use of "1080" in the holds of ships has the great advantage that it replaces the cost of expensive fumigations and does not necessitate putting the crew ashore during the operation – always a difficult and costly problem for the shipowner.

The toxic quality of "1080" makes it imperative that "1080" operations should be carried out only by servicing companies who can be relied upon to ensure that the correct concentration of solution is used and that their staff conform to certain requirements laid down by the Port Medical Officer. Six firms were approved in 1953 for the purpose of using "1080" on ships and each firm was required to give an undertaking to follow, in principle, the methods and precautions prescribed below:–

Conditions governing the use of Sodium Fluoroacetate ("1080") by Servicing Companies for the Deratting of ships in the Port of London

1. The "1080" powder employed shall contain not less than 90% pure sodium fluoroacetate, with an inert soluable substance.
2. "1080" is to be used in solution in clean fresh water, the concentration of "1080" to be not less than 0.25%, nor more than 0.3%.

*See Appendices pages 45 and 46.

3. The solution is to be laid in baiting cups holding approximately 1½-ozs. and to be filled with 1-oz. of the solution. The baiting cups of crater shape should be made of material impervious to water. They should be so constructed as to be easily lifted from a flat surface with with gloved fingers.
4. The solution of "1080" either in concentrate or in ultimate solution for use, viz., 0.25%, shall not be made up in the area of the Port of London Authority but shall be prepared in suitable central premises and transported to the ship in an unbreakable container.
5. The container used for filling and baiting cups shall also be of unbreakable material and shall preferably have a device which delivers one ounce of the fluid into a baiting cup without dripping or overflow.
6. All containers other than baiting cups shall be clearly marked "1080 Poison" in large red letters.
7. The number of baiting cups laid shall conform to the numbers prescribed by the Health Inspector of the Port of London Health Authority supervising the operation and shall be carefully counted and at the end of the operation all baiting cups so laid shall be accounted for and removed from the ship.
8. The residue of liquid in the baiting cups shall be collected at the end of the operation and may be kept for further use in a stock unbreakable container, for removal from the ship and the Port area.
9. "1080" baiting cups shall not in any circumstances be placed on any dunnage or cargo or, particularly, any article of food. If "1080" points are laid with the permission of an inspector of the Port Health Authority in the presence of cargo, they shall be so laid as to avoid any possibility of contamination of the cargo by "1080". This is particularly important in the case where foodstuffs are present in the area under control.
10. "1080" poison shall not be laid in any part of the ship where men are working and any compartment under treatment shall, during the period of treatment, be rendered inaccessible or forbidden of access to any persons other than representatives of the Port Health Authority and staff of the Operating Company. Whenever "1080" is laid notices shall be posted clearly visible to any person who may enter the space or may attempt to enter the space, warning them that poison bait is laid in the spaces. These notices shall be on a white background and have clearly printed on the surface in large red letters at least the following words:—

    POISON BAIT DO NOT TOUCH

    Such notices shall remain in situ until all baiting cups laid have been accounted for and removed.
11. All rats found at the end of the operation shall be carefully collected in a suitable receptacle such as a bag and be destroyed by burning.
12. All operators during the operation shall wear rubber gloves and smoking, eating or drinking shall be strictly prohibited from the beginning to the termination of the operation.
13. The operation shall be under the supervision and control of a responsible operator appointed by the Company for that purpose, who shall conform to all reasonable instructions by a representative of the Port Health Authority as to the number of baiting points to be laid, the method and distribution of the baiting points. The Officer of the Port Health Authority will be responsible to the Port Medical Officer for the efficiency of the operation and for ensuring that the precautions outlined in these conditions are fulfilled. Any neglect to comply with the terms of this paragraph may lead to a refusal by the Port Health Authority to issue a Deratting Certificate.

Your Medical Officer is pleased to say that there has been the greatest co-operation by these Servicing Companies in ensuring that these methods and precautions are strictly followed and he is happy to say that there has been no fatality or incident of any kind.

"1080" is also used by the members of your own staff who regularly carry out deratting in dock premises and on river craft and the following instructions are issued to them:—

INSTRUCTIONS IN THE USE OF "1080" IN THE PORT OF LONDON

RESPONSIBILITY

1. This rests primarily with the Health Inspector in charge of the district.
2. One Rodent Operative only to be the regular custodian of the equipment and the dispensing of "1080", its distribution, storage and stock records, under the control and supervision of the Health Inspector referred to above.
3. Any defective equipment or accidental loss of "1080" must be reported to the Health Inspector forthwith.
4. All equipment and stock of "1080" to be kept in a locked cupboard or case.

INITIAL PROCEDURE

5. The 6-fluid ounces of concentrated liquid "1080" is sufficient to make up 160 ounces (1 gallon) of poisoned water at a concentration of 0.25%.
6. Protective gloves must be worn when dispensing "1080".
7. No "1080" must ever be contained in any equipment other than that officially provided.
8. Dispensing must be carried out in such a place and in such a manner as to prevent any spilling or splashing or other dangerous contamination.

OPERATION

9. All operations must be approved by the Health Inspector.
10. Two Rodent Operatives should work together whenever convenient.
11. The person in charge of the premises must be notified of the operation details.
12. An accurate record must be made of all poison bait laid, e.g., type, number of points and quantity and each point clearly marked on the site.
13. Poison Notices shall be displayed on the premises from the start to the finish of all operations.

PRECAUTIONS
(to be strictly observed)

14. No operation shall be carried out in premises into which the public or domestic animals or birds have free access.
15. No poison baits to be laid in precarious positions where spillage is liable to occur.
16. Protective gloves must be worn by the Operative who handles the poison and dead rats.
17. Premises must be secured by the person in charge until unexpended poison and dead rats have been recovered.
18. Any accidental contamination must be reported to the Health Inspector as soon as possible.
19. Gloves and hands must invariably be washed after handling "1080" or dead rats.

FINAL PROCEDURE

20. Every detail of poison shall be collected and returned to its container except on an open site, when solid bait shall be buried.
21. Dead rodents must be recovered and burnt.
22. The person in charge of premises must be notified on completion of the operation and Poison Notices withdrawn.
23. All contaminated equipment except the interior of the poison container shall be steeped in repeated rinsings of fresh water before returning it to the carrier.

REPORTS

24. An accurate Report shall be rendered by the Rodent Operative in charge of the Operation and submitted to the Health Inspector before dispatch to the Central Office.

Since the introduction of "1080" into the Port of London in 1951, the number of ships treated with "1080" for the purpose of the issue of International Deratting Certificates has steadily risen and in 1955, 119 ships were granted deratting certificates after using "1080" as compared with 28 by hydrogen cyanide, while the figures for 1956 are 121 after using "1080" as against 28 using hydrogen cyanide, and even here it must be borne in mind that hydrogen cyanide may have been used primarily for cockroach or other insect eradication. There is no doubt whatever that "1080"has been warmly welcomed by shipowners and is now a firmly established practice in the Port of London.

Although "1080" is described as highly toxic, it is known that scientists have taken "1080" themselves and survived. It would appear that it takes 30 times as much "1080" to kill a man as is needed to kill a rat – in fact he would have to take a wineglassful. It would have to be gross carelessness for a human to take enough "1080" to kill himself. The greater danger probably arises from homicidal or suicidal intent.

Finally your Medical Officer would point out that there is, in the opinion of those who are experienced in its use, no effective substitute for "1080" as a rodenticide and notwithstanding its disadvantages, there is no poison to compare with it for the rapid eradication of heavy and persistent rat infestations. Although other poisons may be less toxic, they also have their disadvantages. For instance, your Medical Officer has observed that some of the critics of "1080" favour the use of bacterial rodenticides and he thinks he should inform your Worshipful Committee that an authorative contribution to the "Lancet" for 5th May, 1956, by the Medical Director, Salmonella Research Laboratory at Colindale, draws attention to human infections, particularly in children, that have occurred through the use of bacterial rodenticides. The doctor recommends that the use of bacterial rodentifices containing certain types of bacteria (and these are, in fact, bacterial rodenticides in popular use) should be discontinued.

PREVENTION OF DAMAGE BY PESTS (APPLICATION TO SHIPPING) (AMENDMENT) ORDER, 1956

Since 1951 the Port Health Authority has been issuing Rodent Control Certificates to coastwise shipping as provided for by the terms of the Prevention of Damage by Pests (Application to Shipping) Order, 1951, and, in conformity with the Order, no charge has been made for such certificates.

The Ministry of Agriculture, Fisheries and Food has now issued the Prevention of Damage by Pests (Application to Shipping) (Amendment) Order, 1956, which authorises Port Health Authorities to charge a fee for the inspection of coastwise vessels in connection with the issue of Rodent Control Certificates as from the 1st March, 1956.

A Circular from the Ministry of Agriculture, Fisheries and Food dated 28th February, 1956, states that the charges for inspection of coastwise shipping will be as follows:–

Ships up to 300 net tonnage...	10s. 0d.
Ships from 301 to 1,000 net tonnage	£1. 0s. 0d.
Ships from 1,001 to 3,000 net tonnage	£2. 0s. 0d.

The Circular also states that as in the case of inspection of ships from foreign carried out under Article 21(3) of the Public Health (Ships) Regulations, 1952 (for the issue of Deratting or Deratting Exemption Certificates), income derived from the inspection of coastwise vessels for the issue of Rodent Control Certificates should be credited in the claims on the Ministry of Agriculture, Fisheries and Food. Under the same arrangement, any administrative expenditure incurred will continue to be grant-aided by the Ministry of Health and should be included in claims on that Department.

During the year 1956, the Port Health Authority issued in respect of coastwise shipping 71 Rodent Control Certificates as follows:–

Ships up to 300 net tonnage...	60
Ships from 301 to 1,000 net tonnage	11
Ships from 1,001 to 3,000 net tonnage	Nil
Total	71

Fees charged in respect of the above certificates = £41.

TABLE E

Rodents destroyed (bodies recovered) during the year in ships and in shore premises

(1) On vessels

Number of	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Black Rats	201	356	133	221	278	240	84	130	344	97	319	236	2639
Brown Rats... ...	–	–	3	–	–	12	–	–	–	–	–	1	16
Rats examined ...	4	–	–	–	5	9	4	2	10	1	–	1	36
Rats infected with plague	–	–	–	–	–	–	–	–	–	–	–	–	–

(2) In Docks, Quays, Wharves and Warehouses

Number of	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Black Rats	106	56	69	63	96	74	141	85	152	102	83	96	1123
Brown Rats... ...	157	152	86	45	89	140	96	91	96	77	87	34	1150
Rats examined ...	–	–	–	–	4	7	2	3	7	2	1	–	20
Rats infected with plague	–	–	–	–	–	–	–	–	–	–	–	–	–

TABLE F

Deratting Certificates and Deratting Exemption Certificates Issued during the Year for Ships from Foreign Ports

No. of Deratting Certificates Issued						Number of Deratting Exemption Certificates Issued	Total Certificates Issued
After Fumigation with		After Trapping	After Poisoning	After Trapping and Poisoning	Total		
HCN	Other Fumigant (state Method) SO_2.						
1.	2.	3.	4.	4(a)	5.	6.	7.
			"1080" 121				
			"Warfarin 6				
28	Nil	Nil		Nil	155	1053	1208

SECTION XIII – Inspection of Ships for nuisances

TABLE G

Inspections and Notices	*No. of Vessels*
Number of vessels visited by Sanitary Inspectors	13637
Number of vessels on which sanitary defects were found, and details reported to the Master, Owners and/or Ministry of Transport	732
Number of Statutory Notices served	Nil
Number of vessels on which sanitary defects were remedied	719

Summary of Structural and other Defects

Inadequate ventilation	22
Defective Lighting – Natural	1
Do. do. – Artificial	2
Defective Heating	12
Condensation	27
Leaking Decks	22
Leaking Ports, Decklights, etc.	15
Leaking Sideplates	2
Leaking Hawse and Chain Pipes	1
Deficient or Obstructed Floor Drainage	20
Water lodging on top of Peak Tanks	–
Defective Bulkheads	6
Do. Floors	34
Do. Doors	15
Do. Chain Pipes	–
Do. Bunks	7
Do. Clothes Lockers	1
Do. Food Lockers	4
Do. Food Storage	19
Do. Cooking Arrangements	29
Defective or Uncleanly Drinking Water Storage	13
Water Closet Obsolete	6
Do. Defective	28
Do. Foul or Choked	7
Do. Inadequate Flush	14
Wash Basins Defective	16
Do. Foul	1
Neglected Paintwork or Distemper	25
Absence of Washrooms	2
Absence of Messrooms	1
Misappropriation of Crew Spaces	2
Verminous Quarters	93
Dirty Quarters	534
Miscellaneous	64
TOTAL	1045

SECTION XIV– PUBLIC HEALTH (SHELLFISH) REGULATIONS, 1934 AND 1948

Two cases of typhoid fever occurred as the result of eating cockles obtained from the foreshore at Scrapsgate, Minster, Isle of Sheppey. The facts as reported to your Medical Officer by the local Medical Officer of Health and supplemented by information obtained by your Health Inspector in the Medway area was as follows:–

While on holiday at Queenborough between the 7th and 17th May, a lady visited the foreshore at Scrapsgate and collected cockles for her own consumption. Subsequently she was admitted to hospital at Hove, her home town, suffering from typhoid fever.

As a result of this information cockles from the foreshore at Scrapsgate were sampled on the 14th June by the Health Department of the Sheppey Rural District Council and bacteriological examination revealed the same strain of salmonella typhi in the cockles as had been found in the patient.

On the 23rd June a further case of typhoid fever was confirmed by Sheppey General Hospital. The patient had also eaten cockles from Scrapsgate. He first felt unwell about 13th June and had eaten cockles bought on Sunday, 3rd June. These cockles had been gathered by a twelve year old boy living in Scrapsgate who, it appears, had been in the habit of collecting cockles on Saturday, soaking them overnight, boiling them for about 1½ minutes on Sundays and then by arrangement with his uncle, selling the cockles in jars in at least one public house in Queenborough. In the course of three Sundays some 34 jars were sold in the "Queen Phillipa" where, in fact, the second patient was living. Incidentally, the contaminated shellfish were collected in close proximity to Sheppey Council's sewer outfall and the Council swabbed various sewers for bacterial tests.

In the meantime the Medical Officer of Health of the area caused suitably worded notices to be exhibited at strategic points warning the public of the present danger should inadequately sterilised cockles be eaten.

Under the Public Health (Shellfish) Regulations, 1934, a Medical Officer of Health is required to make investigations with regard to any laying from which suspected shellfish have been

derived and to make a report to the Local Authority (a Local Authority for the purposes of these Regulations includes a Port Health Authority). The Local Authority upon consideration of the report, and after giving all persons interested a reasonable opportunity of making representations, may then make an Order if they are satisfied that the consumption of shellfish taken from the layings is likely to cause danger to public health. They may further attach to an Order such exceptions and conditions as they may think proper having regard to the interests of the public health. This enables a Local Authority to prescribe as a condition of the sale of shellfish for human consumption either relaying in pure water, or sterilisation by steam, or cleansing by a satisfactory process in an establishment approved by the Minister.

Your Medical Officer would remain your Worshipful Committee that in 1936 the Corporation of London made such an Order under the Public Health (Shellfish) Regulations in respect of a considerable part of the district of the Port Health Authority on the Essex side of the Thames Estuary, extending roughly from Canvey Island to Shoeburyness. This Order provides that a person shall not sell or expose or distribute or offer for sale or have in his possession for the purpose of sale for human consumption any oysters, mussels or other molluscan shellfish taken from the 'prescribed area' unless such oysters, mussels or other molluscan shellfish have been (i) subjected to a satisfactory process of cleansing at an establishment which is for the time being approved by the Minister of Health for this purpose; or (ii) relaid in pure water for such period and in such place as may from time to time be approved for the purpose by the Port Health Authority; or, (iii) subjected to a process of sterilisation by steam under pressure for at least six minutes in an apparatus which is for the time being approved by the Port Health Authority. It should be noted that the Regulations and likewise the Order apply only to shellfish sold or exposed or distributed or offered for sale and do not apply to shellfish collected for personal consumption.

No such Order was made by the Corporation of London in respect of the Kent side of the Thames Estuary since the Ministry of Health had themselves issued the Medway (Shellfish) Regulations, 1935, which 'prescribed' the River Medway and its tributaries; it did not, however, include the Kent coast within the district of the Port of London Health Authority. In consequence, the foreshore on the Kent side of the Thames Estuary is not 'prescribed' and shellfish can in fact be collected and sold in this area without restriction. It is within this area that Scrapsgate is situated and from which the contaminated cockles were gathered. It is understood, moreover, that cocklers from Leigh-on-Sea are in the habit of gathering cockles from the Kent foreshore but such cockles are in fact sterilised in accordance with the Order made by the Corporation of London.

Your Worshipful Committee concurred with the suggestion of your Medical Officer that an Order under the Public Health (Shellfish) Regulations, 1934, should be made by the Corporation of London as the Port Health Authority of the Port of London to cover that part of the Kent foreshore within the jurisdiction of the Port of London Health Authority which extends from Garrison Point to Warden Point in the Isle of Sheppey and that Mr. Comptroller and City Solicitor be instructed to consult with your Medical Officer on the matter and to take such steps as are required for the making of an order.

SECTION XV – MEDICAL INSPECTION OF ALIENS

1. List of Medical Inspectors of Aliens holding warrants of appointment.

Dr. J. Greenwood Wilson, Dr. H.M. Willoughby, Dr. J.A. Jones, Dr. R.D. MacLean, Dr. W.D.L. Smith

2. List of other staff engaged on the work.

Clerical staff at the Central Office.

3. Organisation of the work.

All vessels carrying aliens are intercepted on arrival at Gravesend and the aliens are examined by the Medical Inspector of Aliens who is, in fact, the Boarding Medical Officer on Duty. Complete liaison exists between the Port Medical Staff and the Immigration Staff at Gravesend and should any doubtful cases arrive, the Medical Inspector is immediately communicated with by telephone and an opinion given.

4. Nature and amount of alien traffic.

(a) Total number of arriving vessels carrying aliens	1,779
(b) Total number of aliens (excluding transmigrants, seamen and airmen)	
(i) Arriving at the port	29,512
(ii) Medically inspected	18,579
(iii) Medically examined	102
(c) Certificates issued	7
(d) Transmigrants landed and medically inspected	Nil

5. Accommodation for medical inspection and examination is provided on Tilbury Landing Stage, though in practice, the majority of aliens are inspected in the ship on arrival and any necessary chaperonage is provided by nursing sisters or stewardesses borne in the ship.

SECTION XVI – MISCELLANEOUS

Arrangements for the burial on shore of persons who have died on board ship from infectious disease. No change.

FOOD INSPECTION

The total amount of foodstuffs seized and condemned for human consumption and either reconditioned or disposed of for animal consumption or for industrial purposes under guarantee or destroyed was 3,992 tons 0 cwts 3 qrs 6 lbs. The following is a summary showing the methodof disposal of the foodstuffs seized:–

Method of Disposal	Weight				Approximate percentage of total weight	Weight (1955)			
	Tons	cwts.	qrs.	lbs.		Tons	cwts.	qrs.	lbs.
Burnt	448	3	1	19	11.2	65	7	0	16
Boiling down	* 250	13	1	10	6.3	84	6	3	24
Buried	1,137	10	3	23	28.5	832	18	0	13
Animal feeding ...	281	0	0	13	7.0	414	14	0	16
Other Districts ...	609	18	0	5	15.3	144	0	1	19
Re-exported	4	11	1	0	0.1	19	7	1	5
Industrial Purposes ...	44	6	0	12	1.1	–	10	3	4
Reconditioning ...	**1,034	1	1	11	25.9	214	14	0	16
Refining	181	16	0	25	4.6	1,393	17	3	8
Manufacturing... ...	–	–	–	–	–	1,869	16	0	0
						("Brown heart" apples)			
Totals	3,992	0	3	6	100.0	5,048	12	0	23

* See report on page 27. ** See report on page 27-29.

Of the 3,992 tons listed in the table above, the principal items condemned for human consumption consisted of :–

Burnt

Approximately 181 cartons and cases and 11,900 tins fruits, vegetables, meats, fish, fruit juices and pulp (burst, blown, leaky, pierced and crushed); 108 hampers, 251 boxes, 159 cases and 22 bags potatoes (sprouting and decomposed); 319 packages oranges (dock water damaged, wasting and sweepings); 118 packages vegetables (decomposed); 639 packages fruits (dock water damaged and decomposed); 184 tons bananas (wasted and decomposed); 77 bags cereals (wet damaged).

Boiling Down

A quantity of carcase meat and meat offals (iced, stained, diseased, dock water damaged, decomposed, dirty and moulds); 4,580 carcases mutton and lamb, 1,000 sides pork, 3,758 bags boneless beef (wet damaged as result of collision); 20 cartons and a quantity of loose collected butter and lard (dirty and dock water damaged); 107 tims corned beef (crushed and leaky).

Buried

585 tons bananas (wasting and decomposed); 146 cases, 247 cartons and approximately 4,750 tins fruits, juices, pulps, meats, fish and vegetables (burst, blown, crushed and leaky);6,709 boxes and bags potatoes (wasting, mouldy, sprouting and decomposed); 1,554 packages oranges (dock water damaged, decomposed and sweepings); 476 bags vegetables (dock water damaged and decomposed); 1,958 packages fruits (dock water damaged and decomposed).

Animal Feeding

86 tons bananas (wasting); 1,880 bags potatoes (wasting); 930 bags flour, wheat germ, rice, milk powder, cake mixture (wet damaged and dirty); 59 bags cashew kernels (rancid).

Re-exported

44 cases and 124 tins hams (blowing); 40 cartons fish in mayonnaise (excess of preservative); 47 cases tomato juice (excess of tin).

Other districts

Quantity of rejected ships' stores (out of condition – released under supervision of local M.O.H.); 3,968 bags groundnuts (wet damaged); 547 bags shelled almonds (wet damaged); 3,362 bags potatoes (frost bitten and broken down); 500 cases canned pineapple (blown and leaky); all released for sorting under the supervision of the local M.O.H.

Industrial Purposes

101 drums oleo stock (rancid – released for soap manufacture); 25 drums inedible tallow (released for soapmaking); 251 cartons and a quantity of loose collected butter (smoke and wet damaged); 279 cases evaporated fruit salad (wasting and dirty – released for vinegar making); 100 cases desiccated coconut (rancid – released for oil extraction).

Reconditioning

40,949 cartons butter (smoke and wet damaged – see separate report); 66 bags rice (rejected ship's stores); 91 crates cheese (extraneous matteraand dirty).

Refining

2,508 bags sugar sweepings (dirty).

PUBLIC HEALTH (IMPORTED FOOD) REGULATIONS, 1947 and 1948

OFFICIAL CERTIFICATES

Circular FSH 1/56 from the Ministry of Agriculture, Fisheries and Food dated 7th March, 1956, directs that the Minister has caused to be published in the London Gazette of the 2nd March, 1956, a notice revoking the official certificate which, as notified in Circular MF 7/53, was recognised for the purposes of the above-named regulations for the importation of carcase meat into England and Wales from the Falkland Islands.

Circular FSH 6/56 from the Ministry of Agriculture, Fisheries and Food dated 29th August, 1956, directs that the Minister has caused to be published in the London Gazette of the 28th August, 1956, a notice containing in the schedule thereto a description of a label issued by the Government of Iceland which has been recognised as an official certificate for the purposes of the above-named Regulations.

The certificate is in substitution for those reproduced in Part XI of the schedule to the notice published in the London Gazette of the 6th August, 1937, which is hereby revoked, and is for meat and animal casings and will be completed by the impression of the veterinary inspector's signature by means of a rubber stamp and by the insertion of the number of the Establishment.

WET DAMAGED MEAT – s.s. "PORT WYNDHAM"

The above-named vessel on her way from London to Glasgow with a part cargo was in collision in the English Channel (off Dover).

No. 2 Hold which contained a quantity of meat received the full impact of the collision and approximately 75 tons of meat was landed at Dover, the remainder approximately 180 tons, remaining in the vessel which returned to London, berthing in the King George V. Dock on the 11th May, 1956.

On arrival in the dock the meat in No. 2 Lower Hold was found to be very badly wet damaged by sea, river and dock water and was already beginning to decompose. It was, therefore, placed under detention by your Senior Health Inspector, pending arrangements for its disposal.

After consultation with the Salvage Company acting on behalf of the Shipping Company, it was agreed that this meat should be allowed to go to an approved firm or firms for rendering down for industrial purposes only, e.g., soap, tallow, etc.

Subsequently the consignment was dealt with by Messrs. John Knight Ltd., but in view of the large amount involved and the necessity for clearing the meat from the dock at the earliest possible opportunity owing to rapid deterioration, Messrs. John Knight Ltd., disposed of roughly one third of the consignment to messrs. Henson and Burbidge and one third to the Smithfield Animal Products Co., Ltd., an arrangement to which your Medical Officer agreed on receipt of a written undertaking from each firm, that the material would be used solely for industrial purposes.

Details of the damaged meat are as follows:–

Approximately – 4,580 carcases mutton and lamb
1,000 sides pork
3,758 bags boneless beef.

BUTTER CONTAMINATED BY FIRE, SMOKE AND WATER

On the 9th February, the New Zealand Dairy Products Marketing Commission informed your Medical Officer by telephone that the s.s. "Port Fairy" which was shortly expected to arrive in the Royal Group of docks, had been on fire in No. 4 Hold which contained a cargo of some 1,000 tons of butter, resulting in the butter being damaged by fire, smoke and Piraeus dock water.

Your Medical Officer immediately referred the matter to your Senior Port Health Inspector on the Royal Docks instructing him that as soon as the vessel arrived at her berth, the consignment should be detained and that samples of the affected butter should be taken for both chemical and bacteriological examination.

The vessel duly arrived on the 15th February and berthed in the Royal Victoria Dock. The affected consignment consisted of 41,297 x 56 lbs. cartons of butter. Each cardboard carton contained a slab of butter wrapped in oil-proof paper. Samples were drawn the same day and submitted to the Public Analyst and Bacteriologist but in each instance nothing abnormal was found.

In the meantime and in order not to delay the discharge of the vessel as a whole, the butter had been discharged overside into lighters, still under detention, and your Medical Officer received a letter from the New Zealand Dairy Products Marketing Commission, suggesting that in order to avoid congestion in the dock and in view of the extreme difficulty in finding a Cold Store prepared to receive this produce, permission be given to move these craft as they completed loading to the Wharf at Convoy's Ltd., Fulham, where the butter could be stored in a cool air chamber.

To comply with this request would mean that the butter would leave the jurisdiction of this Authority to enter that of the Public Health Authority of Fulham, but in view of the circumstances your Medical Officer telephoned the Medical Officer of Health of Fulham who very kindly consented to allow the butter to enter the Fulham area where it would still remain under the detention of this Authority, pending further arrangements.

At this stage it was deemed desirable to call a Conference of all the interested parties to decide on the further action to be taken in the disposal of the butter.

Accordingly a Conference was convened by your Medical Officer in the Central Office on the 29th February. It was attended by representatives of the Importer, the Insurance Company, the Salvage Association and the Cartage Contractors.

At this Conference, at which your Medical Officer took the Chair, it was decided that the butter should, in the first instance, be "sorted" into three categories, namely:–

Category (1) Apparently sound.
" (2) Semi-damaged (loss of shape).
" (3) Extreme damage.

and that the sorting should be carried out in the presence of your Chief and Senior Health Inspectors, a representative of the Insurance Company and a Health Inspector nominated by the Medical Officer of Health of Fulham.

In the meantime it was left to the New Zealand Dairy Products Marketing Commission to instigate enquiries as to a firm or firms who would be prepared to take the butter and when a decision had been made, the Commission should notify your Medical Officer who would then be in a position to consider the question of release.

The final "sorting" of the butter at Convoy's Wharf resulted as follows:–

Category	(1)	–	37,684 cartons
"	(2)	–	3,265 "
"	(3)	–	251 "
and a quantity of loose collected pieces of butter, representing			97
		Total	41,297 cartons

Your Medical Officer subsequently received five applications from individual firms to deal with the butter which was disposed of as follows:–

Category (1) – 37,684 cartons

Released to three firms for conveyance to their own premises where each block of butter would be "guillotined" half an inch all round, the remainder being considered suitable for blending and subsequent marketing as first grade butter, the trimmings to be disposed of for technical purposes.

In each case the operation was carried out under the supervision of the Medical Officer of Health of the area in which the premises were situated, the Medical Officers of these districts having been informed of the circumstances and their consent obtained.

Category (2) – 3,265 cartons

An application was received from a firm who stated it was their intention, subject to the material being released to them, to thoroughly clean the butter by scraping and shaving, blend with added salt and put into tins marked "Cooking Butter" for shipment to the West Indies.

Here again, after consultation with the local Medical Officer of Health, the butter was released to the premises of the firm in question, and there dealt with under his supervision, in the manner mentioned above.

Category (3) – 251 cartons and a quantity of loose collected pieces of butter, representing 97 cartons.

This butter being considered unfit for human consumption, a written guarantee was obtained from the firm applying for the butter and, after consultation with the local Medical Officer of Health, was released on the understanding that it would be taken direct to their premises and there used for technical purposes only, under his supervision.

In arriving at the above decisions for releasing this butter your Medical Officer was influenced by the findings of the Public Analyst and the Bacteriologist, neither of whom found anything abnormal in the samples submitted to them so that the question of any risk to the public health did not arise, it was more a question of protecting the retailer against complaints that the butter was "not of the nature, substance and quality demanded by the purchaser".

This matter has been reported at some length simply as another instance of the large amount of detailed administration involved in occurences of this kind.

BANANAS FROM THE WEST INDIES

In November 1955, your Medical Officer received a letter from the London Manager of the Jamaica Producers' Marketing Co., Ltd., in which they stated that they had received a letter from the Research Department of the Jamaican Banana Board, the sole exporters of this product from Jamaica, informing them that it is hoped to start spraying trials with a new mist-spraying technique using oil based fungicidal mixtures for the control of Leaf Spot.

Leaf Spot is apparently the name given to a disease caused by spores floating in the air which settle on the banana leaves and since bananas breathe through their leaves, if this function is in any way retarded, the leaves fall off and the bunches of bananas become stunted in their growth.

As the result of an interview with the London Manager of the Marketing Company, it was agreed that, if and when the trial lots of fruit from trees so treated arrived in the Port of London and your Medical Officer was given due notice of their arrival, he would arrange for samples to be submitted to the Public Analyst and depending upon the report received from him pronounce whether or not the spray used rendered the bananas unfit for human consumption.

On the 12th March, 1956, your Medical Officer received a further letter from the Jamaica Producers' Marketing Co. Ltd., stating that a small experimental lot of about 20 stems of bananas treated with an oil-based fungicidal spray had been shipped from Jamaica and would be arriving in the Royal Docks on the 19th March.

At the same time a letter was received from the Research Department of the Banana Board in Kingston, Jamaica, in reply to a request made by your Medical Officer, as to the composition of the spray used, which was as follows:–

"The composition of the spray which is applied at the very low-volume rate of 2½ gallons per acre, has been:–

4.5 gallons of Esso Orchard Spray Oil
1.1 gallons of Diesel Oil
6.6 lbs. of Copper Oxychloride."

It was agreed with the Marketing Company that on discharge of the bananas samples of the fruit would be taken by your Senior Health Inspector for submission to this Authority's Public Analyst while the remainder would be allowed to be taken to the Company's Store at Clapham Junction for observation and ripening.

As the removal of the bananas to Clapham Junction would involve the Battersea Public Health Department, your Medical Officer wrote to the Medical Officer of Health of Battersea acquainting him of the circumstances and inviting his co-operation. He replied that he would be pleased to help in any way possible.

In the meantime the samples drawn by your Health Inspector (five "hands") were sent to the Public Analyst together with an explanatory letter and a request that his report should give an indication of the nature and amount of the deposits on the banana skin and whether there was any contamination of the actual fruit itself.

The Public Analyst's report was as follows:–

"This sample on examination gave the following results:–

Date examined	21.3.56	4.4.56	
Copper in Skin	2.3	3.1	parts per million
Copper in Flesh	2.7	2.0	parts per million"

Subsequently the Medical Officer of Health of Battersea forwarded a copy of his Public Analyst's report on the balance of the bananas in his area which read as follows:–

"Each sample consisted of a bunch of about six (five to seven) bananas. The skins having been removed, approximately equal portions were taken from each banana, the portions mixed and tested for the amount of copper present. The results are given in parts per million.

Number	Copper	Number	Copper
83	2.0	90	3.0
84	2.4	91	3.2
85	1.8	92	2.6
86	3.0	93	2.4
87	2.6	94	2.2
88	3.2	95	2.0
89	2.6	(average 2.5 parts per million)	

"A sample of bananas purchased from a shop gave 1.2 parts of copper. The amount natural to bananas is given in reference books as 0.9 parts, which is in close agreement. In my opinion the copper found in these samples may be considered negligible for a foodstuff."

It will be seen from the above reports that although the technique employed in examining the samples differed, the results obtained were, to all intents and purposes, identical.

In view of the latest Memorandum of the Food Standards Committee of the Ministry of Food – "Revised Recommendations for limits of copper content of foods" – para. 9 of which reads "For other foods, with the exception of those for which higher limits are provided below, we recommend a general limit of copper of 20 parts per million", your Medical Officer informed the Jamaican Producers' Marketing Co. Ltd., that provided the composition of the spray did not exceed that laid down in the letter from the Banana Board (quoted above) there would be no grounds from a public health point of view, for prohibiting the importation of bananas so treated, into the United Kingdom.

This decision was evidently forwarded by the London Manager of the Jamaica Producers' Marketing Co. Ltd., to the Banana Board in Jamaica for your Medical Officer received the following letter, dated 16th April, from the Research Department:–

"On my return from a trip to Central America, I found that a cable had been received stating your approval for us to send home bananas sprayed with the new oil-based fungicidal mist-spray, similar to that used in Guadeloupe.

"I am extremely grateful for your prompt action in this matter because it has been a great help to us here, in view of the desire to implement this form of spraying on a large scale throughout Jamaica.

"Thanking you again.

Yours sincerely,
(Sgd.) R. LEACH,
Director of Research."

TRANSPORT AND HANDLING OF MEAT AT THE DOCKS

Your Medical Officer has for some time been concerned by the lack of interest displayed in the hygienic discharge of meat at the docks. Your Health Inspectors have, from time to time, found instances of dirty gear being used in the discharge of meat, particularly boards, tables and cargo nets. Your Officers have partially succeeded in dealing with these shortcomings locally but with a view of focussing the direct attention of shipping companies on the problems involved, your Medical Officer decided to convene a meeting on the 27th March of representatives of those shipping companies importing meat into the Port of London and of the Port of London Authority. At this meeting Mr. P.W. Coombe, your Senior Port Health Inspector at the Royal Docks, outlined some of the causes of complaint – meat deposited on quays for lengthy periods, being exposed to weather conditions and contaminated by repeated handling; exposure in warm weather causing deterioration of frozen meat and attracting flies; unwanted carcases lying about after sorting of batches, and, finally, the insanitary conditions sometimes found of the meat discharge quays.

The representatives of the shipping companies pointed out that the difficulties met with during the discharge of meat carcases were many, but they endeavoured to co-operate fully with the Port Health Authority. There were many difficulties connected with the lack of transport and the provision of adequate cold storage and transport in the docks for meat not immediately required. They further suggested that it would be advisable to consult jointly with meat importers since they could assist in the working out of a policy for regulating the meat discharge and deliveries from the docks.

The Port of London Authority representative dealt in some detail with the Port of London Authority's Cold Storage problems, pointing out that cold storage facilities were already overtaxed and it was not possible to accept any more meat than at present. The regular flow of meat imports into the docks was now being considered at a high level.

Your Worshipful Committee did have power under the Public Health (Meat) Regulations, 1924, to deal with the insanitary conditions in the transport and handling of meat in the docks, but these regulations have recently been revoked and it is understood that new regulations to cover these will shortly be issued by the Ministry concerned. In this connection your Medical Officer has already submitted to the Ministries concerned the following draft of what he considers to be desirable requirements in any new regulations:

(1) Every person who conveys or causes to be conveyed any meat in a vehicle:–

(a) shall cause the vehicle to be kept clean; and in a manner to prevent the contamination of the meat at the time of loading and during transit;

(b) shall cause all refrigerated meat to be conveyed in insulated vehicles;

(c) shall not permit any live animal to be conveyed in the vehicle at the same time as the meat.

(2) A person engaged in the handling or transport of meat:–

(a) shall not permit any part of the meat to come into contact with the ground; and

(b) shall take all necessary steps to guard against the contamination of the meat by flies; and shall cause the meat to be so handled as to prevent mud, filth, or other contaminating substance being splashed or blown thereon; and shall take such other precautions as are reasonably necessary to prevent exposure of the meat to contamination; and

(c) shall cause all articles (tables, landing nets, bogies and hand barrows, etc.) used in connection with the discharge from ships, to be thoroughly cleansed after use, and to be kept at all times in a cleanly condition; and

(d) shall cause all persons engaged in carrying meat such as chilled meat which is insufficiently protected against contamination, to wear a clean and washable head and shoulder covering.

Pending the issue of the new regulations your Officers will continue to do all they can to ensure that, as far as possible, adequate precautions are taken in the docks to protect the meat from abuse.

At the time of writing this report no new regulations have been issued and while your Inspectors are doing all they can to improve the conditions by implementing the above recommendations, they find their hands tied by the fact that they are unable to produce supporting regulations.

Your Medical Officer proposes to call a further conference of interested parties when the lines of the new regulations are determined.

INSPECTION OF IMPORTED BEEF LIVERS

During 1955 your Medical Officer reported on a proposed re-organisation of meat inspection at the Royal Docks consequent upon the gradual handing back of all imported meat by the Ministry of Food to private importers and at the same time pointing out that this change of policy would greatly add to the responsibilities of your Officers on the docks.

Arising out of this report your Worshipful Committee appointed two additional qualified Health Inspectors, one of whom was posted to the Royal Dock Group to carry out meat inspection at the "Meat Inspection Shop" generously provided and equipped by the Port of London Authority at No. 6 Cold Store, Royal Albert Dock.

It would, therefore, seem opportune to report the results of a concentrated survey that has been made over the past twelve months in connection with the inspection of imported meat and meat offals that has resulted in the destruction of many tons of beef livers and in measures being taken in the packing establishments abroad to ensure a more thorough inspection of livers prior to exportation.

In 1954, in the course of a routine examination of various offals a small parcel of livers on inspection showed evidence of echinococcus.*

A further ten bags were examined in the presence of representatives of the Ministry of Agriculture, Fisheries and Food and other interested parties and echinococcus cysts were again found, to the extent of 16% of the parcel.

It was hoped that the representations and reports made by the interests concerned would have the desired affect of putting right a condition which at the time was considered to be an isolated instance of careless inspection in the packing Establishments in the country of origin.

At this time there was very little background or experience of what might be discovered when meat and offals from abroad were inspected and it was decided to make a wide survey of as many meat commodities as possible.

Consequently the question of a detailed survey on any one particular commodity, e.g., beef livers, had temporarily to come second in importance to the building up of a picture of the whole field of imported meats.

It was fortunate that this procedure was adopted, for it led to the discovery early in 1955, of another parasitic disease, namely cysticercus bovis in imported beef tongues. This with its consequences to man called for measures to ensure that this parasite should not come into this country in its viable form. This incident and the action taken was fully described in my Annual Report for 1955.

It was not, therefore, until late in 1955 that attention was again focussed on beef livers, when a parcel of 1,159 bags of livers found to be without an 'official certificate', was detained at the Cold Store and a percentage examination made resulting in the finding of 12% diseased livers, including, which was more serious, numbers of livers having been cut into the substance with a 'cross', an indication that they had been condemned at the time of slaughter. Some of the livers had gross cysts and some showed evidence of tuberculous and other abscesses.

The matter was brought to the notice of the Importers, the Agricultural Adviser of the exporting country, the Ministry of Agriculture, Fisheries and Food and other interested bodies and after a number of conferences and much correspondence, a one hundred percent examination of the livers was made at the Dock Store, resulting in the release as sound of 510 bags of the livers, leaving a balance of 649 bags which were released under guarantee for manufacture into dog food by methods including adequate heat treatment.

The one hundred percent examination referred to above imposed a considerable strain on the staff available for this work and in the light of experience gained it was decided that no more one hundred percent examinations of large consignments could be undertaken, nor was it considered to be the function of your Inspectorate to undertake work on this scale. Subsequent parcels, therefore, were subjected to a ten percent examination only and where the percentage of disease was found to be high, the whole consignment was either condemned for human consumption and allowed to be used for manufacturing purposes under strict guarantee (e.g., dog food involving adequate heat treatment) or released to a cold store where staff conditions permitted the whole consignment to be inspected, by arrangement with and under the supervision of the local Medical Officer of Health.

Despite repeated representations to the appropriate Department of the country concerned, consignments continued to arrive in a very unsatisfactory condition as regards disease, and in April, 1956, in the light of the seriousness of the problem, it was decided that all consignments of beef livers from that country via the Port of London should be detained at the Cold Store in the Royal Albert Dock and the following action taken:–

If on a 10% examination not more than 5% of the livers examined were found diseased, the whole consignment would be released.

If, however, more than 5% were found diseased a further 10% would be examined and if this result confirmed the original findings, the consignment would be held pending my decision as to its ultimate disposal.

To this end and as a warning of the action that it was proposed to take, a letter was sent in the following terms to all Importers, as and when consignments arrived:–

*Echinococcus cysts – This is the cystic stage of the tapeworm, Echinococcus granulosus, the lungs and livers being most frequently affected in bovines, which are then said to be suffering from hydatid disease. The final hosts of this parasite are the dog, cat, fox and other carnivorous animals. The intermediate hosts include farm animals, domestic animals and man. It is because man is an intermediate host that it is vital to break the life cycle of this parasite. The most certain method of doing so is the complete destruction of all organs containing hydatid cysts. It is interesting to note that in New Zealand hydatid disease in both man and animals is a major public health problem at the present moment.

"I am enclosing herewith a Seizure Notice in respect of imported livers and regret that it has been found necessary for me to take this action at such short notice.

"I also regret that I shall be obliged to follow a similar procedure in respect to future consignments but you may rest assured that I shall endeavour to carry put the examination with the minimum of inconvenience and delay and to relax the extent of the examination as soon as it is apparent that there is a definite improvement in the quality of livers shipped to this country."

During the course of inspection at the Cold Store many different diseases were discovered (e.g. Cavernous angioma, tuberculosis, distomatosis) but the chief cause of condemnation was the overwhelming number of livers affected with single or multiple echinococcus cysts in a variety of sizes and although it must be stated that the method of inspection employed in the exporting country are mainly to blame for the non-detection of livers affected with echinococcus cysts, it is also obvious that it would be of great economic value to the exporting country if they took steps to rid their pastureland of this parasite and the treatment of farm and herdsman's dogs would appear to be the first appropriate measure for the eradication of the tapeworm.

In the matter of inspection experience has also shown that unless an incision is made into the thick part of the beef liver, no inspection routine can possibly be complete or effective where parasitic cysts are endemic and it has been put forward as an excuse as to why this is not being done, that by making such an incision the product would be mutilated with a consequent loss of commercial selling value. Experience at the Cold Store, however, has shown that, provided the incision is made correctly, no appreciable difference can be seen when the liver is again frozen (it has, of course, to be defrosted for examination).

Many Importers have been put to a great loss and inconvenience by this rigid control, but it is very gratifying to record that the meat trade has throughout been wholly co-operative in their efforts to ensure that only disease free meat is imported.

It is interesting to note that over the period that this rigid inspection has been carried out it has been established that livers bearing certain marks and from certain Establishments in the exporting country have been consistently bad, whereas livers bearing other marks and from other Establishments have been consistently good, and naturally, in the case of the latter, the routine examination has been somewhat relaxed.

In a few instances Importers have requested that, in order to save time and money, their consignments of livers should be allowed to proceed direct from the ship to an approved Cold Store in the Metropolitan area, there to be dealt with under the supervision of the local Medical Officer of Health. Such a store with the necessary personnel for carrying out an inspection by the same standards as those employed at the Dock Store, is situated in the Borough of Finsbury and your Medical Officer wishes to place on record his sincere thanks to the Medical Officer of Health of Finsbury, Dr. Blyth Brooke, and his staff for their ready co-operation in accepting consignments for examination.

At the time of writing this report it is regretted that only partial relaxation of control is permissible and that it may be some time before improvement in inspection methods overseas will be reflected in the results obtained from the inspection in this Port, but in the meantime your Medical Officer is vigorously taking the matter up with the Agricultural Department of the country concerned.

DANGEROUS DRUGS

During the year fifty-four certificates authorising the purchase of scheduled Dangerous Drugs were issued under the Dangerous Drugs (No. 3) Regulations, 1923, amending the Dangerous Drugs Regulations, 1921, Regulation 15 of which is as follows :–

> "If a foreign ship in any port in Great Britain requires to obtain a supply of any of the drugs in order to complete the necessary equipment of the ship, the master of the ship is authorised to purchase and be in possession of such quantity of any of the drugs as may be certified by the Medical Officer of Health of the Port where the ship is (or in his absence by the Assistant Medical Officer of Health) to be necessary for the purpose, the quantity not to exceed what is required for the use of the ship until it reaches its home port. The certificate given by the Medical Officer of Health of the Port shall be marked by the supplier with the date of the supply and shall be retained by him and kept available for inspection."

PUBLIC HEALTH ACT, 1936, PART X – CANAL BOATS

Seventy-one inspections of canal boats were made during the year of which twenty-one were found to have a total of thirty-nine defects, as follows:–

	No. of defects
Cabin in need of painting, cleaning, etc.	14
Dampness due to defective condition of cabin deckheads and sites, etc.	12
Defective ventilation	2
Defective bulkheads	3
Defective cabin fittings	3
Defective doors	4
Defective fuel tank	1
Total	39

The owners and/or Masters of the defective craft were in each case notified and requested to carry out the necessary repairs.

In four instances the Certificate of Registration was not on board and in one instance the cabin was occupied by more than the permitted number of persons. The Owners and/or Masters were informed of the requirements of the Act in this respect.

No new Registrations were effected during the year.

HOUSEBOATS AT BENFLEET

The Essex County Council Act, 1952, provides that the mooring of any houseboat within the County shall not be lawful without the consent of the Council of the district in which the houseboat is situated and that the Council may require the owner or occupier to remove or demolish any houseboat not authorised by them.

Your Worshipful Committee are, however, still responsible for the sanitary supervision under the Public Health (London) Act, 1936, of houseboats coming within the jurisdiction of the Port Health Authority, although under the Essex County Council Act, the local Councils are now responsible for the licensing and drawing up of conditions under which they are prepared to grant licences to houseboats.

The duties of your Committee in regard to the Sanitary supervision of houseboats are safeguarded by Section 212 of the Essex County Council Act, 1952, which provides, *inter alia*, that no consent shall be given within the Port of London without the previous written consent of the City of London as the Port Health Authority of the said Port of London.

The following letters dated 16th July and 17th September, 1956, were received from the Clerk to the Benfleet Urban District Council:–

16th July, 1956.

"Dear Sir,

Houseboats – Benfleet Creeks – Temporary Consents

With reference to your letter of the 21st October last, the temporary consents then issued expired on 31st May of this year and the Council have agreed that, subject to the approval of your Authority, consents should be issued in respect of the following houseboats for the period ending 31st May, 1957, without any other conditions; the owners to be informed that the boats must be removed at the expiration of that period unless a previous application has been made and renewal granted:

WEST CREEK: Emma Jane, Blake, Haven, Lowestoft, Hi-de-hi, Jewel, Lydia, Nisene, Geojean, San Souci, Patsy Ann, Smugglers, Bill Busty, Amy.

EAST CREEK: Bendigo, Manana.

I shall be glad to receive your Authority's consent to issue the 16 temporary licences.

It is anticipated that a few further applications for consents will be received in the near future.

Yours faithfully,"

17th September, 1956.

"Dear Sir,

Houseboats – Benfleet Creeks – Temporary Consents

In reply to your letter of the 11th instant, further applications for consents have been received in respect of the following:–

FERRY ROAD: Benfleet Yacht Club.
EAST CREEK: M.T.B.492, Whylaway, Madeline.
WEST CREEK; Iris, Balranald.

Yours faithfully,"

Your Worshipful Committee having agreed in past years to similar proposals, formal approval was, on the recommendation of your Medical Officer, again given to the proposed action of the Benfleet Urban District Council.

At the request of the Clerk to the Benfleet Urban District Council, a meeting was held at Guildhall House on the 23rd November to discuss difficulties in the control of houseboats in the Benfleet area.

The Chairman of the Port of London Health Committee took the chair with your Medical Officer, the Deputy Solicitor, the Clerk to the Port Health Committee and the Port Health Inspector of the district in attendance.

The representatives of the Benfleet Urban District Council present were the Chairman of the Housebpat Committee, the Clerk to the Council and the Senior Public Health Inspector.

The position with reference to houseboats in Benfleet Creek was explored especially with reference to the recent decision by the Justices in Southend Court allowing an appeal against the Benfleet Urban District Council's decision not to grant 'Consents' under Section 110 of the Essex County Council Act, 1952, to two houseboats in Benfleet Creek (East).

It was stated that the Port Health Authority will in all probability now grant 'Assents' under Section 212 of the Essex County Council Act, 1952, in respect of the above-mentioned two houseboats and will continue, for the present, to grant "Assents" in respect of other houseboats, as requested by the Benfleet Urban District Council.

It was further considered that in the present circumstances, the Port Health Authority cannot help the Benfleet Urban District Council to any material extent in the matter of "Consents" under Section 110 of the Act, or in the removal of unsatisfactory houseboats.

From the discussion it appears that the Benfleet Urban District Council will now issue "Consents" to expire on the 31st May, 1957, to all houseboats who make application.

For the future, the Benfleet Urban District Council will continue their efforts for the removal of those houseboats which are in a poor condition.

The Port Health Authority hope that when the proposed new Houseboat Bye-laws are approved, it will be possible by a rigorous application of those Bye-laws, to ensure that houseboats which remain at Benfleet will be maintained in a good and sanitary condition.

RIVER POLLUTION

The interest of your Worshipful Committee in Thames Pollution has prompted your Medical Officer to quote from a comment in the "Lancet" for 14th July, 1956, as follows:–

> Research in water pollution concerns itself nowadays with water as an amenity rather than as a vital fluid; but it is not the less important for the change of emphasis. All over the country there are streams where our elders fished, which support no life today but anaerobic bacteria. They look nasty and smell worse, and inescapable gravity spreads their nastiness for many miles downstream. The consequent risk to bathers and others are hard to assess but cannot be overlooked. Commercial fisheries have been ruined and water made unfit for industrial uses. The main causes of damage are poisons (such as cyanides), organic refuse which robs water of oxygen, and – a new hazard whose effects are not yet fully comprehended – the synthetic detergents used in every home. An 'iceberg' of foam five feet high is a dramatic and not unlovely sight, but its effect on plant and animal life seems to be uniformly deleterious.
>
> "Like our patients, no two rivers are identical: they differ in physiology and habit as well in anatomy. There is no bold cure-all to be applied at all times in all places. The foul fluid which passes and repasses under Westminster Bridge comes from the limpid springs of the Cotswolds and, once below the Nore, dances in pellucid waves under the summer sun. The cause of this double metamorphosis is a problem large enough to daunt any investigator; but, bit by bit, the parts played by sewage and industrial effluents, by hot water from the generating stations, and the healthy breezes off the Essex marshes are being understood. Shall we ever again see the Thames bright with running salmon? Not in our lifetime; but perhaps the streams of the Black Country will be a delight and not a disgrace and trout will rise again in the Upper Lea. If the casual reader thinks that fishing interests occupy too much of the Board's attention, let him remember how much the general enthusiasm for clean rivers owes to the *saeva indignatio* of a hundred thousand anglers."

The second paragraph quoted from the "Lancet" says in essence what your Medical Officer wrote at greater length in his report to your Worshipful Committee on the 27th May, 1955.

It so happens that your Medical Officer was also consulted recently about this question by the Right Honourable The Lord Mayor who had been appalled by his own observations on Thames pollution.

Your Medical Officer subsequently sent His Lordship a copy of the above extract and also information which he had obtained from Mr. J. Rawlinson, the London County Council's Chief Engineer, as to the progress of the County Council's schemes for the betterment of the sewage effluent which flows into the Thames from Northern London at Barking and from Southern London at Cross Ness.

The scheme for sewage disposal in Northern London is already well advanced and should be completed by the end of 1958. The contract is for £8 million. Already one-third of the sewage from Northern London is under full treatment so that its effluent approaches the standard laid down by the Royal Commission on Sewage Disposal in 1913. The contract for the Southern area of London has now been let for £10 million and it should be completed in nine years time. This, again, will result in the sewage effluent from Southern London approaching the Royal Commission standard.

POLLUTION OF THE THAMES BY THE RIVER WYE

The question of the pollution of the Thames by the River Wye having been raised by an Honourable Member, your Medical Officer got into touch with the Corporation's Representative on the Thames Conservancy in the matter, and the following is a copy of a letter received from the Secretary of the Thames Conservancy:–

"Dear Mr. Sykes,

WYE STREAM AT BOURNE END

Thank you for your letter of the 17th instant. The question of the pollution of the Wye Stream has been before the Conservators for many years past, the main trouble being the concentration of a number of Paper Mills on the five mile stretch of a small stream to which the Mills discharge their effluents.

"The effluents are sampled regularly and, over the years, the Mills have spent very large sums of money in an endeavour to meet our requirements.

"The difficulty is mostly the suspended matters in the effluents as, even if they always complied with the generally accepted 'standard' of 30 p.p.m., the combined amount passing to the stream with the large volumes of the effluents would be very considerable. These suspended matters settle out at the head-waters of the Mills where decomposition of the organic matters takes place and when the Mill sluices are drawn, they pass downstream and the effect on the lower part of the stream at Bourne End, which receives the accumulations from upstream, is very bad indeed on occasions.

"The only solution to this difficult position, we consider, is the Woodburn Valley Drainage scheme which will take the Mill effluents away from the stream to a modern sewage works at Marlow. We have been pressing for this scheme for years; it has been before the Ministry, details have been prepared and tenders obtained and the Council concerned, the Wycombe Rural District Council, are now awaiting the Minister's final approval before they can proceed, which they hope to do next April.

"We are still hoping the scheme will be allowed to start although, as you know, the restrictions on expenditure have held up a lot of such work.

"I trust this will give you the information you want but if not please do not hesitate to write to me further.

Yours sincerely."

CLEAN AIR ACT, 1956

During 1956 the above-named Act, parts only of which come into operation on the 31st December, 1956, was still before Parliament as a Bill and, in order that tugowners might have an opportunity of discussing the provisions of the Bill so far as they relate to River craft and also of meeting representatives of Government Departments dealing with smoke abatement and coal supply, your Medical Officer convened a meeting at the Port Health Office on Thursday, 9th February, 1956.

Apart from the principal tugowners in the Port of London, the meeting was also attended by the Association of Master Lightermen and Bargeowners; the Director and Chief Research Engineer of the Fuel Research Station; and Engineers from the National Industrial Fuel Efficiency Service. Mr. E.H. Mould of the City Remembrancer's Department and officers of the Port Health Department were also present.

It was emphasised at the beginning of the meeting that it was the policy of the Port Health Authority to work in the closest co-operation with the tugowners and that in the past a personal approach had been made by the Authority to many of the offenders, a method of approach which had met with a great measure of success and goodwill.

After the general provisions of the Clean Air Bill had been explained, there was a wide discussion on the various aspects of the problem of reducing to a minimum the emission of smoke from tugs, the three principal factors involved being (1) the human element, (2) the fuel problem, (3) suitable equipment, e.g., smoke eliminator doors.

(1) **Human element**

All parties emphasised the difficulty of obtaining suitable labour for firemen. The tugowners pointed out that in spite of high wages it was impossible to get the right type of man – the hours of work were irregular and men were being attracted to cleaner and more regular work in local industry. The fireman was mainly interested in keeping up steam and smoke was to him of secondary importance. It was considered that firemen should receive some elementary instruction in firing.

(2) **Fuel problem**

There was considerable discussion on the supply of the right type of fuel, the tugowners complaining repeatedly of not being able to obtain the particular fuel they needed. Complaint was also made of the varying grades of coal that are supplied to them, sometimes two or three grades of coal being supplied in one lot of bunkers. The Ministry of Fuel and Power representative pointed out that the supply of Welsh coal at the present moment was very restricted. During the Festival of Britain Welsh coal was made available to tugowners but subsequently the demand had weakened on the grounds that it was more expensive and because Northumberland coal was better for steam raising. If the tugowners would let the Ministry of Fuel and Power know the type of coal definitely required, he knew that every effort would be made to meet the demand.

(3) **Equipment**

Smoke eliminator doors, provided they are correctly fitted, were a valuable contribution to reducing smoke, but tugowners felt it was secondary to good fuel and stoking; why should they spend money on equipment because proper coal was not being supplied?

The Association of Master Lightermen and Bargeowners stressed again and again that there should be set up a consultative body or panel to whom tugowners could go for advice – not a body who would tell them how to burn a certain type of coal – but a body which would have official blessing and carry weight with those who supplied fuel or whatever else was required?

Your Medical Officer feels that this Conference did much to bring to the minds of the tugowners the urgent need for dealing with the problem and at the same time it gave them the opportunity of bringing certain grievances in regard to fuel supply to the notice of the Ministry of Fuel and Power.

Arising out of the above meeting Dr. A. Parker, C.B.E., Director of the Fuel Research Station of the Department of Scientific and Industrial Research, offered to place at the disposal of the tugowners the resources of his Department and to co-operate with a small committee of the Association of Master Lightermen and Bargeowners in carrying out experiments on tugs during normal working operations on the River Thames to obtain information on the quantity of smoke emitted and to investigate the possibility of reducing smoke.

The Fuel Research Department has now issued a Report on these experiments which show that the type and quality of the coal burned, together with the method of firing are responsible factors in the emission of dense and black smoke, but the extreme density and colour can be controlled by regulating the supply of fresh air under and above the fire grate. The extent of control should satisfy the provisions of the Clean Air Act and this can be achieved by fitting a furnace door of approved design which includes air control valves to both the ashpit and the bed of fuel.

Sir Hugh Beaver in his speech at the Dinner of the Chairman of the Public Health Committee held at the Cutler's Hall on the 19th November, referred appreciatively to the work that had been done by the Corporation as the Port Health Authority in trying to abate smoke nuisance on the River.

DISPOSAL OF REFUSE FROM SHIPS IN THE DOCKS

The organisation for this purpose within the docks of the Port of London Authority is almost comparable to that of any other Local Authority except that the actual disposal and equipment forms the basis of a contract between the Authority and a private undertaking.

Trade refuse includes materials directly associated with the cargo carrying commitments of the ships, such as dunnage and scrap, most of which is collected and disposed of by road or water transport of the private contractors. The system normally presents no difficulties to the Port Health Authority if no putrescible matter becomes involved, but the Bye-laws are always available to correct any deficiencies in protecting public health.

What is more important from the Port Health Authority's viewpoint is the domestic refuse; the refuse from the catering department and the messrooms of the ships. By far the greater proportion of this is composed of rejected food, scraps and preparation trimmings. Any retention of this refuse aboard ship without proper control could be a menace to the health and environmental sanitation of a particular ship, although the consequences of neglect could also spread to the adjacent ships and dockside premises.

The Port of London Authority have always provided some type of refuse container within reasonable distance of the ships alongside the quay, into which domestic refuse could be deposited free of charges.

Those ships which for some reason have not taken advantage of this concession may be required by the Inspector to burn the refuse in the coal-fired furnace of the ship for preference or treat and stow it on the open deck in such a manner as to preclude the possibility of a nuisance arising. The steady replacement of coal-fired furnaces with fuel oil burners and the motorship has substantially reduced the scope for burning refuse aboard, while the growing sanitation consciousness of seafarers has led them to expect a much better alternative to dumping around the open decks.

From humble beginnings, improvements in the type of collecting points have been pursued and adopted according to practicability. In earlier times it was customary to build an open extension to the end of each latrine that was provided for dockers and ships' crews. This consisted of a concrete base surrounded on three sides by a low brick wall. Into this receptacle, and unfortunately often outside, the dockside and domestic refuse from ships was dumped to await rather irregular collection and transport in a relatively crude manner. Many were the protests of the Inspectors.

The collecting points were generally unsightly and exposed the refuse to the elements from the time it was dumped until and during the loading operation into an open vehicle. Not only was the refuse exposed to storm, but, while lying in the dock, it provided harbourage and attractive feeding material for rodents and insect pests.

The next development was the construction of brick-built and totally enclosed types with side-loading sliding doors and large end doors to allow access for the transport vehicle. The intention was sound and anticipated several advantages over the open type, but the human element frustrated the full realisation of all the objectives.

If success is to be achieved in any scheme for refuse disposal within the docks there must be an adequate number of receptacles distributed over the area and the units located at the most convenient places near the ships. The containers should be capable of and receive regular cleansing and the refuse disposed of with a minimum of disturbance and human intervention. The receptacles should be preferably mobile in order that any demands for increased capacity at a given point may be met by an additional unit.

The latest innovation appears to satisfy most requirements. Mobile metal containers capable of receiving about ten cubic yards of average refuse easily are dispersed around the docks and are raised some two feet above the concrete site on which they are rested. They can be easily loaded from the end and are regularly taken away by motor transport to the disposal incinerator, having been replaced with a clean and empty container. When assessing the advantages of this type, and in lighter mood, it may be claimed that should any rodents choose to harbour in the refuse at the time of removal, they will suffer the same treatment as the refuse at the incinerator.

A painted statement on the outside of these containers advises the ships' crews that galley refuse disposal is free of charges. No doubt experience will guide to better provisions yet and, meanwhile, it will be necessary to encourage all concerned to use these present facilities to the best advantage.

CIVIL DEFENCE – VISIT TO ARMY SCHOOL OF HEALTH

Your Medical Officer recommended that your Health Inspectors and other members of the Department, including himself, likely to be associated with public health problems in the event of hostilities, should be divided into two parties to attend demonstrations at the Army School of Health on the 9th December, 1955 and the 13th January, 1956.

Your Worshipful Committee having approved of this recommendation, arrangements were made for the members of your Department concerned to attend the School at Ash Vale, Aldershot, as follows:–

Friday, 9th December, 1955:–	Friday, 13th January 1956
1 Assistant Medical Officer	The Medical Officer of Health
1 Office Staff	2 Assistant Medical Officers
8 Health Inspectors	2 Office Staff
	9 Health Inspectors

In addition to the above the party included the Civil Defence Training Officer and a number of Industrial Civil Defence Officers representing firms like Messrs. Unilever Ltd., Messrs. Mac-Fisheries Ltd., The British Petroleum Co. Ltd., Messrs. Shell Petroleum Co., and a number of Insurance Companies.

At the Army School of Health there was in attendance the Chief Instructor of the Civil Defence Staff College at Sunningdale who took an active part in the discussions which, like the lectures and demonstrations, were of absorbing interest.

The morning session was devoted to a study of Civil Defence Administration with a discussion on how this might be improved, especially from the health point of view and from the aspect of making full use of public health experts in coping with the after results of nuclear warfare.

In the afternoon there was a brilliant talk on the science and effects of nuclear fission and a demonstration of monitoring for radiation hazards. The only note of comfort in the whole day's proceedings was the information that radiation contamination of foodstuffs is easily prevented (by almost any form of waterproof covering) and easily cured by stripping off the surface layers of contaminated foods. A far more difficult problem is with water supplies where some of the radio-active dust from the "fall out" after an explosion of nuclear warfare remains in a state of solution in the water upon which it falls, or as the "Lancet" aptly captioned an editorial on the subject, "Not a Drop to Drink"! It was reported that after the last hydrogen bomb test, 7,000 square miles of sea were found to be infiltrated with strontium in quantities three times the amount to which man ought normally to be exposed during the whole of his lifetime.

There is also the factor that even if a man escapes radiation sickness from his exposure to radiation hazards there are still racial effects in genetics leading to disturbances in the rate of mutations of the various hereditary qualities which could result in the birth of increased numbers of persons suffering from defects and abnormalities of various kinds. This, however, is a subject which still requires much more scientific research before a final assessment can be given.

VISITORS AND STUDENTS

The activities of the Port Health Authority continue to be of much interest to visitors from overseas engaged in public health administration and during the year nine visitors from Germany, Singapore, Spain, Trinidad, and the U.S.A., were, at the request of the Ministry of Health, Colonial Office, British Council and other Departments, shown various branches of port health work in London.

Facilities were also provided for students of the London School of Hygiene and Tropical Medicine, the Royal Institute of Public Health, the Army School of Health and the National College of Food Technology, to see aspects of port health work relating to their studies.

Three Officers of other port health authorities in this country and four Naval Officers were also given training in rodent control work and the inspection of ships for the issue of deratting and deratting exemption certificates.

LAUNCHES AND STATION HULKS

This may well by the last occasion on which operational reference will be made to the "UPLEES", the hulk or converted sailing barge that has been the launches' mooring station at Greenwich for eleven years.

In early August the sale was completed and the launches proceeded to the new station on the Woolwich Harbour Service Pier. This pier affords safe inboard berths and is accessible from the shore through the Woolwich Dockyard.

Among the advantages at the new 'Woolwich Station' are electricity and drinking water supplies, telephone, deckhouse accommodation for office and stores and official supervision of launches at night and public holidays. In addition, the change and the amenities at the Woolwich Pier have marked what may be considered as an advancement in the Port Health administration as well as cementing even closer relations with the Port of London Authority and other River Services.

The transfer from Greenwich to Woolwich affected the normal routine of inspection, but satisfactory arrangements have been made to supplement the services of the "ALFRED ROBERTSON" by making use of public transport when expedient and re-arranging rodent control activities supported by the "FREDERICK WHITTINGHAM". In fact, the operational disadvantages to one launch have been balanced by the advantages to the other.

During the year an extensive overhaul was carried out on the "HOWARD DEIGHTON". The defect list was comprehensive and included three main items. The engines were given a complete refit, the afterpeak bulkhead reconstructed and counteraction taken to deal with the effects of galvanic action on the propeller shafts and stern plating.

Apart from the temporary dislocation of the normal launch services due to this refitting programme, nothing has affected the continuous and efficient performance of the launches.

The condition of shell plating below waterline of the "HYGEIA" is to be investigated in the coming year and it is anticipated that some overhauling of other launches will be necessary to arrest deterioration and maintain efficiency.

APPENDIX I

MEDICAL INSPECTION—From 1st January to 31st December, 1956

GRAVESEND

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
No. medically inspected	159	137	166	156	143	159	122	140	135	137	132	133	1,719
No. of Passengers	861	561	794	1,332	1,464	5,381	4,488	3,798	2,970	821	356	598	23,424
No. of Crew	356	121	776	1,099	687	683	805	424	846	632	347	664	7,440
No. of Foreign Arrivals	1,167	953	1,131	1,198	1,091	1,134	1,155	1,196	1,056	1,117	1,018	1,063	13,279

APPENDIX II

INFECTIOUS DISEASES

Disease	1947	1948	1949	1950	1951	1952	1953	1954	1955	Mean Annual No. for 10 years ending 31st December, 1956	1956
(a) Cases reported—											
Cholera (including suspected cases)	–	–	–	–	–	–	–	–	–	–	–
Plague do.	–	–	–	–	–	–	–	–	–	–	–
Yellow fever do.	–	–	–	–	–	–	–	–	–	–	–
Typhus fever do.	–	1	5	–	–	–	–	–	–	0.6	–
Smallpox do.	2	3	2	4	6	–	1	1	1	2.0	–
Scarlet fever	10	3	3	7	3	–	2	–	2	3.2	2
Enteric fever	5	10	82	9	7	8	8	6	8*	14.8	5
Measles	26	99	80	58	74	56	97	31	64	65.2	67
German measles	5	3	3	17	67	13	6	7	5	12.9	3
Diphtheria	5	2	1	–	–	2	–	–	1	1.1	–
Erysipelas	–	1	–	1	–	–	1	–	–	0.4	34
Pulmonary tuberculosis	27	32	43	41	53	67	46	43	35	42.1	1
Other diseases (including Chickenpox)	102	106	124	114	130	128	184	347**	368	181.3	210
TOTALS	182	260	343	251	340	274	345	435	484	323.6	322
(b) Admitted to Hospital—											
Cholera (including suspected cases)	–	–	–	–	–	–	–	–	–	–	–
Plague do.	–	–	–	–	–	–	–	–	–	–	–
Yellow fever do.	–	–	–	–	–	–	–	–	–	–	–
Typhus fever do.	–	1	3	–	–	–	–	–	–	0.4	–
Smallpox do.	–	–	–	–	–	–	–	2	5	0.7	–
Scarlet fever	–	3	–	–	1	–	–	–	–	0.4	–
Diphtheria	4	2	–	–	1	–	–	–	–	0.7	–
Enteric fever	2	3	–	6	–	1	1	–	3	1.6	–
Measles	10	24	8	5	12	3	16	21	12	13.1	20
Parotitis	1	4	3	1	13	4	2	1	10	4.4	5
Dysentery	9	3	1	–	1	1	–	6	6	2.7	–
Other diseases (including Chickenpox)	60	80	34	56	35	35	48	32	48	49.1	63
TOTALS	86	120	49	68	63	44	67	62	84	73.1	88

** Includes 221 Cases of Gastro-Enteritis

* Includes 2 "Carriers"

Contacts ‡Includes 4 Contacts

APPENDIX III

RETURN OF RATS CAUGHT AND DESTROYED DURING THE YEAR 1956

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
London Dock-													
Warehouses ...	35	19	13	13	53	43	41	58	56	46	28	19	424
Vessels ...	–	–	–	19	–	–	–	–	—	–	1	–	20
St. Katharine Dock-													
Warehouses ...	2	–	–	–	2	1	5	–	1	–	–	–	11
Vessels ...	–	–	–	–	–	–	–	–	–	–	–	–	–
Surrey Commercial Dock–													
Warehouses ...	1	–	2	2	2	4	2	–	–	–	5	3	21
Vessels ...	–	–	–	–	–	–	–	–	–	–	–	–	–
East India Dock–													
Warehouses ...	–	1	–	1	–	–	14	8	–	–	6	–	30
Vessels ...	–	–	–	–	–	–	–	–	—	—	–	–	–
West India Dock-													
Warehouses ...	35	17	22	9	14	12	43	14	5	26	10	34	241
Vessels ...	22	–	43	3	29	–	26	–	91	–	43	–	257
Millwall Dock-													
Warehouses ...	43	7	28	16	30	15	16	7	8	8	14	7	199
Vessels ...	–	–	–	–	26	20	–	–	7	–	–	–	53
Royal Albert Dock–													
Warehouses ...	4	15	15	10	11	19	18	19	71	18	20	40	260
Vessels ...	2	15	22	41	102	39	3	37	35	22	78	158	554
Royal Victoria Dock–													
Warehouses ...	63	16	33	32	51	65	88	43	93	50	51	21	606
Vessels ...	40	41	45	33	16	30	8	13	8	15	86	20	355
King George V. Dock–													
Warehouses ...	14	22	3	13	—	8	9	3	8	13	18	–	111
Vessels ...	20	8	–	18	10	37	18	8	–	4	10	7	140
Tilbury Dock–													
Warehouses ...	4	111	39	12	10	47	1	22	6	16	18	6	292
Vessels ...	65	217	–	4	17	5	8	38	104	1	36	6	501
Regent's Canal Dock–													
Warehouses ...	62	–	–	–	12	–	–	2	–	2	–	–	78
Vessels ...	–	–	–	–	–	–	–	–	–	–	–	–	–
River–													
Vessels ...	52	75	26	103	78	121	21	34	99	55	65	46	775
Totals...	464	564	291	329	463	466	321	306	592	276	489	367	4,928

APPENDIX IV–General Summary and Analysis of the Sanitary Inspections, etc., in the Port of London for the year ended 31st December, 1956.

FOREIGN GOING	
Steam–	
Inspected	10,215
Defective	331
To be cleaned	435
Sail–	
Inspected	–
Defective	–
To be cleaned	–
COASTWISE	
Steam–	
Inspected	2,337
Defective	89
To be cleaned	65
Sail–	
Inspected	10
Defective	–
To be cleaned	–
INLAND NAVIGATION	
Steam–	
Inspected	138
Defective	23
To be cleaned	17
INLAND NAVIGATION–*Continued*	
Sail–	
Inspected	–
Defective	–
To be cleaned	–
Lighters–	
Inspected	937
Defective	4
To be cleaned	17
Canal Boats–	
Inspected	71
Defective	21
To be cleaned	–
SHORE PREMISES	
Inspected	10,516
Defective	152
To be cleaned	254
Sick Seamen referred to Hospital	48
WATER BARGES	
No. in district in good condition on 31st December, 1955	13
New Barges	–
Condemned	–
Use discontinued	–
Previously withdrawn and since resumed work	–
No. in district on 31st December, 1956	13

Inspections		
Total Inspections 1st January to 31st December, 1956:–		
Foreign Going	10,215	
Coastwise	2,347	
Inland Navigation	1,075	
Shore Premises	10,516	
Total		24,153
Number of Vessels inspected in the Launches :–		
"Alfred Roach" / "Howard Deighton"		1,737
"Frederick Whittingham"		841
"Alfred Robertson"		657
In Docks, etc.	10,402	
Shore Premises	10,516	
Total		24,153

Dock and River	*No.*
London and St. Kats.	988
Regent's Canal	521
Surrey Commercial	1,386
East India	239
West India	1,072
Millwall	608
Royal Albert	1,351
Royal Victoria	417
King George V.	1,434
River–Upper	841
River–Middle	657
River–Lower	1,737
River–Medway	912
Tilbury	1,474
Total Vessels	13,637
Shore Premises	10,516
Total	24,153

Nationalities	*No.*
American (U.S.A.)	126
Argentinian	43
Belgian	74
Brazilian	26
British	9,057
Bulgarian	1
Chilian	2
Costa Rican	13
Danish	166
Dutch	1,206
Finnish	190
French	83
German	685
Greek	59
Honduras	7
Icelandic	5
Indian	16
Israeli	33
Italian	47
Japanese	67
Latvian	6
Liberian	90
Monrovian	2
Moroccan	1
Pakistani	4
Panamanian	58
Polish	49
Portuguese	3
Puerto Rican	23
Russian	69
Spanish	50
Swedish and Norwegian	1,292
Swiss	6
Turkish	23
Yugo Slavian	55
Total Vessels	13,637
Shore Premises	10,516
Total	24,153

APPENDIX V

DOCKS WITHIN THE JURISDICTION OF THE PORT HEALTH AUTHORITY

Dock Group	*Docks*	*Water Area*		*Lineal Quayage*	
		Acres	*Yards*	*Miles*	*Yards*
I	London	34	4,460	3	119
	St. Katharine	10	488	–	1,654
	Regent's Canal	11	38	–	966
II	Surrey Commercial	161	2,717	16	200
III	West India	97	3,957	4	1,134
	East India	31	2,878	1	1,242
	Millwall	35	3,217	2	155
IV	Royal Victoria	95	1,772	5	1,479
	Royal Albert	87	213	3	905
	King George V	64	997	3	663
V	Tilbury	104	2,166	3	1,667

The River distance between the Western and Eastern limits of the Port is about 68½ miles.

POWERS

The principal Acts of Parliament and Statutory Instruments affecting the work of the Port Health Authority of the Port of London are:

ABATEMENT OF NUISANCES AND REMOVAL OF REFUSE

Public Health (London) Act, 1936.

ADMINISTRATION

Public Health (London) Act, 1936.
Sanitary Officers Order, 1926. S.R. & O. No. 552.
Sanitary Officers (London) Regulations, 1951. S.I. No. 1021.
Sanitary Inspectors (Change of Designation) Act, 1956.

AIRCRAFT

Public Health (Aircraft) Regulations, 1952 and 1954. S.I. 1952, No. 1410; 1954, No. 674.

ALIENS

Aliens Order, 1953. S.I. No. 1671
Ministry of Health Instructions to Medical Inspectors, 1955.

CANAL BOATS

Public Health Act, 1936.

CONSTITUTION OF THE AUTHORITY

Public Health (London) Act, 1936.

CREW ACCOMMODATION

Public Health (London) Act, 1936.
Merchant Shipping (Crew Accommodation) Regulations, 1953. S.I. No. 1036.

DANGEROUS DRUGS

Dangerous Drugs (No. 3) Regulations, 1923. S.R. & O. No. 1095.

FERTILISERS AND FEEDING STUFFS

Fertilisers and Feeding Stuffs Act, 1926.
Fertilisers and Feeding Stuffs Regulations, 1955. S.I. No. 1673.

FOOD

Public Health (Preservatives, etc. in Food) Regulations, 1925 to 1948. S.R. & O. 1925, No. 775; 1926, 1557; 1927, No.577; 1940, No. 633; 1948, No. 1118.
Public Health (Imported Milk) Regulations 1926. S.R. & O. No. 820.
Public Health (Imported Food) Regulations, 1937 and 1948. S.R. & O. 1937, No. 329; S.I. 1948, No. 886.
Food and Drugs (Whalemeat) Regulations, 1949 and 1950. S.I. 1949, No. 404; 1950, No. 189
Food and Drugs Act, 1955.
Food Hygiene Regulations, 1955.

FUMIGATIONS

Hydrogen Cyanide (Fumigation of Ships) Regulations, 1951. S.I. No. 1760.
Hydrogen Cyanide (Fumigation of Buildings) Regulations, 1951. S.I. No. 1759.

HOUSEBOATS

Public Health (London) Act, 1936.
City of London (Various Powers) Act, 1933, Part III, Sections 6 and 7.

INFECTIOUS DISEASE

Public Health (London) Act, 1936.
Public Health (Ships) Regulations, 1952 and 1954. S.I. 1952, No. 1411; S.I. 1954, No .675.
Public Health (Infectious Disease) Regulations, 1953. S.I. No. 299.

RATS AND MICE

Public Health (Ships) Regulations, 1952 and 1954. S.I. 1952, No. 1411; S.I. 1954, No. 675.
Prevention of Damage by Pests Act, 1949.
Prevention of Damage by Pests (Application to Shipping) Order, 1951. S.I. No. 967.
Prevention of Damage by Pests (Application to Shipping) (Amendment No. 2) Order, 1956.

SHELLFISH

Public Health (Shellfish) Regulations, 1934. S.R. & O. No. 1342. Order dated 23rd April, 1936 made by the Port Health Authority under the Public Health (Shellfish) Regulations, 1934.
Medway (Shellfish) Regulations, 1935. S.R. & O. No. 1221.

SMOKE ABATEMENT

Public Health (London) Act, 1936.
Clean Air Act, 1956.

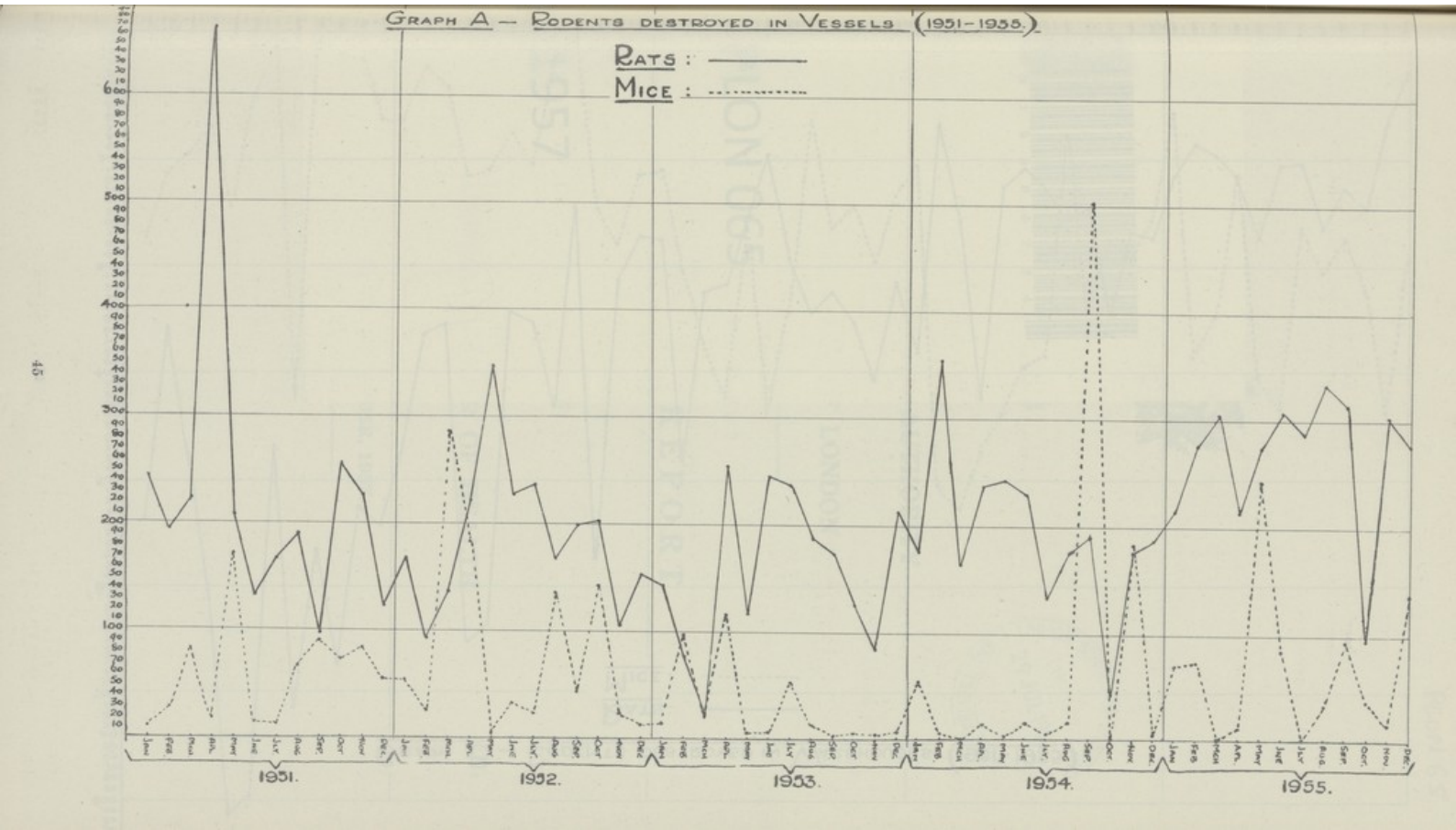
BYE-LAWS

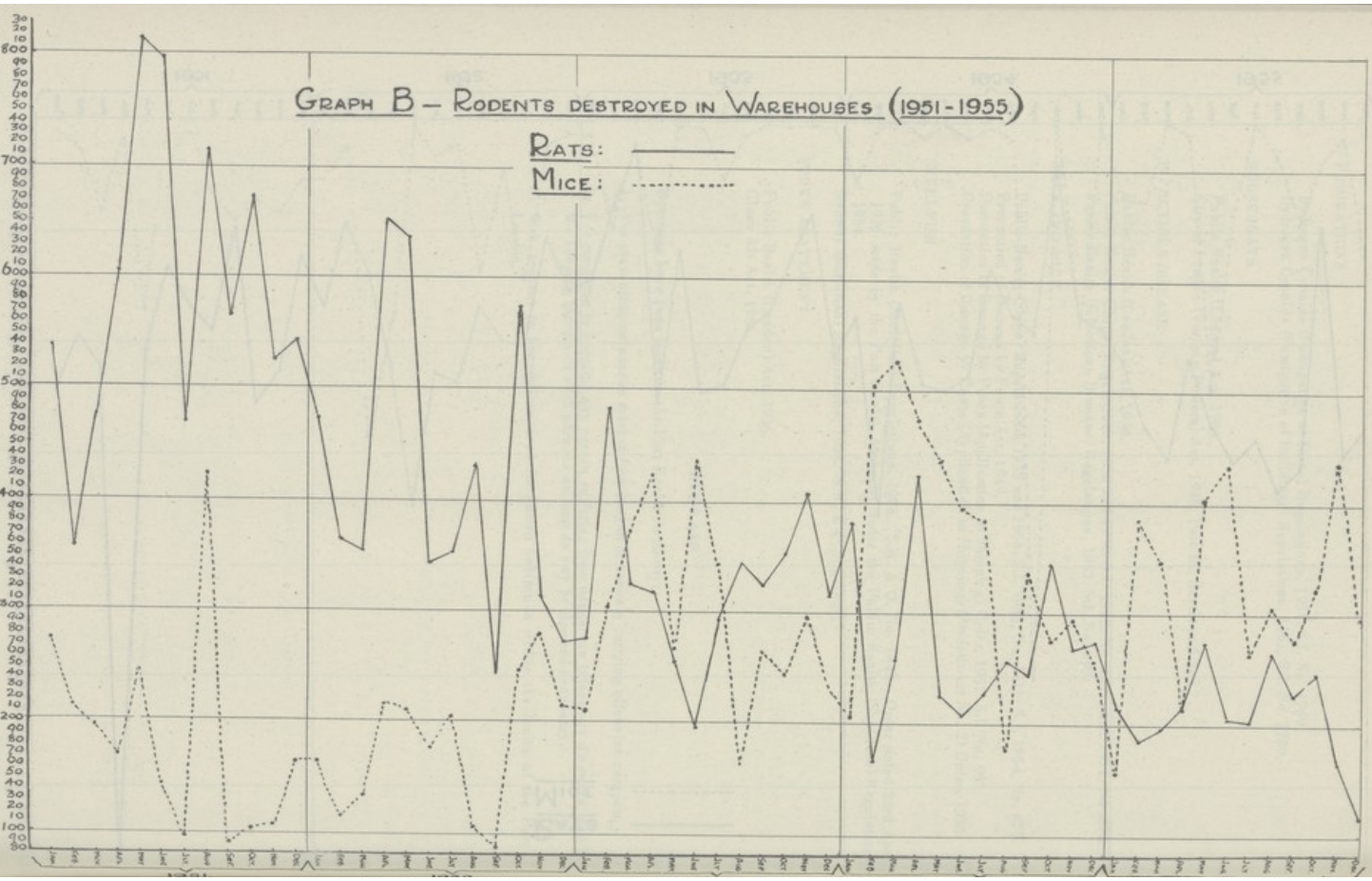
Bye-laws have been made by the Port Health Authority:

1. For preventing nuisances arising from barges or vessels carrying offensive cargoes.

2. For removing to hospital any person suffering from dangerous infectious diseases, and for the keeping therein of such persons as long as may be deemed necessary.

3. With respect to houseboats used for human habitation within the limits of the Port of London.


GRAPH A — RODENTS DESTROYED IN VESSELS (1951-1955.)
RATS : ———
MICE : .....
1951.
1952.
1953.
1954.
1955.


GRAPH B – RODENTS DESTROYED IN WAREHOUSES (1951-1955)
RATS:
MICE: