

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
FEDERAL WATER QUALITY ADMINISTRATION

New England Basins Office
240 Highland Avenue
Needham Heights, Massachusetts, 02194

March 5, 1971

Mr. Peter Mills
United States Attorney
156 Federal Street
Portland, Maine 04111

Dear Mr. Mills:

At your request, the effluents from the Maplewood Poultry Company and the Poultry Processing, Inc. were resampled. Enclosed is a copy of the report of this sampling that occurred March 2 and 3, 1971.

If you have any questions or if the format should need revision, please contact us.

FOR THE REGIONAL DIRECTOR:

Sincerely yours,

E. V. Fitzpatrick
Director

Enclosure

**INDUSTRIAL WASTES SURVEY
MAPLEWOOD POULTRY
POULTRY PROCESSING**

**BELFAST, MAINE
MARCH 2 and 3, 1971**

MAPLEWOOD POULTRY AND POULTRY PROCESSING
BELFAST BAY, BELFAST, MAINE
MARCH 2 and 3, 1971

At the request of the United States Attorney for Maine, the outfalls from Maplewood Poultry Company and Poultry Processing Company, doing business as Penobscot Poultry, were resampled on March 2 and 3, 1971.

David Stonefield collected and Howard Davis witnessed the collection of all samples. Mr. Davis was in charge of laboratory analysis conducted in Belfast. Mr. Stonefield aided Mr. Davis in the analysis of the samples.

Maplewood Poultry

Maplewood Poultry, as described in the report of sampling on November 3 and 4, 1970, is located in Belfast, Maine, on the west side of Belfast Bay between the Veteran's Memorial Bridge and the old bridge across the bay (see Figure 1 of the November 3 and 4 report). On arrival at Maplewood Poultry Company at 1330 hours on March 2, Mr. Stonefield talked with Mr. Steven Glass, the plant manager. Mr. Glass gave the sampling crew permission to sample the outfall.

The southernmost outfall (Station MP-01) is a 24" concrete pipe which reportedly carries the waste from the picking room area where the birds are killed and plucked. The effluent was a reddish-yellow color and varied markedly in quantity of flow (Figure 1).

The middle outfall (Station MP-02) is located below the high water mark just north of the ruins of an old pier. This 24" corrugated steel

pipe reportedly carries the drainage from the preparing rooms. This had the smallest flow of the three outfalls (Figure 1).

The northernmost outfall (Station MP-03) is a 30" corrugated steel pipe which carries the waste from the eviscerating area. The waste is the largest of three effluents and is passed through screens and a grease separator before discharge (Figure 1).

Two samples were collected at each outfall on March 2 - one for bacteria and one for general analysis. The general sample was analyzed for pH, turbidity, and suspended solids. The temperature of the effluent was also obtained. On March 3 the three outfalls were sampled for oil and grease analysis. The temperature of the sample was again recorded.

Poultry Processing

Poultry Processing is also located on the west side of Belfast Bay in Belfast, Maine, as described in the report of the November 3 and 4 sampling. At 1430 hours on March 2, Mr. Stonefield obtained permission from the plant office to sample the effluent on March 3. The outfall is located just above the low water mark of Belfast Bay near the salt water pump house for the condenser cooling water (Figure 2). Two 12" pipes were discharging into the bay. The northernmost pipe appeared to be from the condenser and was not sampled. The southernmost pipe (Station PP-01) was highly colored and carried solids. It appeared to be the wastewater from the processing of the chickens.

On the morning of March 3, the sampling crew returned and collected bacteria, oil and grease, and general samples from Station

PP-01. The temperature of the effluent was also recorded. When the sampling crew arrived the effluent was colored green. During the sampling, which took about five minutes, the color of the effluent varied from green to red to green and back to red. The oil and grease sample and the bacteria sample were collected when the effluent was red. The general analysis sample was collected when the color was changing. As a result the sample was a composite of approximately 50 percent of the effluent when it was red and 50 percent of the effluent when it was green.

Sampling Procedures

At Maplewood all samples except the bacteria samples were collected in plastic cubitainers. Gallon cubitainers were used for the general analysis samples and quart cubitainers were used for the oil and grease samples. The bacteria samples were collected in sterile, glass, bacterial sampling bottles. At Poultry Processing plant the bacteria sampling bottle was used to collect and pour the samples into the gallon and quart cubitainers. Then the bacteria sample was collected in the bottle. The temperature of all samples was determined using a metal thermometer.

The bacterial sample and the general analysis sample were returned to the Belfast Motor Inn. In the rooms the bacterial sample was filtered for both total and fecal coliforms. The general sample was filtered for suspended solids and analyzed for pH and turbidity.

The oil and grease sample was preserved with 5 ml of concentrated hydrochloric acid and returned to the NEBO laboratory for analysis. The filtered bacterial samples were incubated and returned to NEBO to be counted. The filtered suspended solid samples were returned to NEBO for drying and weighing.

Sample Identification

Each sample was tagged with two tags - one sample tag giving lab number, station, date, time, and collector; and one chain of custody tag giving collecting agency, lab number, time, date, source of sample, collector's signature and title, and witness's signature and title, plus information on the transfer of the sample. In addition, a pre-numbered field data card was filled out for each collection time to record weather conditions, the temperature of the sample, and the sampling location.

Results

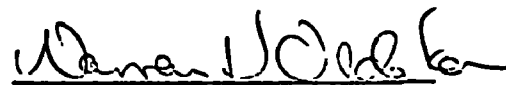
Table 1 summarizes the results of the effluent analysis which are similar to the previous survey. These results show that two of Maplewood Poultry effluents, MP-01 and MP-03, and the Poultry Processing effluent, PP-01, were highly colored, turbid and contained large quantities of suspended solids. The oil-grease contents were above that of normal raw sewage.

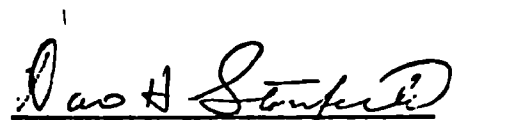
The results of analysis on the other outfall from Maplewood Poultry (MP-02) were similar to those expected for diluted raw sewage.

TABLE 1
SUMMARY OF DATA
MAPLEWOOD POULTRY AND POULTRY PROCESSING

Lab No.	Station	Date	Time	Temp. °C	Turb. JTU	pH Units	Susp. Solids mg/l	Oil & Grease mg/l	Total Coliform per 100 ml	Fecal Coliform per 100 ml
23915	MP-01	3/2/71	1340	20	160	7.2	181		4,800,000	> 2,000,000
23919	MP-01	3/3/71	0805	21.5				85		
23916	MP-02	3/2/71	1410	19.5	8	7.1	7		71,000	7,000
23920	MP-02	3/3/71	0810	19.5				20		
23917	MP-03	3/2/71	1400	10	70	7.2	105		560,000	> 200,000
23921	MP-03	3/3/71	0820	9				240		
23918	PP-01	3/3/71	0840	19.5	80	7.0	174	167	1,000,000	900,000

Tests were performed according to FWQA Standard Methods and data was verified.


Chief, Laboratory Branch


Sanitary Engineer
Field Investigations Section

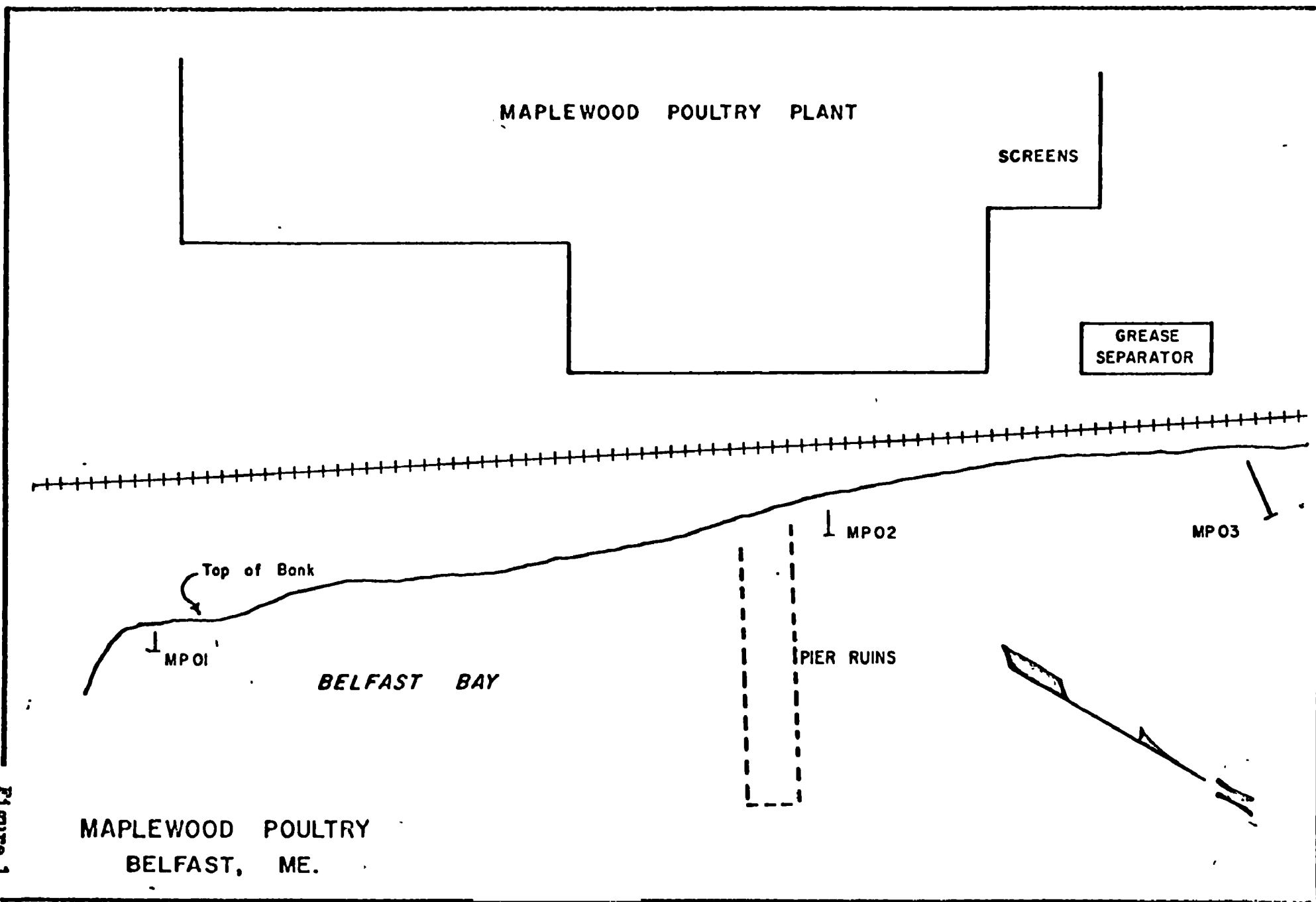


Figure 1

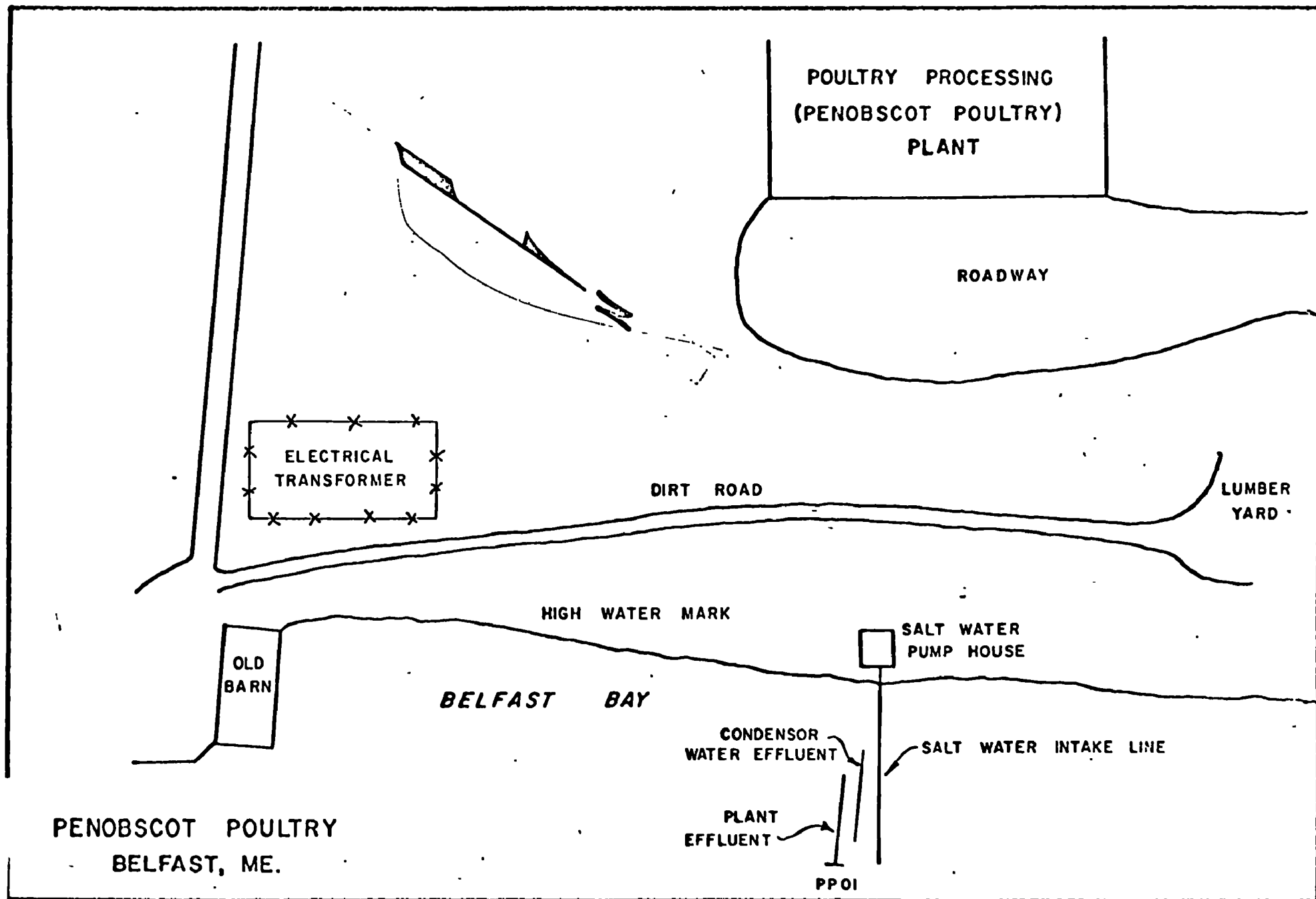


Figure 2