

The University of Rochester
School of Medicine and Dentistry

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NO. 1146 OF 1147 COPIES, SERIES A

BIDM-2 a
MO-720-2

P.O. Box E

8 August 1945

FAB/etp

10 August 1945

District Engineer Office
Manhattan District
Post Office Box E
Oak Ridge, Tennessee

~~SECRET~~

Subject: Contamination of Water in Poplar Creek.
Attention: Captain Bryan

MEMORANDUM TO: Lt. Col. Lavern W. Kehe
Dear Captain Bryan:

1. Reference is made to our discussion on 8 August 1945 concerning dumping of waste material at Y-12. The following analytical reports are now in:

2. It is felt by this office that only three substances are worthy of note as far as contamination of the water of Poplar Creek is concerned,

a. F material should not exceed 1 part per million.

b. Fluoride should not exceed 1.5 parts per million of water if the water is to be used for human consumption. However, if the extra dilution which will occur in the Clinch River is considered, it is felt that F can be safely dumped into the water of Poplar Creek to 5 parts per million. A sample of drinking water containing a residue in the bottom of

c. Copper (Cu) is toxic at 10 parts per million to most forms of life; therefore, it is felt Cu should not exceed 5 parts per million of water. Here again the further dilution in the Clinch River has been considered.

3. All other ions and compounds are either non-toxic or would not reach intolerable levels in the amounts which are normally dumped at Y-12.

strontium, sodium, calcium, magnesium, silicon, aluminum, and barium.

Distribution: Cys 1 & 2 - Addressee

Cys 3 & 4 - Classified Files
Cys 5 - Medical Section w/3 Captain, Medical Corps

Elements present are mainly:

silicon, calcium, magnesium, and boron, and traces of iron, lead, sodium, manganese, aluminum and vanadium.

~~SECRET~~

L. E. Steadman



DISPATCHED

MO-720-2

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HMB/MP

ARMY SERVICE FORCES
UNITED STATES ENGINEER OFFICE
MANHATTAN DISTRICT
OAK RIDGE, TENNESSEE

IN REPLY
REFER TO

7 June 1944

Subject: Fluorine Content of Townsite Water Supply

Memo to: Colonel Warren

1. According to information received from Major Swanson, the following are the results of analyses of Townsite water supply for fluorine content:

<u>Date Sample Taken</u>	<u>Analysis by</u>	<u>Reported Result (p.p.m.)</u>
28 February 1944	H.C.Nutting Co., Cincinnati, Ohio	0.22 (treated water)
5 April 1944	On Area, by Filtration Plant Lab.	0.1 (raw water)
5 April 1944	On Area, by Filtration Plant Lab.	0.7 (treated water)
29 April 1944	H.C.Nutting Co., Cincinnati, Ohio	0.24 (sample No.1) treated 0.16 (sample No.2)

2. Consideration of the reported results above raises several questions: First of all, does the fluorine content of the Townsite water supply fluctuate? To answer this question it would seem wise to submit additional samples for laboratory analysis. Second, are the reported results accurate? Since the samples taken 29 April 1944 were identical, if one assumes that the result 0.16 p.p.m. is correct, then one must conclude that the report on sample No. 1 is in error by 50%. May I suggest that a single sample be divided and submitted to several different laboratories. Perhaps, also, one or more of the operating companies on the project could undertake some of this work for us and do an unusually accurate analysis.

Bernard M. Blum
1st Lt., Medical Corps
Area Health Officer

cc: Major Friedell ✓
Major Rea
Major Swanson

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*Public Health
Reports*