

BASE MAINTENANCE DEPARTMENT
Marine Corps Base
Camp Lejeune, North Carolina 28542

MO 11330
MAIN/RES/gbg
19 Oct 1978

MAINTENANCE ORDER 11330

From: Base Maintenance Officer
To: Distribution List

Subj: Standing Operating Procedures -- Potable Water Sampling

Encl: (1) Fluoride Sampling Procedures
(2) Chemical Analysis Procedures
(3) Bacteriological Sampling Procedures
(4) Semi-Annual Well Fluoride Sampling Procedures

1. Purpose. To publish a standard procedure for potable water sampling technique and schedule for the Marine Corps Base in accordance with state and naval regulations, and the Safe Drinking Water Act.

2. Responsibilities.

a. The General Foreman, Water Treatment Branch, is responsible for the proper collection of potable water samples from the distribution system and water treatment plants. The General Foreman is also responsible for the delivery of water samples to the Quality Control Laboratory, Building 65.

b. The Chief, Quality Control Laboratory is responsible for

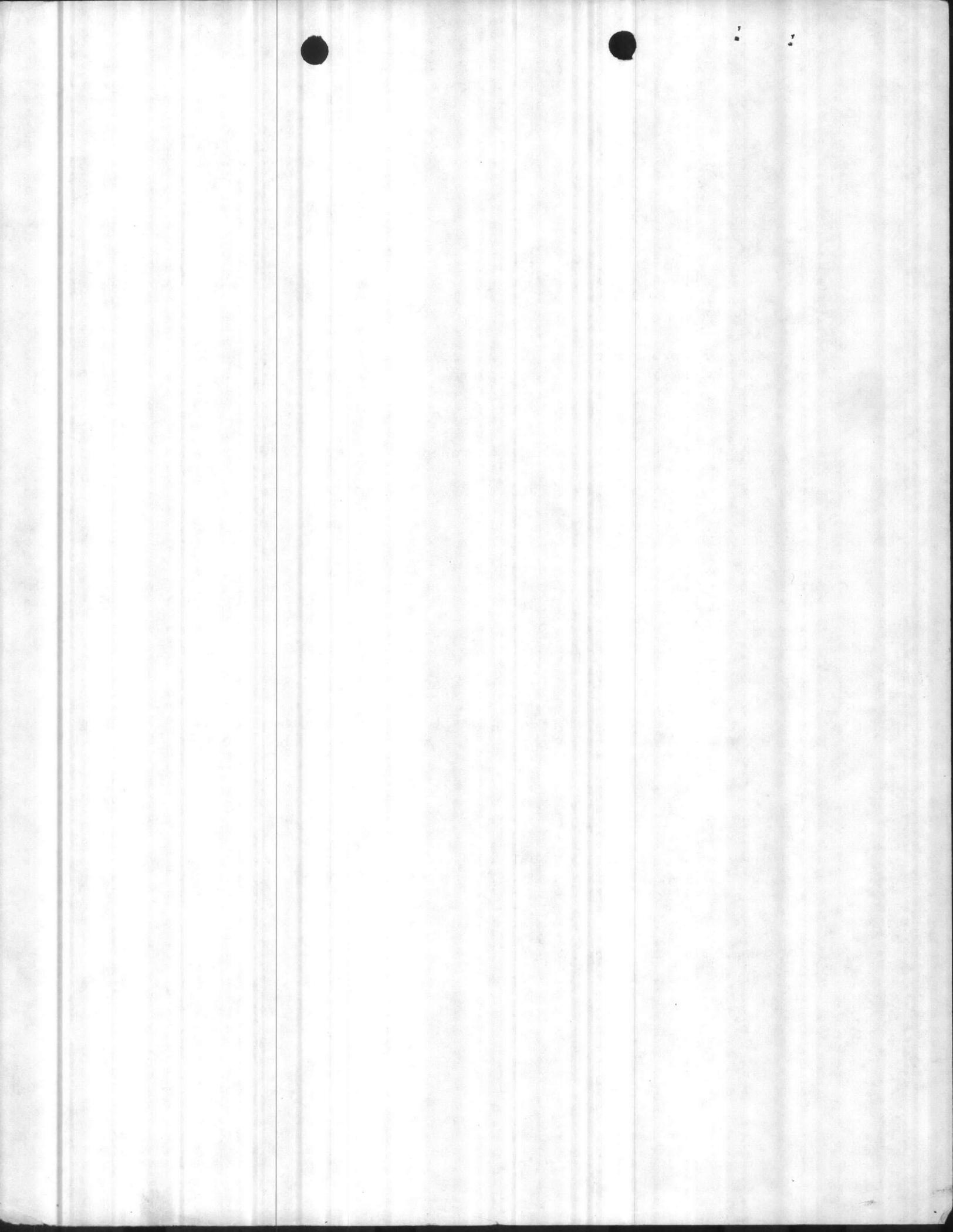
(1) Instructing water samplers (designated by the General Foreman, Water Treatment Branch) in the proper sampling techniques.

(2) Providing adequate containers for sampling.

3. Frequency of Sampling.

a. Fluoride samples of treated and untreated water will be collected daily (seven days per week) from the Hadnot Point, Tarawa Terrace, and Holcomb Blvd Water Treatment Plants. (See Enclosure (1) for procedures.)

b. Chemical analysis samples of treated water will be collected weekly from all Water Treatment Plants. (See Enclosure (2) for procedures.)



Chemical Analysis Sampling Procedures

1. General.

a. Samples will be collected each Tuesday from all the Water Treatment Plants' treated water. These samples are used to determine that proper treatment and chemical additions have been performed.

b. Sample bottles will be provided by the laboratory.

2. Apparatus.

a. Sample bottle, 1000 mls, plastic pre-labeled.

b. Chlorine residual label sticker on bottle.

c. Sample container or carrier.

3. Sampling Procedure.

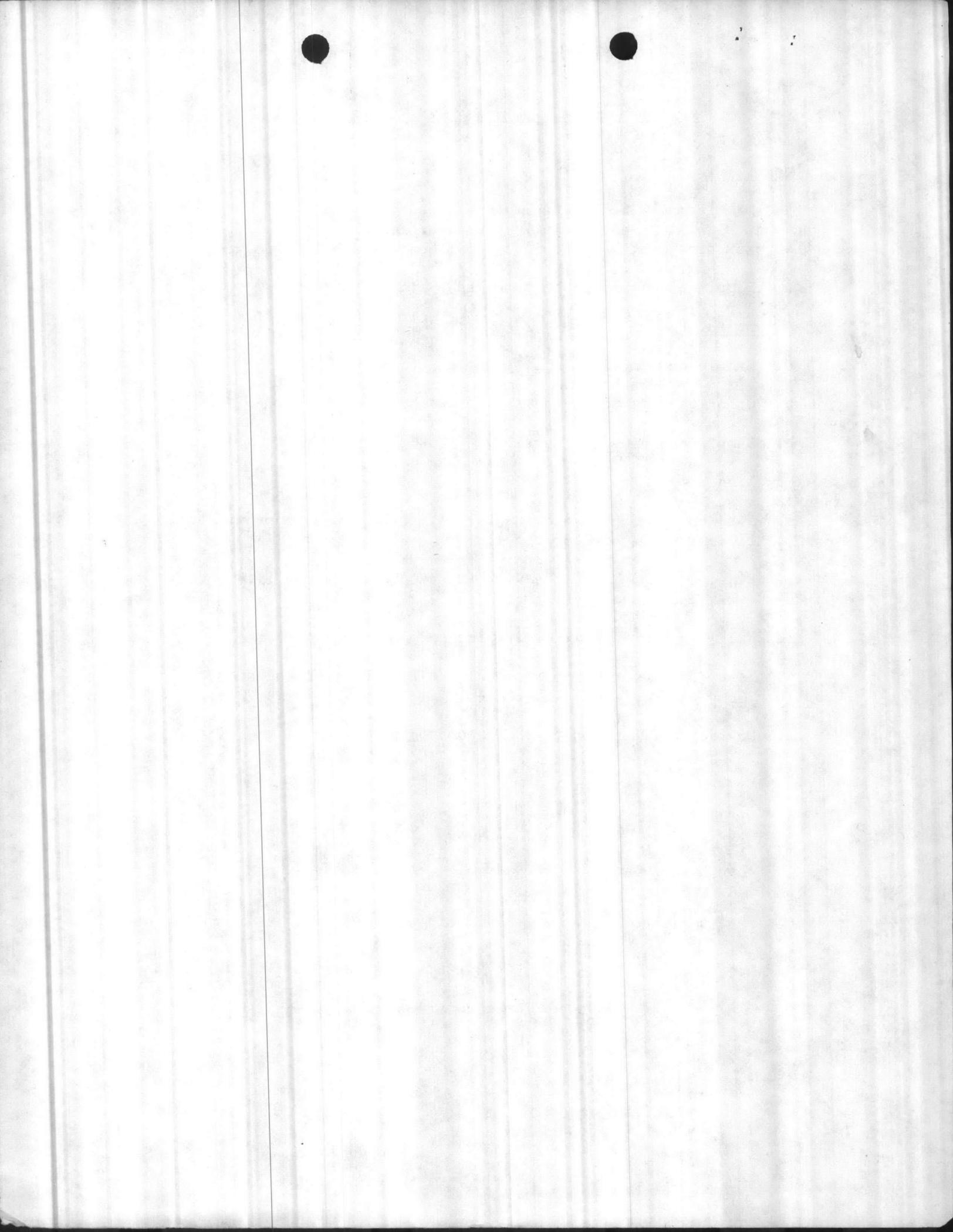
a. Turn on the spigot and run the water (to waste) approximately one minute or longer to clear the line.

b. Rinse the sample bottle with the sample two times (i.e., fill up the bottle and discard the contents).

c. Fill the sample bottle with the sample.

d. Test for the chlorine residual and record it on the sample bottle.

e. Deliver the samples to the laboratory.



MO 11330
19 Oct 1978

c. Bacteriological analysis samples of all potable water distribution systems will be collected weekly. (See Enclosure (3) for procedures.)

d. Fluoride analysis samples of well water will be collected semi-annually. (See Enclosure (4) for procedures.)

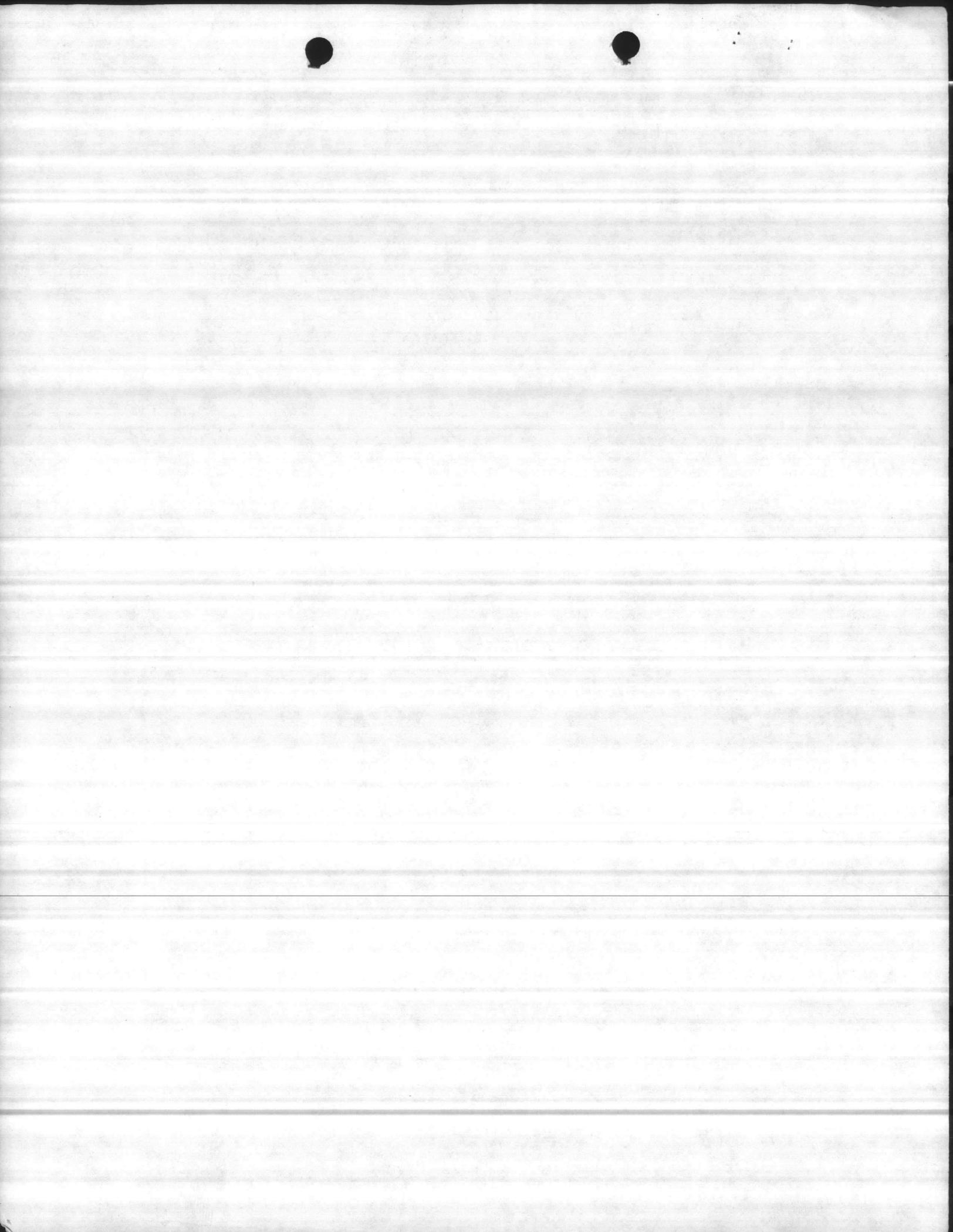
e. Repeat or check samples will be collected as required.



J. KOVACH

DISTRIBUTION:

Dir, NREA Div
✓ Dir, Utilities Div
Dir, Admin Div
Dir, Opns Div



Fluoride Sampling Procedures

1. General.

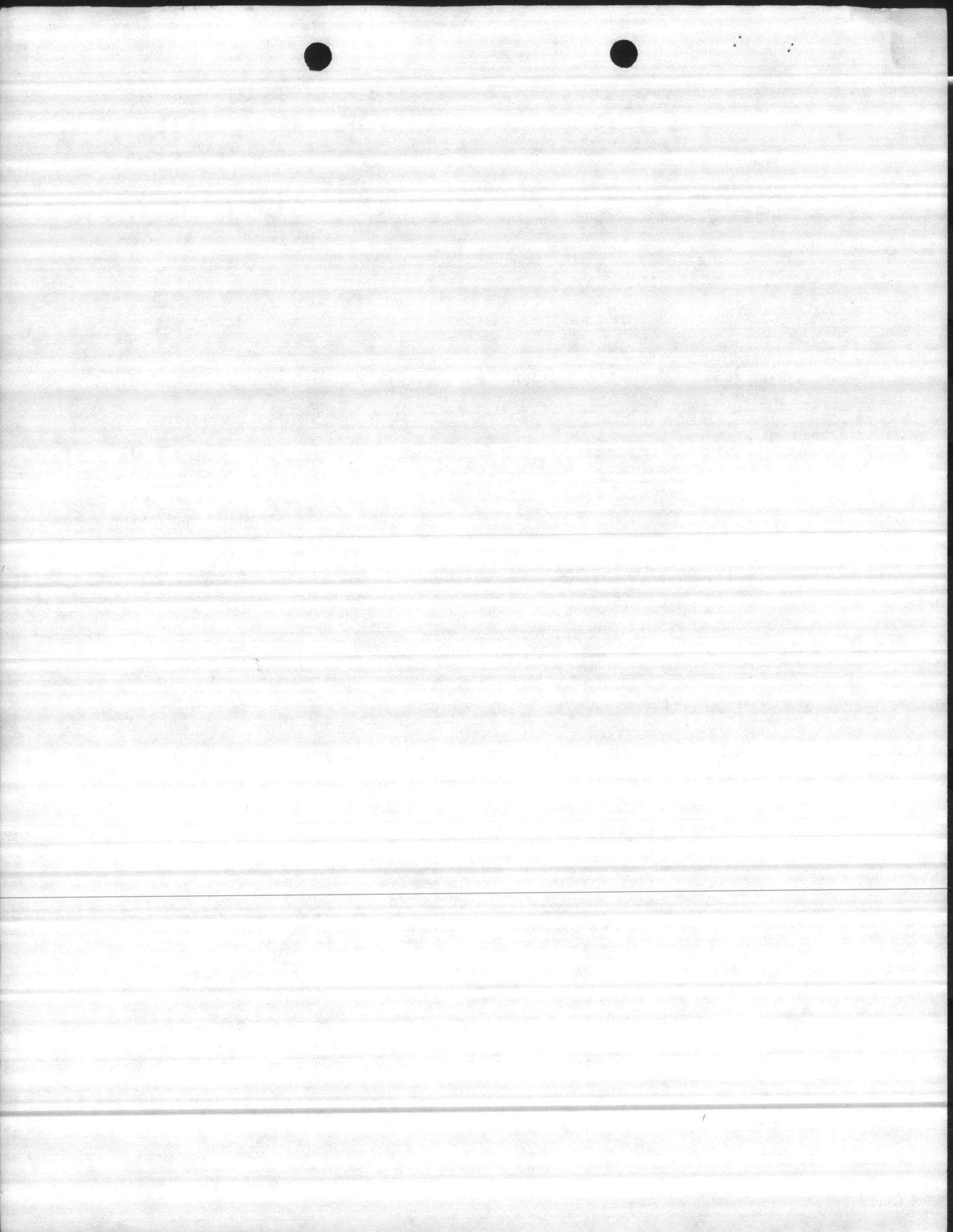
- a. Daily samples will be collected from the raw and treated water from each Water Treatment Plant that adds fluoride to the water.
- b. Sample locations will be designated by the General Foreman, Water Treatment Plant.
- c. Fluoride samples will be collected each morning and delivered to the laboratory by 1000 hours.

2. Apparatus.

- a. Plastic bottles, 500 mls. Each bottle to be labeled (i.e., raw, treated).
- b. Sample carrier or container.

3. Sampling Procedure.

- a. Turn on the spigot and run water (to waste) approximately one minute or longer to clear the line.
- b. Rinse the sample bottle with the sample two times. (Note: This step is important to assure a good sample).
- c. Fill the sample bottle.
- d. Deliver the samples to the laboratory.
- e. Pick up bottles for the next day's samples.



Semi-annual Well Fluoride Sampling Procedures

1. General.

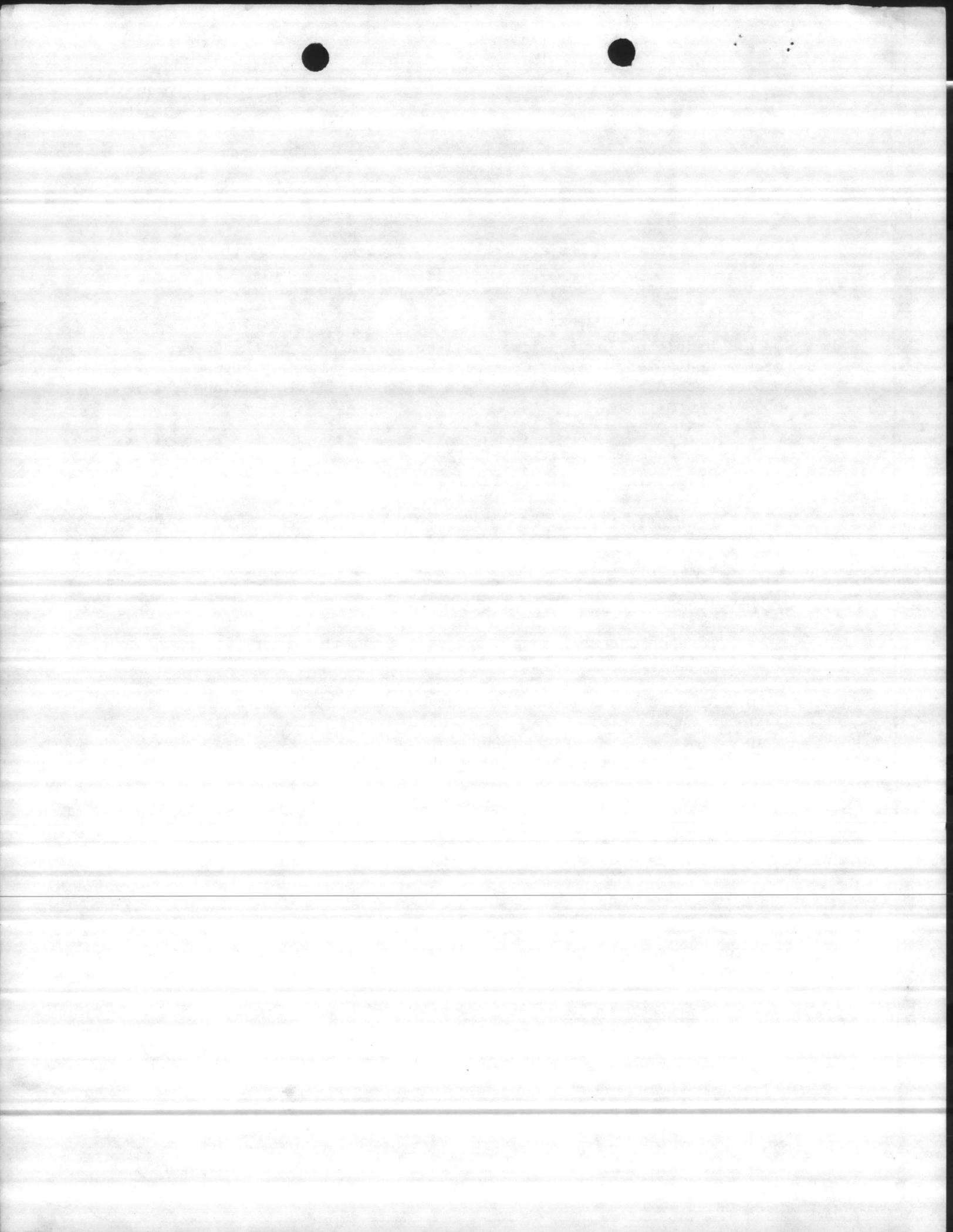
- a. Fluoride samples are collected twice a year from the well sites.
- b. Sampling periods are from January to June and from July to December.
- c. Sample collection times will be agreed upon by the General Foreman and Chief, Quality Control Laboratory. Ideally, these samples should be collected during a one-week period, time and schedule permitting.

2. Apparatus.

- a. Plastic or glass sample bottles.
- b. List of wells.
- c. Sample carrier or container.

3. Sampling Procedure.

- a. Turn on the well sample spigot and run the water (to waste) to clear the line.
- b. Rinse the sample bottle twice by filling and discarding the sample in the bottle.
- c. Fill the sample bottle with the sample.
- d. Record the well building number on the tape on the bottle.
- e. Deliver the samples to the laboratory.



Bacteriological Sampling Procedure

1. General.

a. Bacteriological sampling will be conducted each Tuesday. The purpose of the sampling is to insure disinfection and that bacteria do not exceed the limits established by the Safe Drinking Water Act of four per 100 milliliters (mls), or more than an average of 1 per 100 mls for the distribution system.

b. It is extremely important that proper precautions and techniques are used to preclude water samples from becoming contaminated with bacteria from hands, clothing, etc.

* c. DO NOT take samples from outside spigots or from leaking spigots.

d. When taking samples from spigots that have aerators, remove the aerator before running the water (to waste) and collecting the sample. After the sample is collected replace the aerator.

2. Apparatus.

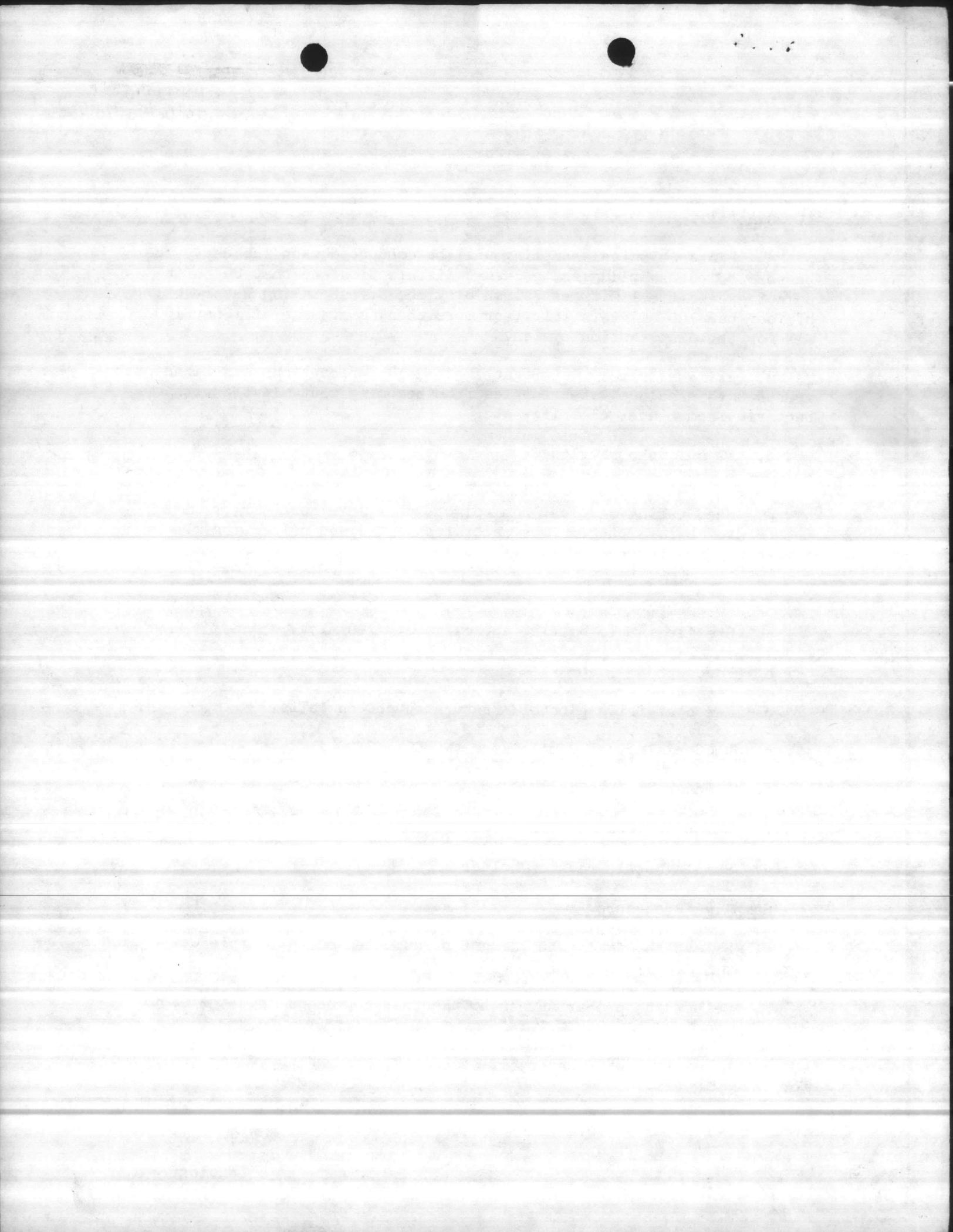
- a. Sterile sample bottle, approximately 100 mls.
- b. Forceps
- c. Jar containing alcohol - saturated cotton balls
- d. Bacteriological Sample Form (MCBCL 11330/4)
- e. Lighter or matches
- f. Chlorine Test Kit
- g. Sample bottle rack or holder

3. Sampling Procedure.

a. Select the proper building (as indicated on the Sample Collection Form).

b. Select the proper number bottle that corresponds to the sample site.

c. Remove faucet aerator, if necessary, and run the water (to waste) for five minutes.



d. Perform a chlorine check on the water, and record the results on the form. (Note: Chlorine residual should be 0.2 mg/l, or higher).

* e. Shut off the water and flame the spigot for about one minute to sterilize.

f. Turn on the water and run (to waste) a few seconds.

g. Remove the top of the sample bottle, taking care not to handle the neck of the bottle or the inside of the cap, and collect about 100 mls of sample. (Note: DO NOT rinse the bottle. DO fill only to the shoulder of the bottle, leaving about one inch of air space).

h. Recap the bottle and return it to the sample carrier.

4. Bacteriological Form MCBCL 1130/4.

a. Record the chlorine residuals in the appropriate place.

b. In "roving" area sample, write the building number sampled.

c. The person collecting the samples must sign and date the form in the place indicated.

d. Return the samples and form to the laboratory by 1400 hours.

5. Repeat Samples.

a. From time to time the bacteria count will exceed the permissible limit of four per 100 mls and resampling must be conducted. The Quality Control Laboratory will notify the General Foreman by telephone of this need.

b. Resampling will consist of at least two additional samples taken from the location in question. Resampling procedures will be performed as outlined in the Sampling Procedures.

NOTE: Make sure you record time of collection on MCBCL Form 1130/4. This is for each bacteria sample collected. Also make sure form is signed and dated on bottom of form.

