

Subject:

**POTABLE WATER SAMPLING**

No.: **3.2.7 OMP-001**

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Effective: **24 October 2022**

Cancels: **01 April 2021**

Affects: Koa Lani Personnel, PMRF Barking Sands

Approved By:

10/25/2022

**X** Mike Brunssen

Mike Brunssen  
Facilities Maintenance Supervisor  
Signed by: CONTRACTOR

Approved By:

10/25/2022

**X** James Fuller

James Fuller  
Public Works Director  
Signed by: FULLER.JAMES.M.1381452235

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**RECORD OF CHANGES**

DATE	SECTION	DESCRIPTION
10/24/2022	3.2 References	Change Spectrophotometer 890 - 900
10/24/2022	6.1.3 Procedures	Change Spectrophotometer 890 - 900
10/24/2022	6.1.4 Procedures	Replaced the word on to off
10/24/2022	6.1.5 Procedures	Change Spectrophotometer 890 - 900
10/24/2022	6.2.1 Fluoride	Change Spectrophotometer 890 - 900
10/24/2022	6.2.2 Fluoride	Change Spectrophotometer 890 - 900
10/24/2022	6.2.3 Fluoride	Change Spectrophotometer 890 - 900
10/24/2022	6.3.2 Coliform	Replaced (3) Three Samples to Two ( 2)
10/24/2022	6.3.3 Coliform	Updated Sampling Process

<b>KOA LANI</b>		<b>Operating &amp; Maintenance Procedure (OMP)</b>	
<b>Program — Pacific Missile Range Facility (PMRF), Barking Sands</b>			
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**1.0 PURPOSE.** To establish specific and detailed instructions to be used by the operations and maintenance personnel of the Facilities Maintenance Plumbing Shop. The execution of this instruction is required to insure the quality of water being distributed at PMRF and comply with the PWS and Department of Health Safe Drinking Water Act.

**2.0 SCOPE.** This procedure applies to Facilities Maintenance Plumbing Shop personnel and the Barking Sands water system.

**3.0 REFERENCES.** The Technical Library has copies of the following references.

3.1 DOH Monitoring Requirements for Phase II and Phase V Contaminants.

3.2 Hach DR 900 Spectrophotometer Operations Instructions.

**4.0 DEFINITIONS.**

4.1 Total Coliform: Coliforms are bacteria that are naturally present in the environment and are used as an indicator to determine that other potentially harmful bacteria may be present.

4.2 Chlorine Residual: The level of chlorine that is remaining in the water after chlorination for bacterial disinfection expressed in part per million (ppm).

4.3 Fluoride Residual: The level of fluoride that is remaining in the water after fluoridation expressed in parts per million (ppm).

**5.0 RESPONSIBILITIES.**

5.1 The Public Works Director ensures that all maintenance activity be properly scheduled and that Operation and Maintenance (O&M) results are properly and accurately documented.

5.2 The Facilities Maintenance Supervisor sees to it that the maintenance schedule is implemented and PM result records are properly completed.

5.3 Plumbing shop personnel retrieve water samples from designated test points, carry out testing procedures, take action required as a result of the analysis, and document the readings on the Chlorine and Fluoride Sampling Report FM Form 003 or on chain of custody forms for external laboratory analysis.

**6.0 PROCEDURES.**

6.1 Chlorine Residual (Daily)

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6.1.1 Samples are to be taken from the following locations: BS 0394, BS 0821, BS 1101, BS 1262, and Sandia Kauai Test Facility.

6.1.2 Fully open the hose bib at the designated sample site and flush the water through the spigot for 3 minutes prior to taking the sample. Throttle back on the water flow to draw the sample after the flushing period has been met.

6.1.3 Rinse the two sample vials from the Hach DR 900 spectrophotometer and fill each to 10 ml mark.

6.1.4 Place the contents off one (1) DPD free chlorine reagent 5ml pillow into the second vial. Gently shake the tube to mix the reagent and place it into the right compartment of the comparator. The reagent will cause the water sample to turn a shade of violet. The intensity of the color will be determined by the chlorine content.

6.1.5 Place vial without DPD reagent into DR 900 and press zero to zero out instrument. When zero is observed on DR 890 remove then insert vial with added reagent. Press read. Record the chlorine residual value noted on the DR 900, on to FM Form 003. The minimum required value is 0.2 ppm.

6.2 Fluoride Residual (Daily)

6.2.1 Samples are to be collected from the following locations: BS 0394, BS 0821, BS 1101, BS 1262, and Sandia Kauai Test Facility and analyzed at the BS 0260 laboratory using the Hach DR 890 Spectrophotometer.

6.2.2 Calibrate the DR 900 Spectrophotometer by using HACH standards.

6.2.3 Once the DR 900 Spectrophotometer is calibrated, fill a vial 10ml mark with a sample collected from one of the designated locations. Add 2 ml of Hach's SPANDS reagent to the test container, shake gently to mix, let stand for one minute and place in the DR 890. Record the fluoride residual in the Chlorine and Fluoride Sampling Report FM Form 003.

6.2.4 Repeat this process between each sample analysis.

6.2.5 The recommended fluoride level is .7 ppm.

6.3 Total Coliform Analysis (Monthly)

6.3.1 This test is performed by the DOH Safe Drinking Water Branch.

6.3.2 Two sample sites are selected by the DOH each month from the sample site plan which consists of the following facilities: BS 0112, BS 0201, BS 0413, BS 0801, BS 1103, BS 1204, BS 1221, BS 1262, and the Sandia Test Facility between trailers G-7 and H-9. Samples sites are chosen on the SCRS website by water system operators.

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6.3.3 Fully open the hose bib at the designated sample site and flush the water through for at least 3 minutes. Prior to taking the sample, throttle down the hose bib pressure to a low flow. Draw sample into the provided DOH bottle.

6.3.4 The samples will be delivered or an alternate will deliver the samples and chain of custody forms to the DOH laboratory in Lihue no later than 11:00 a.m. on the date designated by the DOH.

6.3.5 A Facilities Maintenance delegate will bring back the next month's sample bottles.

6.3.6 The DOH will notify the Facility Maintenance Supervisor if any of the samples test positive for Total Coliform and what re-takes sites the samples must be drawn from. If any of the re-take samples test positive for Total Coliform, another round of retake samples will be drawn as directed by the DOH until all samples test negative. The DOH will provide direction for public notification and any other action if DOH Tier violations are determined as a result of positive readings.

6.3.7 The Facility Maintenance Supervisor will notify the PWO Task Manager and Public Works Director immediately after being informed of a positive Total Coliform reading.

6.4 Perform other sampling for chemical analysis as directed by the DOH and PWO.

— End of OMP —