COVER SHEET
STANDARD OPERATING PROCEDURE

Operation Title: **Radon Sampler Qualification**

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DISTRIBUTION;

( ) Division of Technical Services……..By:_____Date:_____

1. APPLICABILITY

This Standard Operating Procedure (SOP) applies to all programs in the Maine Department of Environmental Protection's (MEDEP) BRWM.

This SOP is not a rule and is not intended to have the force of law, nor does it create or affect any legal rights of any individual, all of which are determined by applicable statutes and law. This SOP does not supersede statutes or rules.

2. PURPOSE

The purpose of this document is to describe the MEDEP/BRWM procedure for qualifying BRWM staff to collect water samples for radon analysis in accordance with the Department of Human Health Services (DHHS), Radiation Control Program (RCP). BRWM staff are required to follow this document when radon samples are needed for managing drinking water treatment systems.

3. RESPONSIBILITIES

All MEDEP Staff must follow this procedure when performing this task. All Managers and Supervisors are responsible for ensuring that their staff are familiar with and adhere to this procedure. MEDEP staff reviewing data by outside parties are responsible for assuring that the procedure (or an equivalent) was utilized appropriately.

4. DEFINITIONS AND ACCRONYMS

4.1 GAC – Granular Activated Carbon A filter media used to remove organic and inorganic contaminants dissolved in water and control odors. GAC is a form of processed carbon designed to have small, micropores to increase surface areas available for adsorption or chemical reactions. GAC is made from raw organic carbonaceous materials such as coconut shells, nut shells, peat, wood, or coal.

4.2 Low-level waste – Nuclear water that does not fit into the categorical definitions for intermediate-level waste (ILW), high-level waste (HLW), spent nuclear fuel (SNF), transuranic waste (TRU), or certain byproduct materials known as 11e (2) wastes, such as uranium mill tailings. Low-level waste includes items that have become contaminated with radioactive material or have become radioactive through exposure to neutron radiation.

4.3 pCi/L - Picocurie per Liter, the standard units used to report radon concentrations in water.

4.4 POET – Point of Entry Treatment- A point of entry treatment system is a whole-house (building) water treatment solution at or before the point the water enters the building.

4.5 Qualified Radon Sampler – BRWM staff who receives hands on training from a BRWM Radon Trainer; demonstrate they have the knowledge and skill to perform the DHHS approved radon sample method; and have documented annual certification from a BRWM Radon Trainer.

4.6 Radon Trainer – BRWM staff who have received approved training from DHHS Radon Control Program for the collection of radon samples from water supply wells.

5. GUIDELINES AND PROCEDURES

5.1 INTRODUCTION

The DHHS is responsible for registering environmental professionals who are qualified for providing air and water radon testing (https://www.maine.gov/dhhs/mecdc/environmental-health/rad/radon/rntesting.htm). It is illegal to test (collect) a residence or its' water supply for radon if you neither own or rent the home, unless you are registered with the State's Radon Program, DHHS, RCP, or are designated as a BRWM Qualified Radon Sampler pursuant to this SOP.

When water supplies become impacted with organic compounds, a point of entry treatment (POET) system consisting of GAC or resin filters is often installed to remove the contaminants from the water. In addition to removing the organic contamination GAC and resin filters will also remove naturally occurring radon from water. When POET consisting of GAC or resin are to be installed on a water supply, the concentration of radon in the water supply will need to be determined to ensure appropriate filter system location, and to consider the resin or GAC change-out schedule and whether pre-treatment for radon is required. Additionally, when a replacement water supply well is installed at a site, the concentration of radon in that well will need to be determined.

5.2 PLANNING

All BRWM staff must follow this procedure to become qualified for radon sampling prior to collecting radon samples from a water supply well.

5.3 PROCEDURE

5.3.1 OVERVIEW

Only BRWM staff who have received training from the Maine DHHS, Radon Control Program are qualified as Radon Trainers to provide training, refresher training, and supervision to staff who have not received training from the Radon Control Program.

Radon Trainers shall provide annual training to BRWM Qualified Radon Sampler staff to assure they can perform the correct sampling procedures in accordance with the Maine DHHS Radiation Control Program.

Training shall include hands on demonstration and/or observation of the approved sampling techniques.

Upon completion of the demonstration of the sampling techniques, the Radon Trainer shall observe to ensure that a sampler has the skills and knowledge to collect the sample in accordance with the DHHS Radon Control methods.

Upon completion, the Radon Trainer shall document the annual training using the form provided as Attachment A to this SOP. Each annual refresher training is good for one calendar year and refresher training must be completed annually to maintain BRWM Qualified Radon Sampler status.

6. QUALITY ASSURANCE/QUALITY CONTROL

Data quality objectives (DQOs) should be stated in the SAP. Quality Assurance/Quality Control (QA/QC) samples may be collected if needed to meet DQOs. All analytical data should be reviewed and assessed to determine if DQOs have been met. If review indicates DQOs have not been met, corrective action will be recommended by the reviewer.

7. REFERENCES

http://www.maine.gov/dhhs/mecdc/environmental-health/rad/radon/hp-radon.htm

Attachment A
Annual Training Certification Form

BRWM Radon Sampler Annual Certification Form

Radon Trainer Name:_____

Name of individual receiving training as a qualified radon sampler:_____

Date of Training:_____

Location of Training:_____

I certify that I have provided training to the individual stated above using the DHHS approved methods for collecting radon samples from a water supply well. Additionally, I certify that I have observed that they have the skills and knowledge to complete the sampling in accordance with the approved method.

_____

Signature Date

This certification is good for one calendar year from the date above and recertification is needed on an annual basis.

RWM-PP-022-Radon Sampler Certification

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