

STANDARD OPERATING PROCEDURE  
Procedure for Collecting Background Water

---

**KEY WORDS**

Ground water, surface water, quality control

**APPROVALS**

APPROVED BY: **Original signed by:** \_\_\_\_\_ DATE: **12/1/06**  
John Sanders, PhD  
Environmental Monitoring Branch Management

APPROVED BY: \_\_\_\_\_ DATE: **11/29/06**  
Lisa Quagliaroli  
Environmental Monitoring Branch Senior Scientist

APPROVED BY: \_\_\_\_\_ DATE: **11/29/06**  
Carissa Ganapathy  
Environmental Monitoring Branch Quality Assurance Officer

PREPARED BY: \_\_\_\_\_ DATE: **11/29/06**  
Brian Orlando  
Scientific Aide

Environmental Monitoring Branch organization and personnel, such as management, senior scientist, quality assurance officer, project leader, etc., are defined and discussed in SOP ADMN002.

## STANDARD OPERATING PROCEDURE

### Procedure for Collecting Background Water

---

#### 1.0 INTRODUCTION

This Standard Operating Procedure (SOP) describes the methods used for preparing carboy containers and gathering background water. Background water is collected in carboys and provided to the laboratory for preparation of quality control spikes for pesticide analysis. Both surface water and ground water are collected from sites known to be free of pesticides.

#### 1.1 Purpose

The purpose of gathering background water is to provide the lab with water similar to the matrix of real samples and free of pesticides. This will insure that the spikes contain a known amount of analyte and that the lab method is working properly.

#### 2.0 MATERIALS

- 2.1 5 Gallon Plastic Carboy
- 2.2 Liqui-Nox<sup>®</sup> or Laboratory Detergent Concentrate
- 2.3 Distilled or DI water
- 2.4 Cart

#### 3.0 PROCEDURES

##### 3.1 Carboy Preparation

- 3.1.1 Add either a small amount (about ¼ tbs.) of Liqui-Nox<sup>®</sup> or a pinch of laboratory detergent concentrate to empty carboy. Add tap water and shake vigorously. Then rinse the carboy with distilled water and empty, repeat 3 times. There should be no visible suds.

##### 3.2 Background Water Collection

- 3.2.1 A native rinse is required before filling the water container. A native rinse refers to collecting water from the same source as the intended sample before sampling for use as a rinse of the collection containers. The purpose is to remove trace residues of any constituent in the containers.
- 3.2.2 When acquiring ground water, run the well for two minutes prior to

STANDARD OPERATING PROCEDURE  
Procedure for Collecting Background Water

---

the native rinse. A hose provided by DPR to insure cleanliness is acceptable for use since it is not a true environmental sample. For surface water, collect water from areas where there is no oily residue on the water surface and avoid stirring up sediment.

- 3.2.3 Fill the carboys with water. Make sure that the air cap on the back of the carboy is off for easier filling. Replace caps when finished. The carboys weigh nearly 50 lbs, so a cart may be useful.
- 3.2.4 Label carboys with the location, water type, and crew names. Then refrigerate the background water until it is delivered to the lab.
- 3.2.5 The carboys must be labeled to insure that they are not used for distilled or DI water.