California Department of Pesticide Regulation
Environmental Hazards Assessment Program
1020 N Street
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STANDARD OPERATING PROCEDURE

Intructions for Splitting Water and Rinsing the Geotech® Dekaport Splitter and Splitting Equipment

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KEY WORDS-
Splitter, Rinse, Cross-contamination

APPROVALS

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Environmental Hazards Assessment Program (EHAP) organization and personnel such as management, senior scientist, quality assurance officer, project leader, etc. are defined and discussed in SOP ADMN002.

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1 .O INTRODUCTION

1.1 Purpose

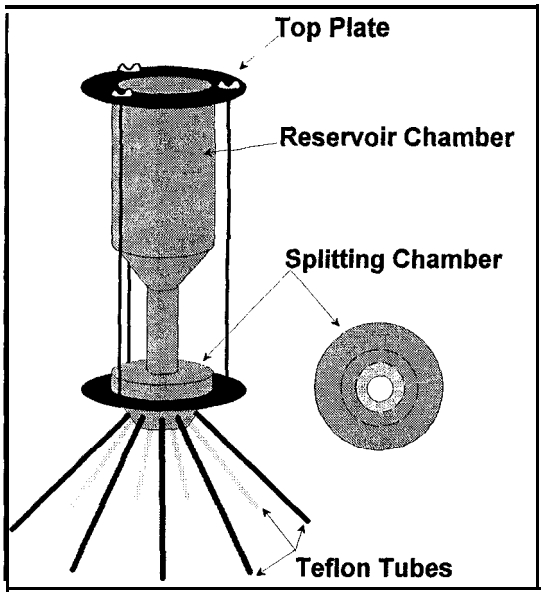
To ensure effective mixing and splitting of a surface water sample when various paired analyses are to be performed and to describe proper cleaning of equipment to prevent cross-contamination.

1.2 Scope

This document will provide specific instructions for splitting surface water samples and rinsing the splitter.

2.0 MATERIALS

2.1 Large glass jars, stainless steel milk can or container large enough to hold sample water that will be split
2.2 Water sample
2.3 Geotech® 10 port splitter
2.4 Sample containers
2.5 Stainless steel buckets, funnel
2.6 Chain of Custody records
2.7 Latex gloves
2.8 Deionized water (3 or more gallons)
2.9 Leveler
2.10 Large Plastic Bags



3.0 PROCEDURES

Samples should be transported in a glass or stainless steel container on wet ice (4^{0}C), from collection site to the site where splitting will occur.

3.1 Splitting Procedure

3.1.1 Place the pre-cleaned (see EQWA001) Geotech dekaport water splitter on level ground. Make sure all splitter water spouts are level to ensure

a fairly even water flow. Place a level across the top of the splitter to ensure that it is level.

3.1.2 Set up to a maximum of 10 sample containers under each Teflon port. If exactly 10 l-liter sample containers (or smaller) are required, use one port per container. If less than 10 samples are required, use fewer ports, or two tubes can be placed in each container. However, all bottles must be treated the same way each time a sample of water is to be split so that each sample contains the same amount of water and sediment. When there are more than ten sample bottles, e.g. 15, then divide the splitter spouts between two buckets and pour the water through the splitter. Then pour the water from one bucket through the splitter into half the sample bottles, then pour the water from the other bucket through the splitter into the remaining bottles. Collect excess water from unused spouts in an uncontaminated bucket or preferably a container used to hold the water sample originally (e.g., a Teflon sampling bottle). This water can be poured through the splitter again to fill the bottles completely.

3.1.3 Immediately before pouring collected sample water into the splitter, mix water inside a glass or stainless steel sample collection container to suspend the sediment. If more than one container was used to collect the sample, mix the separate containers together in a larger container such as a stainless steel milk can. Prior to completely pouring the remainder of the sample water out of the sample containers into the milk can, or into the splitter directly, swirl the water one last time to ensure that all the remaining sediment stays with the sample water and not at the bottom or along the sides of the container.

3.1.4 While pouring the sample water through the splitter, keep the water level near the top of the reservoir chamber so that as much head pressure is maintained as possible to ensure even flow through the spouts. Again, prior to pouring out the last of the sample water, swirl to get the sediment suspended.

3.1.5 Cap all sample containers and rinse the splitting equipment as described below.

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3.2 Rinsing Procedure

3.2.1 If the splitting is conducted at a facility, rather than out in the field, rinse the splitter and all equipment thoroughly with tap water, then proceed to the next step. If splitting is conducted in the field, rinse the splitter and all equipment with deionized-distilled water and add one rinse (see 3.2.3 below).

3.2.2 Rinse the splitter and associated equipment after splitting any water sample by pouring approximately 2 L of deionized water into either the milk can or steel bucket used in the splitting procedure. Then swirl the water to wash out residues. Pour that same water into the next piece of equipment (such as another bucket that was used for splitting), and again swirl the water and pour into another piece of equipment. This continues through all the equipment and ends by pouring the deionized water through the splitter.

3.2.3 This process is completely repeated from start to finish three times, each time with new, uncontaminated 2L volume of deionized water. If initial rinse did not include tap water, as in 3.2.1, then rinse with deionized water once more.

3.2.4 Cover all containers and the splitter with clean plastic bags between uses.