

## 2.0 GENERAL PROTOCOLS FOR SAFETY IN SAMPLING

### Overview

It is crucial that samples are collected in a safe manner. This includes having first aid equipment, communication equipment, survival gear, wearing proper footwear, gloves, life jackets or flotation devices, reflective jackets, and personal safety devices for confined entry situations. It also means that samples usually are collected by teams of two individuals, one of whom is the support person who can provide help to the other should the sampler encounter an unsafe situation from which they cannot remove themselves. The field crew must be trained for the situations to be encountered; experienced with the proposed program and the potential hazards; a detailed job safety analysis must be prepared, this should include very specific emergency response plans; and the crew must be aware of any special safety considerations. Basic information is provided here.

### Sources

Environment Canada and B.C. WLAP (2005 (c)), Alberta Environment (2006), Environment Canada (2006 b), Environment Canada (2007)

### At a glance

*gloves as protection*

**1** Samples should be collected using latex or plastic gloves in order to protect the sampler from contaminants in the ambient waters, and from coming into contact with preservatives.

*training*

**2** At a minimum, all field crew members should possess valid Standard First Aid (Level 1), CPR and Workplace Hazardous Materials Information System (WHMIS) certification to ensure individual and crew safety. Additional required training could also include Transportation of Dangerous Goods (TDG), small boat safety (as required by the Coast Guard), swift water safety and awareness, ice safety and awareness, defensive driving, all-terrain vehicle safety, snowmobile safety, bear awareness, and wilderness first aid.

*workers being informed*

**3** Provincial Workplace Hazardous Materials Information System (WHMIS) legislation requires that all workers be provided with information concerning the storage, handling and use of controlled products. This includes materials such as chemical preservatives. WHMIS requires that controlled products are labeled so that workers are alerted to the identity and dangers of products and to basic safety precautions. In addition, material safety data sheets (MSDS) are to be provided. These are technical bulletins that provide detailed hazard-precautionary and first aid treatment information for controlled substances, as well as the hazardous ingredients, physical data, fire and explosion hazard, reactivity data, health effects, preventative measures, first aid measures and preparation

information. All sample collectors should obtain copies of current MSDS sheets for each preservative that they are expected to use and become familiar with the sheets.

*danger  
from  
complacency* **4** Individuals involved in sampling ambient waters should never become complacent about the potential dangers that exist in this occupation. Although we may think about such dangers as a thing of the past, there is a large volume of evidence that such tragedies continue to this day. There are too often injuries and deaths attributed to poor judgment even when samplers have been to a site numerous times before. At each site the field team should do a quick site safety assessment prior to carrying out any work (i.e. assess site location and access hazards, potential upstream, in-stream, and downstream hazards, safety gear required, etc.)