McLANE
RESEARCH LABORATORIES, INC.

Technical Support Bulletin 2007-04	Watchdog Handler	November 20, 2007

Alert Level: **IMPORTANT**

Instruments: McLane Moored Profiler (MMP), Ice Tethered Profiler (ITP)

Software Versions: Version 4.05 (Rev D electronics) and version 3.19 (Rev C electronics)

Subject: Incorrect Watchdog Resets

Summary: An uninitialized time variable in the Watchdog Handler may result in incorrect watchdog resets.

Potential Negative Effects: Profiles may be skipped if the watchdog resets incorrectly. As each reset occurs, the profiler will begin dive zero and may miss profile data or scheduled profiles.

Technical Details: A routine in the Watchdog Handler uses time variables to determine whether a profile is in progress. If the current time is past the expected profile end time, the watchdog "kick" is suppressed and a reset will occur. This code is intended to prevent the profiler from "hanging" in mid-profile. Specifically, the tick time variable is not being initialized and is assigned an unknown value. The resulting tick count can be a large negative number and therefore the Boolean calculation is incorrect.

Solution: Both components of the time variable are now initialized and the watchdog handler correctly calculates whether the current time is past the profile end time.