1. **Purpose**
   The purpose of this procedure is to set forth guidelines for conducting tests of the main engine safety shutdowns.

2. **Responsibility**
   It is the responsibility of the Chief Engineer to ensure that the safety shutdowns for the main engines are tested in accordance with Coast Guard Regulations.

3. **References**
   a. R/V Neil Armstrong PSTP (Periodic Safety Test Procedures) H12199
   b. Cummins Marine Application Bulletin 0.15.00, Controls Gauges & Alarms, Witness Test Procedure for QSK Series Engines with MCRS

4. **Procedure**
   The following shutdowns are provided on the Cummins QSK38DM engines: Over speed, Intake manifold Temperature, Lube Oil Pressure, Fuel Temperature, Coolant Temperature, Coolant Level, and Coolant Pressure. The INSITE/Calterm III program is required in order to perform the tests noted below.

   - Over speed – Use the DCU410 Panel ‘over-speed test’ button
   - Intake Manifold Temperature – simulated test with INSITE program
   - Lube Oil Low Pressure – manual test with hydraulic test pump
   - Coolant High temperature - simulated test with INSITE or manual test with sensor heater
   - Coolant Pressure - manual test with hydraulic test pump

   Follow the procedures as described in reference (b) when testing these shutdowns.

5. **Reporting**
   Tests of the main engines are recorded in NS5 or in the (PSTP) Periodic Safety Test Procedure when verifying these events as part of the testing.