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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report describes the hydrodynamic design assistance provided by NOSC Code 6342 in the design of the hydrodynamic fairing for the NOSC Free-Swimming Submersible. The four specific areas of nose and tail shape, vehicle stability, vehicle drag and propulsion are addressed. It can be concluded that the vehicle is hydrodynamically stable over the intended speed range and that vehicle maximum speed can be increased from the present 1.8 knots to 5 knots with the addition of a hydrodynamic fairing.		