

New ALVIN - Future Work

- Preparation of the Request for Proposal (RFP)
- Development of Materials Properties Testing Requirements
- Titanium Materials Properties Investigation
- Finite Element Analysis of SEA CLIFF to establish creep design criteria
- NADAC/community review of SOW / RFP
- NADAC / community review of hull interior mock-up
- Selection of prime contractor

Concept Development Status

Sphere Concept Design

- ▶ **Material** - Ti 6Al 4V ELI
- ▶ **Construction method** - forged hemispheres welded into a sphere
- ▶ **Design rules** - ABS U/W Vehicles 2002 as modified by U.S. Navy design methodology used on SEA CLIFF
- ▶ **General design** - 5 viewports
- ▶ **Preliminary design** - finite element analysis completed
- ▶ **Manufacturers located** - Quotes from 2 US & 1 foreign forger. Quotes pending from 1 US and 1 foreign forger.

Vehicle Concept Design

- ▶ **Variable Ballast & Trim** - Sea water
- ▶ **Energy** - Li polymer

Construction Schedule for New ALVIN

10/15/04
 10/15/05
 10/15/06
 10/15/07

