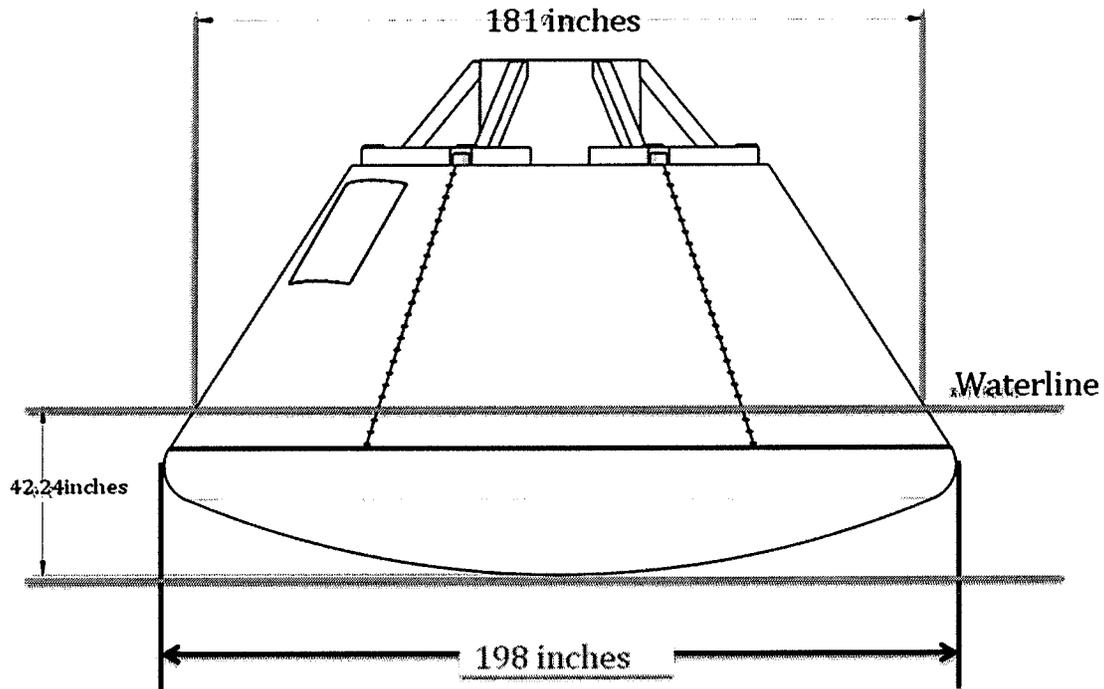
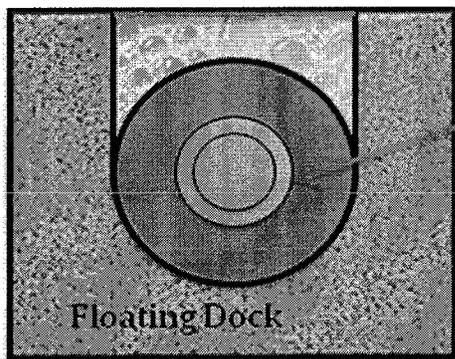


Floating Dock Specifications

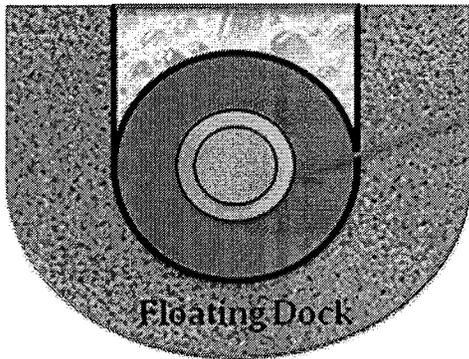
NASA is seeking a purchase of a floating dock to use in a testing program for the ESMD. Water impact testing will be conducted in the LandIR Facility Hydro Impact Basin (HIB). The test vehicle is a crew/Apollo-like module. A schematic of the vehicle with the dimensions and waterline location is in the figure below.



The floating dock is needed to provide a working surface while preparing the module to be lifted from the water post-test. The vehicle will be pulled to the dock and be surrounded such as to provide as much access to the vehicle as possible. Conceptual designs are presented below.

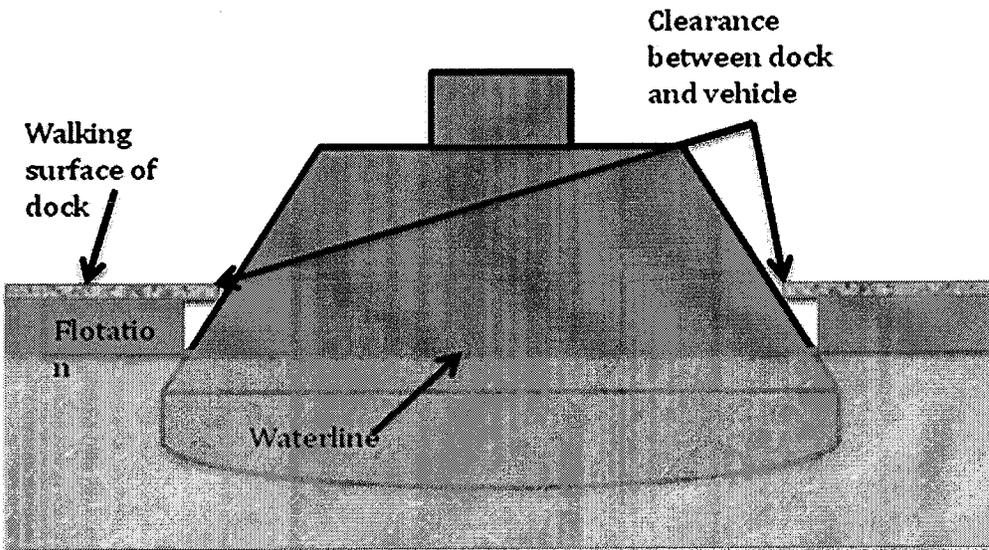


Overhead View of
Test Vehicle



Overhead View of Test Vehicle

1. The dock should leave minimal clearance between the vehicle and the walking surface of the dock. Information from the vehicle schematic above and from a conceptual drawing below clarifies this feature of the dock.



2. For ease of removal from the HIB, the dock shall be less than 6000 lb.
3. Removable railings along outside edges are required.
4. Cleats are required for securing the dock for post-test operations.
5. Low maintenance material, such as polyethylene, should be used for walking surface and flotation units. No wood.
6. Flotation units shall be designed to maintain buoyancy if structurally damaged.
7. Connections of the flotation units shall be designed so the dock acts as one unit.
8. Structural member should adhere to the following regulations/requirements:
 - 29CFR1926.106, Working over or near water
 - Underwriters Laboratory (UL) 746C (f1), the Standard for Safety

of Polymeric Materials. (f1) -- Suitable for outdoor use with respect to exposure to ultraviolet light, water exposure and immersion. The (f1) footnote indicates that the material has met both UV and water exposure or immersion requirements as called out in UL 746C.

- Underwriters Laboratory (UL) 94 (hb), the Standard for Safety of Flammability of Plastic Materials for Parts in Devices and Appliances testing. An HB flame rating indicates that the material was tested in a horizontal position and found to burn at a rate less than a specified maximum.

- FDA title 21, food grade material that will not contaminate the water and is recyclable

- ASTM D1998-04 Falling Dart Test

- 7-Day Hunt Water Absorption Test

9. Flotation materials shall be permanently encapsulated to prevent breakup into small pieces and dispersal in water, (e.g. rectangular float tubs).

10. Deck modules shall have a non-slip surface for safe footing.

11. Deck shall have the ability to allow for cleats to be installed along the inner/outer edges of the dock.

12. Resin shall contain UV ray inhibitors.

13. Manufacturer shall provide all materials, special tools/tool kits, and instructions for assembly of modular dock sections and all associated equipment.

14. Manufacturer shall provide a complete design which identifies the dead load, flotation, freeboard, decking system, safe loading, and certification capacity.

15. Corrosion resistant materials shall be used for connection (bolts, washers, nuts).

16. Walking surface around vehicle should be no less than 7 feet. This allows for people to pass each other on the dock.