Paragon Dive System™ converts a commercially available helmet and suit into a fully encapsulated protection system to isolate the diver from the hazards found in grossly contaminated water.

**System Benefits**

- **Highest Level of Safety:**
  - Isolates diver from environment
  - Eliminates permeation of contaminants
  - Backup exhaust circuit as a fail over in case of malfunction

- **Lower Operating Costs:**
  - Reduce time between dives without having to replace seals
  - Increase dive times to six hours without risk of exposure

Designed to support the US Navy’s need to protect divers from acute and chronic exposure to Category 1 (grossly) contaminated water, the Paragon Dive System™ addresses two main issues of exposure for divers:

- Leakage through helmet seals due to degradation from chemicals in the water
- Ingress of water through the helmet exhaust and suit dump valves
**Paragon Dive System™**

**Exhaust Surface Panel**

Mobile unit handles all exhaust functionality

Two modes of operation for up to three concurrent divers:

- **NEAR SURFACE** (0-33 FSW): integrated Venturi vacuum pumps to reduce exhaust back pressure
- **NOMINAL DIVING** (33-200 FSW)*
  
  *Backup circuit allowance for any one diver failover in either mode*

Compatible for use with pure O₂

Easy transport in a waterproof Pelican™ case (43"L x 27.3"W x 20.2"H)

Easily calibrated instrumentation

Communications and air supply provided separately

Breathing Umbilical: 300 ft length and ¾” dia Goodyear Gorilla hose

**Suit**

Commercial dry suit made of chemically resistant NITECS for protection against permeation and abrasion is outfitted with a unique Paragon dump valve that discharges into the helmet exhaust line.

**Helmet**

Commercially available dive helmet modified with Paragon Return Surface Exhaust (RSE) System assembly and emergency dump valve. All seals and O-rings replaced eliminate harsh chemical permeability and degradation.

Modifications made without impact to original structural integrity of the helmet.*

All connections welded to US Navy specifications.

Breathing apparatus will have a resultant resistive efforts at all depths to 200 FSW and 25 BPM for the following conditions:

- RMV at 62.5 L/min: 1.76 J/L
- RMV at 90.0 L/min: 3.00 J/L

*All modifications are reversible.

**Water Contamination**

US Navy defines four category levels for contaminated water*. The most hazardous categories being:

**CAT 1**: Grossly contaminated, extreme risk of injury (or even death), fully encapsulated diver (including surface exhaust)

**CAT 2**: Heavily contaminated, high risk of injury, fully encapsulated diver (in water exhaust)

The three main groups of contaminants:

- Biological: Pathogens (bacteria, viruses and parasites), blood borne pathogens and toxins.
- Chemical: Hydrocarbons (jet fuel, fuel oil, diesel fuel, solvents, PCBs, heavy metals, oxidizing agents (halogens and acids)
- Warfare Agents: Biological and chemical (GB-sarin, GD-suman, HD-mustard and VX).