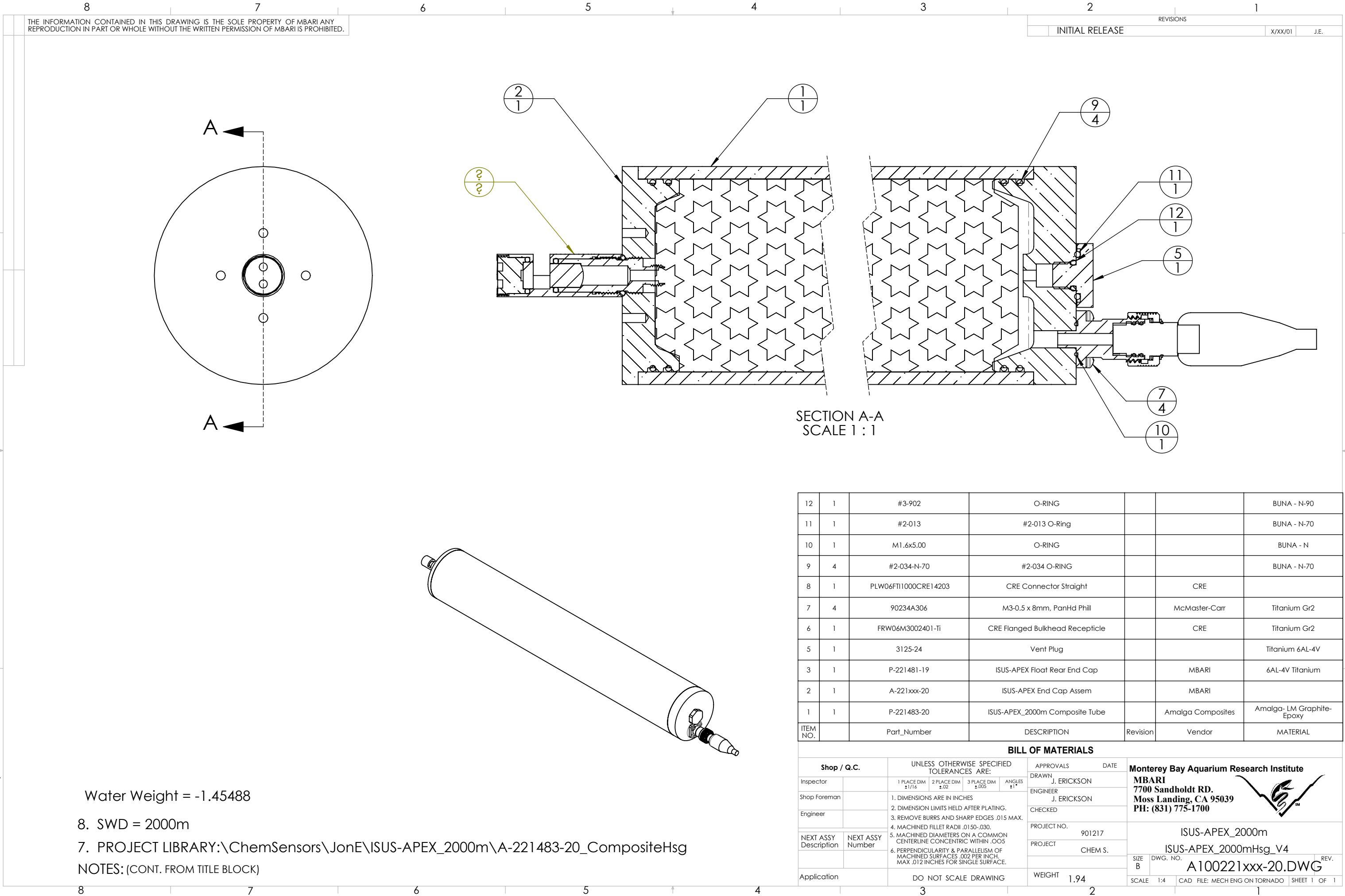




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| REVISIONS       |         |      |
|-----------------|---------|------|
| INITIAL RELEASE | X/XX/01 | J.E. |

SECTION A-A  
SCALE 1 : 1

|          |   |                      |                                 |          |                   |                           |
|----------|---|----------------------|---------------------------------|----------|-------------------|---------------------------|
| 12       | 1 | #3-902               | O-RING                          |          |                   | BUNA - N-90               |
| 11       | 1 | #2-013               | #2-013 O-Ring                   |          |                   | BUNA - N-70               |
| 10       | 1 | M1.6x5.00            | O-RING                          |          |                   | BUNA - N                  |
| 9        | 4 | #2-034-N-70          | #2-034 O-RING                   |          |                   | BUNA - N-70               |
| 8        | 1 | PLW06FT11000CRE14203 | CRE Connector Straight          |          | CRE               |                           |
| 7        | 4 | 90234A306            | M3-0.5 x 8mm, PanHd Phill       |          | McMaster-Carr     | Titanium Gr2              |
| 6        | 1 | FRW06M3002401-Ti     | CRE Flanged Bulkhead Recepticle |          | CRE               | Titanium Gr2              |
| 5        | 1 | 3125-24              | Vent Plug                       |          |                   | Titanium 6AL-4V           |
| 3        | 1 | P-221481-19          | ISUS-APEX Float Rear End Cap    |          | MBARI             | 6AL-4V Titanium           |
| 2        | 1 | A-221xxx-20          | ISUS-APEX End Cap Assem         |          | MBARI             |                           |
| 1        | 1 | P-221483-20          | ISUS-APEX_2000m Composite Tube  |          | Amalga Composites | Amalga- LM Graphite-Epoxy |
| ITEM NO. |   | Part_Number          | DESCRIPTION                     | Revision | Vendor            | MATERIAL                  |

BILL OF MATERIALS

| Shop / Q.C.           |                  | UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:                                                                                                                                                                                                                                                                                                      |                     |                               |               | APPROVALS   |              | DATE                  | <div>Monterey Bay Aquarium Research Institute</div> <div>MBARI</div> <div>7700 Sandholdt RD.</div> <div>Moss Landing, CA 95039</div> <div>PH: (831) 775-1700</div> <div></div> |  |  |          |
|-----------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------|---------------|-------------|--------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|----------|
| Inspector             |                  | 1 PLACE DIM<br>±1/16                                                                                                                                                                                                                                                                                                                            | 2 PLACE DIM<br>±.02 | 3 PLACE DIM<br>±.005          | ANGLES<br>±1° | DRAWN       | J. ERICKSON  |                       |                                                                                                                                                                                                                                                                     |  |  |          |
| Shop Foreman          |                  | 1. DIMENSIONS ARE IN INCHES<br>2. DIMENSION LIMITS HELD AFTER PLATING.<br>3. REMOVE BURRS AND SHARP EDGES .015 MAX.<br>4. MACHINED FILLET RADII .0150-.030.<br>5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005<br>6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE. |                     |                               |               | ENGINEER    | J. ERICKSON  |                       |                                                                                                                                                                                                                                                                     |  |  |          |
| Engineer              |                  |                                                                                                                                                                                                                                                                                                                                                 |                     |                               |               | CHECKED     |              |                       |                                                                                                                                                                                                                                                                     |  |  |          |
| NEXT ASSY Description | NEXT ASSY Number |                                                                                                                                                                                                                                                                                                                                                 |                     |                               |               | PROJECT NO. | 901217       | ISUS-APEX_2000m       |                                                                                                                                                                                                                                                                     |  |  |          |
|                       |                  |                                                                                                                                                                                                                                                                                                                                                 |                     |                               |               | PROJECT     | CHEM S.      | ISUS-APEX_2000mHsg_V4 |                                                                                                                                                                                                                                                                     |  |  |          |
| Application           |                  | DO NOT SCALE DRAWING                                                                                                                                                                                                                                                                                                                            |                     |                               |               | WEIGHT      | 1.94         | SIZE<br>B             |                                                                                                                                                                                                                                                                     |  |  | DWG. NO. |
|                       |                  |                                                                                                                                                                                                                                                                                                                                                 |                     |                               |               |             |              | A100221xxx-20.DWG     |                                                                                                                                                                                                                                                                     |  |  |          |
|                       |                  | SCALE 1:4                                                                                                                                                                                                                                                                                                                                       |                     | CAD FILE: MECH ENG ON TORNADO |               |             | SHEET 1 OF 1 |                       |                                                                                                                                                                                                                                                                     |  |  |          |

Water Weight = -1.45488

8. SWD = 2000m

7. PROJECT LIBRARY:\ChemSensors\JonE\ISUS-APEX\_2000m\A-221483-20\_CompositeHsg

NOTES: (CONT. FROM TITLE BLOCK)