PEA Job Description

1. Position Identification

<table>
<thead>
<tr>
<th>Position Number</th>
<th>991967, 992945, 992654, 992636, 992637</th>
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</thead>
<tbody>
<tr>
<td>Position Title:</td>
<td>Junior Marine Equipment Technician</td>
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<tr>
<td>Department:</td>
<td>Ocean Networks Canada</td>
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<tr>
<td>Reports to:</td>
<td>Testing &amp; Development Manager</td>
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<tr>
<td>Number of Direct/Indirect Reports</td>
<td>Direct 0  Indirect 0</td>
</tr>
<tr>
<td>Classification Level</td>
<td>SG7</td>
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<tr>
<td>Current Incumbent</td>
<td>N/A</td>
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2. Position Summary

Ocean Networks Canada (ONC) is a world-leading organization supporting ocean discovery and technological innovation. ONC is a not-for-profit society that operates and manages innovative cabled observatories on behalf of the University of Victoria that supply continuous power and Internet connectivity to various scientific instruments located in coastal, deep-ocean, and Arctic environments. ONC’s cable arrays host hundreds of sensors distributed in, on and above the seabed along with mobile and land-based assets strategically located, instruments that address key scientific and policy issues (subsea earthquakes and tsunamis, ocean acidification, marine biodiversity, etc.) within a wide range of environments.

ONC's Observatory Operations' division is mandated to provide a reliable and relevant digital, coastal and sub-sea infrastructure that facilitates the goals of the observatory user communities. Marine Operations supports this mandate through the installation, maintenance and repair of the cabled arrays, mobile systems and land-based assets that comprise the coastal sub-sea infrastructure. In this regard, Marine Operations utilizes a team-based, client-focused approach that promotes a safe work environment and fosters an environment of mutual respect, cooperation and support. Together the Field Services, Testing & Development and Operations Support units within Marine Operations, work to efficiently, effectively and safely fulfill their core purpose. The Marine Technology Centre (MTC) in Sidney serves as the department's base of operations.

The Testing and Development (T&D) unit is primarily responsible for testing and qualifying instruments and equipment prior to deployment to the cabled observatories and other mobile and land based assets. The Team designs and develops instruments and equipment, repairs and maintains instruments, and supports the planning and execution of field operations related to the observatory maintenance. This includes ship based activities that occur multiple times a year for up to four weeks duration, as well as day and multi-day trips to service land and marine systems.

The Junior Marine Equipment Technician participates in observatory maintenance, instrument testing activities, maintenance of the laboratory testing facility, equipment design, equipment development, and documentation of instruments and related equipment.

This position is expected to maintain certifications in forklift and crane operation, first aid, and a Transport Canada approved marine safety course such as Standards of Training, Certifications and Watchkeeping - 95 Basic Safety.

This position, as with all Marine Operations positions, will on a rotating basis serve as the Marine Operations Safety Coordinator whose role it is to coordinate internal tasks required to ensure safety equipment, training and records are in place to meet Marine Operations workplace safety requirements. The Safety Coordinator sits on the ONC Joint Local Safety Committee.
### 3. Key Responsibilities and Expectations

**Observatories Maintenance and Instrument Testing:** (40%)
- Test and qualify scientific instruments and equipment to be integrated into ONC observatories according to established standards and protocols
- Create test reports according to instrument qualification processes and procedures
- Prepare and stage qualified instruments for observatory deployments.
- Repair, maintain, clean and requalify marine instruments and related equipment according to established practices and standards
- Provide technical support on shore or at sea during observatory maintenance cruises as required, including the handling of heavy items, readying instruments for deployment etc.
- Complete other related duties as assigned.

**Laboratory Operations:** (30%)
- Ensure the laboratory and testing facilities are maintained at a high operational standard and are a clean, healthy and safe working environment
- Maintain laboratory testing equipment and salt water test tanks to ensure that instrument preparation and testing are not disrupted.
- Assist with shipping and receiving duties for laboratory equipment.
- Ensure equipment and instruments are properly stored and inventoried

**Equipment Design and Development:** (20%)
- Maintain up-to-date testing documentation for marine instruments
- Create design documentation for equipment and cables using standard document templates
- Assist in the design and manufacture of equipment, platforms and structures under the supervision of senior T&D staff.
- Update workflow documents to ensure that operation schedules are maintained
- Build and test marine cable assemblies for instruments and equipment.

**Consultation with other ONC staff and external parties:** (10%)
- Communicate with venders and equipment providers as required to confirm technical specifications for scientific instruments
- Support Digital Infrastructure staff in charge of software development, instrument communications and testing by setting up and connecting instruments on an agreed upon schedule
- Work collaboratively with the Field Services, Testing and Development and Operations Support team members as required to move projects forward to completion. This requires the development of effective working relationships with Team members, and cross training so specialized knowledge can be shared between Teams

### 4. Classification Factors:

(a) Independence of action, authority and decision making:
This position receives informed guidance, direction and support from senior T&D staff and the Manager T&D. Objectives are set by the person performing the work based on the direction received. When completing assignments the Junior Technician works independently selecting work methods.

Policy, standards best practices, as well as established processes and procedures guide decisions made by this position. The Junior Technician is expected to consult senior T&D staff when encountering unfamiliar instruments and equipment. Issues that are unusual, are of consequence to the functioning of the instrumentation, or could
impact the workflow schedule are to be escalated to senior T&D personnel or the Manager T&D. Tasks completed by the Junior Technician are reviewed upon completion.

The Junior Technician is expected to uphold all applicable safety regulations, policies and procedures.

(b) Accountability – scope and impact:
The Junior Technician will ensure that instruments are thoroughly tested and qualified to meet the appropriate criteria and functionality prior to deployment on the ONC observatories. Given tight deployment deadlines, the value of the instruments and systems, and the high costs associated with deployment and recovery operations at sea, this task is critical. The decisions and actions taken by this position directly impact both the success of the network and the reputation of ONC and ultimately UVic based on the reliability of the network.

The Junior Technician will contribute to the design and manufacture of equipment, including subsea platforms, underwater housings, specialized brackets etc. Both innovative ideas and pragmatic approaches in this area are central to developing solutions that produce successful outcomes.

(c) Supervision given and received:
Direct supervision of this position will be provided by the Manager T&D. The Junior Technician will also receive informal supervision from senior T&D staff.

The Junior Technician will train and oversee other ONC employees with regard to the specific hazards presented by the individual instruments particularly with regard to working with electrified equipment both at sea and at the ONC testing facility at MTC.

(c) Budget, Financial & Material resources:
Shared responsibility for laboratory equipment and instrument inventory. Recommends moderate purchases of laboratory equipment, supplies and materials.

(d) Problem-Solving
This position contributes innovative and pragmatic ideas as well as their technical knowledge and experience to the design of sub-sea marine environments. Testing and troubleshooting of operational issues requires the position to use their knowledge and experience to diagnose and analyze problems. Guidance from senior staff, established processes, protocols and instrument documentation assist the position in the completion of testing, maintenance, troubleshooting and repair activities.

5. Summary of qualifications:
The successful candidate will have an electrical/electronic education at a degree or technologist level with additional specialized training or experience, and a minimum of 1-2 years of related experience, or the equivalent combination of education, training and experience.

Technical:
- Experience with electronics testing equipment and tools
- Strong electronic troubleshooting and soldering skills
- Experience with PC based command, control and data acquisition
- Experience with serial communications protocols (EIA 232, 422, 485)
- Experience with computer networking, TCP/IP and UDP
- Experience with systems-level hardware integration
- Capable with basic hand and power tools
- Some experience with CAD software
- Documentation, diagram and technical writing skills
Other:
- Strong problem-solving abilities
- Ability to work cooperatively within a team, as well as independently
- Strong interpersonal, verbal and written communication skills
- Experience with oceanographic instrumentation and equipment including field support at sea would be an asset
- Forklift certification an asset.
- Previous maritime experience an asset.
- A current Standard First Aid or Marine Basic First Aid certificate is desirable
- A Transport Canada approved marine safety course such as Standards in Training, Certifications and Watchkeeping Basic Safety would be an asset

Date of Submission: ________________________________

Signature of Responsible Manager: ____________________________