

PDR-OPS-002 SUB-ZERO ASSEMBLY LINE SAFETY GUIDELINES

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Document Classification: CONFIDENTIAL

Polar Dynamics Robotics, Inc.

1. PURPOSE AND SCOPE

1. This document establishes mandatory safety guidelines and operat
2. These guidelines apply to all employees, contractors, and visitors a

2. DEFINITIONS

1. "Sub-Zero Assembly Area" means any controlled environment facility
2. "Critical Safety Equipment" includes all PDR-approved personal protective
3. "Emergency Response Protocol" refers to PDR's documented procedure

3. MANDATORY SAFETY EQUIPMENT

1. All personnel must wear the following PDR-approved equipment while working in the Sub-Zero Assembly Area:
 - Insulated coveralls (PDR Model TC-500 or equivalent)
 - Cold-resistant safety boots with non-slip soles

- - 2 -

Thermal gloves with tactile sensitivity rating of Level 2 or higher

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Safety glasses with anti-fog coating

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Hard hat with thermal liner

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Personal emergency alert device (PEAD)

2. Equipment must be inspected before each use according to Appen

4. ACCESS PROTOCOLS

1. No personnel shall enter sub-zero assembly areas without:

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Completing PDR's Cold Environment Safety Training (CERT-CE-101)

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Obtaining supervisor authorization

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Implementing the buddy system

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Conducting pre-entry equipment checks

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Verifying emergency communication systems

2. Maximum continuous exposure time shall not exceed four (4) hours

5. OPERATIONAL PROCEDURES

1. Assembly Line Safety Zones

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Yellow Zone: -5 C to 0 C

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Orange Zone: -15 C to -5 C

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Red Zone: Below -15 C

2. Zone-Specific Requirements:

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Yellow Zone: Standard cold-weather PPE

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Orange Zone: Enhanced thermal protection and 15-minute check-ins

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Red Zone: Maximum 2-hour exposure, continuous monitoring required

3. Emergency Procedures

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Location of emergency exits must be verified before entry

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Emergency stop buttons located every 10 meters

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Thermal emergency shelters available within 30 seconds' walking distance

6. ROBOTICS SAFETY PROTOCOLS

1. BlueCore(TM) System Safety

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Maintain minimum 2-meter clearance from active robots

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Verify visual indicators are operational

- - 6 -

Monitor robot status via PDR SafetyNet(TM) system

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Follow lockout/tagout procedures during maintenance

2. Testing Procedures

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Conduct pre-test safety checks per Form PDR-TEST-103

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Verify emergency override systems

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Document all test parameters in SafetyNet(TM)

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Maintain continuous communication with control room

7. INCIDENT REPORTING

1. All safety incidents must be reported immediately to:

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Shift Supervisor

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Safety Compliance Officer

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Facility Manager

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Human Resources Department

2. Documentation Requirements:

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Complete Incident Report Form (PDR-IR-201)

- - 8 -

Photograph any relevant equipment or conditions

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Preserve all digital logs and sensor data

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Submit report within 24 hours

8. COMPLIANCE AND ENFORCEMENT

1. Violation of these guidelines may result in:

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Immediate removal from sub-zero assembly areas

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Suspension of access privileges

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Disciplinary action up to termination

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Legal liability for resulting damages

2. Quarterly safety audits will be conducted to ensure compliance.

9. DOCUMENT CONTROL

1. This document shall be reviewed annually and updated as required

2. Changes must be approved by:

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Chief Operations Officer

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Safety Compliance Director

- - 10 -

Legal Department

AUTHORIZATION

Approved by:

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Sarah Nordstrom

Chief Operations Officer

Polar Dynamics Robotics, Inc.

—

Dr. James Barrett

Chief Robotics Officer

Polar Dynamics Robotics, Inc.

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