

TEMPERATURE-CONTROLLED ENVIRONMENT SAFETY PROTOCOL

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Issuing Authority: Polar Dynamics Robotics, Inc.

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1. PURPOSE AND SCOPE

1. This Temperature-Controlled Environment Safety Protocol ("Protocol") establishes mandatory safety requirements and operational procedures for all Polar Dynamics Robotics, Inc. ("Company") autonomous mobile robots ("AMRs") deployed in temperature-controlled environments, including but not limited to cold storage facilities, industrial freezers, and pharmaceutical cold chains.

2. This Protocol applies to all Company employees, contractors, customers, and third-party operators involved in the deployment, operation, maintenance, or supervision of Company AMRs in environments where ambient temperature is artificially maintained below 15 C (59 F).

2. DEFINITIONS

1. "Cold Environment" means any controlled space maintained at temperatures below 15 C (59 F).

2. "Ultra-Low Temperature Environment" means any controlled space maintained at temperatures below -25 C (-13 F).

3. "IceNav(TM) System" means the Company's proprietary cold-environment navigation and operation platform.

4. "Safety Incident" means any unplanned event resulting in or having the potential to result in injury, equipment damage, or operational disruption.

3. OPERATIONAL REQUIREMENTS

1. Pre-Deployment Assessment

a) A qualified Company engineer must conduct a comprehensive environmental assessment before any AMR deployment in Cold Environments.

b) Temperature mapping of the deployment zone must be documented using Company Form PDR-TM-101.

c) All structural elements, including floors, walls, and ceiling materials, must be evaluated for thermal conductivity and friction coefficients.

2. Equipment Specifications

a) Only Company AMRs certified for operation in the target temperature range may be deployed.

b) IceNav(TM) System software must be updated to the latest approved version (minimum v4.2.1).

c) Thermal management systems must maintain internal component temperatures within operational parameters specified in Technical Document PDR-TECH-2023-118.

4. SAFETY PROTOCOLS

1. Human Interface Requirements

a) All personnel must complete Company-approved cold environment safety training (Course Code: CE-SAF-101).

b) Minimum PPE requirements apply as specified in Appendix A.

c) Emergency stop protocols must be clearly posted and reviewed quarterly.

2. Operational Safety Measures

a) AMRs must maintain minimum separation distances as specified in Section 4.2.1 of the IceNav(TM) Operating Manual.

b) Visual and audible warnings must remain functional at all times during operation.

c) Thermal sensors must be calibrated monthly according to Schedule B specifications.

5. EMERGENCY PROCEDURES

1. In the event of a Safety Incident:

- a) Activate emergency stop systems immediately
- b) Clear all personnel from the affected area
- c) Contact facility supervisor and Company technical support
- d) Document incident using Company Form PDR-INC-201
- e) Preserve all sensor data and operational logs

2. Recovery Procedures

- a) AMRs may only resume operation following:
 - Complete technical inspection
 - Incident investigation completion
 - Written authorization from Company technical support
 - Facility supervisor approval

6. COMPLIANCE AND DOCUMENTATION

1. Record Keeping

- a) Daily operational logs must be maintained for 90 days
- b) Safety incident reports must be retained for 7 years
- c) Training records must be updated and maintained for all authorized personnel
- d) Environmental condition logs must be preserved for 12 months

2. Audit Requirements

- a) Quarterly internal safety audits
- b) Annual third-party compliance review
- c) Random spot checks by Company safety officers

7. LIABILITY AND INDEMNIFICATION

- 1. The Company shall not be liable for any damages resulting from:
 - a) Operation of AMRs by untrained personnel
 - b) Modifications to AMR systems by unauthorized parties
 - c) Operation outside specified environmental parameters

d) Failure to follow safety protocols herein

2. Customers shall indemnify and hold harmless the Company from claims arising from non-compliance with this Protocol.

8. AMENDMENTS AND UPDATES

1. This Protocol may be amended by the Company at any time with 30 days' written notice to affected parties.

2. Emergency safety bulletins may be issued with immediate effect when required.

AUTHORIZATION

Approved by:

—

Dr. Elena Frost

Chief Executive Officer

Polar Dynamics Robotics, Inc.

—

Dr. James Barrett

Chief Robotics Officer

Polar Dynamics Robotics, Inc.

Date: January 15, 2024

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