PDR-OPS-025 ARCTIC FIELD SERVICE OPERATIONS GUIDE

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Polar Dynamics Robotics, Inc.

Version 2.4 - Effective Date: January 15, 2024

1. PURPOSE AND SCOPE

1. This Arctic Field Service Operations Guide ("Guide") establishes m

2. This Guide applies to all PDR employees, contractors, and authoriz

2. DEFINITIONS

1. "Arctic Operating Environment" means any deployment location wit

2. "Field Service Personnel" means PDR-certified technicians and eng

3. "BlueCore(TM) Systems" refers to PDR's proprietary cold-environm

3. PRE-DEPLOYMENT REQUIREMENTS

1. Personnel Certification

-

Completion of PDR Arctic Operations Certification Program

-

Current Cold Environment Safety Training (CEST) certification

Medical clearance for extreme cold environment work

-

Documented proficiency with BlueCore(TM) diagnostic tools

2. Equipment Requirements

-

Arctic-rated personal protective equipment (PPE)

-

PDR-issued cold-resistant diagnostic devices

-

Emergency communication devices

-

Backup power systems rated to -40 C

4. OPÊRATING PROCEDURES

1. Site Assessment

-

Conduct environmental temperature mapping

-

Verify facility power infrastructure

-

Document all ingress/egress points

-

Establish emergency response protocols

2. AMR Deployment Protocol

-

Minimum 2-hour thermal adaptation period

-     - 4 -

BlueCore(TM) system calibration verification

-

Navigation mesh validation in cold conditions

-

Battery performance baseline testing

3. Safety Requirements

-

Mandatory buddy system for all field operations

-

30-minute maximum continuous exposure time

-

Required warm-up breaks every 2 hours

-

Constant communication with facility supervisor

5. TECHNICAL STANDARDS

1. AMR Cold Start Procedures

-

Progressive power-up sequence

-

Thermal sensor verification

-

Motor torque validation

-

Navigation system cold boot protocol

2. Performance Monitoring

Continuous temperature logging

-

Power consumption tracking

-

Navigation accuracy verification

-

System response time monitoring

6. EMERGENCY PROCEDURES

1. System Failures

-

Immediate safe-state activation

-

Customer notification protocol

-

Emergency shutdown procedures

-

Data preservation requirements

2. Personnel Emergency

-

Medical emergency response

-

Facility evacuation procedures

-

Emergency contact protocol

-

Incident reporting requirements

7. DOCUMENTATION REQUIREMENTS

1. Required Records

-

Pre-deployment checklists

-

Environmental condition logs

-

Service intervention reports

-

Performance validation data

2. Reporting

-

Daily operation summaries

- Incident reports within 24 hours

-

Customer sign-off requirements

-

Quality assurance documentation

8. LIABILITY AND COMPLIANCE

1. This Guide forms part of PDR's operational compliance framework

2. Field Service Personnel must acknowledge that working in arctic er

9. MODIFICATIONS AND UPDATES

1. PDR reserves the right to modify this Guide at any time. Field Servi

2. Suggestions for Guide improvements should be submitted through

ACKNOWLEDGMENT

I acknowledge receipt of PDR-OPS-025 Arctic Field Service Operation

agree to comply with all procedures and requirements contained here

Name: _

Title: _

Date: _

Signature: _

Document Control

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