EQUIPMENT MAINTENANCE PLAN

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ARCTIC BAY STORAGE FACILITY

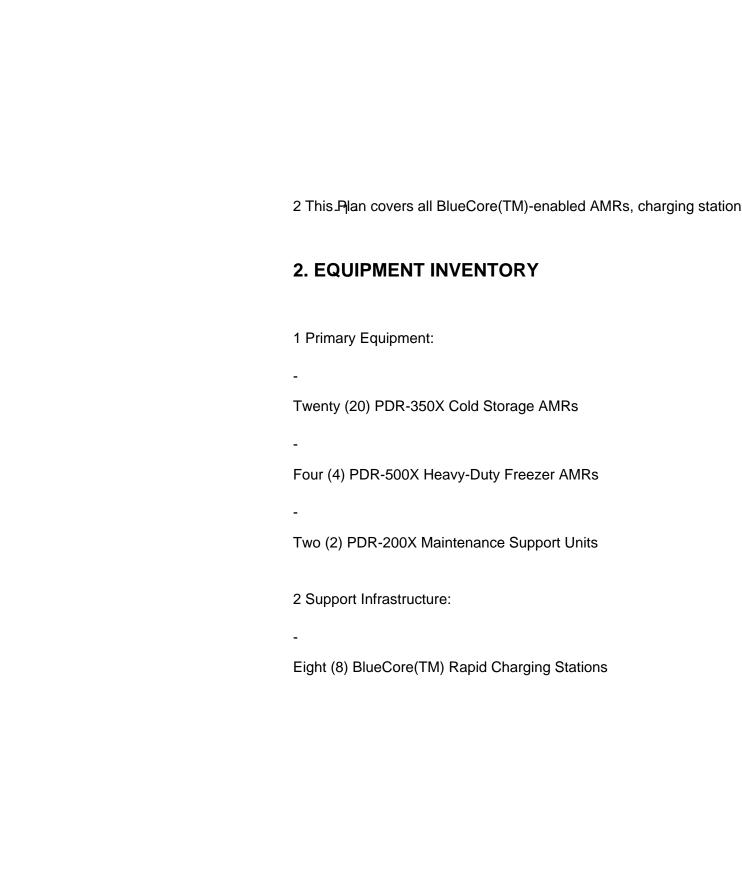
Polar Dynamics Robotics, Inc.

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1. PURPOSE AND SCOPE

1 This Equipment Maintenance Plan ("Plan") establishes the maintenance



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Thirty-two (32) Environmental Navigation Beacons

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Four (4) Central Control Units

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One (1) Emergency Backup Power System

3. MAINTENANCE SCHEDULES

1 Daily Inspections:

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Visual inspection of all operational AMRs

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Battery performance verification

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Navigation system calibration check
-
Temperature sensor validation
-
Obstacle detection system testing
2 Weekly Maintenance:
-
Detailed diagnostic scanning of BlueCore(TM) systems
-
Charging station efficiency testing
-
Navigation beacon signal strength verification
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Wheel assembly and drive train inspection
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Environmental seal integrity check

3 Monthly Service:

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Comprehensive software updates

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Battery pack deep cycle testing

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Motor efficiency analysis

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Chassis structural inspection

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Environmental control system maintenance

4 Quarterly Overhaul:
-
Complete system teardown and inspection
-
Replacement of wear components
-
Full calibration of all sensors
-
Stress testing under maximum load conditions
-
Safety system certification

4. MAINTENANCE PROCEDURES

1 All maintenance activities shall be performed by certified technicians

2 Maintenance activities shall follow the procedures detailed in the Bl
3 Documentation Requirements:
-
Digital maintenance logs for each unit
-
Photographic evidence of completed work
-
Performance test results
-
Parts replacement records
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Technician certification verification
5 SAFETY PROTOCOLS

1 Requi red Safety Equipment:
-
Cold environment protective gear
-
Electrical safety equipment
-
Fall protection systems
-
Emergency shutdown devices
-
Communication systems
2 Safety Procedures:
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Lock-out/tag-out implementation
Lock-ouvlag-out implementation

- 8 Work zone isolation
Emergency response protocols
Environmental monitoring
Personal protective equipment verification

6. SPARE PARTS MANAGEMENT

1 Minimum Stock Requirements:

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Four (4) replacement battery packs

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Eight (8) drive motors
-
Sixteen (16) wheel assemblies
-
Two (2) complete navigation systems
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Standard maintenance consumables
2 Parts shall be stored in the designated maintenance facility under control of the stored in the designated maintenance facility under control of the stored in the designated maintenance facility under control of the stored in the designated maintenance facility under control of the stored in the designated maintenance facility under control of the stored in the designated maintenance facility under control of the stored in the designated maintenance facility under control of the stored in the designated maintenance facility under control of the stored in
7. QUALITY CONTROL
1 Performance Metrics:
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Equipment uptime target: 98%

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Mean time between failures: >2000 hours

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Charging efficiency: >95%

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Navigation accuracy: 5mm

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Temperature variance tolerance: 0.5 C

2 Monthly audit of maintenance records and performance data

8. EMERGENCY PROCEDURES

1 Emergency Response Protocol:

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Immediate shutdown procedures
-
Technical support escalation
-
Backup system activation
-
Client notification process
-
Recovery operations
9. COMPLIANCE AND REPORTING
1 Maintenance activities shall comply with:
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ISO 9001:2015 Quality Management Systems

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ANSI/RIA R15.06-2012 Robot Safety Standards
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Company Standard Operating Procedures
-
Facility Safety Requirements
-
Local regulatory requirements
10. AMENDMENTS AND UPDATES
1 This Plan shall be reviewed quarterly and updated as necessary to
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Equipment modifications
-

Operational changes
-
Safety requirement updates
-
Regulatory compliance requirements
-
Performance optimization needs
AUTUODIZATION
AUTHORIZATION
APPROVED BY:
APPROVED BY:

Date: January 15, 2024

Sarah Nordstrom

COO, Polar Dynamics Robotics, Inc.

Date: January 15, 2024

Dr. James Barrett

Chief Robotics Officer

Date: January 15, 2024

