

COLD STORAGE INVENTORY MANAGEMENT SYSTEM

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Classification: Confidential

1. PURPOSE AND SCOPE

1. This Cold Storage Inventory Management System protocol ("Protocol")

2. This Protocol applies to all Company-deployed BlueCore(TM)-enabled

2. DEFINITIONS

1. "BlueCore(TM) System" means the Company's proprietary cold-en
2. "Cold Storage Zone" means any designated area maintained at or l
3. "Inventory Management Functions" means the automated processe
4. "System Administrator" means the designated facility personnel au

3. SYSTEM ARCHITECTURE

1. Hardware Components
 - a) Temperature-hardened mobile robot units

- b) Environmental sensors and monitoring devices
- c) Charging stations with cold-resistant power delivery
- d) Backup power systems
- e) Local processing units

2. Software Integration

- a) BlueCore(TM) navigation software (v4.2 or later)
- b) Inventory tracking module
- c) Warehouse management system (WMS) interface
- d) Real-time monitoring dashboard
- e) Data encryption protocols

4. OPERATIONAL PROCEDURES

1. System Initialization

- a) Daily pre-operation checks
- b) Temperature calibration verification
- c) Navigation system alignment
- d) WMS synchronization
- e) Safety system validation

2. Inventory Management Protocols

- a) Continuous inventory scanning
- b) Location verification every 4 hours
- c) Automated reconciliation with WMS
- d) Exception handling and alerts
- e) Daily inventory reports

3. Cold Storage Specifications

- a) Operating temperature range: -40 C to +5 C
- b) Maximum humidity: 95%
- c) Minimum aisle width: 1.8 meters
- d) Maximum operating time: 18 hours per charge
- e) Required charging time: 6 hours

5. SAFETY AND COMPLIANCE

1. Safety Requirements

- a) Emergency stop systems
- b) Proximity detection
- c) Audio-visual warnings
- d) Anti-collision protocols

e) Temperature monitoring alerts

2. Regulatory Compliance

a) FDA 21 CFR Part 11

b) FSMA requirements

c) OSHA workplace safety standards

d) ISO 9001:2015

e) GMP guidelines

6. DATA MANAGEMENT

1. Data Collection

a) Inventory movement logs

b) Temperature readings

- c) Robot performance metrics
- d) System alerts and exceptions
- e) User access records

2. Data Retention

- a) Operational data: 3 years
- b) System logs: 2 years
- c) Temperature records: 5 years
- d) Maintenance records: 3 years
- e) Incident reports: 7 years

7. MAINTENANCE AND SUPPORT

1. Scheduled Maintenance

- a) Weekly system diagnostics
- b) Monthly hardware inspection
- c) Quarterly software updates
- d) Semi-annual calibration
- e) Annual certification

2. Technical Support

- a) 24/7 remote monitoring
- b) Emergency response within 2 hours
- c) On-site support within 24 hours
- d) Software patches within 48 hours
- e) Replacement parts within 72 hours

8. LIABILITY AND INDEMNIFICATION

1. The Company shall not be liable for any consequential, incidental, or special damages.
2. Customer assumes all risks associated with operation outside specifications.

9. PROPRIETARY RIGHTS

1. All intellectual property rights in the BlueCore(TM) System and related materials shall remain the property of the Company.

10. DOCUMENT CONTROL

1. This Protocol shall be reviewed annually and updated as necessary.
2. All revisions must be approved by the Chief Technology Officer and the Chief Financial Officer.

APPROVED BY:

- 9 -

Marcus Chen

Chief Technology Officer

Date: January 15, 2024

Sarah Nordstrom

Chief Operations Officer

Date: January 15, 2024

