

# **MIAMI MARITIME OPERATIONS SECURITY REVIEW**

**DeepShield Systems, Inc.**

**Confidential & Privileged**

**Date: January 11, 2024**

## **1. EXECUTIVE SUMMARY**

This Security Review documents the assessment of DeepShield Systems, Inc.'s ("DeepShield") maritime cybersecurity operations in the Port of Miami and surrounding facilities, conducted pursuant to Maritime Transportation Security Act (MTSA) requirements and the company's contractual obligations with port authorities.

## **2. SCOPE OF REVIEW**

1. The review encompasses DeepShield's operational security infrastructure deployed across:

- Port of Miami Terminal Operating System (TOS)
- Vessel Traffic Management System (VTMS)
- Container tracking and logistics networks
- Maritime Industrial Control Systems (ICS)
- Automated cargo handling systems
- Terminal automation infrastructure

2. Assessment Period: October 15, 2023 - December 31, 2023

## **3. REGULATORY COMPLIANCE**

1. Verified compliance with:

- 33 CFR Part 105 (Maritime Security)
- NIST SP 800-82r3 (Industrial Control Systems Security)
- International Ship and Port Facility Security (ISPS) Code
- Coast Guard Maritime Security (MARSEC) Directives

2. Documentation reviewed includes all required security plans, procedures, and certifications maintained by DeepShield pursuant to applicable regulations.

## **4. TECHNICAL INFRASTRUCTURE ASSESSMENT**

### **1. Deep-Layer Security Architecture**

- Deployment of DeepShield's proprietary NEPTUNE(TM) maritime security platform
- Implementation of AI-driven anomaly detection across all monitored systems
- Real-time threat monitoring and response capabilities
- Secure segmentation of operational technology (OT) networks

### **2. Critical Systems Protection**

- Enhanced security controls for vessel berthing systems
- Hardened access controls for cargo management infrastructure
- Encrypted communications for all maritime control systems
- Redundant backup systems with geographic distribution

## **5. OPERATIONAL PROCEDURES**

### **1. Security Operations Center (SOC)**

- 24/7 staffing with minimum two Level 3 analysts
- Incident response protocols with defined escalation procedures
- Regular penetration testing and vulnerability assessments
- Continuous monitoring of all critical maritime systems

### **2. Personnel Security**

- Background screening compliance for all personnel
- Role-based access control implementation
- Regular security awareness training
- Contractor management procedures

## **6. RISK ASSESSMENT**

### **1. Identified Vulnerabilities**

- Legacy systems integration points requiring additional hardening
- Potential supply chain security gaps in third-party software
- Physical security considerations at remote sensor locations

## 2. Mitigation Strategies

- Implementation of enhanced endpoint protection
- Deployment of additional network segmentation
- Strengthened vendor security requirements
- Updated incident response procedures

## 7. RECOMMENDATIONS

### 1. Short-term Actions (0-6 months)

- Upgrade firmware on all maritime control systems
- Implement additional network monitoring sensors
- Enhance physical security at remote locations
- Conduct comprehensive staff security training

### 2. Long-term Initiatives (6-18 months)

- Deploy advanced threat hunting capabilities
- Establish redundant SOC facility
- Implement blockchain-based cargo tracking
- Enhance maritime IoT security framework

## 8. CERTIFICATION

The undersigned hereby certifies that this Security Review has been conducted in accordance with all applicable regulations and industry standards, and accurately reflects the current security posture of DeepShield Systems, Inc.'s Miami maritime operations.

## 9. CONFIDENTIALITY

This document contains confidential and proprietary information of DeepShield Systems, Inc. Unauthorized disclosure, reproduction, or distribution is strictly prohibited and may result in civil and criminal penalties.

## 10. EXECUTION

REVIEWED AND APPROVED:

—

Dr. Elena Rodriguez

Chief Security Architect

DeepShield Systems, Inc.

Date: January 11, 2024

—

James Morrison

VP of Engineering

DeepShield Systems, Inc.

Date: January 11, 2024

—

Robert Thompson

Director of Maritime Security Operations

DeepShield Systems, Inc.

Date: January 11, 2024