

IMSP-AMS-004 January 1<sup>st</sup> 2023

## 1.0 Purpose:

The purpose of this procedure is to ensure processes are in place for the monitoring and inspection of systems and equipment within the Nassau Cruise Port Limited (NCPL) facilities.

### 2.0 Responsibility:

The Projects and Facilities Manager is responsible for ensuring that the following procedures are effectively implemented and maintained.

### 3.0 Procedures:

#### 3.1 Overview

Based on the frequency and level of detail, the system of evaluation of the conditions for the facilities of the Nassau Cruise Port Limited is divided into two groups: "Monitoring" and "Inspection".



IMSP-AMS-004 January 1st 2023

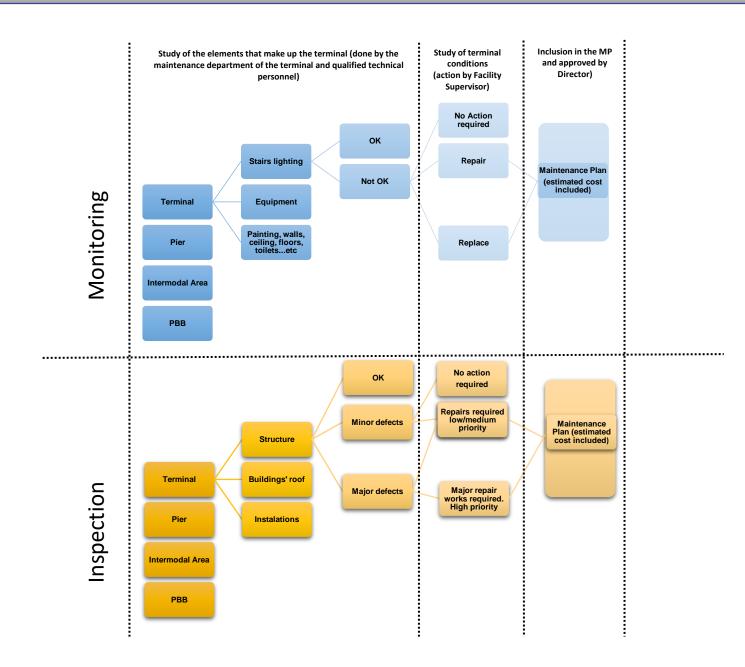


Figure 1 Flowchart of the Maintenance System



IMSP-AMS-004 January 1st 2023

### 3.2 Classification of the Condition

Condition Grade	Classification	Overview
6	Very Good	No visible damage or only minor damage noticed. The elements and equipment may show a very slight deterioration. No repairs are required.
5	Good	Mild to moderate defects or deterioration observed, but no excessive stress was observed. No repairs are required.
4	Fair	All the main structural elements are in good condition; but minor defects or deterioration are observed. Minor defects that can develop into structurally significant long-term defects.  Repairs are recommended, but the priority of recommended repairs is low (Priority 3 and 4).
3	Poor	Advanced deterioration, over exertion observed in localized areas of the structure, but does not significantly reduce the load capacity of the structure. Structurally significant defects leading to a possible loss of stability in the medium term. It includes damage to users or to the structure itself. It includes conditions not acceptable for the correct operation or use of users.
1	Very Poor	Repairs with moderate urgency are required (Priority 2).  Very advanced deterioration, excessive stress or breakage have been located in areas of primary structural components. More widespread failures are possible or likely to occur and load restrictions should be implemented as necessary. Possible imminent collapse or in an incipient state of failure (about to collapse in the short term).  Repairs can be carried out with a very high priority with great urgency (Priority 1).

 ${\it Tabla 1 \ Classification \ of \ the \ conditions \ of \ a \ maritime \ structure}$ 



IMSP-AMS-004 January 1st 2023

#### 3.3 Monitoring

- Monitoring is the activity that visually checks the condition of easily accessible components, without requiring equipment/machinery or specialized technical equipment. This is a daily inspection to quickly identify unusual incidents and installation defects. It usually consists of a visual inspection while walking through the facility.
- During the "Monitoring" activity, the condition of the item is evaluated as "OK" or "Not OK" based on certain parameters.
- The duration of this "Monitoring" activity must be carried out by the "Assistant Facility Manager/Facility Supervisor", and / or the maintenance staff, and cannot last more than the total hours of work of a day.
- The result of "Monitoring" consists of photos and details of the damaged components or evaluated as "Not OK". Components that are evaluated as "OK" will not be documented.

### 3.4 Periodic Inspection

The periodic inspection will be carried out by a competent technician who will prepare a detailed document with plans, evaluation of the conditions, main findings found, as well as a proposal of works to be carried out to mitigate the deficiencies/defects found. This inspection will help to:

- Identify damage including deterioration and defects.
- Analyze deterioration and defects.
- Select the most suitable repair methods for those small defects and deterioration.

It also includes recommendations for more detailed studies on those highly damaged elements.

This inspection will be carried out annually.

For technical inspections of medium and low voltage electricity equipment, fire detection/extinction, hydraulics, air conditioning and distribution, lifting / ladder equipment, the



IMSP-AMS-004 January 1st 2023

certifying entities will be contacted to carry out the periodic inspections established in each Standard.

### **3.5 Priorities and Corrective Actions**

	RANKING OF PRIORITIES	ACTION
1	<ul> <li>Deterioration/corrosion of an element that presents an immediate hazard to personnel, equipment or the environment and is considered to require immediate action.</li> <li>Examples:         <ul> <li>Structural element severely corroded or damaged by impact.</li> <li>Metal structural elements subject to the effects of Accelerated Corrosion (ALWC).</li> <li>Loss of filler from behind the solid spring structure.</li> <li>Spring structure showing large bumps and signs of great differential movement.</li> <li>Defense system that suffers impact damage and no longer works.</li> <li>Elevators or toilets inoperative and with lack of minimum conditions according to international standards.</li> <li>Lack of lighting, signage necessary for proper operation and to ensure safety and health conditions of users.</li> </ul> </li> </ul>	A Priority 1 should be brought to the immediate attention of the Director of Projects and Facilities and GM, and a confirmatory signature is required.  Immediate steps should be taken to eliminate/minimize the risk to personnel, equipment or the environment and appropriate measures to rectify the anomaly.
2	Deterioration/corrosion of an element that presents a potential future hazard to personnel, equipment or the environment and is considered to require action prior to the next inspection.  Examples:  Structural element moderately corroded or damaged by impact.	A Priority 2 must be specifically reported in the inspection report. Depending on the type of deterioration/corrosion, a temporary remediation action may be required and/or a more detailed study followed by a structural assessment may be performed.



IMSP-AMS-004 January 1st 2023

_			
		<ul> <li>Insufficient ventilation system that causes high temperatures and suffocation of users.</li> <li>Loss of filler from behind the solid spring structure. Spring structure showing moderate bumps and signs of moderate differential movement.</li> <li>Defense system that suffers impact damage with some defense elements missing and need replacement.</li> </ul>	Deterioration/corrosion must be rectified as soon as possible minimizing the risk to personnel, equipment, or the environment.
	3	Deterioration/corrosion of a marine asset that with little or no attention could move to level 2 status before the next inspection.  Examples:  Localized corrosion or minor damage to the structural element  Localized corrosion or minor damage to defense and berthing accessories.  The defense system suffers some damage with the UHMWPE faceplate that needs to be replaced.	A Priority 3 must be reported in the inspection report. Depending on the type and degree of deterioration/corrosion, a more detailed study can be performed followed by a structural evaluation.
	4	An abnormality that requires little or no attention.  Example:  Less corrosion or damage to steel sheet piles, concrete structural elements, grids, stairs, railings, fenders and docking aids.	A Priority 4 must be reported in the inspection report.



IMSP-AMS-004 January 1st 2023

### 3.6 Methodology

- Identification of areas that have received mechanical damage.
- ldentification of cracks, concrete detachment and settlement or deformation of the structure.
- Identification of bollards and fenders damaged due to excessive drafting, corrosion, impact damage or loss of corrosion protection layer.
- Examination of anomalies in the superstructure.
- Identification of those areas intended for the use of passengers that do not meet the minimum requirements in terms of safety and health.
- > Justification of the need for emergency (short-term) repairs.
- Justification of the need to carry out repairs for optimal operation (medium term).
- Justification of the need to carry out protective measures to reduce risk mitigation (long-term measures).

Before starting the inspection work, it is common practice to divide the area to be studied by chainage for a clear analysis and evaluation of the results. If it is not possible, due to the inability to access certain areas, the key areas where defects were found shall be taken as reference points.

#### 3.7 Photo Report

For the piers, photos will be taken approximately every 10-20 meters to reflect the potential presence of damage and degradation. Similarly, for those areas where deterioration is noticeable, detailed photos of these areas will be taken to confirm the observation.

### 3.8 Summary of Findings

The main findings of the inspections will be summarized in a table called: "Summary of findings" and are classified into "main" and "minor" defects. Minor defects are not considered critical to the current structural integrity of the facility or operational functioning of the terminal itself, although they are considered important enough to require repair or monitoring in order to maintain the



IMSP-AMS-004 January 1st 2023

integrity of the facility in the long term. Major defects are considered significant enough to affect the structural integrity of the facilities in the near future or the partial or total disruption of terminal operations and may therefore require short-term repair.

The photographic records taken during the visual inspection shall be included in the appendices to this report. These include:

- Location Plan. Plan drawing showing the location, distribution and main findings found.
- Details of any identified visible defects.
- ➤ Photographs showing a typical view of the site and other photographs highlighting the main defects observed during the inspection. These photographs support the findings shown in the main section.

Observations made during visual inspections will be used to provide a tabulated summary of key findings that focus on major defects and any key areas of concern (Table 4).

The inspection frequency will depend on the anticipated rate of deterioration and damage. It is recommended the frequency of the inspections to be as per the table, deepening on the type of damage and priority for action. However unless otherwise specified, the frequency of the inspection will be annual.

#### 4.0 Records:

- Condition Reports.
- Daily Inspection reports.
- Periodic Inspection reports
- Photo Report of Piers.
- Summary of findings table.



IMSP-AMS-004 January 1st 2023