



**The Bahamas
Maritime Authority**

THE COMMONWEALTH OF THE BAHAMAS

M. v. Sherice M
Official Number: 724986



(Image source: www.ericwiberg.com)

**Report of the marine safety investigation into a
fire on a General Cargo vessel on 16 June 2018**

M.v. Sherice M – Marine Safety Investigation Report

The Bahamas conducts marine safety or other investigations on ships flying the flag of the Commonwealth of the Bahamas in accordance with the obligations set forth in International Conventions to which The Bahamas is a Party. In accordance with the IMO Casualty Investigation Code, mandated by the International Convention for the Safety of Life at Sea (SOLAS) Regulation XI-1/6, investigations have the objective of preventing marine casualties and marine incidents in the future and do not seek to apportion blame or determine liability.

It should be noted that the Bahamas Merchant Shipping Act, Para 170 (2) requires officers of a ship involved in an accident to answer an Inspector's questions fully and truly. If the contents of a report were subsequently submitted as evidence in court proceedings relating to an accident this could offend the principle that a person cannot be required to give evidence against themselves. The Bahamas Maritime Authority makes this report available to any interested individuals, organizations, agencies or States on the strict understanding that it will not be used as evidence in any legal proceedings anywhere in the world. You must re-use it accurately and not in a misleading context. Any material used must contain the title of the source publication and where we have identified any third-party copyright material you will need to obtain permission from the copyright holders concerned.

Date of Issue: 31 August 2018
Bahamas Maritime Authority
120 Old Broad Street
LONDON
EC2N 1AR
United Kingdom

CONTENTS

1. Glossary of abbreviations and acronyms
2. Summary
2. Details of involved vessel(s) and other matters
3. Narrative of events
4. Analysis and discussion
5. Conclusions
6. Recommendations

1 GLOSSARY OF ABBREVIATIONS AND ACRONYMS

AB	Able Body Seaman
Authority	Bahamas Maritime Authority
BMA	Bahamas Maritime Authority
CCSS	Code of Safety for Caribbean Cargo Ships
GISIS	Global Integrated Shipping Information System
HP	Horsepower
IMO	International Maritime Organization
N/mm ²	Newtons/Square Millimetre
RBPF	Royal Bahamas Police Force
SCV	Code of Safety for Small Commercial Vessels trading in the Caribbean Region
STCW	The International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
UTC	Universal Time Coordinated

All times noted in the report are given in the style of the standard 24-hour clock without additional annotation and as local time in the Bahamas, which was UTC -4.

2 SUMMARY

- 2.1 This investigation has been carried out in accordance with the International Maritime Organisation's Casualty Investigation Code (Resolution MSC.255(84)), as required by Regulation IX-1/6 of the International Convention on the Safety of Life at Sea, for the purpose of identifying any safety improvements which may need to be made to prevent such incidents in the future.
- 2.2 M. v. Sherice M was a general cargo vessel built in 1995. The vessel was owned by Munson Shipping Co. Ltd. and the owner of the vessel was also the Master of the vessel. The vessel does not hold any international statutory certificates and operates solely within Bahamian territorial waters (domestic voyage) supplying cargo and transferring passengers between the islands of the Commonwealth of the Bahamas.
- 2.3 On 16 June 2018 the vessel was berthed in Bimini Government dock. The Cook had prepared the food in the galley and left the vessel at 0745 hours to attend a funeral service. He left the pots on the stove after serving the breakfast in a smaller pot for the Captain and the Crew.
- 2.4 By 0900 hours the crew completed the cargo offloading operation. Subsequently, the loading operation was commenced and the vessel had an intended departure from Bimini scheduled at 1500 hours.
- 2.5 At 1110 hours the agent standing at the ship side dock, observed heavy smoke and flames originating from the galley area and informed the Bosun.
- 2.6 The Bosun contacted the Master on his phone, who was attending a Funeral service in Bimini.
- 2.7 The Bosun and crew started to fight the fire using the ship's fire pump. However, due to the spread of fire, they were unable to control the fire with one fire pump. The local residents brought 7 fire pumps from their homes and started to fight the fire from the dock.
- 2.8 At 1200 the fire brigade from Resort World Bimini¹ got additional fire pumps to fight the fire and by 1700 the fire was extinguished.
- 2.9 The actual cause of the fire was not determined due to the significant damage sustained to the galley and surrounding space. The probable origin of the fire was from the stove which was left lit and after some time overheated the vent, spreading the heat to wooden cabinets due to conduction, leading to the fire.

¹ Resorts World Bimini, Bahamas is a beachfront resort located on North Bimini Island.

3 DETAILS OF INVOLVED VESSEL(S) AND OTHER MATTERS

3.1 Details of vessel

3.1.1 M. v. Sherice M is a General Cargo vessel with superstructure and wheelhouse located aft of the vessel. The propulsion is delivered through two 3412 Caterpillar engines each with 403 horse power.

3.1.2 The vessel had the following principal particulars:

Call sign	C6V2034
Official number	724986
MMSI number	311 000 068
Built	1995
Length overall	35.1 metres
Propulsion power	403 HP
Gross registered tonnage	287.26 tonnes
Type	General Cargo

3.1.3 At the time of the incident, the vessel was owned and managed by Munson Shipping Co. Ltd.

3.2 Vessel Certification and Inspection History

3.2.1 M.v. Sherice M was first registered with the Bahamas Maritime Authority (BMA) in 1995.

3.2.2 From the records available it was found that the last BMA inspection conducted onboard Sherice M was between 17-22 November 2000. At the same time, the vessel underwent a ship survey conducted by an approved nautical Inspector in accordance with the Code of Safety for Caribbean Cargo at Port Everglades, Florida.

3.2.3 On 04 May 2004, the BMA contacted the owners requesting confirmation of registration with the Bahamas Port Department and the number of passengers carried by vessel as authorised by the port department. No response was found during the course of the investigation, however, from the information received

from the port department, it was concluded that the vessel was certified by them to carry 50 passengers.

- 3.2.4 On 11 February 2005, the BMA sent a reminder to the Owners regarding the pending annual inspection as per BMA Information Bulletin No. 66: Bahamas Flag State Inspections. At this point, the inspection was 4 years overdue. No response was found of a BMA annual inspection from the Owners.
- 3.2.5 The BMA annual registration fee was last paid by the Owners in 2008.
- 3.2.6 The Bahamas port department conducted vessel safety inspections annually. Last port department annual inspection was conducted on 29 December 2017, as per the records available from Bahamas port department.

3.3 Vessel cargo and passenger capacity

- 3.3.1 M.v. Sherice M is a general cargo vessel, trading in the waters of the Bahamas.
- 3.3.2 The usual cargo carried was on wooden planks and consisted of electrical items such as air conditioning units, fans and microwaves and consumable items such as water, drinks and seafood, as required by the local islands.



Figure 1: Cargo carried on another vessel from Bimini, similar to cargo that was carried on m.v. Sherice M



Figure 2: Cargo carried on another vessel from Bimini, similar to cargo that was carried on m.v. Sherice M



Figure 3: Cargo carried on another vessel from Bimini, similar to cargo that was carried on m.v. Sherice M

3.3.2 The vessel was certified by the Bahamas port department to carry a maximum of 50 passengers.

3.4 Vessel trading pattern

3.4.1 M.v. Sherice M had a fixed weekly voyage covering four islands in The Bahamas. The vessel left Nassau every Tuesday at 1700 hours to Chub Cay (Berry Islands), undertaking a 4.5 hours voyage and staying for 1 hour in Chub Cay.

- 3.4.2 After departing Chub Cay the vessel sailed out to Bimini undertaking a voyage of 10 hours and usually staying in Bimini for 8 hours. However, at the time of the incident the vessel stayed overnight in Bimini as the Master had to attend a funeral the next morning.
- 3.4.3 After completing the cargo operation in Bimini, the vessel would sail out to Cat Cay and stay there for 2 hours.
- 3.4.4 After departing Cat Cay the vessel would sail back to Nassau undertaking a voyage of 13.5 hours and arriving at 0800 hours on Thursday.
- 3.4.5 The vessel stayed in Nassau from Thursday till Tuesday doing usual maintenance and cargo work.

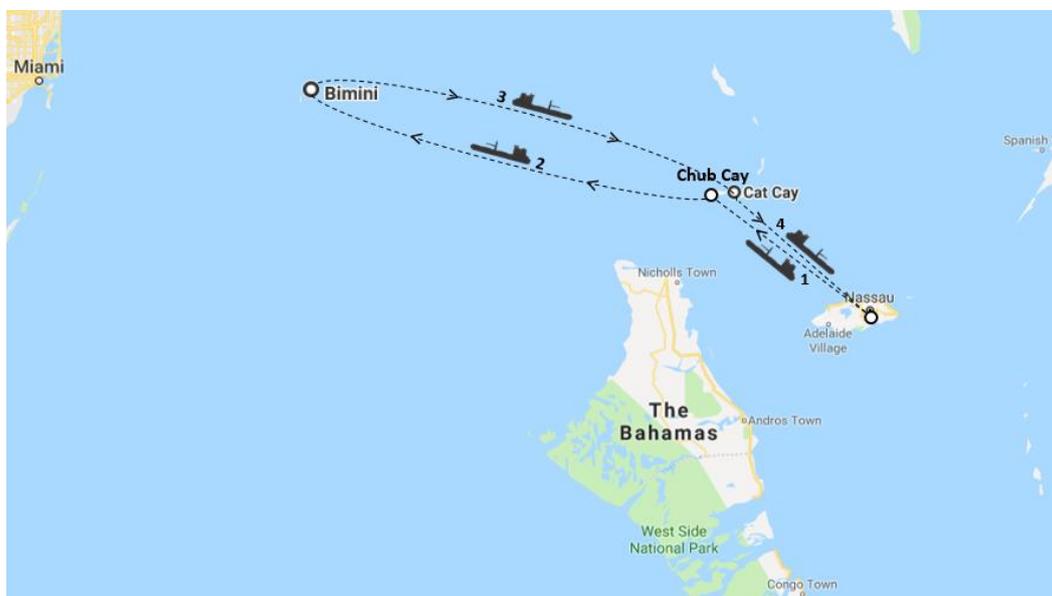


Figure 4: Vessel trading pattern

3.5 Crew Competency and Training

- 3.5.1 The Master held a valid Form IV² license that is valid until 31 December 2018, issued by the Port Department in Nassau under the Boat Registration Act 1961. He was the Owner of the vessel along with his father and had captained the vessel for the last 14 years. The vessel was owned by them since it was built in 1995.
- 3.5.2 Although not confirmed by any documentary evidence, it was reported by the Chief Engineer within a statement provided to Royal Bahamas Police Force (RBPF) that he had been the Engineer onboard Sherice M for three months before the time of the incident.

² Form IV is a Bahamas Boat Master's Licence issued under The Boat Registration Act 1961 to cover all harbours and waters of the Bahamas restricted to vessels of 500GT and below.

- 3.5.3 From the documents and records available from the port department, it was found that the Bosun and Master held Elementary First Aid, Personal Survival Techniques, Fire Prevention and Fire Fighting, and Personal Safety and Social Responsibilities certificates meeting the requirements of STCW Convention section A- VI/I paragraphs 2.1.1.1, 2.1.1.2, 2.1.1.3 and 2.1.1.4. which were valid at the time of the incident.
- 3.5.4 The Bahamas Maritime Authority (BMA) does not hold any record of a valid or otherwise, certificate of competency from any jurisdiction and therefore no flag State endorsement exists for the officers and ratings of the vessel. Under STCW Article VI (1) *Certificates for masters, officers or ratings shall be issued to those candidates who, to the satisfaction of the Administration, meet the requirements for service, age, medical fitness, training, qualification and examinations in accordance with the appropriate provisions of the annex to the Convention.*

3.6 Investigation limitations

- 3.6.1 From the interview with the Master it was found that all the vessel related documentation and Master's certificates were on board in the Master's cabin at the time of the incident and were destroyed by the fire.

4 NARRATIVE OF EVENTS

- 4.1 On 15 June 2018 at 0730 hours M.v. Sherice M arrived at Bimini Government dock. The cargo offloading operation commenced at 0800 hours and continued till 1700 hours.
- 4.2 On 16 June 2018 at 0530 hours the Cook went to the Galley to prepare the breakfast. At 0700 hours he finished cooking and left the pots on the stove after serving the breakfast on a smaller pot for the Captain and the Crew.
- 4.3 At 0645 hours the offloading operation resumed and by 0900 the operation was complete.
- 4.4 At 0745 hours the cook left the vessel to attend a funeral service.
- 4.5 At 0900 the ship team started to load the cargo, including fresh conch, and was scheduled to depart at 1500 hours after completing the cargo operation.
- 4.6 The Master of the vessel left the ship at 0915 hours to attend a funeral service.
- 4.7 At 1110 hours Bosun and Agent were on the dock by the ship side, when the agent observed heavy smoke and flames originating from the galley area and informed the Bosun.
- 4.8 The Bosun tried to enter the galley but was unable to enter due to heavy smoke and fire.
- 4.9 At 1114 hours the Bosun called the Master and informed about the fire.
- 4.10 The Bosun and the crew started the fire pump to fight the fire.
- 4.11 The Master arrived at the scene of fire a few minutes later. The Master was the fire marshal of the vessel but could not reach the firebox to access the firefighting equipment, due to the spread of fire.



Figure 5: Location of firefighting equipment



Figure 6: Unused firefighting equipment after fire

- 4.12 As Bimini does not have a local fire station, the local residents arranged 7 more fire pumps from their houses to fight the fire.
- 4.13 At 1200 the fire brigade from Resort World Bimini brought additional fire pumps to fight the fire.
- 4.14 By 1700 hours the fire was extinguished.



Figure 7: Vessel condition after fire was extinguished (Source: RBPF)

5 ANALYSIS AND DISCUSSION

5.1 Origin of the Fire

- 5.1.1 On the morning of 16 May 2018 at 0530 hours the Cook went to the galley to prepare the breakfast. Out of the four burners on the stove, the front big burner was not operational. The Cook prepared a pot of chicken soup on the rear burner, a pot of rice on the rear small burner and boiled water for tea on the remaining front burner.
- 5.1.2 At 0700 hours he finished cooking and left the pots on the stove after serving the breakfast in a smaller pot for the Captain and the crew, so they could help themselves as he had to go to a funeral. He mentioned in his interview testimony provided to RBPF, that he had turned off the stove. The Cook left for the funeral at 0745.
- 5.1.3 The Bosun and other deck hands were on the dock alongside the ship loading the cargo to the vessel. At 1110 hours the Agent was talking to the Bosun and they were standing by the bow of the vessel when the Agent observed the fire around the galley area with heavy smoke and flame coming out from the galley window. The Agent quickly informed the Bosun about the fire.



Figure 8: Fire location (Source: RBPF)

- 5.1.4 The Bosun tried to enter the galley, but he was unable to do so due to the heavy smoke and fire in the area. He observed large flames above the stove area.
- 5.1.5 The knobs and metal that held the knobs of the stove were completely disintegrated due to the fire. Therefore, the Cook's testimony could not be

confirmed as to the position of the knobs, to determine whether the stove was in an ‘on’ or ‘off’ condition.



Figure 9: Picture of the stove after the fire was extinguished

5.1.6 From the RBPF fire investigator’s report it was concluded that heavy damages were observed on the starboard side of accommodation area and a distortion of the metal in the galley area indicated that the galley area was burning for a longer period. The most probable origin of the fire was the stove, which most likely was left on and after some time, overheated the vent, spreading the heat to wooden cabinets in the immediate vicinity, which then initiated the fire due to heat conduction.

5.2 Firefighting efforts

5.2.1 As the fire was observed, the Bosun and the crew started the fire pump and set up the hose to contain the fire.

5.2.2 Due to the intensity and spread of the fire, the vessel’s fire pump was not sufficient to fight the fire.

5.2.3 The Master was the fire marshal of the vessel and was unable to reach the firebox (refer figure 5), due to the spread of the fire. No crew member including the Bosun tried to access the firebox, before the Master’s arrival at the scene. The crew members were busy fighting the fire using the fire pump and made no attempt to wear the fireman outfit located in the firebox to extinguish the fire.

5.2.4 As Bimini does not have a local fire station, the local residents brought in 7 fire pumps to fight the fire. Subsequently, the Resort World Bimini fire brigade came on site to assist in the firefighting efforts.



Figure 10: Firefighting efforts by resort world fire team (Source: RBPF)

5.3 Fire spread and damage

- 5.3.1 The fire potentially started in the galley area and rapidly spread throughout the whole superstructure.
- 5.3.2 The CCSS code chapter 3, section 3.16 outlines the requirement of the material used to build the vessel's bulkheads, decks, doors and stairways, as such: '*the fire safety requirements of bulkheads, decks, doors and stairways should, as far as practicable and reasonable in the opinion of the Administration, comply with the applicable requirements of the 1974 SOLAS Convention for such bulkheads, doors and stairways.*' Considering the swift spread of fire and the heavy damage caused by the fire, it is highly likely that the wooden fixtures, infrastructure and fittings which provided a ready source of fuel were not constructed in accordance with the Code and ultimately aided the spread of the fire.



Figure 11: Superstructure after the fire



Figure 12: Superstructure after the fire



Figure 13: Cabin and accommodation area after the fire



Figure 14: Bridge and Master's cabin area after the fire

5.4 Statutory compliance

- 5.4.1 The Bahamas Merchant Shipping Act, Part I stipulates that it is the responsibility of the Owner to ensure annual inspections of the vessel as per section 172 (3) *The owner of every Bahamian ship to which this section applies shall cause the ship to be inspected by an Inspector appointed under section*

169 within three months before or after the anniversary date of its assigned Annual Inspection Day.' Even though the vessel was registered with the BMA, the Owners had not arranged a BMA inspection since 2000.

- 5.4.2 From the records available it was found that the last BMA inspection was conducted onboard Sherice M on 17-22 November 2000, along with a Code of Safety for Caribbean Cargo ship survey carried out by an approved nautical Inspector at Port Everglades, Florida. Nine observations were recorded during the inspection which included one Service Certification related, two Safe Navigation related, one Safety on Deck related, two Safety Equipment related and three Safety in Engine Room related observations.
- 5.4.3 The BMA annual registration fee was last paid by the Owners in 2008. The vessel was with the Bahamas port department and simultaneously with the BMA, by virtue of the absence of a record of deletion from the BMA register. The last port department annual inspection was conducted on 29 December 2017. Five deficiencies were recorded during the inspection.
- 5.4.4 The BMA annual inspection for vessels less than 500 gross tonnage, to which this vessel applies, follows the guidelines as laid out in BMA Information Bulletin No. 99: Survey and inspection of ships of less than 500 gross tonnage operating solely within the Caribbean Trading Area. *'The Bahamas Maritime Authority (BMA) applies the CCSS Code and SCV Code, which provide a regional safety standard for small ships engaged in voyages in the Caribbean Trading Area.'*
- 5.4.5 The Code of Safety for Cargo Ships Operating in the Caribbean (CCSS Code) was developed to provide a regional safety standard for ships of less than 500 gross tons engaged on voyages in the Caribbean Region. Chapter 3 of the CCSS Code outlines the requirements for construction - fire protection, fire detection and fire extinction.
- 5.4.6 The CCSS code chapter 3, section 3.8 defines the requirement for fixed fire-extinguishing systems and fixed fire detection and fire alarm systems, as such: *'fixed fire-extinguishing systems and fixed fire detection and fire alarm systems required by this chapter should comply, as far as is practicable and reasonable, with the relevant requirements for these systems specified in the regulations of the 1974 SOLAS Convention³*'. Considering that the fire was noticed visually by the Agent and the Bosun and there was no alarm sounded at the origin of the fire or while it was spreading, it is considered probable that the ship's fire alarm or detection system was not available or inoperative.
- 5.4.7 The CCSS code chapter 3, section 3.4.2.2 and 3.4.3 outlines the requirement of the minimum pressure of the fire hydrant to be 0.21 N/mm² and in every ship,

³ SOLAS Chapter II-1, regulation 5.2 **Requirements for passenger ships carrying more than 36 passengers:** A fixed fire detection and fire alarm system shall be installed and arranged as to provide smoke detection in service spaces, control stations and accommodation spaces, including corridors, stairways and escape routes within accommodation spaces. Smoke detectors need not be fitted in private bathrooms and galleys. Spaces having little or no fire risk such as voids, public toilets, carbon dioxide rooms and similar spaces need not be fitted with a fixed fire detection and alarm system.

the number and position of hydrants should be such that at least one jet of water from a single length of hose can reach any part of the ship normally accessible to the crew. From the interviews, it was found that the fire pump used by Bosun and the crew was not sufficient to contain the fire.

- 5.4.8 The CCSS code, section 3.22.3 outlines the requirement of having a fire-retardant barrier adjacent to combustible material and structures, as such: *‘There should be suitable fire retardant barriers built around the cooking and heating appliances where they are adjacent to combustible materials and structures.’* Due to the damage after the fire, it could not be confirmed if the vessel had any fire-retardant barrier adjacent to the stove. However, while examining the galley area and stove after the incident, no barrier was sighted in the vicinity and it is considered highly probable that there was no fire-retardant barrier adjacent to the stove.

5.5 Crew training and qualifications

- 5.5.1 From the documents and records available from the port department, it was found that the Bosun and Master held an Elementary First Aid, Personal Survival Techniques, Fire Prevention and Fire Fighting, and Personal Safety and Social Responsibilities certificates meeting the requirements of STCW Convention section A- VI/I paragraph 2.1.1.1, 2.1.1.2, 2.1.1.3 and 2.1.1.4, which were valid at the time of the incident.
- 5.5.2 From the Master’s interview testimony it was found that the fire drill was conducted every 6 months, although this was not confirmed by any documentary evidence.
- 5.5.3 The CCSC code chapter 4, section 4.17 outlines the requirement for Emergency training and drills. It states that all ship’s training should be carried out at least once per month and the date when training was conducted should be recorded in Official Log book. As the vessel documents including the Official Log book were destroyed due to the fire, the training records could not be verified.
- 5.5.4 At the time of the incident, the Bosun tried entering the galley area and was unable to enter due to the spread of the fire. However, no attempt was made to reach the firebox to use the fireman outfit to enter the galley area (origin of fire) using a fire extinguisher or fire hose.
- 5.5.5 The response of the crew was ineffective in suppressing the fire at the origin. Additional assistance from local residents and Bimini’s Resort World fire brigade was required, which, when combined with the time taken to react, led to the escalation of the fire. As a result, it took six hours to extinguish the fire, which had severely damaged the whole accommodation area, burning almost all carbonaceous material.

6 CONCLUSIONS

- 6.1 The fire was observed to be originating from the galley area and then spread across the accommodation.
- 6.2 The investigation was not able to identify the actual cause of fire due to the significant damage sustained to the galley and the surrounding space. The probable origin of the fire was from the stove which was left lit and after some time overheated the vent, spreading the heat to wooden cabinets due to conduction, leading to a fire.
- 6.3 All the vessel related documents and official log book was onboard at the time of the incident and were destroyed in the fire.
- 6.4 The Bosun and crew attempted to fight the fire using the fire pump but were unable to contain the fire with one pump. There is no fire station in Bimini and the local residents and the Resort World Bimini fire brigade brought their fire pump to help the crew fight the fire.
- 6.5 The firefighting efforts took 6 hours to extinguish the fire and the accommodation area including the bridge area and Master's cabin was severely damaged due to the spread of the fire.

7 RECOMMENDATIONS

Recommendation for the operator:

- 7.1 The Owners are required to ensure all vessels owned by Munson Shipping Co. Ltd. and registered with the BMA, undertake a Bahamas Maritime Authority annual inspection to ensure full compliance with the provisions of the Merchant Shipping Act 1976, within the next 30 days.
- 7.2 The Owner is required to ensure all crew members on board are qualified to the appropriate standard in accordance with the Merchant Shipping Act 1976 and are in possession of a Bahamas Certificate of Endorsement in accordance with STCW Convention or be in receipt of the relevant Article issued by the Bahamas Maritime Authority.

Recommendation for the Bahamas Maritime Authority:

- 7.3 The Authority should consider a proposal to integrate the Caribbean Safety Codes into the national legislation within the Merchant Shipping Act 1976, Chapter 268 as amended, in order to ensure full application to all domestic trade vessels.
- 7.4 The Authority is recommended to draft a proposal for a regulatory framework, to be used by the Ministry of Transport, in conjunction with the Port Department, to ensure that all home-trade vessels meet the relevant minimum regional standards.
- 7.5 The Authority is recommended to conduct a thorough review of existing procedures relating to annual inspections to ensure that an effective mechanism is in place, in order to ensure all home-trade vessels registered with the BMA undertake the required annual inspection.
- 7.6 The Authority should consider including this marine safety investigation on the IMO GISIS database for the purpose of sharing lessons learned with other States.

Recommendation for the Bahamas Port Department:

- 7.7 Consider a review of the existing standards for the annual safety inspection of all vessels registered with the Bahamas Port Department.
