

Report on the investigation of  
the grounding of  
***Jackie Moon***  
Dunoon Breakwater  
Firth of Clyde, Scotland  
1 September 2004

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**Extract from**  
**The Merchant Shipping**  
**(Accident Reporting and Investigation)**  
**Regulations 1999 – Regulation 4:**

*“The fundamental purpose of investigating an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 1999 is to determine its circumstances and the causes with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not the purpose to apportion liability, nor, except so far as is necessary to achieve the fundamental purpose, to apportion blame.”*

**NOTE**

This report is not written with liability in mind and is not intended to be used in court for the purpose of litigation. It endeavours to identify and analyse the relevant safety issues pertaining to the specific accident, and to make recommendations aimed at preventing similar accidents in the future.

*Pursuant to the 'Code for the Investigation of Marine Casualties and Incidents', the UK Marine Accident Investigation Branch accepts responsibility for the conduct of this investigation as the **lead investigating state** and, accepts that Antigua and Barbuda as the Flag state of the vessel, is a **substantially interested state**.*

*Accordingly, the MAIB has welcomed the assistance and co-operation of the Antigua and Barbuda Department of Marine Services and Merchant Shipping, which has assisted in this investigation and has been consulted during the drafting of this report.*

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## **GLOSSARY OF ABBREVIATIONS AND ACRONYMS**

AB	-	Able Seaman
ADOMS	-	Antigua and Barbuda Department of Marine Services and Merchant Shipping
CV	-	Curriculum Vitae
DOC	-	Document of Compliance
DP	-	Designated Person
EC	-	European Commission
ETA	-	Estimated Time of Arrival
EU	-	European Union
GPS	-	Global Positioning System
ILO	-	International Labour Organisation
IMO	-	International Maritime Organization
ISM Code	-	International Management Code for the Safe Operation of Ships and for Pollution Prevention
ISPS Code	-	International Code for the Security of Ships and Port facilities
MAIB	-	Marine Accident Investigation Branch
MCA	-	Maritime and Coastguard Agency
MGN	-	Marine Guidance Note
MSC	-	Maritime Safety Committee
OOW	-	Officer of the Watch
SMC	-	Safety Management Certificate
SMS	-	Safety Management System
SOLAS	-	International Convention of Safety of Life at Sea
STCW	-	International Convention on Standards of Training, Certification and Watchkeeping incorporating the 1995 Amendments
UTC	-	Universal Co-ordinated Time
VHF	-	Very High Frequency

## SYNOPSIS



At 0430 on 1 September 2004, the Antigua and Barbuda registered general cargo vessel *Jackie Moon* ran aground off Dunoon breakwater in the Firth of Clyde. The vessel was re-floated later the same day and proceeded to an anchorage off Greenock. Damage was limited to indentations to the underside of the ship's hull, and distortion to her internal frames. There was no pollution.

The grounding occurred when *Jackie Moon* was on passage from Dundalk, Eire to Glasgow, Scotland. As the ship passed the Skelmorlie Bank at about 0400, *Jackie Moon* was within the navigable channel, but to starboard of the planned navigational track. To correct this, the chief officer, who was the OOW, adjusted the course set on the autopilot from 011° to 006°; he then fell asleep in a chair and the ship ran aground 30 minutes later.

The investigation highlighted several contributory factors, including:

- The chief officer had been unable to have sufficient rest as required by ILO 180 or STCW 95, and had become increasingly fatigued during his 4 months on board. He had also not slept well immediately before the accident.
- The chief officer had consumed about 0.5 litre of brandy, and had in the region of 17 units of alcohol in his blood when taking over the bridge watch.
- The chief officer was alone on the bridge. A separate lookout was not used during darkness because the ABs had been discharging cargo in Dundalk, and were expected to be required for cargo operation when the ship arrived in Glasgow the following morning.
- The bridge watch alarm was not in use. Neither the chief officer, nor master knew how to operate it.
- Shortcomings in the ship's SMS had not been identified.
- The ship manager's alcohol policy was not effectively policed.

Recommendations have been made to the Maritime and Coastguard Agency for the purpose of combating fatigue among bridge watchkeepers and improving the standard of lookout. Recommendations have also been made to the International Association of Classification Societies and the Administrations of the Bahamas, Malta, and St Vincent and the Grenadines aimed at improving the ship manager's understanding and application of the ISM Code.



Jackie Moon



## **SECTION 1 - FACTUAL INFORMATION**

### **1.1 PARTICULARS OF *JACKIE MOON* AND ACCIDENT**

#### **Vessel details**

Registered owner	:	J. M. Shipping Limited
Manager	:	ARPA Shipping
Port of registry	:	St John's
Flag	:	Antigua and Barbuda
Type	:	General cargo
Built	:	1985, Germany
Classification society	:	RINA
Construction	:	Steel
Length overall	:	82.4m
Gross tonnage	:	1616
Engine power	:	600kW
Service speed	:	9 knots

#### **Accident details**

Time and date	:	0430 UTC+1 on 1 September 2004
Location of incident	:	55° 56.68N, 004° 55.38W, Dunoon breakwater, River Clyde
Persons on board	:	6
Injuries/fatalities	:	Nil
Damage	:	Indentation to underside of hull and distortion of internal frames

## 1.2 NARRATIVE

(All times are UTC+1, all courses are true) (Ship's time was UTC+2)

### 1.2.1 Events prior to the grounding

*Jackie Moon* arrived in Dundalk, Eire, on 30 August 2004. At 0900 the following morning, the chief officer was informed by telephone that his father had died in the Ukraine. He told the master of his sad news, but stated that he did not want to go home because his father had already been buried. Shortly after, all six of the crew toasted the life of the chief officer's father, which was a Ukrainian tradition, each consuming a small amount of alcohol.

*Jackie Moon* sailed in ballast from Dundalk at 1300 bound for Glasgow, where she was scheduled to arrive the following morning. When the pilot from Dundalk disembarked at 1340, the master remained on watch. He considered that the chief officer was extremely upset by the death of his father, and decided that he would keep the bridge watch himself through to 0100. The master told the chief officer to rest. The chief officer went to his cabin and attended to end of the month paperwork during the afternoon.

Between 1700 and 1800, the chief officer briefly visited the master on the bridge. The master still considered him to be too upset to stand a watch, and again instructed the chief officer to rest until 0100. The chief officer returned to his cabin, and during the evening drank a part bottle of brandy. He then slept from 2100 until 0050 when he was woken by the master via intercom from the bridge.

When the chief officer arrived on the bridge at 0100, the master assessed his behaviour to be normal, and considered him fit to take the watch. During the handover, the master instructed the chief officer to call him before the pilot embarked, which was scheduled for 0800, or if he had any problems. The master did not leave any written night orders. The ship was on a course of 005° in autopilot, and was making good 9 knots over the ground.

At 0204, the chief officer informed Clyde Estuary Control via VHF radio that the ETA of *Jackie Moon* off Kempock Point, the pilot embarkation point, was 0500. As this was three hours earlier than expected, the controller on watch first checked that a pilot was available before informing the chief officer that the advanced ETA was acceptable.

At 0255, the chief officer informed Clyde Estuary Control of the ship's position as she entered the Firth of Clyde in the vicinity of Cumbrae Island (**Figure 1**). At this point, the chief officer adjusted the course on the autopilot to 011° in accordance with the passage plan. Shortly after, the chief officer noticed that the cross track error on the GPS receiver indicated that the ship was 0.16 mile to starboard of the planned track. The cross track error alarm was not in use. As the ship passed between the Skelmorlie lateral and fairway buoys at about

Figure 1

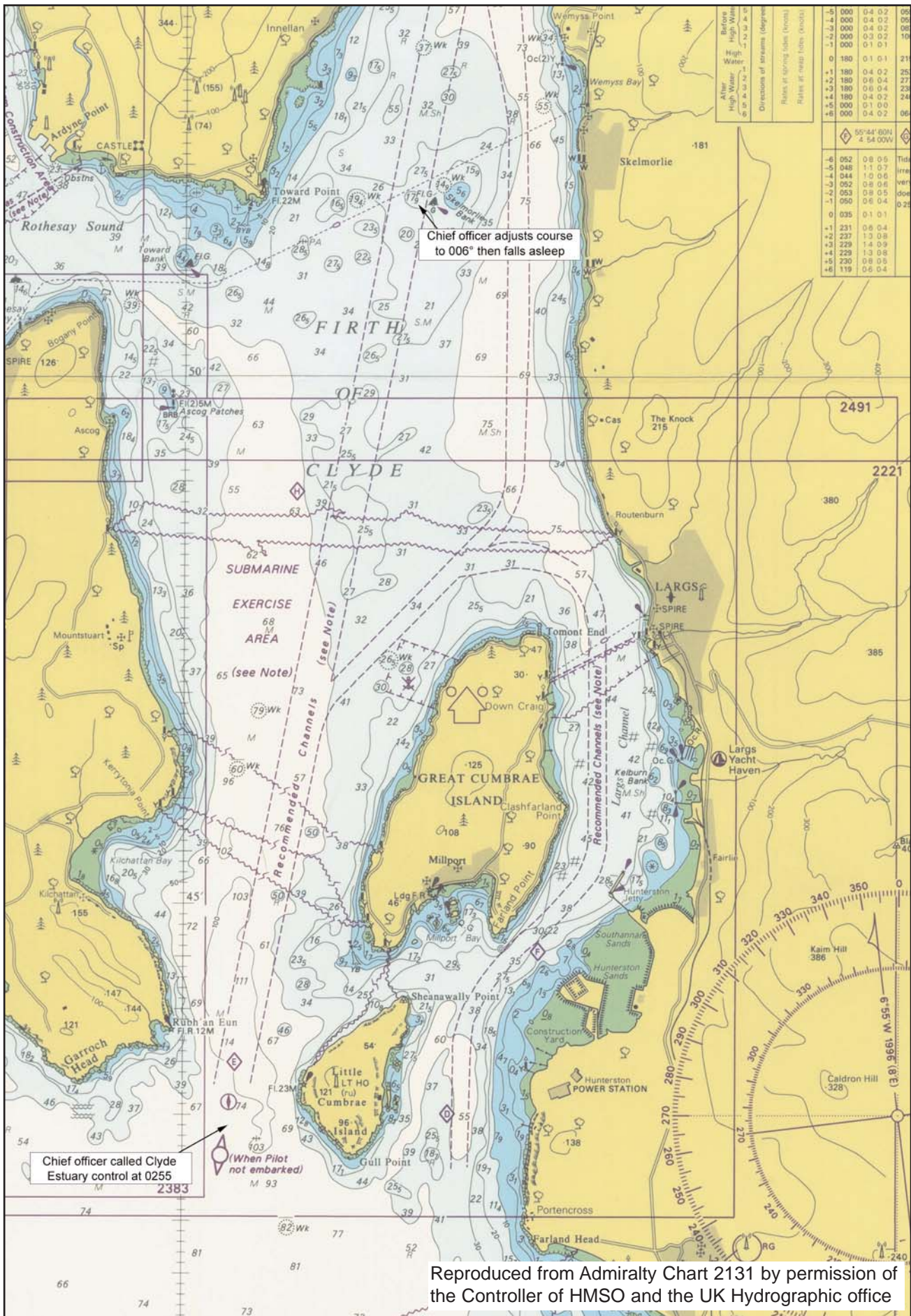
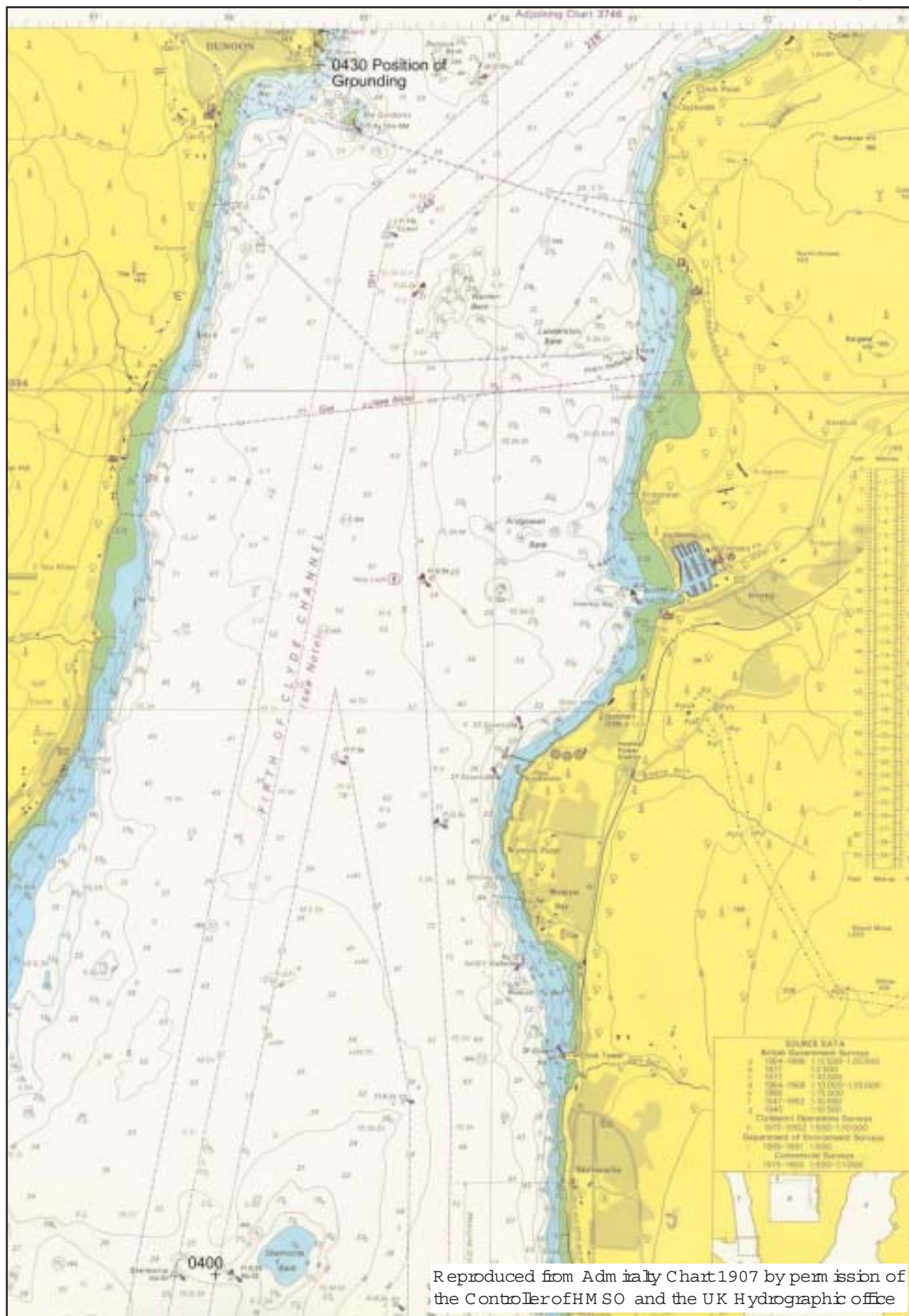




Figure 2



0400, the chief officer assessed that the ship was still to starboard of the planned track, and adjusted course to 006° on the autopilot to regain. The chief officer then fell asleep in the starboard bridge chair. At 0430 Jackie Moon ran aground on the south-east side of Dunoon Breakwater (Figures 2 & 3).

Figure 3



Jackie Moon aground off Dunoon



Close up of Jackie Moon aground

### 1.2.2 Events following the grounding

The vibration caused by the grounding immediately woke the crew, including the chief officer and master. On seeing rocks very close ahead, the chief officer immediately put the engine control lever to the full astern position, but the ship remained fast. After the master arrived on the bridge, he instructed the chief engineer to discharge the ballast from number 1 and 2 wing tanks to reduce the draught forward. The remaining crew checked for damage forward, but none was evident. As the master was aware that all of the crew were up and about, the general alarm was not sounded.

Shortly after the grounding, a local milkman saw *Jackie Moon*, and telephoned the local police. The police informed Clyde Coastguard at 0447. Clyde Coastguard contacted *Jackie Moon* via VHF radio at 0453, and the master confirmed that the ship was aground, but that she was not in any immediate danger. During the initial VHF radio conversations between the ship and the coastguard, the coastguard had difficulty understanding the content of the transmissions from the ship because of the poor quality of the spoken English.

The pilot, who had been due to embark off Kempock Point, boarded *Jackie Moon* at 0515, as the ship was in the process of discharging ballast forward. Safety information such as the stability of the ship and the amount of fuel carried was then relayed by the pilot to the coastguard.

Between 0800 and 0830, the master informed the ship manager's operations manager of the accident. This was then relayed to the company's DP, who was in the Ukraine. The DP then notified the ship's insurers, but decided that it was not necessary to send a representative of the company to the ship to assist the master.

At 0900, local police officers, along with an MCA enforcement officer and the Clydeport harbourmaster, boarded the vessel. A strong smell of alcohol was detected on the chief officer's breath. A breath sample was taken, which indicated that the amount of alcohol present exceeded the legal limit allowed under the Railway and Transport Safety Act 2003. As a consequence, the chief officer was arrested and taken to Dunoon police station.

### 1.2.3 Prosecution of the chief officer

At 1320 on 1 September, the chief officer provided further breath specimens to the police while in custody. Analysis of the specimens by a calibrated intoximeter indicated that 75 microgrammes of alcohol per 100millilitres of breath was present. As the Railways and Transport Safety Act 2003 permits a maximum of 35 microgrammes of alcohol per 100 millilitres<sup>1</sup> of breath, the chief officer was then charged. The chief officer was also charged under Section 58 of the Merchant Shipping Act 1995 for causing damage to the ship's outer hull.

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<sup>1</sup> This equates to 80 milligrammes of alcohol per 100 millilitres of blood



On 2 September, the chief officer appeared before the sheriff's court in Dunoon. He pleaded guilty to the charge brought under the Railways and Transport Safety Act 2003 but not guilty to the charge brought under the Merchant Shipping Act 1995. The sheriff fined the chief officer £500 with no time to pay for the first charge, but accepted his not guilty plea for the second. As the chief officer had no means of paying the fine, he was sentenced to 14 days imprisonment. Neither the ship manager nor its agent contacted the chief officer during his period in police custody. The chief officer was released the following day, after the master, who had been informed of the outcome of the court proceedings by the Ukrainian Consulate in Edinburgh, paid his fine.

#### 1.2.4 Subsequent action

*Jackie Moon* re-floated without assistance at 1140 on 1 September, and then proceeded under her own power to Greenock, where she anchored at 1250. The ship was shifted to an alongside berth on 4 September, from where she sailed on 6 September with the master and chief officer having been replaced. The ship manager terminated the employment of the chief officer for breaching the company's alcohol policy. The master was dismissed for failing to report the grounding in accordance with the documented procedure, namely to the DP. The ship manager arranged for their repatriation to the Ukraine, but recovered the cost of this from their first month's salaries, which it had withheld in accordance with their contracts of employment.

### 1.3 ENVIRONMENTAL CONDITIONS

Nautical twilight was at 0456. Visibility was good, the wind was easterly force 2, and the sea state was slight. Predicted high water at Greenock was at 0243 and it was spring tides. The predicted tidal stream was ebbing at 0.4 knot but might have been stronger in the narrows between Cloch Point and Dunoon.

### 1.4 THE CREW

#### 1.4.1 General

*Jackie Moon's* crew comprised her master, chief officer, chief engineer, and three ABs. One of the ABs was the cook. This was in accordance with her Minimum Safe Manning Certificate, which specified that two of the ABs form part of the navigational watch. It also specified that a chief engineer was not required if either the master or chief officer held an engineer officer's licence. The ship managers, however, had never operated the ship without a chief engineer.

All of the crew were Ukrainian, and were recruited by FCO, a Ukrainian based crewing agency, which had signed the crew's employment contracts on behalf of ARPA Shipping, the ship's manager. The normal contract length for the officers was 6 months.

#### 1.4.2 The chief officer's contract of employment

A copy of the chief officer's contract of employment is at **Annex A**. Certain conditions of this contract do not comply with current ILO Conventions namely, the termination of employment due to contact with a trade union, and the retention of the first month's salary. These were at variance with ILO conventions 98 and 166 respectively. As Antigua and Barbuda has ratified ILO 98, it follows that the chief officer's contract did not comply with the flag state's national law with respect to access to a trade union. It also did not comply with the ADOMS Directive 02-2002 regarding repatriation. It is assumed that similar contracts of employment are used by ARPA Shipping on all the vessels under its management. Since other flag states, with whom ARPA Shipping operates vessels under registration, have also ratified certain of the ILO Conventions it follows that the employment contract used by ARPA Shipping probably does not comply with the applicable national laws of any of its vessels.

#### 1.4.3 The chief officer

The chief officer qualified as a master in 2001, and had been at sea for 19 years in various types of ships, mainly operating in the eastern Mediterranean. He had been employed by ARPA Shipping as a chief officer since April 2002, and had visited Glasgow on four previous occasions. This was his first contract on board *Jackie Moon*, which he joined on 10 April 2004.

The chief officer stated that he did not usually drink alcohol on board, and that until toasting the life of his father, he had not consumed any alcohol since 1 January 2004. The master had not seen the chief officer consume alcohol during his time on board prior to the toast on 31 August. The brandy consumed on 31 August was taken from a bottle purchased by the chief officer with the intention of offering it to stevedores during port visits. Part of the bottle had already been used for this purpose.

In addition to the upset caused by the death of his father, the chief officer was worried about the health of his pregnant wife. The chief officer routinely kept the 1400 to 2000 and 0200 to 0800 watches (ship's time). An approximation of how the chief officer spent his time from arriving in Dundalk on 30 August until taking the bridge watch on 1 September is at **Annex B**.

#### 1.4.4 The master

The master was 37 years old and had been at sea since 1989. He had been a fisherman until 1991, and had mainly operated in the Mediterranean and Black Sea. The master had served 5 years as a chief officer, mainly on river barges, but had qualified as a master of vessels over 500grt in January 2003. He joined *Jackie Moon* late in the afternoon on 31 May 2004, with the off-going master departing at 0500 the next morning. During the handover, a bridge equipment form was completed; this did not contain any reference to the operation of the watch alarm. This was the master's first contract with the ship and with ARPA Shipping, and the first time he had worked in northern Europe. The master routinely kept the 0800 to 1400 and the 2000 to 0200 watches (ship's time).



## 1.5 PORT STATE CONTROL

The MCA conducted a Port State Control Inspection on board *Jackie Moon* on 3 September, while the ship was at anchor. Twenty deficiencies were noted including:

- No record of unannounced drug and alcohol testing was found;
- The ship's safety manuals were written in English and were not clearly understood by the crew, except the master and the chief officer; and
- The hours of rest were not recorded as required by the regulations.

## 1.6 THE ISM CODE

### a. Background

The International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) provides an international standard for the safe management and operation of ships, and for pollution prevention. It was adopted by the IMO in 1993, and came into force on 1 July 1998 via SOLAS Chapter IX, 'Management and Safe Operation of Ships'. It did not apply to dry cargo ships over 500gt making international voyages until 1 July 2002.

### b. Objectives

The objectives of the Code are to ensure safety at sea, prevention of loss of life and injury, and prevention of damage to the environment. It requires owners and operators to set in place a Safety Management System (SMS), in which management procedures for all activities affecting safety and environmental protection are conducted in accordance with legislative and company requirements. An SMS should allow companies to measure performance against a documented system and enable them to identify areas for improvement in safe practices and pollution prevention measures. The Code states:

*1.2.2. Safety–management objectives of the Company should, inter alia:*

- .1 provide for safe practices in ship operation and safe working environment;*
- .2 establish safeguards against all identified risks; and*
- .3 continuously improve safety management skills of personnel ashore and aboard ships, including preparing for emergencies related both to safety and environmental protection.*

### c. Certification

Certification under the ISM Code is conducted by flag states, but can be delegated to recognised organisations such as classification societies. Two types of certification exist. The Document of Compliance (DOC) is issued to companies whose shore-based aspects of the SMS comply with the requirements of the ISM Code. The DOC is specific to the ship type for which

the SMS is implemented. The Safety Management Certificate (SMC) is issued to a ship when her company has completed a satisfactory assessment for a DOC, and her onboard management operates in accordance with the SMS.

d. Designated person

The ISM Code states:

*To ensure the safe operation of each ship and to provide a link between the company and those on board, every company, as appropriate, should designate a person or persons ashore having direct access to the highest level of management. The responsibility and authority of the designated person or persons should include monitoring the safety and pollution prevention aspects of the operation of each ship and ensuring adequate resources and shore based support are applied as required.*

The Code does not state who or how qualified the designated person should be, other than that they should be well experienced in the operation of ships both at sea and in port.

## **1.7 THE SHIP MANAGER AND SAFETY MANAGEMENT SYSTEM**

### **1.7.1 ARPA Shipping**

ARPA Shipping started trading in 1976 as a chartering manager. It has commercially managed ships since 1992 and has undertaken technical management since 1996. It fully manages eleven ships, but has a further five under its commercial management. The company does not own any of the vessels it manages, and the owners of the ships choose the flag state under which they operate. The flag states of the company's vessels are: Antigua and Barbuda, Malta, Bahamas, and St Vincent and the Grenadines.

ARPA Shipping has a staff of eight, including: the managing director, the technical manager, who is also responsible for crewing matters and is the company's DP, the operations manager, and a financial manager.

The technical manager served at sea as an engineer on large ships for 12 years, but came ashore in 1987 as a superintendent. He has worked for ARPA Shipping for 8 years.

### **1.7.2 Crewing policy**

The company manned its ships with Polish crew until 1997, but since then has recruited only Ukrainian personnel via three manning agencies based in the Ukraine, one of which was FCO in Odessa. The technical manager visited the crewing agencies at least once per year, but he took the opportunity to make additional visits when the company's vessels docked in the Ukraine. The company considered its Ukrainian crews to be good seamen, and kept personal files on all the crew it employed. In the company's experience, it was usual for its officers to return for repeat contracts.

The Ukrainian crew were expected to speak English, and a basic English comprehension test was given to ratings by the crewing agencies, which also ran a basic English course. The company was not aware of the length or content of this course. ADOMS requires its vessels to keep all official records in English, but does not require the crews on its vessels to speak or write in English to a specified standard.

The masters employed by the company were not interviewed by ARPA Shipping before starting their contracts. The company saw the vetting of its masters and chief officers as the job of the crewing agents, which provided CVs of the people concerned. The crewing agencies were given a software copy of the company's safety manuals and procedures with which prospective crew were able to familiarise themselves before joining. After joining, masters were normally given 24 hours to complete their handover, although this was dependent on flight availability. The technical manager had no concerns about the competency of the master before the accident, although he considered his standard of English could have been better.

FCO was used to crew two of the company's ships, *Jackie Moon* and *Aqua Pioneer*. Both ships had the same owner. Since 2002, the owner had insisted that ARPA Shipping use FCO, with which the ship manager understood it had either business or personal connections, to crew its ships. The technical manager had expressed concerns about FCO, particularly with respect to the poor standard of English common amongst the crews it provided. He had raised these concerns with both FCO and the ships' owner.

### 1.7.3 Safety management system

The copy of the ship manager's DOC held on board *Jackie Moon* was issued by Lloyd's Register on behalf of ADOMS on 7 April 2000. The last DOC audit had been carried out by Lloyd's Register in April 2004.

The technical manager had been the DP since the beginning of 2001. The DP was responsible for all eleven of the ships the company fully manages, and visited the ships at least twice per year. Internal audits were conducted during one of the visits, with the second visit being more informal, usually around a crew change. The company had no certified deck experience amongst its staff but, as a regular yacht sailor, the DP felt capable of auditing the deck and navigational aspects of the vessels' operation. Independent auditors were not considered necessary in this respect.

The company's SMS stated:

*The designated person is required to:*

- *Monitor the safety and pollution prevention of the ship.*
- *Ensure that adequate resources and shore based support are provided to assure support of the company's policies.*

- *Ensure that audits are held and to monitor that corrective action has been taken.*
- *Ensure that the operation of the ship is done in according [sic] with SMS.*
- *Report of all non-conformities to the company's management*

During the DOC audit in April 2004, Observation No 01 noted that, although the company had identified that the standard of English among some crew was inadequate, it was not clear what action had been taken to rectify the situation.

## **1.8 ONBOARD PROCEDURES AND DOCUMENTATION**

### **1.8.1 General**

Lloyd's Register audited the SMS of *Jackie Moon*, and a Safety Management Certificate was issued on 17 April 2002. Non-conformities raised during this audit included:

- *Registrations for working and rest hours are not being kept and no watchkeeping arrangements found provided*
- *Machinery instruction books were found written in the German language not understood by the chief engineer.*

### **1.8.2 Language**

With regard to language, the ISM Code states:

*The Company should establish procedures by which the ship's personnel receive relevant information on the SMS in a working language or languages understood by them.*

The SMS on board *Jackie Moon* was written in English. The native language of the crew was Russian.

### **1.8.3 Drug and alcohol policy**

The ship manager's drug and alcohol policy was contained in the ship's safety manual, and was clearly posted on the bridge. With regard to alcohol, the policy stated:

- *The maximum allowable blood alcohol content is 0.4 promille.*
- *Four hours total abstinence is required prior to watchkeeping or duty.*
- *Use, possession, distribution of alcohol without master's permission is prohibited.*
- *Bringing of alcohol on board without of [sic] master's permission is prohibited.*

The policy also stated that:

*Owners can test and screen the crew members for drugs and alcohol abuse during routine medical examination as well as unannounced testing. Test to be carried out by 'recognized authority' or by the master of the vessel in case of abuse suspicion.*

The master allowed the crew to keep alcohol in their cabins but did not expect them to consume any when at sea. During the 3 months the master had been on board, the crew had consumed about 72 cans of beer, which the master had purchased from chandlers. The chief officer was aware that he had breached the company's alcohol policy. ARPA Shipping had no records of previous alcohol abuse on board its vessels, and it stated that the last paragraph of its policy refers to testing whilst a vessel was alongside. The company did not equip its masters with a means of testing as it considered it unlikely that masters would use such equipment to discipline a member of its typically closely-knit crews.

#### 1.8.4 Records of hours of work and rest

During 2002, ARPA Shipping issued a circular to its fleet detailing the format in which the hours of work and rest were to be recorded (**Annex C**). This was issued after the recording of this information was found to be deficient on several of its vessels during flag and port state inspections, and during the SMC audit on board *Jackie Moon*.

The records of the hours worked by the master and chief officer of *Jackie Moon* during August 2004 are at **Annex D**. The records were maintained on a laptop computer and reflected the watches kept using templates for a 30 day and a 31 day month. The only changes that were made to the templates were the individual's name, and the month. The master acknowledged that these records, which were retained on board, did not reflect the actual hours worked. He was aware that the actual hours worked were more than the hours logged, but considered that the ship manager would not expect this to be formally recorded.

The ship managers did not consider its ships' programmes to be disruptive, as its vessels operated on set routes, and it had not received complaints from its masters regarding the hours required to be worked. A record of *Jackie Moon*'s port visits for August 2004 is at **Annex E**.

#### 1.8.5 Watch alarm

The ship's bridge manual stated:

*When the navigator on duty is alone on the bridge during passage, the dead man equipment must be operating (if installed)*

A watch or 'deadman' alarm was fitted on the bridge of *Jackie Moon*. The alarm was not in use at the time of the accident. Neither the master nor the chief officer knew how to operate it. During visits to the ship by the MAIB on 1 and 2

September, the master was unable to switch it on, and during a further visit on 13 October when in dry dock, its correct functioning could not be demonstrated because of a lack of 24v power supplies. However, it was reported to the MAIB during the latter visit that the alarm was functioning correctly, and was set at a 10 minute interval. If the alarm was not cancelled on the bridge within one minute of activation, a second alarm would sound in the accommodation area. Watch alarms were fitted on the majority of ships managed by ARPA Shipping, and the DP was aware that the crew did not like using them.

#### 1.8.6 The employment of ABs as lookout

The master's standing orders, which were part of the bridge safety manual, instructed the officer on watch:

*Whenever you need a lookout don't hesitate to call an AB*

The master acknowledged that the ABs were rarely used as lookouts, and did not normally form part of the navigational watch during darkness. The chief officer stated that he had not called an AB to act as lookout on this occasion because they had been busy during the day discharging cargo in Dundalk, and would be required to load cargo in Glasgow.

Examination of the deck log showed that although the names of the ABs had not been entered as watchmen for 31 August and 1 September, names had been entered when at sea for the rest of August. All of these entries appeared to be in the same handwriting.

#### 1.8.7 Training program – deck officers

The safety manual required all officers joining *Jackie Moon* to demonstrate their familiarity of specified subjects, within one month of joining. The chief officer's record in this respect is at **Annex F**. With the exception of one item concerned with the ISPS Code, the remainder were recorded as being completed on the date the chief officer joined the vessel.

### 1.9 PRINCIPLES OF SAFE MANNING

The principles of safe manning are detailed in IMO Resolution A.890(21) and SOLAS Chapter V, Regulation 14. Responsibility for applying these principles rests with the relevant Administration, and ships' owners and managers. Included within the IMO Resolution is the requirement:

*Except in ships of limited size, the provision of qualified deck officers to ensure that it is not necessary for the master to keep regular watches by adopting a three watch system.*

Guidance on the application of the principles of safe manning is included in Annex 1 of the Resolution, in which article 1.2 states:

*The Administration may retain or adopt arrangements which differ from the provisions herein recommended and which are especially adapted to technical developments and to special types of ships and trades. However,*



*at all time [sic] the Administration should satisfy itself that the detailed manning arrangements ensure a degree of safety at least equivalent to that established by these guidelines.*

## **1.10 HOURS OF WORK AND REST**

In accordance with the requirements of EC Directive 1999/95/EC, all ships trading in EU waters must comply with ILO convention 180 with regard to the hours of work and rest for all seafarers. It is therefore the basis of enforcement under port state control in Europe. Article 5 of the convention includes:

1. *The limits on hours of work and rest shall be as follows:*
  - (a) *maximum hours of work shall not exceed:*
    - (i) *14 hours in any 24-hour period; and*
    - (ii) *72 hours in any seven-day period;*
  - or*
  - (b) *minimum hours of rest shall not be less than:*
    - (i) *10 hours in any 24-hour period; and*
    - (ii) *77 hours in any seven-day period.*
2. *Hours of rest may be divided into no more than two periods, one of which shall be at least six hours in length, and the interval between consecutive periods of rest shall not exceed 14 hours.*
6. *Nothing in paragraphs 1 and 2 shall prevent the Member from having national laws or regulations or a procedure for the competent authority to authorize or register collective agreements permitting exceptions to the limits set out. Such exceptions shall, as far as possible, follow the standards set out but may take account of more frequent or longer leave periods or the granting of compensatory leave for watchkeeping seafarers or seafarers working on board ships on short voyages.*
7. *The Member shall require the posting, in an easily accessible place, of a table with the shipboard working arrangements, which shall contain for every position at least:*
  - (a) *the schedule of service at sea and service in port; and*
  - (b) *the maximum hours of work or the minimum hours of rest required by the laws, regulations or collective agreements in force in the flag State.*

Article 8 of the convention also states:

*The Member shall require that records of seafarers' daily hours of work or their daily hours of rest be maintained to allow monitoring of compliance with the provisions set out in Article 5. The seafarer shall receive a copy of the records pertaining to him or her which shall be endorsed by the master, or a person authorized by the master, and by the seafarer.*

Similar but less stringent requirements regarding minimum hours of rest are also contained in Section A-VIII/1 of STCW 95, which were promulgated by ADOMS to ships on its register via Directive 02-2002 and circular 01-001-98.

## 1.11 LOOKOUT

The provisions of STCW 95 address watchkeeping at sea and set out certain principles to be observed in keeping a navigational watch, including the keeping of a lookout. Relevant parts of the text read as follows:

### **Section A-VIII/2.Part 3**

1. *The duties of the lookout and helmsperson are separate and the helmsperson shall not be considered to be the lookout while steering, except in small ships where an unobstructed all-round view is provided at the steering position and there is no impairment of night vision or other impediment to the keeping of a proper lookout. The officer in charge of the navigational watch may be the sole lookout in daylight provided that on each such occasion:*
  - a. *the situation has been carefully assessed and it has been established without doubt that it is safe to do so;*
  - b. *full account has been taken of all relevant factors, including, but not limited to:*
    - *state of weather,*
    - *visibility*
    - *traffic density*
    - *proximity of dangers to navigation*
    - *the attention necessary when navigating in or near traffic separation schemes; and*
  - c. *assistance is immediately available to be summoned to the bridge when any change in the situation so requires*

The STCW 95 requirement to have an additional lookout posted on the bridge during the hours of darkness was brought to the attention of “*all companies having registered their flag of Antigua and Barbuda W.I.*”, and “*all ships registered under the flag of Antigua and Barbuda W.I.*”, by ADOMS in a circular letter (01-002-98) issued in December 1998. This highlighted that “*ships are prohibited from operating with the officer of the navigational watch as the sole lookout during periods of darkness*”.



## 1.12 ILO CONVENTIONS

In addition to ILO 180, there are numerous other ILO Conventions, which impact on the conditions of seafarers on board ships. These include:

- a. ILO Convention No 98 (Right to Organise and Collective Bargaining Convention, 1949). This states:

*Workers shall enjoy adequate protection against acts of anti-union discrimination in respect of their employment.*

And that,

*Such protection shall apply more particularly in respect of acts calculated to:*

- (a) make the employment of a worker subject to the condition that he shall not join a union or shall relinquish trade union membership;*
- (b) cause the dismissal of or otherwise prejudice a worker by reason of union membership or because of participation in union activities outside working hours or, with the consent of the employer, within working hours.*

Antigua and Barbuda, Malta, Bahamas and St Vincent and the Grenadines have all ratified this Convention.

- b. ILO Convention No 166 - ILO Repatriation of Seafarers Convention (Revised), 1987. This states that the cost of the repatriation of seafarers shall be borne by the ship owner, and that the ship owner shall not require seafarers to make an advance payment towards the cost of repatriation at the beginning of his or her employment. Antigua and Barbuda have not ratified this convention, but in its ADOMS Directive 02-2002, stated that:

*The company shall pay all the costs related to the repatriation of a seafarer serving on board an Antigua and Barbuda flag vessel at the termination of the engagement agreement or prior to the termination of the engagement agreement if it is caused without the seafarer's consent..*

- c. ILO Convention No 147 –Merchant Shipping (Minimum Standards) Convention 1976.

With regard to contracts of employment, this convention requires states to have laws or regulations laying down:

*Shipboard conditions of employment and shipboard living arrangements, in so far as these, in the opinion of the Member, are not covered by collective agreements or laid down by competent courts in a manner equally binding on the shipowners and seafarers concerned; and to satisfy itself that the provisions of such laws and regulations are substantially equivalent to the Conventions or Articles of Conventions referred to in the Appendix to this Convention.*

The Appendix refers to fifteen other Conventions, to which a further six were added (including Convention No 166) in the Protocol to the Convention, which came into force in 1996. Forty seven states ratified this ILO Convention, of which twelve ratified its 1996 protocol. Of the other flag states of ships managed by ARPA Shipping, only Malta has ratified both the ILO Convention No 147 (1976) and its 1996 Protocol.

c. ILO Convention No 178 – Labour Inspection (Seafarers) Convention, 1996

Among its requirements, this Convention states:

*Each Member shall ensure that all ships registered in its territory are inspected at intervals not exceeding three years and, when practicable, annually, to verify that the seafarers' working and living conditions on board conform to national laws and regulations. And,*

*If a member receives a complaint or obtains evidence that a ship registered in its territory does not conform to national laws and regulations in respect of seafarers' living and working conditions, the Member shall take measures to inspect the ship as soon as practicable*

In this respect, the Convention defines the term *seafarers' working and living conditions* as:

*The conditions such as those relating to the standards of maintenance and cleanliness of shipboard living and working areas, minimum age, articles of agreement, food and catering, crew accommodation, recruitment, manning, qualifications, hours of work, medical benefits, social welfare and related matters, repatriation, terms and conditions of employment which are subject to national laws and regulations, and freedom of association as defined in the Freedom of Association and Protection of the Right to Organise Convention, 1948.*

This Convention has been ratified by ten states, none of which are the flag states of the ships operated by ARPA Shipping.

### **1.13 THE ANTIGUA AND BARBUDA MERCHANT SHIPPING ACT**

With respect to the terms and conditions of the employment of seamen, the Merchant Shipping Act of Antigua and Barbuda, 1985, includes provisions for the payment of wages, certification, physical fitness, crew agreements, discharge of seamen, safety, health, welfare, and repatriation. It does not, however, contain specific regulations with regard to the content of contracts of employment. These contracts are subject to civil law, and it is the responsibility of the owners and ship managers to ensure that Antigua and Barbuda civil law is complied with. The Antigua and Barbuda Registry does not check the employment contracts of seamen employed on its ships, and had not received any reports or complaints regarding the contract of employment used on board *Jackie Moon*.

## SECTION 2 - ANALYSIS

### 2.1 AIM

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents occurring in the future.

### 2.2 FATIGUE AND ALCOHOL

After adjusting the course on the autopilot from 011° to 006° on passing the Skelmorlie lateral and fairway buoys, the chief officer fell asleep. As no further adjustments to the course steered were made, the ship crossed the planned navigational track, and ran aground on Dunoon breakwater. It was fortunate that the ebbing tidal stream influenced the ship's ground track, otherwise her course would probably have taken her over The Gantocks (**Figure 2**), the consequences of which were potentially far more serious than those experienced.

It is almost certain that the chief officer fell asleep due to the effects of fatigue and his consumption of alcohol. For the chief officer to be over twice the legal limit when tested at 1320 on the day of the accident, he must have had in the region of 17 units of alcohol<sup>2</sup> in his bloodstream when he took over the watch at 0100. Alcohol is known to affect performance in several ways, including: the boosting of confidence, the impairment of judgment and decision-making, the impairment of co-ordination, and, in the extreme, the inducement of coma. As the chief officer fell asleep after carrying out his duties on the bridge for over 3 hours, during which time the level of alcohol in his bloodstream would have decreased, it is improbable that the chief officer lost consciousness as a result of an alcohol-induced coma. It is more likely that the alcohol influenced his behaviour and decision-making. This was reflected in his decision not to call for the assistance of a lookout, and his decision to sit down when he knew that he was alone on the bridge and feeling tired. The effects of the chief officer's consumption of alcohol must therefore be viewed as a contributory factor to his falling asleep.

The chief officer fell asleep at about 0500 ship's time. Research has shown that alertness and performance tend to be at their lowest during the early hours of the morning due to the human circadian rhythm being synchronised with the normal pattern of daytime wakefulness and sleep at night. An MAIB Bridge Watchkeeping Study published in July 2004 highlighted that in the majority of groundings which occurred between 0000 and 0600 the bridge watchkeepers were following a 6 hours on – 6 hours off working pattern, similar to that of the chief officer. The Bridge Watchkeeping Study stated:

*If uninterrupted this cycle of work will normally allow an individual's body clock to adapt, resulting in improved levels of performance and alertness during the night-time watches. Uninterrupted cycles of work are possible on*

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<sup>2</sup> 1 unit of alcohol = 10 millilitres of pure alcohol (Ethanol)

*longer sea passages, but within North European waters, where voyage lengths vary between several hours and several days, the cycle is disrupted by frequent port visits. During such visits, the demands of pilotage, cargo operations, and the increasing number of audits and inspections, make departure from the watchkeeping patterns inevitable. Also, although a night in port, or short term lay up, might appear to be an appropriate solution to offset fatigue, it can in fact be detrimental by further disrupting watchkeepers' sleep patterns. The continual disruptions to sleep and circadian rhythms can lead to the accumulation of fatigue, the longer individuals are subjected to them.*

Examination of *Jackie Moon's* programme for August (**Annex E**) shows that the ship made nine port visits of various duration, with the voyages between ports ranging between one and four days. While working 6 hours on – 6 hours off within a programme of this nature, disruptions to this pattern would have been inevitable, and it was therefore highly probable that the chief officer became increasingly fatigued over the four months he was on board. His fatigue would have been exacerbated during the 24 hours before the accident (**Annex B**) in which the chief officer only had 5.5 hours sleep. Of this, 4 hours were taken immediately before taking over the bridge watch at 0100, when the chief officer was upset at the death of his father, worried about the health of his pregnant wife, and had consumed a large quantity of alcohol. The quality of sleep achieved during this period was therefore highly questionable.

## **2.3 SAFE MANNING AND COMMERCIAL PRESSURE**

The principles of safe manning contained in IMO Resolution 890(21), although comprehensive, are not prescriptive or mandatory, and converting them into a set number of persons on a particular ship requires many subjective assessments to be made by vessels' owners and managers, and the approving Administrations.

*Jackie Moon* was manned in accordance with her Minimum Safe Manning Certificate issued by ADOMS. However, the deliberate falsification of the hours of work and rest maintained on board is a very strong indication that the ship was unable to keep to her commercial programme without contravening the ILO 180, or even the STCW 95 requirements regarding the hours of work and rest.

When there is insufficient manpower on board a ship to meet the demands of both commercial pressure and ship safety, it is unfortunate that in many cases, commercial needs take priority. In addition to the fatigue of the chief officer, this was illustrated by the master's decision to sail as planned from Dundalk with himself as the only fit bridge watchkeeper, and by the higher priority given to cargo operations over bridge lookout when determining the employment of the ABs.

Some shipping companies are reluctant to incur the expense of employing more crew than necessary to meet their commercial needs, even where this means that regulation intended to enhance the safety of their vessels cannot always be

adhered to. This is despite the fact that the ISM Code requirement for ship managers to *establish safeguards against all identified risks* places a responsibility on them to ensure that their vessels are adequately manned to meet all safety requirements at all times, irrespective of a vessel's commercial commitments. Ships such as *Jackie Moon*, which do not have sufficient crew to allow sufficient rest, provide flexibility following the incapacitation of a member of the crew, or provide for an additional lookout when required, cast serious doubt over the effectiveness of the current process for the determination and approval of safe manning levels. This is endorsed by the fact that there are many ships of different flags, which are similar to *Jackie Moon*, and trade in a similar pattern, but with even fewer crew.

## **2.4 ONBOARD PROCEDURES**

Ship owners and managers are obliged under the ISM Code to ensure that the activities on board their vessels, which affect safety and environmental protection, are conducted in accordance with legislative and company requirements. In this respect, there were several shortcomings in *Jackie Moon's* SMS, which had a bearing on this accident to varying degrees.

### **a. The hours of work and rest records**

Although the ship manager issued a fleet circular in 2002 containing instructions and guidance regarding the recording of hours of work and rest, these records were neither accurately maintained on board, nor periodically checked by the ship manager. As a consequence, the hours of rest taken by the chief officer were not monitored, and his fatigue was allowed to accumulate.

### **b. Additional bridge lookout**

By operating with a single bridge watchkeeper during the hours of darkness, *Jackie Moon* was in contravention of STCW 95, which allows an OOW to be the sole watchkeeper by day but not by night. The procedures issued by the ship manager did not contain any specific instructions in this respect. Instead, it left the use of an additional lookout entirely to the discretion of the OOW. As a consequence, the practice of not using an additional lookout during the hours of darkness became the norm, with the deck log reflecting only which AB was available to stand a watch. The regular nature of this practice was illustrated by the master's decision not to call for a lookout to accompany the chief officer, even when he had considered him to be unfit to stand a watch for the previous 12 hours.

Had a second man been present on the bridge on the morning of 1 September, it is probable he would have prevented the chief officer from falling asleep for a prolonged period, and therefore prevented the ship from grounding.



c. Bridge watch alarm

*Jackie Moon* was fitted with a bridge watch alarm, which the on board procedures required to be in use when a watchkeeper was alone on the bridge. The watch alarm was not in use at the time of the accident, as neither the chief officer, nor the master, knew how to use it.

Had the watch alarm been used, it would have activated not more than 11 minutes after the chief officer had fallen asleep, which was about 19 minutes before the ship grounded. Even had the chief officer not been woken by the alarm, some of the other crew probably would have been, and there would therefore have been sufficient time for successful corrective action to be taken.

d. Drug and alcohol policy

The chief officer's consumption of alcohol, which possibly none of the crew were aware of until he was tested by the police following the accident, was a violation of the ship manager's alcohol policy. However, even had the master suspected the chief officer of alcohol abuse when handing over the watch, he had no means of proving that this was the case.

Although the ship manager outlined in its alcohol policy the potential for the master to test his crew in such circumstances, it did not equip the master accordingly. Therefore, the master was unable to effectively enforce the company's policy. As a consequence, the policy would have undoubtedly lost much of its deterrent value, particularly as no other random testing had been undertaken.

e. Watch handover

The master left the bridge after handing the watch over to the chief officer, and expected to be called shortly before 0800 when the pilot was scheduled to board. Given the ship's position at 0100, this would have required the ship to slow considerably. The chief officer, however, maintained a speed of 9 knots and re-arranged to embark the pilot at 0500. It is not certain why the chief officer took this action. It is possible that the master, who had been on watch for 12 hours, did not inform the chief officer of the intended plan. However, it is equally possible that the chief officer's performance was impaired by alcohol. Had the master laid down his instructions in written night orders, the likelihood of the chief officer misinterpreting his intentions would have been substantially decreased.

f. Familiarisation procedures

On joining *Jackie Moon*, the chief officer was required to demonstrate his competence to the master in the subject areas detailed on the checklist at **Annex F** within one month of joining. The competencies included a general knowledge of the vessel, her safety equipment and procedures, together with

company and statutory regulation relating to her operation. As the master had initialled all, except the subject area relating to security, on the day the chief officer joined, the validity of the master's assessment of the chief officer's knowledge in these areas must be seriously questioned, particularly as this was his first contract on board the ship. Indeed, noting the wide-ranging and general nature of many of the subject areas included on the checklist, none of which relate specifically to the chief officer's bridge watchkeeping duties, or bridge equipment, the usefulness of the checklist and familiarisation procedure is questionable.

## **2.5 THE SHIP MANAGER**

### **2.5.1 Safety management**

Safety management is a process in which instructions and procedures must be continually reviewed, not only to ensure that all statutory requirements are complied with, but also to make certain its operations are conducted safely. Within the spirit of the ISM Code, this process should be driven from a commitment by the senior management via its safety policy, and achieved through management reviews, feedback from accidents, non-conformities, and audits. The shortcomings identified in the procedures on board *Jackie Moon*, several of which had been previously identified by external audit, indicate that the need for continual improvement had not yet been embraced within ARPA Shipping.

ARPA Shipping is a small company, in which the DP also undertakes the duties of the technical and crewing manager for all eleven of the company's fully managed vessels. The DP is experienced in the operation of ships at sea and in port, and in most circumstances it is likely that he is able to arrange ship visits in order to combine the varying requirements of his different roles. However, the DP is nevertheless equally likely to be extremely busy in meeting only the demands of his technical and crewing responsibilities. It is, therefore, questionable that he can commit sufficient time to effectively monitor the company's SMS, or make use of its feedback process. This is highlighted by the fact that some of the non conformities identified by Lloyd's Register of Shipping during their initial SMC audit in 2002, notably the recording of hours of rest and problems associated with language, had not been effectively dealt with on board by the time of the incident despite a written commitment and instruction to do so being issued by ARPA Shipping.

The limited resources available within the company, along with the workload of the DP would have impaired the identification of the shortcomings in the procedures already highlighted on board *Jackie Moon*. It is also probable that they also influenced the decisions not to:

- introduce specific measures to ensure that the crew on board *Jackie Moon* understood key procedures of the SMS, despite concerns with the standard of English demonstrated by her crew having been raised with the crewing agents, and the owner;

- take additional follow up action to make sure that accurate records of hours of work and rest were maintained, following its issue of a fleet circular on this matter;
- take steps to ensure its deck officers were familiar with the use of the watch alarms fitted, and use them as directed, particularly as the DP had been made aware of a negative attitude towards the use of this equipment; and
- send a representative to *Jackie Moon* following her grounding in order to provide feedback, and assist the crew.

### 2.5.2 Crewing policy

The three crewing agencies used by the ship manager were expected to provide suitably qualified officers and ratings. However, they were also expected to: ensure that the crews understood the English language; familiarise the crew with the company's SMS using the company-provided software; and ensure that the persons nominated as masters were suitable for command. The delegation of responsibility in these areas was possibly a further consequence of the DP's workload.

As the crewing manager, the DP visited the agencies in the Ukraine, but did not formally audit their procedures, and was not aware of the content of the English courses provided. Although the company was placed in a difficult position by the ship owner with regard to the use of FCO, the DP still appeared to play no part in the vetting process. The company expected the master of *Jackie Moon*, who had never operated in North European waters, and who the company had never met, to take command and sail within several hours of arriving on board. The master's lack of knowledge regarding the use the watch alarm fitted, and the correct reporting procedure following the grounding, together with the standard of his spoken English, illustrate the pitfalls of this approach. Had the company interviewed the master, his weakness in English, the consequences of which could have been far more serious given the communication difficulties experienced by the coastguard, would have been highlighted. His knowledge of the SMS could have been tested before he was placed in command.

## 2.6 CONTRACT OF EMPLOYMENT

A contract of employment lays the foundations of the relationship between an individual and a ship manager. Although the terms of the chief officer's contract (**Annex A**) are not considered to have contributed to the accident on this occasion, it is nevertheless extremely disturbing that some of its conditions were potential impediments to safety management. In particular:

*8.C. In the case of the vessel's damage or damage of the vessel's equipment or unmaintaining of the vessel according to ISM manual is caused by the lack of care, neglect and fault of the seaman, he has to pay a penalty in the amount of 5 per cent of the sum of caused damage but not more than EURO 1.000,0 [sic].*



A clause of this nature potentially discourages free and open reporting. An individual who accidentally breaks a piece of equipment, or sees a piece of equipment or machinery that is not working, is unlikely to report the deficiency if he feels that he or others might be blamed and a fine imposed. This reluctance to report would inevitably be strengthened where, as in this contract of employment, a right of access to a trade union is denied. In such an environment, broken equipment, some of which might be safety related, is likely not to be repaired or replaced as quickly as it might otherwise have been. The equipment might therefore not be available for use when needed. The rights of employers to fine a seafarer for damages as contained in this contract of employment does not appear to be covered by any current ILO Conventions. Other conditions of the contract, however, did not comply with current ILO Conventions **(1.4.2)**.

Given the complexities of the status of the various ILO Conventions, and the differences in national laws, placing the responsibility of compliance solely with ship managers is unlikely to be successful in many instances. It therefore follows that the non-compliance of employment contracts with national law is not uncommon. While ship managers should endeavour to write contracts in accordance with the relevant national law, this is extremely difficult to achieve in the absence of guidance and verification by Administrations.

There are currently about sixty maritime ILO instruments. These conventions have not had the same success in terms of ratification by flag states, as IMO conventions. As a result, in 2000, the ILO started a major updating and consolidation of its conventions into one document. The format of the resulting document, which is still in draft, is based on the layout of STCW. The draft places a requirement on Administrations to issue a maritime labour certificate to their vessels, certifying that the living and working conditions of seafarers on a ship have been inspected and meet the requirements of national laws or regulations. The draft also puts a responsibility on Administrations to require their ships to carry a declaration of maritime labour compliance stating the national requirements for implementing the consolidated Convention for the working and living conditions for seafarers. The draft of the consolidated Convention also contains enforcement provisions. It is anticipated that the final document will be agreed and published by February 2006.

In the long term, the proposed consolidated ILO Convention will hopefully lead to the introduction of a formal procedure for ensuring the compliance of employment contracts with the national laws of the relevant flag states. This, however, will depend on the final wording of the Convention, and the extent to which it is ratified by the various administrations. In the short term, the onus of compliance lies with the flag states, ship owners and ship managers. A seafarer does not have to sign a contract of employment, but when he does, it is desirable that his rights under the national laws of the relevant administration are not diminished.

## SECTION 3 - CONCLUSIONS

### 3.1 SAFETY ISSUES

The following are the safety issues identified in the MAIB investigation. They are not listed in any order of priority.

1. It is almost certain that the chief officer fell asleep due to the effects of fatigue and his consumption of alcohol. [2.2]
2. For the chief officer to be over twice the legal limit when tested at 1320 on the day of the accident, he must have had in the region of 17 units of alcohol in his bloodstream when he took over the watch at 0100. [2.2]
3. There was a high probability that the chief officer became increasingly fatigued over the 4 months he was on board. His fatigue would have been exacerbated during the 24 hours before the accident when the chief officer only had 5.5 hours sleep. Of this, the 4 hours taken immediately before assuming the bridge watch were of questionable quality. [2.2]
4. The deliberate falsification of the hours of work and rest maintained on board *Jackie Moon* is a very strong indication that the ship was unable to keep to her commercial programme without contravening the ILO 180, or even the STCW 95 requirements regarding the hours of work and rest. [2.3]
5. Ships such as *Jackie Moon*, which do not have sufficient crew to allow sufficient rest; provide flexibility following the incapacitation of a member of the crew; or provide for an additional lookout when required, cast serious doubt over the effectiveness of the current process for the determination and approval of safe manning levels. [2.3]
6. The practice of not using an additional lookout during the hours of darkness had become the norm. [2.4]
7. Had a second man been present on the bridge on the morning of 1 September, it is probable he would have prevented the chief officer from falling asleep for a prolonged period, and therefore prevented the ship from grounding. [2.4]
8. The bridge watch alarm was not in use at the time of the accident. Neither the chief officer, nor the master knew how to operate it. [2.4]
9. Had the bridge watch alarm been in use, it would have activated in sufficient time to allow action to be taken to prevent the ship from grounding. [2.4]
10. As the master was not provided with any testing equipment, he was unable to effectively enforce the company's alcohol policy. As a consequence, the policy would have undoubtedly lost much of its deterrent value, particularly as no other random testing had been undertaken. [2.4]

11. Had the master laid down his instructions in written night orders, the likelihood of the chief officer misinterpreting his intentions would have been substantially decreased. [2.4]
12. The shortcomings identified in the procedures on board *Jackie Moon*, several of which had been previously identified by external audit, indicate that the need for continual improvement has not yet been embraced within ARPA Shipping. [2.5.1]
13. The limited resources available to the ship manager, and the workload of the DP, impaired the identification of the shortcomings in the procedures on board *Jackie Moon*. [2.5.1]
14. Some of the non conformities identified by Lloyd's Register of Shipping during their initial SMC audit in 2002, notably the recording of hours of rest and problems associated with language, had not been effectively dealt with on board by the time of the incident. [2.5.1]
15. The ship manager delegated responsibility for nearly all aspects of recruitment of its crews to three crewing agencies, and played no part in the vetting process. [2.5.2]
16. Had the company interviewed the master, his weakness in English would have been highlighted, and his knowledge of the SMS could have been tested before he was placed in command. [2.5.2]
17. It is extremely disturbing that elements within the chief officer's contract of employment were potential impediments to safety management. [2.6]
18. The employment contract used by ARPA Shipping probably does not comply with the applicable national laws on any of its vessels. [1.4.2]

## SECTION 4 - ACTION TAKEN

### The Marine Accident Investigation Branch:

- In its Bridge Watchkeeping Study published in July 2004, the MAIB recommended that the MCA take the conclusions of the study forward to the IMO with the aim of reviewing:

*2004/206 – The guidelines on safe manning to ensure that all merchant vessels over 500grt have a minimum of a master plus two bridge watchkeeping officers, unless specifically exempted for limited local operations as approved by the Administration.*

*2004/207 – The requirements of STCW 95 to change the emphasis with respect to the provision of a designated lookout to ensure that a lookout is provided on the bridge at all times, unless a positive decision is taken that, in view of daylight and good visibility, low traffic density and the vessel being well clear of navigational dangers, a sole watchkeeper would be able to fulfil the task.*

*2004/208 – The requirements of STCW 95 so that a bridge lookout can be more effectively utilised as an integral part of the bridge team.*

### The Maritime and Coastguard Agency:

- In response to the MAIB recommendation 2004/206, the MCA has arranged an independent survey into safe manning levels across Europe. The survey will include levels of manning according to vessel size and types required by different European administrations, and also a study of accident investigations where levels of manning might have been an influence. The study is programmed for completion by March 2005 and, depending on its outcome, a report will be sent to the IMO through the STCW sub-committee. The MCA also stated its intention to request that the issue of safe manning be placed on the work programme of the next IMO MSC.
- In response to MAIB recommendations 2004/207 and 208 the MCA intends to issue guidance on the use of lookouts in an MGN, and to take the recommendations forward to the IMO STCW sub-committee.

### ADOMS:

- Issued a circular letter (Circ.01-002-04) (**Annex G**) to shipping companies, and to all ships registered under the flag of Antigua and Barbuda, recommending that the provisions of ILO Conventions No 147 and ILO 180 be applied on board its vessels.
- Sent a letter to ARPA Shipping (**Annex H**) requiring the ship manager to review the effectiveness and spirit of application of its shore and on board ISM procedures, and to address the shortcomings identified during this investigation. It also required the company to ensure that the contracts of employment used on board the Administration's vessels were in accordance with national law.

**ARPA Shipping:**

- Terminated its contract with FCO, and replaced all crew supplied via FCO with crew supplied by the remaining two agencies used in the Ukraine.
- Arranged for some key procedures to be translated from English into Russian and posted in the accommodation spaces in *Jackie Moon*.



## **SECTION 5 - RECOMMENDATIONS**

**The Maritime and Coastguard Agency** is recommended to:

- 2005/127      Give increased priority to the recommendations made in the MAIB Bridge Watchkeeping Study aimed at combating fatigue among bridge watchkeepers operating in the short sea trade, and to improve the standard of lookout on all merchant vessels.
- 2005/128      Ensure that when conducting port state control inspections on ships with only two bridge watchkeeping officers, the hours of work and rest are carefully scrutinised, and where a surveyor considers that the regulatory rest requirements have not been met because of inadequate manning, serious consideration be given to detention of the vessel.

**The International Association of Classification Societies** is recommended to:

- 2005/129      Encourage its members to review the methods in which they ensure that actions taken to address non conformities identified during SMC and DOC audits are monitored thereby ensuring satisfactory “closure”, particularly within those organisations identified as lacking in commitment or resource to facilitate an effective safety management system.

**The Administrations of Malta, Bahamas, and St Vincent and the Grenadines** are recommended to:

- 2005/130      Validate the effectiveness of the shore and on board procedures for their ships managed by ARPA Shipping with regard to both content and spirit of application.
- 2005/131      Ensure that the contracts of employment used on board their ships managed by ARPA Shipping are in accordance with appropriate national laws.

**Marine Accident Investigation Branch**  
**March 2005**

Chief officer's contract of employment

This employment commences on the 09.04.2014 terminates after about 6+1 months

It is understood that the vessels of the employer are sailing on world wide trade in accordance with generality accepted customs of sailing areas.

### SALARY

2.  
In full and final settlement of all financial claims the employer shall be obliged to pay to the seaman for the previous month of pro rata a basic net salary monthly as a lumpsum of **USD 1850** all inclusive. (including overtime).

3.  
When calculating the wages it is understood the months to have 30 days. Increment of wages and improvement of living and working conditions of seaman employed with the employer of seaman employed on board the ship as per item 1 of this contract shall also be equally valid for the seaman according to the current tariff of the employer.

## PAYMENT

4.  
Payments will be done at the end of each month to the above nominated bank account after deduction of cash on board (cantine on board) and after deduction of private phone calls. The first month salary is kept by the Owners as an insurance in a case of necessary reimbursement for the expenses of seaman's repatriation, if he violated the rules of clause 22 item 2 and paid in the last month of the contract.

## NORMAL WORKING TIME AND OVERTIME WORK

5  
Normal working hours at sea and the port shall be eight hours a day and four hours on Saturdays. Work on Sunday and holidays shall be determined as per master's requirements and instructions and in accordance with international regulations in force.

6  
For any work performed in excess of eight hours - Monday to Friday - and four hours on Saturday or any work on Sundays or holidays shall be made payment in accordance with item 2 para. of this contract. This does not apply to regular watches on Sundays of holidays at sea nor to safety watches whilst in port, provided that the normal weekly working hours do not exceed 44 hours.

Free time between normal work should be as a rule at least 6 hours. The seaman shall not be paid out compensation for overtime work done in the case of emergency (danger), that directly affects the safety of the vessel, passengers and the crew, the necessary work for rendering assistance to other ship or persons in immediate danger, or for times spent at emergence, drills at sea.

## ACCOMMODATION AND MEALS

7  
The employer shall be obliged to provide the seaman with good and substantial and adequate accommodation with sufficient facilities.

## DUTIES OF THE SEAMAN

8  
The seaman is liable under the duties to execute at all obvious works as requested by the master and his superiors with due diligence and to the best of his ability in a satisfactory manner, provided such work is:  
A) Lawful and in accordance with this contract  
B) In the interest of the vessel, its crew, passenger and cargo.  
C) In case the vessel's damage or damage of vessel's equipment or unmaintaining of vessel according to ISM manual is caused by the lack of care, neglect and fault of seaman, he has to pay penalty in the amount of 5 per cent of sum of caused damage but not more than EURO 1.000,0.

## MEDICAL CARE AND SICKNESS WAGES

9.  
In the case of illness or injury of the seaman while the seaman is in service for the employer irrespective of whether at the moment of developing illness or getting injured the seaman was on board the ship or ashore provided that he has not consciously caused illness or injury or that illness or injury is not a consequence of penal premeditated action for which one may be liable to imprisonment respectively, the seaman shall be entitled to:

A) All necessary medical care, including hospitalization, medication and therapeutic aids.  
B) The seaman shall not be entitled to his basic salary as per this item if prior to conclusion of the contract he had known, or because of the nature of this illness he must know that he was not fit for service of the ship. In case of death of the seaman the cost for his transportation to the place of his burial, in accordance with the international law at the request of his relatives, shall be borne by the employer.

10  
The employer shall be obliged to provide the seaman with all ordinary dental treatment during all the time of employment, excluding artificial aids.

11.  
If the health condition of the seaman at a written request of the physician requires professional medical escort during repatriation the costs of the escort shall be borne by the employer.

12.

The employer shall be obliged to undertake usual measures for protection of property left on board the ship by the sick, injured or deceased seaman.

13.

If crew member is signed off and landed at any port for hospitalization, his salary is saved up to repatriation.

#### **INSURANCE AGAINST ACCIDENT WORK**

14.

The employer shall insure the seaman against death, missing at sea or disablement caused by accident at work for all the time during employment.

The insurance for paragraph 1 of this item shall be valid from the date of commencement of this contract until the date of signing off the ship or his direct repatriation until arrival at his provided the repatriation was accomplished immediately after termination of the employment.

The amount of the insurance shall be:

A) in case of death or missing at sea EURO. 51.000,0

B) in case of permanent disability of 100% EURO 102.200,0 or pro rata the determined disability.

15.

All claims against the insurance company as per item 14 must be governed by the conditions of the insurance policy.

#### **HOLIDAYS**

16.

The seaman is entitled to no days leave per each month of work which he shall have as a rule upon termination of the contract in agreement with the employer or master of the vessel it may be possible for the seaman to take a part of his leave during the time of his employment.

#### **COSTS OF EMBARKATION AND REPATRIATION**

17.

The employer shall bear the costs of reimburse respectively to the seaman the costs of transportation from the place of seaman's domicile to the port of employment, as well; as the costs for his meals overnight and miscellaneous expenses, during the time of transportation against submitted vouchers.

18.

The employer shall pay the seaman after termination of his contract the corresponding part of his basic monthly wages and shall arrange for and bear costs for his repatriation to his domicile. It is understood that costs of repatriation to the seaman's domicile shall be those costs of transportation and other costs as per item 17 of this contract. The payment for the seaman's leave shall be remitted to the a.m. account of the seaman by the employer, unless differently mutually agreed between the employer and the seaman.

#### **TERMINATION AND EXTENSION OF THE CONTRACT**

19.

If the two contracting parties agree, this contract may be extent upon expiry of the contract period of time as per item 1 paragraph 2. In order that the contract can be extended, one of the contracting parties shall inform the other party of his intention latest 30 days before expiry of this contract. The party to which the extension of the contract was offered shall be obliged to answer the offer in writing within 7 days. If the seaman wishes to terminate the contract prior to the date of expire, the seaman has to bear the costs of his repatriation as well as transportation costs of his substitute as per clause 16 here in above.

20.

In the case that the contract expires during the ship's stay at a Non - European - Port, the employer shall have the right to hold the seaman on board the ship until the ship has arrived a European port.

The employer may exploit this right for up to 30 days. If the ship fail to reach any European port within 30 days and the seaman does not a wish to extend the contract, the employer shall be obliged to make it possible for the seaman to return to his domicile and arrange and bear the costs of repatriation as per item 18 paragraph 2, at a port that the master of the employer considers to be convenient for repatriation.

21.

If the vessel is lost, either constructive or total, sold, laid up, and the employer is not in the position to provide the seaman with employment under the same conditions, the seaman and the employer may terminate this contract provided that the employer bears the costs of the seaman to directly repatriation to his domicile.



In the case that personal effects of the seaman were lost as previously mentioned the employer shall compensate to the seaman the value of his lost effects but in any case not more than EURO 500,00

#### **EXTRAORDINARY CASES OF TERMINATION OF CONTRACT**

22

The contract may be terminated before expiry in such extraordinary cases as follows:

1) By the seaman.

A) If the employer or its representative does not follow the contracted obligations.

B) If the vessel is sailing or making preparations to sail into waters where war operations are going on and the seaman has not given his written consent accepting such a voyage and under the condition that the employer is not in the position to offer employment on another ship to the seaman under same conditions.

C) If he carries illegal cargo.

D) If any way and without his being guilty the seaman's life, personal liberty and health have been continuously threatened beyond normal risks of seaman's profession.

In the case that the contract terminates because of the above stated reasons, the seaman is entitled to one month's extra net basis salary upon termination of employment and compensation for costs of his repatriation.

2) By the employer this contract may be terminated with immediate effect in case:

A) Refuse to perform a job, entrusted by the higher crew member.

B) Fight, theft, etc., or other law violation of the country of disposition.

C) The seaman was sentenced lawfully for a deed of smuggling, embezzlement, possession of narcotics or firearms.

D) Willful and/or permanent leaving of the vessel.

E) Repeated disobedience or disobedience in very grave circumstance (with very grave consequences)

F) Willful considerable destruction of the vessel's belonging, part of the vessel.

G) Drunkenness on duty or drunkenness that considerably spoils relations between crewmembers and customary order and discipline on the vessel.

H) The seaman approaches directly, or indirectly, or accepts any approach, directly or indirectly, from the International Workers Federation (which expression shall include any of its affiliates) with a view to varying the terms herein.

I) Bad quality of service, lack of experience and unsatisfactory qualification.

If the contract was terminated because of above mentioned cases of breach of provisions of this contract by the seamen, he alone shall bear the costs of his repatriation and also the costs of his replacement.

23

The employer or the master of the vessel respectively shall be obliged in all cases of termination of employment to issue a certificate in English to the seaman stating the reason and date of disembark

#### **FINAL PROVISION**

24

All terms and conditions in this contract have been explained by the crewing agent to the crewmember in his native language, and any questions the crewing member had, have been answered by the agent.

This contract is signed by crew member and [REDACTED], as crewing agents on behalf of Owners according to the general conditions of crewing agreement. Crewmember has right to be acquainted with terms of agreement between Agency and Owners. This contract has been issued in three copies, one of which is kept respectively by the seaman, the company and the master.

25

Any disputes that may arise from the contract should be resolved between the seaman and the employer directly. Should the parties not reach an agreement, Rotterdam should apply as place of jurisdiction and the case should be brought to the competent Law Court of Rotterdam.



Chief officer's activities 30 August to 1 September

## **Chief Officer's Diary of Activities 31 August/1 September 2004**

### **31 August**

0000-0530 Bed  
0530-1230 On deck for cargo discharge. 0900 called wife at home, received news father had died on 29/8/04 and had been buried 30/8/04  
1230-1300 Vessel sailed from Dundalk for Glasgow  
1300-1700 Completed paperwork in cabin.  
1700-1800 On the bridge speaking with master preparing for Glasgow  
1800-2100 In cabin (2000-2100 drinking brandy)  
2100-0000 Bed

### **1 September**

0000-0100 Bed  
0100-0400 On watch alone in bridge  
0400-0430 Asleep in bridge seat

Ship manager's circular regarding records of hours of work and rest





Circular No. 54

To master of mv Jacky Moon

Dear Sirs,

Herewith attached we send you a original watch schedule and work/rest hours schedule.

- Work/rest hours schedule is to be filled in for all crew members bearing in mind the contents of below extract from STCW 95 regulations, and be filed in a separate binder.
- Watch schedule to be filled out and posted as per below extract from STCW 95 regulations.

#### Fitness for duty

1. All persons who are assigned duty as officer in charge of a watch or as a rating forming part of a watch shall be provided a minimum of 10 hours of rest in any 24-hour period.
2. The hours of rest may be divided into no more than two periods, one of which shall be at least 6 hours in length.
3. The requirements for rest periods laid down in paragraphs 1 and 2 need not be maintained in the case of an emergency or drill or in other overriding operational conditions.
4. Notwithstanding the provisions of paragraphs 1 and 2, the minimum period of ten hours may be reduced to not less than 6 consecutive hours provided that any such reduction shall not extend beyond two days and not less than 70 hours of rest are provided each seven day period.
5. Administrations shall require that watch schedules be posted where they are easily accessible.

*In the recent past absence of these documents were noted as deficiencies during flag and port state controls on various of our vessels. Therefore, use these documents to avoid similar situations in future.*

Kind Regards,  
Arpa Shipping B.V.



The "Rotterdamse Cargadoorscondities", "Nederlandse Expeditievoorwaarden" and "Conditie van de Vereniging van Rotterdamse Stuwadoors" as lastly deposited with the Registry of the Rotterdam County Court shall apply.

# ARPA SHIPPING B.V.



Approved:

Master of mv

## Watcheschedule

The following Watch Plan is established for maintaining of a proper look-out:

a) open sea:

20.00 - 02.00	AB2	name: .....
02.00 - 08.00	AB1	name: .....

b) coastal waters or restricted visibility:

08.00 - 14.00	AB2	name:.....
14.00 - 20.00	AB1	name:.....
20.00 - 02.00	AB2	name:.....
02.00 - 08.00	AB1	name:.....

$m/v$ 

**Rang:**

[illegible]

Recorded hours of work and rest for the master and chief officer

Master

AUGUST 2004

Day/ hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
2	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
3	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
4	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
5	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
6	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
7	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
8	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
9	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
10	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
11	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
12	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
13	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
14	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
15	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
16	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
17	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
18	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
19	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
20	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
21	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
22	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
23	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
24	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
25	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
26	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
27	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
28	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
29	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
30	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W
31	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W

W - work

R - rest



# m/v "Jackie Moon"

Chief Officer AUGUST 2004

Day/ hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
2	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
3	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
4	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
5	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
6	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
7	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
8	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
9	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
10	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
11	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
12	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
13	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
14	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
15	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
16	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
17	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
18	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
19	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
20	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
21	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
22	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
23	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
24	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
25	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
26	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
27	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
28	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
29	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
30	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R
31	R	R	W	W	W	W	W	W	R	R	R	R	R	R	W	W	W	W	W	W	R	R	R	R



Record of Jackie Moon's port visits during August 2004

PORTS OF CALL M/V "JACKIE MOON"

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AUGUST 2004

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Port	Date of arrival	Date of departure
1. Tonney Charente	31/07 - 2004	02/08 - 2004
2. Belfast	06/08 - 2004	07/08 - 2004
3. Dagenham	11/08 - 2004	11/08 - 2004
4. Rotterdam	12/08 -2004	13/08 - 2004
5. Dundalk	17/08 - 2004	19/08 - 2004
6. Belfast	19/08 - 2004	19/08 - 2004
7. Newhaven	22/08 - 2004	23/08 - 2004
8. Rotterdam	24/08 - 2004	26/08 - 2004
9. Dundalk	30/08 - 2004	31/08 - 2004

Chief officer's familiarisation record

SAFETY MANUAL	File No.: 11.1	Page No.: 1/1	Rev. No.: 1	Date: 2004-05-19
TRAINING PROGRAM - DECK OFFICERS	Form No.: 11.1-1	Appr. By: AMvH	Prep. By: smsab	

This card will be used for all Deck Officers joining the ship.

With the assistance of the Master and the Company's visiting Superintendents and Representatives, it is the intention that the Officers shall become familiar with all the items listed on the card. This as soon as possible after joining the ship, preferably within one month.

When the Chief Officers or Master decides that the Officer is competent in a specific function on the check-list he will date and sign the appropriate item.

Before the Officer is competent with a specific function, he is not to be in sole charge of it.

Mark those items not applicable with n/a.


It is in the interest of each individual and the whole crew that this safety-training program is undertaken in an responsible manner.

NAME:	RANK: CH.OFFICER	
	Date	Initials
01. Knows general arrangement of the ship	10.04.04	
02. Knows operation and use of life-saving equipment, incl. inflatable life-rafts	10.04.04	
03. Knows operation and use of fire-extinguishing appliances	10.04.04	
04. Knows problems of hypothermia and first aid treatment for hypothermia	10.04.04	
05. Knows other appropriate first aid procedures	10.04.04	
09. Knows emergency organisation and procedures	10.04.04	
10. Knows Company's SMS	10.04.04	
11. Knows applicable SOLAS regulations	10.04.04	
12. Knows applicable MARPOL regulations	10.04.04	
13. Knows operation of cargo handling systems (cranes etc.)	10.04.04	
14. Knows operation of cargo hatch systems	10.04.04	
15. Knows ballast tank arrangement and operation of pumps and valves	10.04.04	
16. Understands cargo stowage limitations and restrictions	10.04.04	
17. Knows the dangers of enclosed spaces	10.04.04	
18. Knows the location and operation of oil spill equipment	10.04.04	
19. Knows how to raise alarm in an emergency	10.04.04	
20. Knows how and when to use safety equipment and protective clothing	10.04.04	
21. Participates in effective training of other crew members	10.04.04	
22. Participates in planned maintenance system	10.04.04	
23. Knows the Security Procedure and drills	05.06.04	

Completed

Date : 05.06.04	Name :
Rank : MASTER	Signature :

Antigua and Barbuda Department of Marine Services  
and Merchant Shipping circular 01-002-04

	<b>GOVERNMENT OF ANTIGUA AND BARBUDA</b> DEPARTMENT OF MARINE SERVICES AND MERCHAND SHIPPING (ADOMS)  <b>Circular 01-002-04</b>  <b>International Labour Organization (ILO) -  Convention 147 and 180</b>	Document	Circ. 01-002-04
		Revision	00
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		Reference	ILO C 180, P 147; Directors Directive 02-2002; Circular 01 001-98; Directive 1999/95/EC

**Circular letter to**

1. all Companies having registered their ships under the flag of Antigua and Barbuda W.I.
2. all ships registered under the flag of Antigua and Barbuda W.I.

**Recommendation for the application of ILO Conventions C147 and C180 on board ships flying the flag of Antigua & Barbuda.**

Ships registered in Antigua and Barbuda should in principle, comply with the ILO C 147/180 although Antigua and Barbuda is not party to those conventions. The requirements out of ILO C 147/180 are subject for inspection in several PSC MOUs.

Above all, Antigua and Barbuda flagged ships shall comply with the ADOMS Director's Directive 02-2002, dealing inter alia with hours of rest etc., and the ADOMS-Circular 01 001-98, which are based on Section A-VIII/1 of STCW 1978, as amended.

The "no more favourable treatment" clause in the "Directive 1999/95/EC of the European Parliament and of the Council", of 13 December 1999, clause 8, clearly outlines that:

*"..... ships flying the flag of a State which is not a party to ILO Convention No 180 or the Protocol to ILO Convention No 147 should not receive more favourable treatment than those flying the flag of a State which is party to either the Convention or Protocol or to both of them."*

That means any ship in European waters has to comply, and that Directive 1999/95/EC, clause 5, apply to all ships trading in EU-waters:

*"The purpose of this Directive is to apply the provisions of Directive 1999/63/EC which reflect the provisions of ILO Convention No 180, to any ship calling at a Community port, irrespective of the flag it flies in order to identify and remedy any situation which is manifestly hazardous for the safety or health of seafarers; however, Directive 1999/63/EC includes requirements which are not to be found in ILO Convention No 180 and which should not therefore be enforced on board ships not flying the flag of a Member State."*

Therefore, ships flying the flag of Antigua and Barbuda will also be judged under the same requirements as member ships.

Annex ILO C180, Seafarers' Hours of Work and the Manning of Ships Convention, 1996



Antigua and Barbuda Department of Marine Services and  
Merchant Shipping letter dated 15 December 2004



DEPARTMENT OF MARINE SERVICES AND MERCHANT SHIPPING  
ANTIGUA AND BARBUDA W.I.

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The Netherlands

By registered letter!

Oldenburg, the 15 December 2004

**Grounding of MV"Jackie Moon" off Dunoon, Scotland 1 September 2004**

During the investigation of the accident above, which was conducted jointly by the maritime Administration of Antigua and Barbuda and the MAIB of UK, shortcomings were highlighted in the safety management of the vessel.

It is considered that these shortcomings resulted from a lack of commitment and inadequate allocation of resources by ARPA Shipping.

Consequently, ARPA Shipping is required to review the effectiveness and spirit of application of the shore- and shipboard ISM procedures for the Antigua and Barbuda registered ships it manages. In particular, the following areas should be targeted:

1. The ability of crew to adhere to the STCW 95 requirements for rest periods, and the accuracy of the records maintained in this respect.
2. Adherence to the STCW 95 and COLREG 72 requirements for keeping an additional lookout on the bridge.
3. The knowledge and operation of bridge watch alarms where fitted.
4. The provision of means to police and enforce the promulgated drug and alcohol policy.
5. The procedures for the recruitment and vetting of crew.
6. The crews' understanding of the SMS manuals and procedures; and
7. The familiarisation of the crew with the vessel, her equipment, and operation.

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It was also highlighted during the investigation, that the contract of employment used by ARPA Shipping contained clauses such as:

*8.C. In case the vessel's damage or damage of the vessel's equipment or unmaintaining of vessel according to ISM manual is caused by the lack of care, neglect and fault of seaman, he has to pay penalty in the amount of 5 per cent of sum caused damage but not more than EURO 1.000,00.*

Such clauses are generally considered to be potential barriers to open reporting and therefore impediments to ship safety. The contract also stated that association with a trade union was grounds for the ship manager to terminate the contract. This is at variance with ILO Convention No 98 (Art. 1), which has been ratified by Antigua and Barbuda on the 03 February 1983.

ARPA Shipping is reminded that the contracts of employment used on board Antigua and Barbuda ships are to be in accordance with the relevant national laws.

The results of the company's review of ISM procedures, and the content of the contract of employment, will be examined during future Annual Safety Inspections by the maritime Administration of Antigua and Barbuda.

In addition, Lloyd's Register is kindly requested to verify the revised ISM procedures during the next regular intermediate shipboard audits on board vessels managed by ARPA Shipping B.V. and during the next initial ISM verification of the company, which has to take place until the 30 March 2005, latest.

Kind regards

Dept. of Marine Services and Merchant Shipping

signed for and on behalf of  
The Government of Antigua and Barbuda

cc: MAIB Southampton, UK, att. Mr. T. Brown MBE  
cc: Lloyd's Register UK, att. Mr. Molly  
cc: Lloyd's Register Rotterdam, NL, att. Mr. P.T. Graaf  
cc: Dept. of Marine Services and Merchant Shipping, Chief Investigator Capt. S. Ottinger  
cc: Dept. of Marine Services and Merchant Shipping, Director Capt. J. Wendler

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