



Accident Report
Miyunhe & Provider
Near Approach at the entrance
to Port of Napier on
13 May 2004



REPORT NO.: 04 3464
VESSEL NAME: *MIYUNHE & PROVIDER*

Casualty Details:

Date of Casualty: 13 May 2004
Time of Casualty: 0530 hours New Zealand Standard Time (NZST)
Casualty Type: Near Approach
Casualty Location: Entrance to Port of Napier
Weather Forecast Area: Portland
Investigator: Michael Eno, Chief Investigator of Accidents



REPORT NO.: 04 3464
VESSEL NAME: *MIYUNHE & PROVIDER*

Vessel Details:

Ship Name:	<i>Miyunhe</i>
Built:	2001
Ship Category:	Container Ship
Certified Operating Limit:	International
Overall Length (m):	182.87
Maximum Breadth:	27.6
Gross Tonnage:	16 738
Flag:	Panama
Registered Owner:	Miyunhe Maritime, Singapore
Ship Manager:	Cosco Cayman Fortune, Singapore
Classification Society:	American Bureau of Shipping



REPORT NO.: 04 3464

VESSEL NAME: *MIYUNHE & PROVIDER*

Vessel Details:

Ship Name:	<i>Provider</i>
Built:	1978
Ship Category:	Container Ship
Certified Operating Limit:	International
Overall Length (m):	243.41
Maximum Breadth:	30.60
Gross Tonnage:	30 575
Flag:	Liberia
Registered Owner:	Vega ShipHolding, Singapore
Ship Manager:	NYK Shipmanagement, Singapore
Classification Society:	Nippon Kaiji Kyokai



SUMMARY

Shortly before 0530 hours New Zealand Standard Time on 13 May 2004, the container vessel *Provider*, with a local Pilot on board, was approaching the entrance channel to the Port of Napier. At the same time, another container vessel, *Miyunhe*, which had been berthed in the Breakwater Harbour of the Port, was being conned outbound by another local Pilot along the axis of the entrance channel.

As *Provider* and *Miyunhe* were respectively approaching 'A' and 'B' buoys, that mark the entrance to the channel, dense fog was suddenly encountered. *Miyunhe* continued on her normal outbound track, passing 'B' buoy on her starboard hand. The Pilot of *Provider*, who was about to alter course to port to line up with the entrance channel leading beacons, elected to pass the starboard hand 'A' buoy on the vessel's port side so as to avoid a possible collision with the buoy and to maximize the passing distance with *Miyunhe*. The fog cleared as *Provider* passed 'A' buoy to port at a distance of about 15 metres.



Key Events

1.1 Evidence of the Pilot of *Provider*

- 1.1.1 At 1800 hours, New Zealand Standard Time (NZST) on 12 May 2004, the duty Pilot finished work. This was on the evening prior to this incident.
- 1.1.2 He subsequently attended the pilot office at the Port of Napier at 0000 hours on 13 May 2004, to bring *Brahman Express*, a small livestock carrier, into the Port. This vessel was due at the pilot boarding ground at 0100 hours. However, she was delayed some fifty minutes and the Pilot eventually left the Port on the pilot launch, at 0130 hours.
- 1.1.3 He boarded *Brahman Express* at 0150 hours. The vessel was later secured safely alongside No. 2 berth, at approximately 0245 hours. The Pilot returned to the pilots office, completed the necessary paperwork for the arrival of the next vessel, *Provider*, and then rested for about one hour.
- 1.1.4 The most recent weather report available to the Pilot during the early hours of 13 May, was a Blue Skies forecast, which had been issued at 1835 hours on Wednesday 12 May. This forecast made no mention of the possibility of fog.
- 1.1.5 *Provider* arrived off the Port of Napier at 0300 hours and drifted, awaiting a pilot. The Pilot was scheduled to board at 0500 hours. Another container vessel, *Miyunhe*, was scheduled to sail at 0500 hours. It was intended that *Provider* would enter the Port, after *Miyunhe* had cleared the entrance channel.
- 1.1.6 The Pilot left the office at 0430 hours to walk to the pilot launch. At this time, he noticed a wisp of fog or low cloud by the breakwater. For this reason, he called the Pilot of *Miyunhe*, who was in the pilots office, and asked him to bring the E-Sea Fix computer down to the pilot launch.
- 1.1.7 On the way out, on the pilot launch, the Pilot called *Provider* and asked if they had experienced any fog. The Master replied that a little bit had gone through but that it had cleared. The Master stated he could see all the shore lights clearly.
- 1.1.8 At 0500 hours, the Pilot boarded the vessel, a little to the north of No. 2 Pilot boarding area, situated to the north of Pania Reef. He had piloted this vessel many times before with the same Master. *Provider* had visited Napier at least thirty times previously.
- 1.1.9 The Pilot and Master exchanged a passage plan and vessel information. The Master had tested the ship's engines astern and crew were standing by the anchors. The Pilot set up the E-Sea Fix system. The VHF was set on channel 10, to monitor the progress of *Miyunhe*.
- 1.1.10 The Pilot set a course of 240°(T), towards the yellow special purposes buoy. The ship was on full ahead, giving a speed over the ground of 11.4 knots.
- 1.1.11 Just after boarding *Provider*, the Pilot received a call from *Miyunhe*, stating she was letting go. This meant there would be no delay in entering the Port, as it was anticipated that *Miyunhe* would clear the channel before *Provider*.
- 1.1.12 The visibility was clear. All the lights in the Port area and other shore lights were visible and there was no indication of any fog. Both radar sets and the echo sounder were operating satisfactorily.
- 1.1.13 At 0511 hours, main engine revolutions were reduced to half ahead, followed closely by a further reduction to slow ahead. At this time, *Miyunhe* was swinging off the berth but had not yet gathered headway.



- 1.1.14 At approximately 0513 hours, **Provider** passed the yellow special purposes buoy abeam to port, and her course was altered to 205°(T). The speed of the vessel was approximately 10 knots and reducing.
- 1.1.15 At 0516 hours, main engine revolutions were reduced to dead slow ahead. At 0518 hours, the main engine was stopped. **Provider** had good steerage way; her speed was approximately 8 knots over the ground.
- 1.1.16 At approximately 0518 hours, when **Provider** was about one mile from the breakwater at the entrance to the Port, **Miyunhe** was observed, both visually and by radar, passing the end of the breakwater. The Pilot expected **Miyunhe** to be well clear before **Provider** reached the entrance channel to the Port.
- 1.1.17 **Miyunhe** advised she was clear of the breakwater, that she had released the tugs and that VHF channel 10 was free for **Provider** to use to communicate with the tugs.
- 1.1.18 The first indication of fog occurred at approximately 0520 hours, when the lights in the Port area suddenly disappeared. The Pilot asked the Master for a radar range of the starboard hand “A” buoy, and then called **Miyunhe** to advise that **Provider** was to the east of the leads, steering 205°(T) and situated 3.5 cables from “A” buoy.
- 1.1.19 At this time, **Provider** should have commenced a swing to port to line up with the entrance channel leading beacons. The swing was delayed, however, whilst the Pilot changed mentally, from conning the vessel visually, to navigating, using the E-Sea Fix system. The Pilot did not refer to the ship’s radar at any time, however, the Master was observing the ship’s radar and advising the Pilot.
- 1.1.20 At approximately 0521 hours, the Pilot swung the bow of **Provider** to port, using full port rudder and half ahead on the main engine. The Pilot checked the rate of swing on the E-Sea Fix display and then moved to the port bridge wing to search for “A” buoy visually. He knew that the buoy was close ahead but he was not certain whether he could swing the bow of the vessel past the buoy, and pass it on the ‘correct’ starboard side of **Provider**.
- 1.1.21 The Pilot decided that the safest option was to run down to the leads, leaving “A” buoy to port. The green light on “A” buoy was visible through the fog and the Pilot steadied the vessel on a course of 135°(T), with “A” buoy bearing fine on the port bow. *[At the time of this incident, “A” buoy was not in the position shown on the chart extract, attached to this report. The position of the buoy changes slightly each time that it is re-laid after servicing. It’s position at the time of this incident, was approximately on the 11 metre sounding contour, very close to the line of the blue leads, which mark the 12 metre sounding contour.]*
- 1.1.22 The Pilot explained his actions to the Master and showed him the distance between “A” buoy and the 10 metre sounding contour of the adjacent bank, on the E-Sea Fix display. The distance was about 90 metres. The maximum breadth of the vessel was 32 metres.
- 1.1.24 The Pilot had never passed to the west of “A” buoy before, although this had been done previously by other Pilots when two ships were passing close to the channel entrance.
- 1.1.25 The tug, **Ahuriri**, manoeuvred close alongside **Provider**. Notwithstanding its proximity, the tugmaster reported that the fog was so thick he could not see the ship. The Pilot, however, could see the glow of the tug’s lights. The tugmaster asked if the Pilot could see “A” buoy. The Pilot replied in the affirmative, and said he knew it was on the ‘wrong,’ port side of **Provider**.
- 1.1.26 At approximately 0525 hours, **Miyunhe** advised that she was passing the port hand “B” buoy *(on her starboard side)*. The Pilot of **Provider** knew from his own position, to the west of “A” buoy, that there was plenty of sea room between the two vessels, even though he did not check the distance of her echo by radar. The Pilot did not see **Miyunhe** but heard her fog signal abaft the beam.



- 1.1.27 The Pilot retained visual contact with “A” buoy. At about 0528 hours, the fog cleared, as **Provider** passed the buoy at a distance of about 15 metres on her port side.
- 1.1.28 At 0529 hours, the tug **Mangatea** made fast aft, as **Provider** cleared “A” buoy. At 0531 hours, **Ahuriri** made fast forward, as the vessel was swinging into the entrance channel. The vessel subsequently made fast at No. 5 berth, without further incident, and was secure at 0554 hours.
- 1.1.29 After berthing, the Pilot ran through the E-Sea Fix record with the Master who was satisfied with the pilotage and did not wish to make a report.
- 1.1.30 The Pilot believed the closest approach between the two vessels was between 3-5 cables. The Master reported that there was a minimum dynamic under keel clearance of two metres at all times. [If “A” buoy had been in the charted position shown on *Appendix 1* (which was the case 12 months previously), **Provider** would have passed the buoy ‘correctly’ on her starboard side.

1.2 Evidence of the Captain of **Provider**

- 1.2.1 The Captain of **Provider** did not provide an official statement. The following is an extract from the vessel’s log book:

“0524 During vessel approach under pilotage of Captain Neill at Napier due to a late manoeuvre vessel resulted in passing starboard hand buoy ‘A’ on vessel’s port side.”

1.3 Evidence of the Pilot of **Miyunhe**

- 1.3.1 At about 0400 hours, the Pilot arrived at the pilots office, Napier. He noticed that the visibility was probably between one and three miles. It was slightly hazy with the possibility of the onset of fog.
- 1.3.2 At 0455 hours, the Pilot boarded **Miyunhe** at No. 5 berth. The vessel’s moorings were singled up. At 0505 hours, as the crew was letting go, the Pilot called **Provider** to advise what was happening. He could see the lights of **Provider** to the north, in the vicinity of North Pania cardinal mark. Visibility was excellent at that time. There was a light breeze. The Pilot expected this would clear any remaining patches of fog.
- 1.3.3 **Miyunhe** swung off the berth and proceeded outwards, letting go the two tugs as they passed the northern end of No. 5 berth. The Pilot told **Provider** that the tugs had been let go and that VHF channel 10, used for working with the tugs, was clear for **Provider** to use. It was at this point that fog encroached on the channel. The Pilot advised **Provider** that he would report when **Miyunhe** had cleared “B” buoy.
- 1.3.4 The Pilot expected to pass **Provider** between “B” Buoy and the line of the South Pania Leads. It is the practice of the Port, for inward bound vessels under pilotage to ‘give way’ and provide adequate sea room for outward bound vessels that are under pilotage.
- 1.3.5 As the bow of **Miyunhe** passed the western extremity of the breakwater, the fog came in quite thick and the Pilot lost sight of “A” buoy. “C” buoy was indistinct but still visible and the Pilot never lost sight of it. Visibility was about three cables.
- 1.3.6 The speed of **Miyunhe** was 2½-3 knots, when turning round the western extremity of the breakwater, increasing to 5-6 knots once in the entrance channel. The vessel was slightly to starboard of the centre of this channel. The radar presented a clear picture of the buoys and the channel. The Pilot did not sight “B” buoy visually until passing it abeam to starboard.



- 1.3.7 On passing “B” buoy, the Pilot told *Provider* and altered course to 035°(T). *Miyunhe* was slightly to the east of the leads and she passed “B” buoy at a distance of about one cable. Although the Pilot must have observed the echo of *Provider* on the radar, he had no recollection of doing so. He was concentrating on the navigation of his own vessel and on the position of the two tugs, which were in close proximity. He was aware of the presence of *Provider* to the northwest, but does not recall seeing her echo on radar, which was set on 0.75 mile range. Her position caused him no concern.
- 1.3.8 At 0530 hours, the Pilot disembarked in a position just to the south of South Pania leads. The fog was just clearing at this time. The vessel’s speed was 6-7 knots. The Pilot returned on the pilot launch, *Pania*, and passed *Provider* just south of “A” buoy.

1.4 Evidence of the Captain of *Miyunhe*

- 1.4.1 The following is a statement given by the Master of *Miyunhe*.

“The Master advise (sic) that the ship was lying starboard side to berth No. 5 North in Napier. After the Pilot boarded they discussed the information on the pilot card and the Pilot explained how he intended to manoeuvre the ship.

The crew went to stations, the Chief Officer forward and the Second Officer aft. Tugs were made fast on the port shoulder and port quarter. There were four persons on the bridge: Master, Pilot, Third Officer and Helmsman. A second bridge-watch seaman had been sent to rig the pilot ladder.

Miyunhe left the berth stern-first and turned to starboard (clockwise) before heading out. Visibility was clear. They passed the breakwater to starboard and turned to starboard. The engine was put to slow ahead. This gave five knots but the ship had not gathered speed.

The Pilot and Master were at the front of the bridge near the ship’s centre line, moving to check the radar from time to time. There were two radars, one on 1.5 miles range and the other on a longer range. The Third Mate was at the engine controls on the port side and the Helmsman at the wheel on the centre line.

The fog came in at about the time *Miyunhe* reached “B” buoy. Another ship was proceeding inwards and the pilots spoke to each other on VHF radio. The Master observed the other ship on radar but it was not visible when the ships passed port to port. He did not recall the minimum passing distance. The ships passed without incident.

The Pilot ordered *Miyunhe* to steer 030°(T) and it proceeded along the outward passage channel. The fog had lifted and it was clear again before the Pilot disembarked. The fog lasted only a short time – possibly 5 to 10 minutes.”



Key Conditions

2.1 Details of the Pilot of *Provider*

2.1.1 The Pilot of *Provider* went to sea in 1972 with the Union Steam Ship Company. He also worked for Blue Star Line and Te Aroha Shipping Company before obtaining a New Zealand Foreign Going Master's Certificate of Competency in 1981. He also holds an Engineer Restricted Limit Motorship Certificate of Competency and has a Master in Business Administration, Maritime Management degree.

2.1.2 He was a Master with Sofrana Pacific Line for eighteen months before joining Marlborough Harbour Board as Deputy Harbourmaster and Pilot in 1985. He subsequently worked as a Pilot with the Taranaki Harbour Board for nine years, followed by five years as Pilot at Whangarei and Marsden Point, handling super tankers of up to 150 000 tonnes deadweight.

2.1.3 He joined Port of Napier Limited as Pilot in 2001, gaining his Unrestricted Pilot's Licence in August 2001. He completed a Bridge Resource Management Course in 1999 and an Advanced Marine Pilot's Course in 2001.

2.2 Details of Master of *Provider*

2.2.1 The Master of the *Provider*, is of Indian nationality and holds a Master Foreign Going Certificate of Competency. He has 19 years experience at sea and *Provider* is his first command.

2.3 Particulars of *Provider*

2.3.1

• Type of Vessel	Container
• Built	Mitsubishi Heavy Industry, Japan
• Date of Delivery	December 1978
• Port of Registry	Monrovia, Liberia
• Official Number	8587
• Length Overall	243.41 metres
• Breadth	30.60 metres
• Maximum Draught	10.500 metres
• Gross Tonnage	30 575 tonnes
• Engine	Single Mitsubishi Diesel 24 639kW
• Service Speed	22.4 knots
• Nationality of Crew	Indian

2.3.2 *Provider* has been lengthened during her service and is known to handle sluggishly at slow speeds.

2.4 Details of the Pilot of *Miyunhe*

2.4.1 The Pilot has 15 years experience at sea, which includes 1½ years in command. He holds a Class I Master's Certificate of Competency.

2.4.2 He has been employed as a Tugmaster then Pilot in Napier for 2½ years and holds a Class A Pilot's Licence. He completed a Bridge Resource Management Course in 2003 and an Advanced Marine Pilot's Course in 2004.



2.4.3 He has worked on the Launceston simulator on three occasions. On the last simulation, fog was introduced, prior to reaching the yellow special purposes buoy, during an approach to the Port. The Pilot abandoned the approach after the onset of fog. Blind pilotage was not simulated in or close to the entrance channel, when the vessel was past the 'point of no return' and committed to entering the Port.

2.5 Details of the Master of *Miyunhe*

2.5.1 The Master of *Miyunhe*, a Chinese national, holds a Certificate as Master of Ships of more than 3 000 gross tonnage, issued by the Shanghai Maritime Safety Administration of the Peoples Republic of China.

2.6 Particulars of *Miyunhe*

2.6.1

• Type of Vessel	Container
• Built	Imbari Ship Building Company, Japan
• Date of Delivery	28 March 2001
• Port of Registry	Panama
• Official Number	27829
• Length Overall	182.87metres
• Breadth	27.6 metres
• Maximum Draught	10.116 metres
• Gross Tonnage	16 738 tonnes
• Engine	Single B&W 11 768kW
• Service Speed	19.1 knots
• Nationality of Crew	Peoples Republic of China



2.7 Radar Simulation

2.7.1 The Pilot of *Provider* had worked on the Launceston Radar Simulator, Tasmania, Australia. He had attended approximately six times, conducting simulations for the ports of Taranaki (Westgate), Whangarei and Port of Napier. In 2003, he completed a single two-hour session, shared between three pilots, on blind pilotage on the simulator for the Port of Napier. The simulation involved encountering fog on an inward bound vessel when approaching or passing the yellow special purposes buoy, which is generally regarded as the abort point when entering the Port. Blind pilotage, however, had not been simulated past the abort point and in or about the entrance channel to the Breakwater Harbour at Port of Napier.

2.8 Fog in Napier

2.8.1 The Admiralty Sailing Directions, New Zealand Pilot, states that fog occurs in Napier on an average of 11 days a year.

2.8.2 The Pilot stated that fog once or twice a year would be considered normal in Napier but he had experienced fog on four or five occasions in the previous six months.

2.8.3 The procedure for the Port is to delay the arrival or departure of a vessel if fog is present until such time as the fog clears.

2.8.4 The Marine Standing Orders for the Port of Napier has the following section covering reduced visibility:

“Visibility

Blind pilotage must not be attempted.

All vessels subject to pilotage will not transit the port limits when visibility is below a minimum of 0.5 nautical miles.

Vessels >200m LOA or >10m draft will not transit the port limits when visibility is below a minimum of 0.75 nautical miles.

The ship’s bridge team should consider the following factors when encountering restricted visibility.

- Abort the pilotage
- Holding the ship in a safe position until conditions improve
- Proceed to a safer position
- Use pilot vessel or tug as a guide
- Utilise electronic pilot aids
- Reduce speed
- Plot other vessels
- Condition/performance of ships radars and ascertain range scale in use.”



2.9 Fatigue

2.9.1 Following a week off duty the Pilot of *Provider* commenced his duty period at 0800 hours on 11 May 2004. His hours of work, prior to the incident, are tabled below. Times indicated are the times of leaving and arriving home.

Date	Start	Finish	Start	Finish
Tue 11 May	2200	2359		
Wed 12 May	1200	1800	2345	2400
Thu 13 May	0000	0930		

2.9.2 The Pilot reported that he had “solid sleep” between 2130 hours and 2340 hours on 12 May and was able to relax from 0300 hours to 0400 hours on 13 May. This was his first early morning call and he was not feeling tired.

2.9.3 The pilots at Napier manage fatigue using a program called “Sleep 61” which takes account of the circadian rhythm effect. They also monitor each other.

2.10 Under Keel Clearance (UKC)

2.10.1 The predicted tides for Napier on Thursday 13 May were as follows:

HW	0033 hours	1.7m
LW	0650 hours	0.1m
HW	1257 hours	1.6m
LW	1910 hours	0.2m

2.10.2 The static under keel clearance calculation, as shown on the passage plan, for the arrival of *Provider* is set out below.

Dredged depth	12.00m
Predicted height of tide	<u>0.35m</u>
Total depth	12.35m
Draft	<u>8.30m</u>
Static UKC	<u>4.05m</u>

2.10.3 The predicted low water was +0.1 metres. Actual low water, as recorded by the tide gauge, was +0.3 metres. The predicted height of tide at the time of the vessel's passage was +0.35 metres. The actual height was +0.5 metres.

2.10.4 The Master of *Provider* reported that the minimum dynamic under keel clearance during the transit was +2 metres.



Cause

Human Factor

<input type="checkbox"/> Failure to comply with regulations	<input type="checkbox"/> Drugs & Alcohol	<input type="checkbox"/> Overloading
<input type="checkbox"/> Failure to obtain ships position or course	<input checked="" type="checkbox"/> Fatigue	<input type="checkbox"/> Physiological
<input type="checkbox"/> Improper watchkeeping or lookout	<input type="checkbox"/> Lack of knowledge	<input checked="" type="checkbox"/> Ship Handling
<input type="checkbox"/> Misconduct/Negligence	<input type="checkbox"/> Error of judgement	<input type="checkbox"/> Other . . .

Environmental Factor

<input checked="" type="checkbox"/> Adverse weather	<input type="checkbox"/> Debris	<input type="checkbox"/> Ice	<input type="checkbox"/> Navigation hazard
<input type="checkbox"/> Adverse current	<input type="checkbox"/> Submerged object	<input type="checkbox"/> Lightning	<input type="checkbox"/> Other . . .

Technical Factor

<input type="checkbox"/> Structural failure	<input type="checkbox"/> Wear & tear	<input type="checkbox"/> Steering failure
<input type="checkbox"/> Mechanical failure	<input type="checkbox"/> Improper welding	<input type="checkbox"/> Inadequate firefighting/lifesaving
<input type="checkbox"/> Electrical failure	<input type="checkbox"/> Inadequate maintenance	<input type="checkbox"/> Insufficient fuel
<input type="checkbox"/> Corrosion	<input type="checkbox"/> Inadequate stability	<input type="checkbox"/> Other . . .

- 4.1 The container vessel *Provider* was suddenly beset by dense fog at a critical time in her approach to the Port of Napier.
- 4.2 Whilst transferring from conning the vessel visually, to navigation, using the E-Sea Fix computer, the Pilot missed the turn onto the entrance channel leads. In turning late, the Pilot decided that the safest course of action was to pass on the 'wrong' side of "A" buoy.



Opinions & Recommendations

5.1 Conduct of Pilotage

- 5.1.1 **Provider** was beset by dense fog at a critical point in the pilotage. The turn to port onto the leading line was delayed whilst the Pilot re-orientated himself. In making the delayed turn, the Pilot was not certain that he would clear "A" Buoy. In order to avoid a possible collision with "A" Buoy, the Pilot elected to pass the wrong side of the Buoy. He discussed this decision with the vessel's Master.
- 5.1.2 Passing to the west of "A" Buoy would not be considered a desirable action in 'ordinary circumstances'. The sudden onset of dense fog at such a point in the pilotage cannot be considered to be 'ordinary circumstances'. There was sufficient room and depth of water for the vessel to pass to the west of "A" Buoy with reasonable safety.
- 5.1.3 Whilst appreciating that both pilots were satisfied the two vessels would pass each other safely, neither was fully aware of the exact position of each vessel in relation to the other. The Bridge Procedures Guide, published by the International Chamber of Shipping, sets out the requirements of good radar practice, including the need to closely monitor the navigation of other vessels during times of restricted visibility. Moreover, the Port of Napier Marine Standing Orders required vessels to be plotted. Pilots should monitor the radar themselves in restricted visibility or failing that, instruct the officer of the watch to do so, and keep the pilot fully advised of developments. When fog set in the Master and Officer of the Watch of **Provider** monitored the two radar sets and advised the Pilot. However, the Pilot was unaware of the closest point of approach (CPA) of **Miyunhe** at the time. He later calculated that the CPA was approximately 0.5 miles.



5.2 Radar Simulation

- 5.2.1 The Pilot had simulated fog on the Launceston simulator for a vessel arriving at Napier, but only up to the position of the yellow special purposes buoy. There had been no simulation exercises for the sudden onset of fog when a vessel was committed to the entrance channel. Neither had there been simulation of emergency manoeuvres to abort the approach when a vessel was close to "A" Buoy.
- 5.2.2 Similarly, there had been no simulation of suddenly experiencing fog when a vessel was manoeuvring to exit the port.
- 5.2.3 It is recommended that Napier Pilots simulate the sudden onset of fog at all stages of the pilotage. It is further recommended that they simulate emergency manoeuvres to abort an approach to the channel when close to "A" Buoy.

5.3 Fatigue

- 5.3.1 The Pilot worked from 2345 hours on Wednesday 12 May through to 0930 hours on Thursday 13 May, after approximately four hours rest and two hours sleep. On this basis, and given this incident occurred at the time of day, when the body's circadian rhythm is at or close to its lowest, that fatigue would be likely to impact on the pilot's decision making ability.
- 5.3.2 It is recommended therefore, that pilots at Napier review their use of the current fatigue management program, with a view to reducing the impact of fatigue, so far as is reasonably practicable, both on their work performance and health.

5.3.3 It is further recommended that Port of Napier Management maintain an overview of pilots working hours, and their management of fatigue, to ensure that the fatigue management program operates satisfactorily. This is particularly important during busy periods when changes in ships programmed movement times can significantly disrupt fatigue management planning.

5.4 Marine Standing Orders

5.4.1 The Marine Standing Orders define visibility limits for vessels transiting the port limits. This is laudable and it is appropriate to apply these rules to a vessel alongside a berth or at a reasonable distance to seaward of the entrance channel.

5.4.2 However, it is neither possible nor desirable to produce rigid rules to cover a situation where vessels are manoeuvring within, or close to, the port limits, and experience the sudden onset of fog. The pilots should be experienced and trained to make on the spot decisions, taking account of all factors pertaining at the time.

5.4.3 It is recommended that after gaining experience with radar simulation, the pilots discuss guide lines for ship manoeuvring within and in close proximity to the port limits in emergency situations, including the sudden onset of fog.

5.4.4 The Marine Standing Orders make no mention of separation between inward and outward bound vessels.

5.4.5 In view of the above, it is recommended that the pilots discuss guidelines for such separation and that the Port of Napier Management monitor the effectiveness of those guidelines.

