Coroners Act 1996
[Section 26(1)]

Western *Australia*

RECORD OF INVESTIGATION INTO DEATH

Ref: 03/15

I, Sarah Helen Linton, Coroner, having investigated the suspected death of ***Samuel Eya LEOPOLDO*** *with an inquest held at the* ***Perth Coroner's Court, Court 51, CLC Building, 501 Hay Street, Perth****, on* ***23 January 2015*** *find that the death of* ***Samuel Eya LEOPOLDO*** *has been established beyond all reasonable doubt, that the identity of the deceased person was* ***Samuel Eya LEOPOLDO*** *and that death occurred on or about* ***17 November 2011*** *in* ***sea, approximately three nautical miles west of Rottnest Island off the port of Fremantle, Western Australia (Latitude 32° 00.85' South, Longitude 115° 23.95' East)*** *in the following circumstances -*

Counsel Appearing:

Sergeant L Housiaux assisting the Coroner
Mr P Hopwood appearing on behalf of Allseas Marine S.A
Mr J Taylor appearing on behalf of the Australian Transport Safety Bureau

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INTRODUCTION

1. On 17 November 2011, Samuel Leopoldo fell overboard from the container ship MSC Siena near Rottnest Island off the port of Fremantle, Western Australia. Despite extensive search efforts, his body has never been found.

2. On 14 April 2012, Mr Leopoldo's brother, Lloyd Leopoldo, requested on behalf of his mother that the State Coroner inquire into the circumstances surrounding Mr Leopoldo's disappearance and suspected death.

3. In the context of the information provided by Mr Leopoldo in the email, the Acting State Coroner considered that there was reasonable cause to suspect that the deceased had died and that his death was a reportable death.

4. By letter dated 2 May 2012 to the Commissioner of Police, the Acting State Coroner directed under s 23(1) of the *Coroner's Act 1996* (WA) that the suspected death of Mr Leopoldo be investigated.

5. The subsequent investigation was carried out by Senior Constable Male as a member of the Missing Persons Team of the Major Crime Squad and a report was prepared for the Coroner.[1]

6. Pursuant to s 23(2) of the Act, an inquest was then required to be held in order to determine whether the death could be established beyond all reasonable doubt.

7. I held an inquest into the suspected death of Mr Leopoldo at the Perth Coroner's Court on 23 January 2015.

8. The inquest focused primarily on determining whether the death of Mr Leopoldo could be established to my satisfaction, beyond reasonable doubt. In addition,

[1] Exhibit 1.

evidence was heard about how safety issues raised during the investigation into Mr Leopoldo's death have been addressed by his employer, Allseas Marine.

9. The documentary evidence comprised a report from the investigating officer, Senior Constable Male,[2] with relevant attachments, including the Australian Transport Safety Bureau (ATSB) Safety Report,[3] and a report from Allseas Marine with annexures.[4] The report from Allseas Marine, signed by Mr Michael Bodouroglou, the Managing Director and Sole Owner of Allseas Marine, was provided at a very late stage in the proceedings (days before the inquest hearing). While the timing of the report was not ideal from the court's perspective, I acknowledge that the contents of the report were comprehensive and of considerable use to me in making my findings.

10. Oral testimony was heard from Senior Constable Male and the ATSB investigator Mr Chaudhri.

11. This evidence formed the basis for the facts found below.

MR LEOPOLDO

12. Mr Leopoldo was born on 6 December 1983 in Sinacaban, Misamis Occidental, Philippines. He was the youngest of four siblings.[5]

13. He completed his Bachelor of Science Marine Transportation (BAMT Nautical) in 2003 at the Misamis Institute of Technology[6] and was registered as an Able Seaman in the Republic of the Philippines.[7]

[2] Exhibit 1.
[3] Exhibit 1, Tab 12.
[4] Exhibit 2.
[5] Exhibit 1, Tab 2, 7.
[6] Exhibit 1, Tab 2, 7.
[7] Exhibit 1, Tab 14, Seafarer's Registration Certificate.

14. He first went to sea in May 2005 as a deck cadet and then had a number of assignments as an Ordinary Seaman before he was employed as an Ordinary Seaman by Allseas Marine S.A (Allseas Marine) in March 2011.[8]

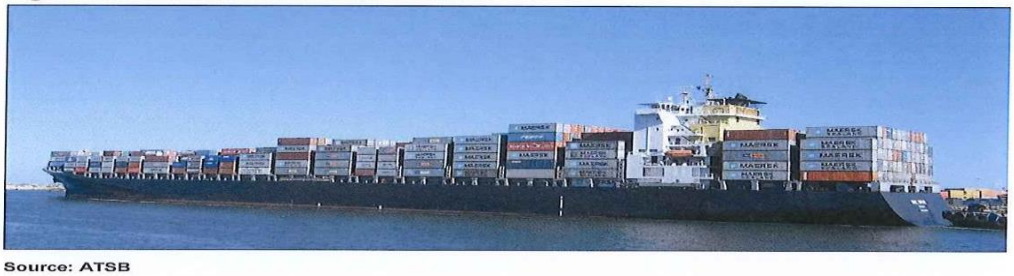
15. Mr Leopoldo was single and when not at sea he resided at Sinacaban, Misamis Occidental in the Philippines.[9] He was described to police as being of medium to large height and build.[10] He had no known medical conditions and had been declared fit for sea duty on 4 March 2011.[11] He was of reasonable fitness and was able to swim.[12]

THE MSC SIENA

16. Allseas Marine is a company incorporated in Greece. It operates a fleet of approximately twenty bulk carriers and nine container vessels, with a number of additional vessels currently under construction.[13] One of the container ships operated by Allseas Marine is the MSC Siena.

17. The MSC Siena is a 290 metre long, 57 000 tonne container ship. It was built in 2006 and had been managed by Allseas Marine since May 2011, six months before the incident.[14]

Figure 1: *MSC Siena* in Fremantle harbour



Source: ATSB

Figure 1 - MSC Siena in Fremantle Harbour

[8] Exhibit 2, Tab 1A.
[9] Exhibit 1, Tab 2, 7.
[10] Exhibit 1, Tab 6, noting his medical examination for Allseas Marine recorded his height as 171.5 cm and his weight as 85 kg – Exhibit 2, Tab 1B, Medical Examination Certificate.
[11] Exhibit 2, Tab 1B, Medical Examination Certificate.
[12] Exhibit 1, Tab 2, 12 and Tab 4 [3.1]
[13] Exhibit 2, Tab 1 [1.1].
[14] Exhibit 1, Tab 2, 2 and Tab 12, 6.

18. As operator of the MSC Siena, Allseas Marine was responsible for appointing and employing the vessel's crew, training the vessel's crew, and establishing and implementing the safety management system governing work on board the vessel.[15]

19. Mr Leopoldo joined the MSC Siena on 18 May 2011 in Brisbane, Australia, and had been working on the container vessel for approximately six months at the time he went missing.[16] He had undergone a training course prior to joining the MSC Siena, including "working at height training" on 28 March 2011.[17] Arrestors and safety harness use form part of this training.[18]

20. In addition to Mr Leopoldo, the ship's crew was comprised of 23 other people, all of whom were appropriately qualified for their positions.[19]

THE FALL INTO THE SEA

21. On 17 November 2011, the MSC Siena was in the final stages of its passage from Melbourne, Victoria to Fremantle port, Western Australia.[20] The ship was travelling in a north easterly direction at a speed of 15 knots near Rottnest Island off the port of Fremantle.

22. When they were about 20 nautical miles out from Fremantle port they began preparations to take on a harbour pilot so that the vessel could enter the port. A ladder is required to transfer the pilot between the pilot boat and the ship. The MSC Siena's usual freeboard (vertical distance between the waterline and the main ship's deck) meant that a combination accommodation ladder and a pilot ladder were used for that purpose.[21]

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[15] Exhibit 2, Tab 1 [1.3].
[16] Exhibit 1, Tab 2, 7 and Tab 8 [43]; Exhibit 2, Tab 1 [2.1] – [2.4].
[17] Exhibit 2, Tab 1 [2.3] – [2.4], Tab 1B - In-House Training Record.
[18] Exhibit 2, Tab 1 [2.5].
[19] Exhibit 1, Tab 10 and Tab 12, 6.
[20] Exhibit 1, Tab 2, 2.
[21] Exhibit 1, Tab 12, 6 and 8.

23. The ladder system is retracted when at sea or while in port, so it needs to be set up or rigged when approaching port.[22] The crew had carried out the task more than 30 times in the two months before this incident.[23]

24. Shortly after 11.00 am, Mr Leopoldo and three other crew members were tasked with preparing the combination ladder and pilot ladder. At that time, the weather was observed to be rough,[24] with rough seas (2.5 – 4 m waves), a moderate swell, strong winds (28 to 33 knots), and slightly overcast.[25]

25. The pilot was due to board the ship at 12.30pm,[26] so they had an hour before they had to have the ladders in place (according to the bosun of the ship they had to put the ladders down about half an hour before the meeting).[27]

26. Rigging the combination accommodation and pilot ladder requires a crewmember to work over the side of the accommodation ladder to secure the pilot ladder.[28] This is considered a hazardous task, due to the risk of falling overboard while rigging it, and requires specific training.[29] Exposure to rough weather when rigging the combination ladder increases the risk and difficulty of the task.[30]

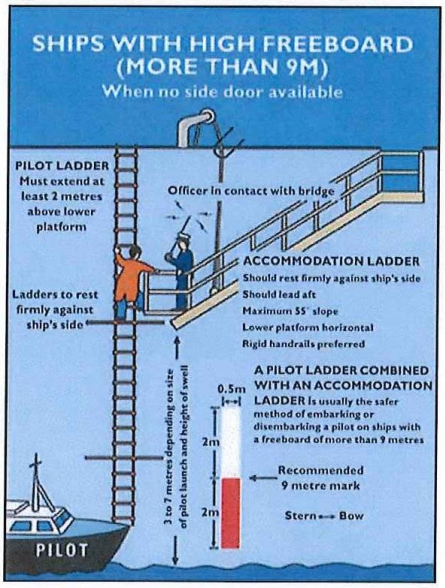
27. In order to reduce the risk, any person working over the side must be appropriately tethered to a strong point on the ship. This is to ensure that in the case of a slip, the person does not fall overboard, is not seriously injured and can be safely recovered.[31] Tethering equipment

[22] Exhibit 2, Tab 3, 2.
[23] Exhibit 1, Tab 12, 8.
[24] Exhibit 1, Tab 11, 1.
[25] Exhibit 1, Tab 4. 9 and Tab 8 [11], Tab 12, 1.
[26] Exhibit 1, Tab 2, 2.
[27] Exhibit 1, Tab 7 [5].
[28] Exhibit 1, Tab 12, 8.
[29] Exhibit 1, Tab 2, 2 and Tab 12, 8.
[30] Exhibit 1, Tab 12, 8.
[31] Exhibit 1, Tab 12, 8.

generally includes a full body safety harness connected to a fall arrestor secured to a strong point.[32]

28. Sometime after 11.00 am, the bosun of the ship, Mr Edgardo Eran, began to prepare the combination accommodation and pilot ladder with Mr Leopoldo and two other crew members, Ordinary Seaman Jake Lorenana and Deck Cadet Zammy Millare. The ladder was positioned amidships on the port side of the ship, with its lowest step intended to be 2.5 metres above the waterline, as part of the normal operating procedures.[33] Mr Leopoldo was assigned the task of going down the combination ladder over the side of the ship to secure the accommodation and pilot ladder.[34]

Figure 6: Combination pilot ladder poster



Source: International Maritime Pilot's Association

Figure 2 - Combination Ladder

29. It was agreed by witnesses that at the time that Mr Leopoldo went to complete this task, he was wearing green overalls with reflective tapes on the arms and legs, black safety boots and a white safety helmet.[35]

30. There was some confusion in the reports as to whether he was wearing a life jacket. The bosun recalled that Mr Leopoldo was wearing a blue manual inflatable life jacket.[36] He described it as an automatic inflation type of vest, which can also be manually inflated by the wearer.[37] The seaman could not remember whether Mr Leopoldo was wearing a life jacket, but he agreed that Mr Leopoldo was wearing something black and blue

[32] Exhibit 1, Tab 12, 8.
[33] Exhibit 1, Tab 2, 2.
[34] Exhibit 1, Tab 2, 3 and Tab 11.
[35] Exhibit 1, Tab 5, Tab 7 [35], Tab 8 [38], [40] and Tab 9 [8] and Tab 11, 2.
[36] Exhibit 1, Tab 7 [34].
[37] Exhibit 1, Tab 7 [53] – [54].

under his harness (which is consistent with the colour of the life jacket the bosun recalls).[38] The cadet, who was a friend of Mr Leopoldo, saw Mr Leopoldo put on a life vest and saw him buckle the life vest.[39]

31. However, the ATSB report concluded that the evidence suggests that Mr Leopoldo was not wearing the lifejacket when he was knocked off the accommodation ladder.[40] After Mr Leopoldo went into the sea he was only ever seen underwater (that is, not floating) and shortly after the search began, the crew reported to search coordinators that Mr Leopoldo was not wearing a lifejacket, only a safety harness.[41]

32. The ATSB investigator concluded that it was possible that Mr Leopoldo was wearing the lifejacket with its buckle undone, or he managed to undo it while being pounded against the ship, but considered it more likely that Mr Leopoldo was not wearing a lifejacket. This is within the context that wearing a lifejacket with a full body harness presents some practical problems, as the lifejacket can only properly inflate when it is worn over the harness (but the two may then interfere with each other).[42] Therefore, even if Mr Leopoldo was wearing a lifejacket under the harness, it would have been useless as it couldn't inflate, unless and until he came out of the harness.[43]

33. If Mr Leopoldo was wearing a lifejacket and his was the lifejacket found, then it suggests it was not done up and he came out of it immediately, given he did not float in the water. If Mr Leopoldo was not wearing a lifejacket, the explanation for finding a lifejacket in the water was that it had been thrown overboard at the same time as the life ring, although no witness attested to having done so.[44] There is also the third possibility, that Mr Leopoldo was wearing a life jacket which failed to

[38] Exhibit 1, Tab 8 [41].
[39] Exhibit 1, Tab 9 [8].
[40] Exhibit 1, Tab 12, 6.
[41] Exhibit 1, Tab 12, 7.
[42] Exhibit 1, Tab 12, 7.
[43] T 20.
[44] T 20 -21; Exhibit 1, Tab 12, 7.

inflate for some reason, and the life jacket found was thrown into the water by a crewmember.

34. Given the other floating objects were located, if Mr Leopoldo had been wearing a flotation device that was working properly, it would be expected that he would have been found

35. Mr Leopoldo was assisted to put on a full body safety harness by the seaman.[45] The harness is designed to be worn by stepping into the leg straps and then the wearer puts their arms through the shoulder straps. There is a metal clasp to secure the harness across the chest and the harness can be adjusted in various ways to fit the wearer. There is also a strap that comes from the back of the harness and attaches to the rope.[46]

Figure 3: The same type of safety harness as used on 17 November (front and back)

Source: ATSB

Figure 3 - Harness Type Worn by the Deceased

36. The seaman recalled helping Mr Leopoldo to put his arms through the harness.[47] He then saw Mr Leopoldo pulling his harness together as he walked towards the platform. No one saw Mr Leopoldo do up the central chest strap, but the bosun recalled that when Mr Leopoldo went down the ladder the harness strap

[45] Exhibit 1, Tab 8 [15].
[46] Exhibit 1, Tab 7 [37] – [41].
[47] Exhibit 1, Tab 8 [15].

across his chest was secure.[48] However, later evidence suggests that the chest buckle and one of the leg buckles were not done up, as explained below.

37. The men lowered the metal combination ladder down the side of the ship, about 5 metres from the water level. The pilot ladder was then lowered another 2.5 metres below that.[49] Mr Leopoldo had secured the combination ladder and was on the bottom of the combination ladder, working on the pilot ladder, when a large wave came up from below the ladder and hit him.[50] The wave pushed Mr Leopoldo off the ladder and along the side of the ship. The waves had also struck the combination ladder and broken it away from the side of the ship and the ladder was swinging.[51]

38. Mr Leopoldo was hanging in his safety harness about one metre below the bottom platform.[52] It appeared to the bosun that Mr Leopoldo had injured his left arm as it was hanging by his side and Mr Leopoldo was holding onto the rope with his right arm only.[53] The seaman also thought that Mr Leopoldo's back appeared to be dislocated.[54]

39. While Mr Leopoldo was hanging, he was struck by a number of big waves, which forced him against the side of the ship, the platform and the ladders.[55] The seaman did not hear Mr Leopoldo say anything during this time, but the cadet thought he heard Mr Leopoldo yell something like "pull me up".[56]

40. The bosun radioed the first mate to tell him that Mr Leopoldo was hanging and then the bosun and the other men tried to pull Mr Leopoldo up by heaving on the harness rope. However, he was caught under the

[48] Exhibit 1, Tab 7 [43] – although note when the harness was later retrieved the bosun noted the chest strap was unlocked – Exhibit 1, Tab 7 [44].
[49] Exhibit 1, Tab 7 [6] – [9].
[50] Exhibit 1, Tab 7 [10], Tab 9 [10].
[51] Exhibit 1, Tab 9 [13].
[52] Exhibit 1, Tab 12, 3.
[53] Exhibit 1, Tab 7 [14] – [17].
[54] Exhibit 1, Tab 8 [26].
[55] Exhibit 1, Tab 8 [26], Tab 9 [14], Tab 12, 3.
[56] Exhibit 1, Tab 9 [16].

accommodation ladder's bottom platform and they could not pull him up.[57]

41. Just after 11.24 am, another wave came through and struck Mr Leopoldo. Mr Leopoldo appeared to go limp after this wave passed, swinging on the harness.[58] When another wave passed, only the safety harness was still attached to the rope and Mr Leopoldo was seen in the water, untethered.

42. The crewmembers could see Mr Leopoldo in the water, surrounded by large strong waves.[59] The waves made it difficult to keep sight of Mr Leopoldo.

43. The bosun and the cadet threw Mr Leopoldo some life rings and the bosun called the third mate on the radio again to tell him that Mr Leopoldo was in the water. Mr Leopoldo was about 3 to 5 metres from a life ring but he did not make any attempt to swim towards the life ring.[60] Shortly after he disappeared from sight.

44. After Mr Leopoldo disappeared from view the cadet ran to the bridge and collected binoculars. With the use of the binoculars he immediately began searching the water for Mr Leopoldo, but was unable to find him.[61]

45. The empty harness was pulled back up by the ship's crew and the bosun observed that the rope was still intact and attached to the harness but the buckle securing the strap across the chest was unlocked.[62] The safety harness was later seized by police. It was still attached to the safety line and visual examination of the harness did not reveal any damage to the straps or buckles, nor any fault with the harness.[63] However, it was apparent that the chest buckle and the right leg buckle, two of its four buckles, were undone.[64]

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[57] Exhibit 1, Tab 12, 3.
[58] Exhibit 1, Tab 12, 4.
[59] Exhibit 1, Tab 9 [17].
[60] Exhibit 1, Tab 12, 4.
[61] Exhibit 1, Tab 9 [20] – [21].
[62] Exhibit 1, Tab 7 [44], [49].
[63] Exhibit 1, Tab 2, 13.
[64] Exhibit 1, Tab 12, 5.

46. The ATSB investigator, Captain Chaudhri, noted that the only explanation for the undone buckles is that either they had not been done up or Mr Leopoldo undid them to avoid being pounded by the ship's side. If they were undone by Mr Leopoldo, which is unlikely because it is difficult to undo a buckle once it has weight on it, given that he appeared injured and possibly unconscious, loss of muscle tone would have made slipping out of the partially undone harness more likely.[65]

47. After being notified of the man overboard, the Master began manoeuvring the ship to do a turn. Additional crew were posted as look-outs and a further life ring with a smoke signal was thrown overboard.[66] A Mayday report was also made over the radio.

THE SEARCH

48. At 11.29 am, the Mayday call notifying of a man overboard was received by Water Police Command Centre in North Fremantle. Water Police took charge of coordinating the emergency response to search for and recover Mr Leopoldo.[67] Senior Constable Robert Jennings at Water Police assumed control as Search and Rescue Mission Controller.[68]

49. Senior Constable Jennings arranged for the Mayday call to be relayed to any vessels in the area. A charter vessel, "Blue Water", in close proximity to the area responded. The crew of the Blue Water were directed to attend and assist. They arrived on the scene within three minutes[69] and immediately began to search an expanding square search area.[70]

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[65] Exhibit 1, Tab 12, 7.
[66] Exhibit 1, Tab 11; that made in total three life rings thrown overboard, two with lights and one with the man overboard signal.
[67] Exhibit 1, Tab 2, 4 and Tab 4, 4.
[68] Exhibit 1, Tab 4 [4.2].
[69] Exhibit 1, Tab 4 [4.3] and [4.5].
[70] Exhibit 1, Tab 4 [4.5].

50. Despite the adverse weather conditions which hampered the search and rescue operation,[71] one life jacket and two life rings were located quickly by the crew of the Blue Water at 11.36 am, 7 minutes after the mayday distress call. The life jacket found in the water was checked and found to have its buckle undone and to be in good condition and inflated. The inflation appeared to be by water activation of the gas cylinder as opposed to breath inflation.[72]

51. At 11.54 am, the Blue Water crew reported they had recovered two boots from the water. The boots were still laced up and had the word "$am" written on the side,[73] which were subsequently identified as those worn by Mr Leopoldo.[74] The fact that the boots were still done up suggested the force of the waves and striking the ship had knocked them from Mr Leopoldo's body.[75]

52. In the meantime, a large number of other search resources were deployed, including a Police Air Wing helicopter and a number of commercial helicopters.[76]

53. Two officers aboard a police vessel on patrol were tasked from Water Police base to respond as a Priority 1.[77] They arrived at the scene at 12.22 pm and took charge of the surface area search.[78]

54. Water police used a recognised computer search program to assist with the prediction of movement of objects through the water using recorded winds and sea currents.[79] At 12.46 pm, a police helicopter located the lifebuoy with the smoke signal, a short distance from where the other lifebuoys were found.[80] However, no

[71] Exhibit 1, Tab 4 [6.7].
[72] Exhibit 1, Tab 4, 26 and Tab 12, 4.
[73] Exhibit 1, Tab 4, 26.
[74] Exhibit 1, Tab 2, 3.
[75] T 11.
[76] Exhibit 1, Tab 4 [4.9].
[77] Exhibit 1, Tab 2, 4 and Tab 4 [4.1].
[78] Exhibit 1, Tab 2, 4.
[79] Exhibit 1, Tab 2, 4 and Tab 4 [4.6].
[80] Exhibit 1, Tab 2, 4 – 6 and Tab 4, 15.

sightings of Mr Leopoldo were made at sea or onshore at Rottnest Island either that day or the following.[81]

55. On the second day of the search, Dr Paul Luckin, an expert in 'Time Frame for Survival', was consulted regarding an estimation of Mr Leopoldo's time frame for survival. In Dr Luckin's expert opinion, working from the best case scenario that Mr Leopoldo was alive and conscious when he entered the water, given the clothing worn and the sea conditions, it was concluded that survival was only possible for up to 24 hours.[82] If seriously injured, the chances of his unaided survival were seriously diminished.[83] A decision was therefore made to suspend the search operation at 1.50 pm on the second day, given the deteriorating sea conditions and the fact that the search timeframe exceeded the 'best case scenario' for Mr Leopoldo's likely survival.[84]

56. The probability of detection of Mr Leopoldo, by the airborne search alone, was calculated by Senior Constable Jennings at approximately 98% at the end of Day 1.[85] In Senior Constable Jennings' opinion, based upon the high probability of detection, if Mr Leopoldo was alive and floating on the water surface during the search operations, he would have been sighted and located by one of the search crews.[86] Senior Constable Jennings therefore concluded that it was reasonable to suspect that Mr Leopoldo was no longer on the surface of the water at the time the search began.[87]

57. No remains of his body, nor any other evidence relating to Mr Leopoldo, have been located since.[88] He has not been in contact with his family or any member of the

[81] Exhibit 1, Tab 4, 14 – 15, 20 [4.10] and 29.
[82] Exhibit 1, Tab 4, 27.
[83] Exhibit 1, Tab 4 [6.9].
[84] Exhibit 1, Tab 2, 6.
[85] Exhibit 1, Tab 4, 33 and 42.
[86] Exhibit 1, Tab 4 [6.9].
[87] Exhibit 1, Tab 4 [6.4].
[88] Exhibit 1, Tab 4 [6.10].

public and there have been no unidentified remains that might match the description of Mr Leopoldo.[89]

CAUSE AND MANNER OF DEATH

58. The evidence strongly supports the conclusion that Mr Leopoldo was either dead or seriously injured at the time he went into the ocean that morning. He had been pounded against the side of the ship while hanging in the harness for about four minutes, and was seen to be injured and to go limp before falling into the water.[90]

59. All of the available flotation devices that went into the water at that time were later recovered, but no sign of Mr Leopoldo was found other than his boots, still laced.

60. I find that Mr Leopoldo died either shortly before or shortly after he entered the water.

61. I am satisfied on the basis of all the evidence before me that the death of Mr Leopoldo has been established beyond reasonable doubt and I so find.

62. In the circumstances described by the witnesses, I am unable to be satisfied beyond reasonable doubt whether the cause of Mr Leopoldo's death was multiple injuries, or as a result of immersion (drowning), or a combination of both. In those circumstances, the cause of death must remain unascertained.

63. However, either possible cause of death would support the same manner of death, namely accident. I therefore find that the manner of Mr Leopoldo's death was by way of accident.

[89] T 11.
[90] T 19; Exhibit 1, Tab 12, 7.

SAFETY ISSUES IDENTIFIED

Water Police Investigation

64. In his report into this incident, Senior Constable Jennings considered the shipboard safety practices on the MSC Siena.

65. Senior Constable Jennings noted that at the time Mr Leopoldo began to erect the combination ladder, the MSC Siena was travelling in a northerly direction with a reasonable swell coming from the west against its port side, where the ladder was being positioned. In his view, had the vessel moved around Rottnest Island closer to the pilot meeting point, it would have been in lee of the island with the swell to starboard, which would possibly have been a safer position for Mr Leopoldo to complete his task.[91]

66. Senior Constable Jennings also noted that the evidence suggested the life jacket may not have been worn and the safety harness may not have been worn correctly, given a visual examination did not indicate there was any critical damage that would cause it to fail, if worn correctly.[92]

Allseas Marine Investigation

67. Following the incident, officers of Allseas Marine conducted an inspection and audit. The following deficiencies were recorded and identified for further analysis and investigation:

    67.1 The work permit, which was required to authorise working at heights and working over the side ,was not completed on the occasion on which Mr Leopoldo was lost overboard, nor did it appear to have been completed on all occasions that such work was undertaken;

[91] Exhibit 1, Tab 4 [7.2].
[92] Exhibit 1, Tab 4 [7.5].

67.2 The record of hours worked by crew members was not complete, was not monitored and was not up-to-date; and

67.3 The Safety Management System had not ensured development of plans for all shipboard operations based on 4.11 and 4.12.[93]

68. The result of these deficiencies was that, as noted by the other investigators, the rigging of the pilot ladder was done at a time when the risk posed by weather conditions was higher than it should have been, done in circumstances where the fastening of the safety harness was not properly executed, where there would appear to have been some question about whether the life jacket was properly fitted and checked, and in circumstances where communication between the deck crew and the bridge was not as clear and precise as it should have been.[94]

69. The action taken by Allseas Marine following the incident was to amend, strengthen and implement changes to the International Safety Management systems aboard all of its vessels, to ensure that crew training addressed the specific issues raised by the incident, and to enhance efforts to promote an appropriate safety management culture aboard its vessels.[95]

70. A detailed list of all the actions taken by Allseas Marine to remedy the defects was also provided for the inquest.[96] I note in particular that on 18 and 19 November 2011, extensive training was conducted with the vessel's staff in the use of personal protective equipment and life-saving appliances and a Technical Superintendent stayed with the vessel until it reached Malaysia to conduct an internal audit and to provide continuing training to the crew.[97]

[93] Exhibit 2, Tab 1 [4.1].
[94] Exhibit 2, Tab 1 [4.2].
[95] Exhibit 2, Tab 1 [5.4].
[96] Exhibit 2, Tab 1 [5.5].
[97] Exhibit 2, Tab 1 [5.5.1].

71. Allseas acknowledged in its report that its responsibility extends beyond merely providing the framework for a safety management system, but also to ensuring that there is an appropriate safety management culture on board its vessels.[98]

ATSB Investigation

72. The Australian Transport Safety Bureau also conducted an investigation into this fatality. A report of the investigation was compiled by ATSB Investigator Captain Vikrant Chaudhri, who is currently the manager of Marine Investigations for the ATSB.[99]

73. The ATSB investigation found that a risk assessment for the task of rigging the pilot ladder was not undertaken and a number of precautions, including taking into account the poor weather conditions, were not taken. It seemed there was an appropriate ship safety management system for the task, but it was not followed in this instance.[100]

74. One of the principal findings of the investigation, as a contributing safety factor, was that the crew did not take into account the weather conditions, which had been significantly bad from early that morning.[101] It was noted that there was a course alteration expected at 11.35 am, which would have reduced exposure to weather on the ship's port side, but no one considered the ship's course and the weather to determine an appropriate time/opportunity to rig the pilot ladder.[102] After this accident, all of the crew involved accepted that the weather conditions should have been considered before rigging the pilot ladder.[103]

75. In place on the ship at the time was a 'permit to work system' for controlling hazardous tasks. The work

[98] Exhibit 2, Tab 1 [6.3].
[99] T 15; Exhibit 3.
[100] Exhibit 1, Tab 12, Safety Summary.
[101] T 21.
[102] Exhibit 1, Tab 12, 8.
[103] Exhibit 1, Tab 12, 10.

permit was not completed in this case, and the later investigation found that a permit for such a task had only been completed once in the 5 months before the incident, indicating the system was routinely not followed. If the required procedure of completing a permit to work had been followed, it would have prompted consideration of the weather conditions.[104]

76. Captain Chaudhri also observed that the tethering equipment used in this case did not include a fall arrestor, and the tethering rope was unnecessarily long, which led to Mr Leopoldo being left hanging under the platform and much closer to the water than was desirable.[105] A proper risk assessment, completed as part of the work permit system, might have established an appropriate rope length and included the use of a fall arrestor.[106]

77. The ATSB acknowledged in its report that, following the incident, Allseas Marine had taken steps to address the safety issues identified by its own and the ATSB's investigation.

78. The ATSB report notes that the company's shipboard safety management system procedure for its work permit system has undergone major revision with regard to work over the side. Importantly, the revised procedure specifically addresses the task of working on combination pilot ladders, including task specific guidance and precautions.[107] Training of the crew has also been improved, and a fleet wide safety campaign was carried out.[108]

79. After assessing the action taken by Allseas Marine, the ATSB is satisfied that the company will adequately address the safety issues identified in the ATSB investigation.[109] The ATSB did not suggest any

[104] Exhibit 1, Tab 12, 10.
[105] Exhibit 1, Tab 12, 9.
[106] Exhibit 1, Tab 12, 10.
[107] Exhibit 1, Tab 12, Safety Summary.
[108] Exhibit 1, Tab 12, Safety Summary.
[109] Exhibit 1, Tab 12, Safety Summary.

recommendations that I might make from a public safety aspect.[110]

80. Allseas Marine accepted that the issues identified by the ATSB Report highlighted deficiencies in that system and in its implementation.[111] However, it was submitted on behalf of Allseas Marine that the extensive corrective action taken promptly and vigorously following the incident demonstrates that Allseas Marine is committed to continually improving its safety management system, and, in particular, its safety management culture.[112]

81. I accept the submission made on behalf of Allseas Marine that the principal problem in this instance was not a failure to have a safety procedure system, but a lack of implementation of that system by individuals. The management of the company took immediate steps to rectify that problem.[113]

82. Allseas Marine provided a safety record for the entire Allseas Marine fleet for the year 2014. It demonstrates a low incident rate, with no fatalities or permanent total disablements and a very small number of permanent partial disablements or other serious injuries recorded for the year.[114]

CONCLUSION

83. On 17 November 2011, Samuel Leopoldo was involved in an accident while working over the side of the container ship MSC Siena in seas off Fremantle, Western Australia. He was lost overboard in a severely injured state. He was seen to enter the sea in a lifeless state and I find that he died at that time or shortly afterwards.

[110] T 22.
[111] Exhibit 2, Tab 1 [6.4].
[112] Exhibit 2, Tab 1 [6.5].
[113] T 23.
[114] Exhibit 2, Tab 1 [6.6], Tab 1U.

84. The management of Allseas Marine, the company which was responsible for the vessel Mr Leopoldo was working on at the time, have taken steps to ensure that important lessons about safety, and the dangers of complacency, are learnt from Mr Leopoldo's tragic death. To paraphrase one of the managers of Allseas Marine, it is hoped that the lessons learned from Mr Leopoldo's death will ensure that this was the first and last fatality in the Allseas Marine fleet. I am sure the family of Mr Leopoldo will join with them in that hope.

S H Linton
Coroner
26th May 2015