SHERIFFDOM OF GRAMPIAN, HIGHLAND AND ISLANDS AT BANFF

UNDER THE FATAL ACCIDENTS AND SUDDEN DEATHS INQUIRY (SCOTLAND) ACT 1976

2010 FAI 46

DETERMINATION

by

PATRICK PROTHEROE DAVIES,

Sheriff of Grampian, Highland and Islands at Banff

In

FATAL ACCIDENT INQUIRY

into the death of

WILLIAM CASUGA ANTONIO

BANFF, 25th October 2010

Having heard the evidence led, considered the affidavit and productions lodged and both heard and considered the submissions of the parties thereon, I determine, in terms of Section 6(1) of the Fatal Accidents and Sudden Death Inquiry (Scotland) Act 1976:

1. In terms of Section 6(1)(a), that

(i) at about 18.50 hours on 11th November 2009, in the North Sea at 57° 45.633 N 002° 28.787 W and approximately 5.5 miles off Macduff, Aberdeenshire, William Casuga Antonio, born on 28th October 1981 who normally resided on MFV Osprey 3, BF 500, Banff, but whose home address was Esmeralda, Balungao, Pangasinan, 2442, The Philippines died as the result of an accident in the course of his employment;

(ii) the death resulted from drowning;

2. In terms of Section 6(1)(b), that

(i) Mr Antonio was acting in the course of his employment on the fishing vessel Osprey III, BF 500 as a deckhand;

(ii) the accident occurred when Mr Antonio became entangled in a fishing net as it ran from the rear deck of the vessel and he then was carried overboard by the net;

3. In terms of Section 6(1)(c), that

(i) Mr Antonio's death might have been avoided had the Osprey III been carrying suitable, well maintained lifejackets available to the crew for them to wear during, at least, net shooting and hauling operations and had Mr Antonio been wearing such a lifejacket at the time of the accident;

(ii) Mr Antonio's death might have been avoided had there been a practice upon the vessel Osprey III of carrying out periodical "man overboard drills" with associated training to ensure that the vessel's crew (a) had a good understanding of the effects upon human beings of immersion in cold water; (b) were trained as to how best to survive once in the water; (c) were fully aware of the potential difficulties of recovering a crew member from the sea; and (d) were adequately trained in the techniques to be adopted in seeking to effect such a recovery;

(iii) The death of Mr Antonio might have been avoided had the Osprey III been provided with a properly positioned life saving "cage" such as may have facilitated his recovery from the water.

4. In terms of Section 6(1)(e) that:

(i) Fishing vessel owners should encourage the use of suitable lifejackets by crew members when on deck during net shooting and hauling and other dangerous operations unless such lifejackets are seen to represent, in any particular situation, a risk to the wearer;

(ii) In so far as such arrangements are not already in place:

> (a) skippers should be trained with regard to the effects of cold shock on the human body;
>
> (b) skippers should be trained as to the extent to which crew members require to obtain "health and safety training" and ensure that such training has taken place; and
>
> (c) the health and safety training of such crew members should include training as to the effects of cold water shock on the human body.

Note

The Inquiry was conducted on behalf of the Crown by Mr Alistair Fay, Procurator Fiscal Depute.

Mr Lewis McDonald represented the interests of the owners of the fishing vessel Osprey III, BF 500, the vessel's agents and the owners.

There was no further representation and, no doubt due to the nationality and homeland of the deceased, no members of the deceased's family were in Court.

I was assisted throughout the Inquiry by the clear manner in which the Procurator Fiscal Depute led the evidence for the Crown and his full but well-focused submissions. His thorough examination was such that little cross-examination was required. It was clear that his case had been thoroughly prepared. Mr McDonald confined his cross-examination to a sensible minimum. My task was also eased by the open and frank manner in which the two witnesses who were directly involved in this matter gave their evidence. All those whose lives have been touched by the tragic accident which led to this death have my sympathy.

The evidence

Four witnesses were called to this Inquiry on behalf of the Crown.

I first heard from Professor Michael John Tipton, a professor of Human and Applied Physiology at Portsmouth University. He spoke to having a particular interest and expertise in environmental physiology. In particular, he had an interest in survival at sea and the effects of heat and cold and other "stresses" on the human body. He spoke to various of his activities in this field, to committee positions that he held and to related matters. Both by reason of his qualifications and experience and the manner in which he gave his evidence, he impressed as an expert upon whose evidence I felt I could rely. He gave evidence at large over the course of several hours about the issues which arose from the death of Mr Antonio. Professor Tipton spoke to an RNLI video which I was shown which dealt with survival at sea and commented on passages from the Marine Accident Investigation Branch Report which had been prepared in respect of this death.

I next heard from the skipper of the vessel, Ronald Milne, and thereafter from the deckhand, Steven Milne, both of whom were on Osprey III at the time of Mr Antonio's death. The evidence concluded with that of a police officer who had carried out some initial enquiries during the time during which Mr Antonio remained a "missing person".

The evidence of Dr James Grieve who had undertaken a post-mortem was introduced at the outset of the Inquiry by way of affidavit evidence.

I had no concerns with regard to the credibility or reliability of any of the witnesses – they all gave their evidence very well.

In addition to the Marine Accident Investigation Branch Report which was lodged as a Crown production, the Crown also produced a book of photographs of the Osprey III and of other items related items and a Merchant Shipping Notice containing The Fishing Vessels Code of Practice for the Safety of Smaller Fishing Vessels.

With regard to my determinations:

Section 6(1)(a) findings:

These findings are broadly the findings which the Procurator Fiscal Depute invited me to make. I conclude that they are appropriate.

The place of death was spoken to by Ronald Milne who said that he had reported to his Insurers the location at which he had pressed the "Man Overboard button" when Mr Antonio went overboard. That was the point to which the vessel had returned and at which Mr Antonio was initially found but then lost from view. He accepted that the bearing noted at page 29 the Marine Accident Investigation Branch ("MAIB") Report – a Crown production that was put to him – recorded that location correctly. So, in determining the place of death, I have proceeded upon the basis of the bearing noted in the Report. The Report, unfortunately notes at pages 29 and 30, two different distances between the point of death and Macduff. It records distances of 5.5 nautical miles and about 6.4 nautical miles. Detective Constable Low suggested that this possibly arose because one distance was truly recorded in miles as distinct from nautical miles. As 5.5 miles equates to about 6.33 nautical miles, I have concluded that, on the balance of probabilities, the death took place about 5.5 miles (as distinct from nautical miles) from Macduff.

All the evidence pointed to the fact that Mr Antonio drowned and that he drowned very shortly after - and possibly within a few moments of his being lost from sight in the sea by the skipper and deckhand on the vessel.

The conclusion of the autopsy report carried out by Doctor James Grieve on the body of Mr Antonio was that Mr Antonio probably died from drowning. Dr Grieve reported that the examination was compromised by the degradation of the body which had been in the water for about a week before it was recovered. There was not, however, nothing to indicate significant natural disease, nor were there features to suggest significant blunt force trauma or penetrating disease, although such could not be definitely excluded.

Professor Tipton gave evidence at some length with regard to the effects of cold shock upon someone falling into cold water – to, *inter alia*, the fact that it can cause them to hyper-ventilate or gasp. He spoke to the small quantities of water that could result in drowning. He explained the effects of the cold upon one's muscles, to the blocking of nerve responses and to the onset of paralysis which then prevented an unsupported person from keeping themselves afloat. He told me how the "boundary layer" that could be provided by clothing could be broken by one's movement in the water – by attempts to swim or tread water if one lacked a lifejacket. He made mention of the effects of tiredness. He suggested that these effects were compounded if one's oxygen supply was reduced by the effects of water in the lungs. He addressed the

likelihood of a person in cold water dying of hypothermia and expressed the opinion, which he fully explained, that only someone who was well supported in the water was likely to survive long enough to die of cold. Such a person would, he said, rather die of drowning before their body temperature fell to a fatal level. There was also, the Professor said, the risk of aspirating splashed water if a sea was running. That could lead directly to drowning. Death could result from a cardiac failure but there was, as he understood the position, nothing to suggest that Mr Antonio had a cardiac problem. Given the circumstances of Mr Antonio's immersion, it was Professor Tipton's opinion that the overwhelming probability was that Mr Antonio died from drowning.

The Procurator Fiscal took Professor Tipton through certain passages in an extract of the MAIB Report produced by the Crown. No one spoke directly to the preparation of this Report, but the accuracy of the narration within it as to the broad background of events was largely confirmed by Mr Robert Milne. The Report contained certain data relating both to the Osprey III and to the accident. It contained a narration of events. Within it, was a photograph and several diagrams relative to the vessel and a copy chart. There was a narrative of the events leading to Mr Antonio's accident and of the facts surrounding the attempted rescue. Details of the ownership and operation of the vessel were recorded along with details of the Code of Practice for Small Fishing Vessels. It contained a commentary on safety at work issues, personal protective equipment, personal floatation devices and safety training. Some details were given relating to two similar accidents. There was an analysis of the accident involving Mr Antonio. The final section of the extract Report contained details of the Combined Safety Issues and Actions taken following upon this and two other accidents to which the Report related. The Report provided a useful tool in the examination of Professor Tipton.

Professor Tipton was familiar with the preparation of MIAB Reports, had read the Report produced and recognised it as the MIAB Report relating to this death. I have thus felt able to have regard to the terms of this Report in considering the evidence before me. In commenting on the Report, Professor Tipton pointed to the fact that Mr Antonio was reported to have been conscious when he initially surfaced after going overboard. That suggested that he had not inhaled a lot of water at that stage. It was relevant that it was calm but dark and the water temperature about 10 degrees centigrade. It was clear from the circumstances, that Mr Antonio had tired very quickly and significant that the rope initially thrown to him soon slipped through his hands – indicative of the effects of cooling. While it was surprising, the Professor said, that Mr Antonio had disappeared within 12 minutes, this could be explained by his light weight that would have led to more rapid cooling of his body than might otherwise have taken place. The facts narrated in the Report bore out the view that Mr Antonio had drowned.

The fact that drowning was the cause of death was, Professor Tipton said, supported by the fact that, as reported, Mr Antonio had quickly disappeared from sight. Had his lungs been full of air, he would have floated. But, with lungs full of water, a body will sink.

Mr Ronald Milne gave direct evidence as to the circumstances in which Mr Antonio fell overboard from the Osprey III. He explained the operation that had been undertaken to repair the vessel's net and the steps thereafter being undertaken to

investigate a suspected snagging of a line within the net. He told me how, during the latter stage of these operations, Mr Antonio - who had been in an appropriate position to undertake the work in hand - had stepped onto the vessel's net as it was running out freely from the vessel's rear deck and over the stern. The witness was unable to explain why he had done this. The consequence, however, was that Mr Antonio was carried by the net over the stern and into the sea. Mr Milne had immediately pressed the MOB button on his chart logger to record the position at which this happened. He quickly hauled in the net so that he vessel could be turned. He then returned to the position at which the accident had occurred and immediately Mr Antonio was seen off the vessels' bow. I was told of the unsuccessful efforts to haul Mr Antonio onto the vessel, of the decision to move him – while he held on to a rope – to the lower stern of the vessel and of Mr Antonio's disappearance while being pulled around the side of the vessel. By reference to the time when he had pressed his MOB button and the time at which he had radioed another vessel after the disappearance, Mr Milne was able to pinpoint, within a minute or two, the time at which Mr Antonio had disappeared from view.

Both Robert and Steven Milne expressed the view that Mr Antonio had died because of the cold. The basis for this view was not, however, explored with either of them and – while it is clear that the cold was a major factor in what transpired – their views have not caused me to question the weight which I should attach to the other evidence which points to Mr Antonio having drowned.

Section 6(1)(b) findings

Mr Robert Milne spoke to Mr Antonio's employment on the Osprey III. Mr Antonio had been employed on the vessel for about six months. He had a reasonable understanding of spoken English, although "not the best". He had joined the vessel through an agency and had come with a number of certificates to vouch his experience as a deckhand. After six months with the vessel, Mr Antonio had a good understanding of his work and had become a valuable member of the crew. Mr Milne confirmed that Mr Antonio was acting in the course of his employment when he lost his life.

The explanation of my findings under Section 6(1)(a) does, I think, adequately explains my finding under Section 6(1)(b).

Section 6(1)(c) finding

Any finding made under this head requires to be directed to any reasonable precautions which, in my view, might have prevented either this accident or Mr Antonio's resulting death.

The accident

I cannot identify any steps that might reasonably have been taken in the context of the "net handling operation" to avoid an accident of this sort and the Procurator Fiscal Depute did not directly invite me to make any finding under this sub-section. He hazarded the suggestion, however, that had a specific warning been given to the crew with regard to the danger of the net running away overboard, then the accident may

have been avoided. But, in what appeared on the evidence to be an inherently dangerous working environment, I do not think that it would have been practicable for the vessel's skipper to both identify and warn Mr Antonio as to each and every hazard. Given Mr Antonio's experience as a seaman and, in particular, a crew member of Osprey III, he should himself have appreciated the hazards involved in a net handling operation on the vessel's rear deck. Indeed, there is no reason to think that he did not appreciate those hazards. I was told that he did not "rush into things" that what he did on this occasion was "out of character". Both Robert and Steven Milne said that when the net did begin to run out, Mr Antonio was standing clear of the net and in a safe position. Both Robert and Steven Milne shouted a warning to alert him to the net's movement. Then, for some inexplicable reason, Mr Antonio appears to have stepped onto the net and not away from it. Mr Robert Milne said that he himself normally controlled the running of the net – it was controlled by the speed at which the net drum turned – and he had never himself seen the net run free from the deck in this way that it did on this occasion. That said, Steven Milne said that the net was free to run were part of it to enter the water – he seemed to recognise the potential risks of the net handling operation. Mr Robert Milne hazarded the suggestion that Mr Antonio failed to appreciate the forces involved and thought that he could stop the net running – but what was in his mind will never be known. I acknowledge, however, that this could explain why he acted as he did – but I cannot reach a concluded view as to why he acted in this way. The evidence that I heard with regard to Mr Antonio's pattern of work prior to this accident suggested that he should not have been unduly tired and there was nothing in the evidence to suggest that his alertness or concentration would have been adversely affected by any other factor. There was nothing, in my view, which his colleagues could reasonably have done to guard against this accident.

The death

What the Procurator Fiscal did ask me to do was to identify certain matters which, given the fact that the accident had occurred, might have prevented it resulting in Mr Antonio's death. Advancing reasoned arguments related to the evidence that I had heard, the Procurator Fiscal Depute asked me to make a number of findings under this sub-section. As he did so, I engaged in a dialogue with him which perhaps served to "fragment" his submissions. In summary, however, I noted him to seek the following findings. The exact wording that I use is my own wording – not a verbatim record of the submissions that I heard but, rather, a summary of each point. I was asked to determine that Mr Antonio's death might have been avoided had it been mandatory at the time of this accident:

1. For all fishing vessels to carry and maintain suitable life jackets for the use of the crew;

2. For crew members on the deck of such vessels during hazardous operations, such as net-handling operations, to wear such lifejackets;

3. For such vessels to have in place a system to ensure compliance with the foregoing requirements;

4. For such vessels to have periodic "man overboard training" to ensure that crew members were adequately trained with regard to the hazards that confronted crew members who fell overboard, with regard to how best to survive once in the water and with regard to the difficulty of recovering such crew members from the sea;

5. For such vessels to carry appropriate equipment to assist in the recovery of any crew member who fell overboard;

6. For the crews of such vessels to have periodic drills in relation to the use of the equipment available for recovering a "man overboard".

With regard to findings under this head, while I require to speculate as to the measures that might have avoided Mr Antonio's death, some possible measures are much more likely to have done so than others. The evidence suggested that, had Mr Antonio been wearing a suitable lifejacket, then there would have been a very good chance of his surviving this accident. It is, in my view, appropriate to go beyond saying that he might have survived the accident had he been wearing a life jacket. Had he been wearing a life jacket, it is very likely that he would have done so.

Carrying and wearing lifejackets

During the course of the evidence, I heard evidence from both Robert and Steven Milne to the effect that the crew of the Osprey III now wore lifejackets when working on deck. The lifejackets which they wore "had come a long way" in terms of design and use when contrasted with the heavy duty lifejackets that had been available on the vessel at the time of the accident. The heavy duty jackets were bulky, were intended for use in the event of the crew abandoning their vessel and were not kept readily available for the use of crew going onto the deck. The new one's were similar to waistcoats and could be inflated manually or on immersion. They were relatively cheap to purchase. There was a ring on the front to which a hook or shackle could be attached. One could readily work in these lifejackets and Steven Milne said that he had sometimes found himself working on fish under the shelter deck having forgotten that he still had his jacket on. With reference to this evidence as also evidence given by Professor Tipton, the Procurator Fiscal Depute indicated that the RNLI had been seeking to address the issue of fishermen wearing lifejackets for a number of years. It was clear from the evidence before me that lifejackets such as those now worn on Osprey III were the "right tool for the job". While not the norm in the fishing industry, they could have been in use prior to this death. The Procurator Fiscal Depute urged upon me the view that the wearing of lifejackets by fishing vessel crewmen would be the best single way of saving their lives.

I endorse the view advanced by the Procurator Fiscal Depute with regard to the use of lifejackets. It was clear from the evidence that I heard that lifejacket technology has "moved on". There is no longer a need to wear a bulky lifejacket such as might impede one's ability to work – and perhaps add to the hazards of one's workplace. The evidence demonstrated that it is possible for crew members – certainly on fishing vessels such as the Osprey III – to work readily and safely in a modern lifejacket. There would be no justification for resisting the use of lifejackets on grounds of cost – they are inexpensive. Every vessel owner should make such lifejackets available for

use by their crew members and encourage the use of such jackets. As to that position, I am quite satisfied. I have, however, only heard limited evidence about the use of modern lifejackets on one small vessel, undertaking one particular type of fishing operation. It is a matter of human experience that fishing vessels are very varied and undertake many different types of fishing operations. There may be hazards in the use of even the best of modern lifejackets on some types of vessel during certain operations. Professor Tipton indicated that there was an "ongoing debate" with regard to the need to make the wearing of lifejackets mandatory. Against this background, I do not consider that I can properly find on the limited evidence before me that the use of lifejackets should be made mandatory as suggested by the Procurator Fiscal Depute. But their use should certainly be encouraged unless they are seen to represent, in certain situations, a very real risk to the wearer. Owners should make them available and require their use unless, on a balanced assessment, the hazards of wearing them can reasonably be said to outweigh the benefits of wearing them. I have made a determination to this effect under Section 6(1)(e).

The position which I have adopted in relation to the issue of the mandatory wearing of lifejackets is, I think, very much the position that Mr McDonald urged upon me so I find it unnecessary to record his submissions in this regard.

I heard some evidence about the use of "buoyancy trousers", immersion suits and the like. I also heard some evidence from Professor Tipton with regard to the beneficial use of "splash guards" to prevent someone in the sea aspirating splashed water. I did not, however, understand there to be any suggestion that such splash guards could and should be worn by those working on a fishing vessel's deck. I have not deemed it appropriate to make any determination with regard to the use of such devices.

I was asked to make a determination with regard to the need for fishing vessels to have in place a system to ensure compliance with any mandatory requirement that might be imposed with regard to the provision and wearing of lifejackets. Standing my position with regard to the imposition of a mandatory requirement, there is no need for me to address this suggestion. Where lifejackets are made available, however, there is a clear need to ensure that such lifejackets are maintained in good working order. III

Equipment for the recovery of "men overboard"

Having regard to the evidence that I had heard about the matter, I enquired of the Procurator Fiscal whether or not I should make a finding with regard to the type of equipment that should be kept aboard fishing vessels for recovering crew members from the sea. On the night of Mr Antonio's accident, a rope with a loop on the end of it had first been used to try and recover Mr Antonio, but he had simply sought to hold onto the rope rather than securing the loop around any part of his body. A lifebelt had then been thrown to him, but again he had simply clung to it rather than putting it over his head. Ultimately, he appeared to have lost his grip on the rope and lifebelt while being moved along the side of the vessel towards the lower stern area and he disappeared from view. It was not clear why he had not made better use of these devices and it was variously suggested that he became frightened to loosen his grip on the rope or let it slacken, that he may have misunderstood the instructions given to him or that he had simply been too tired to respond to those instructions. Against this

background, both Ronald and Steven Milne gave evidence with regard to a "safety cage" having now been installed on Osprey III. This had been specially manufactured and was a smaller version of similar cages in use on some larger fishing vessels. The cage was kept on tied to the edge of the shelter with slip knots. The cage was such that it could be thrown into the sea – attached to the vessel by a rope – and ultimately winched back aboard. When in the sea, the cage floated with its centre portion below the surface such that a person could float (as distinct from having to climb) into it – and could then be hauled within the cage back on to the vessel. Mr Ronald Milne indicated that no such equipment was mandatory but expressed the view that such cages should be made mandatory – at least on new-build vessels. Mr Steven Milne spoke to having trained in the use of the cage at the local swimming pool. He commended its ease of use and stability. He thought that it may have made a difference had the Osprey III had a cage at the time of Mr Antonio's accident.

In response to my enquiry about equipment, the Procurator Fiscal Depute acknowledged that a cradle appeared to be more suitable that a rope ladder or scrambling net. But he did not, he said, ask me to say that all boats should carry such a cage. I accept his position – given the limited evidence that I have heard with regard to the use of such cages. But, that said, there is a clear need for vessels to carry properly positioned life saving equipment the use of which demands the minimum of effort from a person in the water. The evidence that I heard in this case suggests that something better than a rope, lifebelt, scrambling net or rope ladder is required. A device is required that demands very little in terms of effort on the part of the crew member in the water - who may well be both cold and tired. Such a person could be in shock or injured. The only device brought to my attention that meets this requirement was the life saving "cage". As described to me, had a cage been available it may have saved Mr Antonio's life. I see merit in such cages being carried and this view is reflected in my determination. It would not, however, be appropriate to suggest that the use of such cages should be made mandatory at this time.

Man overboard training

Distinct from the broader issue of "health and safety training" which he later addressed, the Procurator Fiscal Depute asked me to specifically determine that the crew of fishing vessels should undergo periodic "man overboard training" to ensure that crew members were adequately trained with regard to the hazards that confronted crew members who fell overboard and with regard to the difficulty of recovering such crew members from the sea; that, had the crew of the Osprey III had such training, then Mr Antonio's death might have been avoided. To demonstrate the need for this, he pointed to the fact that, had Mr Ronald Milne appreciated the speed with which Mr Antonio would become exhausted, he may not have tried to raise him at the bow. I think that there is merit in this submission. While I can only speculate as to the position, I think that it might have made a difference if Mr Ronald Milne had fully appreciated the speed with which the cold would impact upon Mr Antonio's ability to hold onto a rope. That said, I do not think that on the evidence before me I could reasonably conclude that "man overboard training" should be made mandatory on all fishing vessels. The requirement for such training on a large fishing vessel may be quite different from the requirement on a small vessel such as the Osprey III – I simply lack the broad evidence that I would require before a wide-sweeping recommendation for mandatory training could be made. Clearly, however, prudent

owners should assess the need for such training and provide it unless it could serve no useful purpose.

Section 6(1)(d) findings

I do not identify any failure of any system of working such as would justify my making a finding under Section 6(1)(d). The Procurator Fiscal Depute did not invite me to make any finding under this sub-section of the Act.

Section 6(1)(e) findings

The Procurator Fiscal Depute suggested that Mr Antonio's accident demonstrated the need for the skippers of fishing vessels to be properly trained in relation to the risks posed by men going overboard. The Procurator Fiscal Depute pointed out that Mr Ronald Milne, despite having spent a "lifetime at sea", had accepted in evidence that he lacked a proper understanding of the risks involved. He had failed to demonstrate an understanding of the mechanisms that led to drowning prior to someone dying as a result of the cold. Training was required with regard to the effects of cold shock on the human body. Training would ensure that those involved were alert to the risks and would better enable skippers to encourage the wearing of lifejackets on their vessels. Further, in so far as Mr Ronald Milne had failed to appreciate that Mr Antonio should have undertaken a one day "health and safety" training course with regard to safe working practices prior to his joining the vessel, it was clear that skippers should be trained as to the training requirements that related to the crew. I suggested to the Procurator Fiscal Depute that the employment agencies from whom such crew were sourced should perhaps receive such training but he did not adopt this point.

While I heard from Mr Ronald Milne with regard to both his own level of training and his own understanding of the risks involved in a man going overboard, I did not hear any direct detailed evidence about the training regimes that were presently in place for the "health and safety" training of the skippers of fishing vessels. Rather, Mr Milne was taken through and spoke to the section in the MAIB Report (at page 39) where something was said of the training regime. Mr Milne commented on his own knowledge of that regime. Professor Tipton spoke to the efforts made by the RNLI to heighten an understanding of the risks involved in a man going overboard and of the precautions required. He spoke to the excellent RNLI training video that I was shown. But, he said relatively little of training.

In the course of his submissions on this issue, the Procurator Fiscal Depute asked me to make determinations under Section 6(1)(e) to the broad effect that (a) skippers should be trained with regard to the effects of cold shock on the human body; (b) skippers should be trained with regard to the level of "health and safety training" that their crew members required to demonstrate; and (c) the health and safety training of such crews should include training as to the effects of cold water shock on the human body. I do not consider that I can make determinations in these exact terms because, on the evidence before me, I cannot be satisfied either that such steps are not already in place or that the matter of "cold shock" is not adequately dealt with in existing training courses. But, I have made a qualified finding to "flag up" the points made by the Procurator Fiscal Depute.