Leeson Lane, Dublin 2, Ireland.
Tel: +353 1 678 2460.
Fax: +353 1 678 2159.
Freefone: 1800 202614.

MCIB
Marine Casualty Investigation Board

REPORT OF THE INVESTIGATION INTO THE LOSS OF A CREWMAN OVERBOARD FROM THE IRISH FISHING VESSEL "SPAILPIN FANACH" OFF THE WEST COAST OF IRELAND ON 13TH MAY 2000.

The Marine Casualty Investigation Board was established on the 5th, June 2002 under The Merchant Shipping (Investigation of Marine Casualties) Act 2000

CONTENTS

1. SYNOPSIS.

1.1 On May 9th 2000, the Irish registered fishing vessel "Spailpin Fanach" sailed from Castletownbere, Co. Cork with a crew of four on board.

1.2 On 13th May 2000, while preparing to haul nets in position 52° 52 North, 011° 14 West, one of the crew, John O'Leary fell overboard.

1.3 After some time Mr O'Leary's body was recovered and was subsequently landed at Castletownbere.

2. FACTUAL INFORMATION
DESCRIPTION OF THE VESSEL

2.1	Vessel Name:	"Spailpin Fanach"
	Built:	1972 in Killybegs, Co. Donegal.
	Owner:	Denis O'Regan, Toormore, Castletownbere, Co. Cork.
	Purchased:	1996
	Registered Length:	62.40 feet.
	Registered Breadth:	20.00 feet.
	Registered Depth:	7.30 feet.
	Gross Tonnage:	66.66 tons.
	Register Tonnage:	32.24 tons
	Port of Registry:	Tralee.
	Official Number:	401202.
	Machinery:	Single Kelvin Diesel (Glasgow) 8 Cylinder Main Engine. B.H.P.: 435. Engine made in 1979. The engine gives an estimated speed of 10 knots.
	Description:	Carvel built, wooden fishing vessel with a cruiser stern. The vessel has no watertight bulkheads fitted. The vessel was being used as a stern trawler fishing for monk and megrims.

2.2 Lifesaving Appliances available on board.

Lifejackets:	Eight
Lifebuoys:	Two
Pyrotechnics:	Twelve parachute flares
Line throwing apparatus:	One
Liferafts:	Two inflatable liferafts.

2.3 Navigational aids provided on board.

One Magnetic Compass.	One NT 921 Autopilot.
One Furuno Radar.	One Koden 106 sounder.
One Koden 8831 sounder.	One Sodena fish plotter.
One Shipmate RS 2500 fish plotter.	One Furuno DGPS Navigator.
One Raystar 920 GPS Navigator	One Raytheon GPS backup.
One ICOM VHF Installation.	One Sailor VHF Installation.
One Hand VHF Swiftech.	3-minute watchkeepers alarm.
One ICOM IC-M700 MF Installation.	

2.4 The crew of the "Spailpin Fanach" on 13th May 2000 consisted of the following persons:

2.4.1 Mr. Denis O'Regan aged 51 years is the holder of a Second Hand Special Certificate of Service No. 157, which he obtained in 1990. He has been fishing at sea since 1969 and was the Skipper of the vessel. He had been sailing on the vessel for four years. He is also the holder of Lifeboat, E.D.H. and A.B. Certificates. He had successfully completed a L.R.C. GMDSS course in January 2000.

2.4.2 Mr. John Kelly aged 46 years has been fishing periodically for about 9 years but holds no formal sea going qualifications. He had been on the vessel for two weeks.

2.4.3 Mr. John O'Leary aged 48 years has been fishing periodically since 1969 and had been on the vessel for only 12 days. He is not known to hold any formal sea going qualifications.

2.4.4 Mr. Carlos Pesqueira Area has been fishing for about 16 years and had been on board the vessel for six weeks. He is not known to hold any formal sea going qualifications.

3. EVENTS PRIOR TO THE INCIDENT

3.1 The "Spailpin Fanach" sailed from Castletownbere, Co. Cork at about 21.00 hours on 09-05-2000.

3.2 On the 13th May, 2000 The "Spailpin Fanach" went fishing in the vicinity where the incident occurred around 53° 00 N and 11° 00 W. (See Appendix 8.1)

3.3 The starboard net had been shot at about 06.30 hours on and the vessel towed in a SE direction into the weather. The Skipper called the other three crewmembers at 11.45 hours.

3.4 The weather conditions at this time were winds from the Southeast to South-south-east force 5 to 6, possibly force 7 for short periods. The visibility was good with a moderate to rough sea. (See the Met Eireann weather report in Appendix 2).

4. THE INCIDENT

4.1 4.1 The crew commenced hauling nets with Mr. Area on the winch forward. There was 225 fathoms of wire out, as well as 90 fathoms of combination rope, doors and the net. This hauling of nets was carried out several times each day and took approximately 20 minutes.

4.2 When the net came up the wing ends were twisted. The crew took the twist out by dipping one of the drum end ropes and then reconnecting it. This was carried out in the stern area. The Skipper then left the stern area to go to the wheelhouse and turn the vessel around to run before the weather while hauling the nets. He took the vessel out of autopilot and went hard to port and increased engine speed from 500 to 850 or 900revs.

4.3 After about one minute, the Skipper heard John Kelly, who was aft with John O'Leary, shouting "man in the water". The vessel was in position 52° 52 North and 011° 14 West (See Appendix 8.1.). John Kelly recalls that he and John O'Leary were standing on the poop deck, with John O'Leary on the starboard side aft and John Kelly on the port side. The skipper was in the wheelhouse and Mr. Area was forward on the winch controls. The power block was in the raised position, the only obstacle between Mr. John O'Leary and Mr. John Kelly was the spare net ends (See letter from Mr. John Kelly dated 06/11/03 on page 61). The deck under John O'Leary was clear but wet. The starboard net was out and was above their heads. Both men were looking up towards the net reel.

4.4 John Kelly recalls that about a minute or two after the Skipper started the turning manoeuvre, John O'Leary fell out on his back over the rails. He did not move after entering the water. John Kelly recalls that he did not slip before falling over but appeared to lose his balance although there was not any big rolling motion that could have knocked Mr. O'Leary over. John O'Leary did not strike his head against anything. John O'Leary was wearing a full set of oilskins and short knee length boots. Mr. O'Leary was not wearing a personal flotation device or lifejacket. John Kelly raised the alarm by shouting. The Skipper came to the wheelhouse door. Both men observed John O'Leary in the water.

5. EVENTS FOLLOWING THE INCIDENT

5.1 The Skipper immediately took the engine out of gear. He then looked aft on the starboard side and saw John O'Leary in the water at an angle of about 45 degrees from the stern and at a distance of about 10 to 12 feet. This distance was increasing, as the vessel was still moving ahead.

5.2 He then reached out and took the lifebuoy and told one of the crew to throw it towards John O'Leary. However he then stopped them as he realised that John O'Leary was now too far away. Mr. O'Leary had by then turned over with his face in the water and was showing no signs of life.

5.3 The Skipper then told Mr. Area to let the brakes go off the winch as fast as he could. Mr. Area did this and the vessel then made a full circle back to where John O'Leary was. When he was close to the starboard side the crew tried to catch him with the grapnel, but the grapnel kept slipping off his oilskins.

5.4 Mr. O'Leary then went around the bow and the vessel circled back to him again. The crew lost sight of him for a moment but eventually succeeded in getting him alongside again on the starboard side and used the winch to lift him back on board.

5.5 The crew tried for over 30 minutes to resuscitate him using mouth to mouth artificial respiration and external heart massage by chest compression. They took off his clothes and tried warming him and put him into two sleeping bags but to no avail. It would appear that the grapnel had cut him under the chin. They brought the body back into the galley. They then brought in the gear and headed back to Castletownbere where they arrived at 06.45 hours on 14 May 2000.

5.6 The Skipper recalls that when he was making the first turn, he sent out 3 Mayday calls on V.H.F. Channel 16. These were not answered. The VHF's were transmitting and receiving satisfactorily. He is unsure if he sent out these Mayday calls correctly. The Coast Guard did not receive these Mayday calls. At the time of the incident, the Skipper could hear Glen Head Radio and he thought that they might have picked up the mayday calls. The position of the incident in the Report is 52° 52n011° 14w. This location is approximately 60 nautical miles from the nearest Shannon and Clifden Coast Guard VHF radio sites and, as such, would be outside the normal range for reception of VHF radio signals from a fishing vessel transmitter. Marine VHF range is normally line of site range between aerials. No mayday call was heard from the IFV "Spailpin Fanach" at the time of the incident, at either of these sites that are remotely operated by Valentia and Malin Head Coast Guard Stations respectively. The published range for VHF coverage provided by the Irish Coast Guard around the Irish coast is 30 nautical miles out from land.

The VHF site at Glen Head (referred to in paragraph 5.6), remotely operated by MRSC Malin Head, is approximately 140 nautical miles from 52º 52n 011º 14w. It may be possible in certain situations, due to high atmospheric pressure, the height above mean sea level of the Glen Head VHF site and the power of the transmission equipment at this site, that transmissions could be heard from Glen Head Radio by vessels operating in that location. It would not, however, be normally possible for VHF signals from vessels in position 52º 52n 011º 14w to be received at Glen Head due to the relative low height of aerials on fishing vessels, the low power of their transmitters and the distance involved. Vessels operating outside normal VHF range should use their MF equipment due to its greater range for transmission and reception."
(Please see Coast Guard's correspondence at page 58).

5.7 At about 22.00 hours, the Skipper phoned his cousin and asked him to inform the Gardai and relations of Mr. O'Leary and to arrange a doctor. The Skipper advised Valencia Radio of the incident at 00.54 hours BST on the 14 May while returning to Castletownbere. (i.e. 12 hours after the incident)

6. CONCLUSIONS AND FINDINGS

6.1 Mr. O'Leary appears to have lost his balance and fell overboard. His death was recorded at an Inquest as being due to Cardiac Arrest in turn due to Vagal Inhibition as a result of sudden immersion in cold water.

7 RECOMMENDATIONS

7.1 The mandatory wearing of personal flotation devices (PFD's) is required by S.I. No. 586 of 2001, which came into operation on 1st March 2002. Guidance on the selection of PFD's is given in Marine Notice No. 7 of 2002, which supersedes Marine Notice No 14 of 2000. (See Appendix 8.4).

7.2 Marine Notice No. 16 of 2002, dealing with the dangers of falling overboard when working on the deck of a fishing vessel, is attached at Appendix 8.5.

7.3 All fishing vessels should carry the appropriate radio equipment as required by S.I. No. 544 of 1998. (See Appendix 8.6).

8. APPENDICES

8.1. Appendix 1 Chart extract showing position of man overboard.

8.2. Appendix 2 Weather Report from Met. Eireann.

8.3. Appendix 3 Photograph showing deck area where Mr. O'Leary was standing prior to falling overboard.

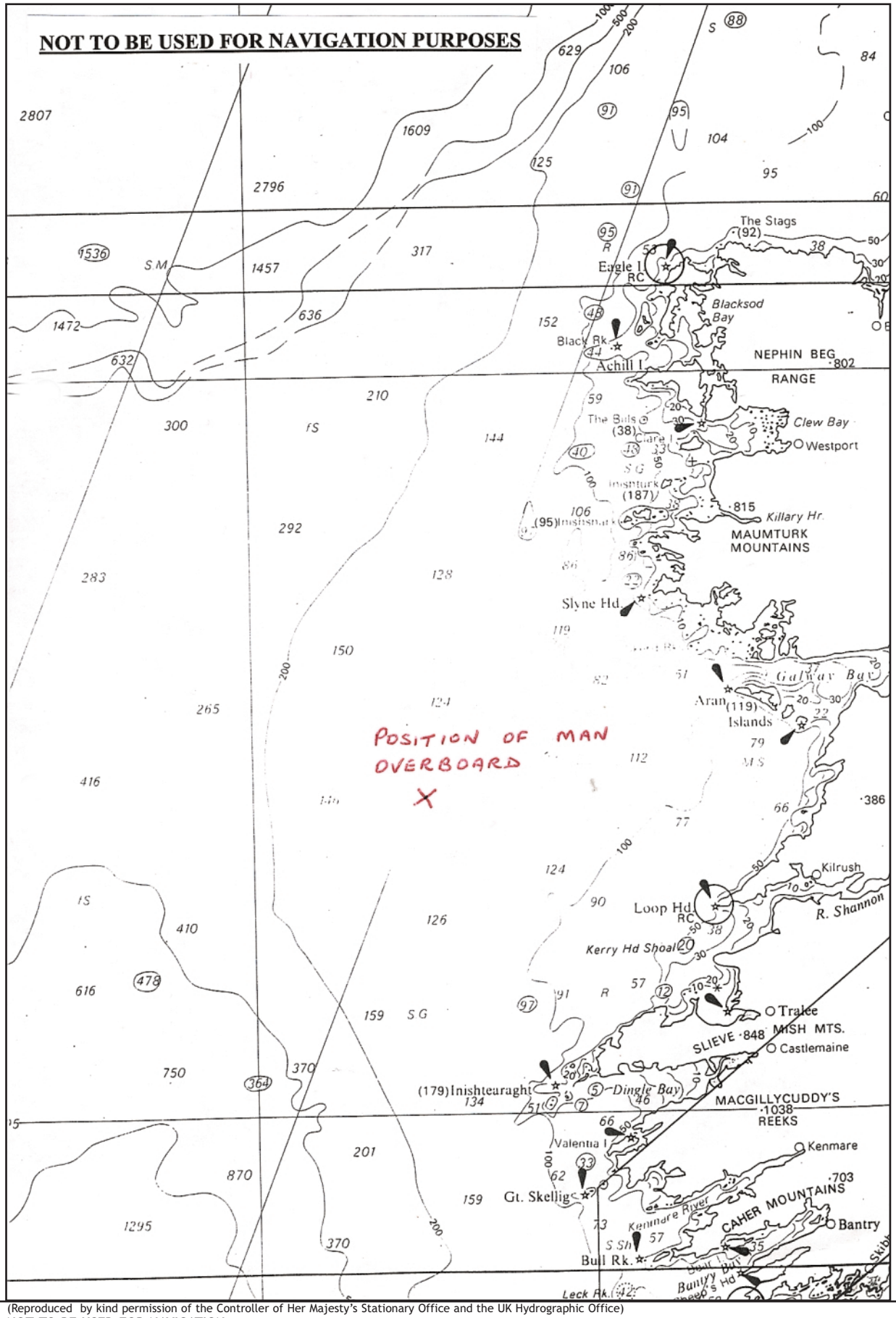
8.4. Appendix 4 Copies of Marine Notices No's. 14 of 2000 and 7 of 2002, dealing with the wearing of personal flotation devices.

8.5. Appendix 5 Marine Notice No. 16 of 2002, dealing with the dangers of falling overboard from the deck of a fishing vessel.

8.6. Appendix 6 Copy of S.I. No. 544 of 1998 dealing with Fishing Vessel (Radio Installations) Regulations, 1998.

APPENDIX 8.1

8.1. Appendix 1 Chart extract showing position of man overboard.



8.2. Appendix 2 Weather Report from Met. Eireann.

MET ÉIREANN
The Irish Meteorological Service

Glasnevin Hill, Cnoc Ghlas Naíon, Tel: +353-1-806 4200
Dublin 9, Ireland. Baile Átha Cliath 9, Éire. Fax: +353-1-806 4247

Weather report for the sea area near 52° 52'N, 11° 14'W
on the 13th May 2000
between 6 and 18 hours

General Situation
A deep low pressure in the Atlantic gave a south-easterly airflow over Ireland.
Associated frontal troughs moved eastwards over the area.

Details:

Winds: South-east to south-south-east Force 5 to 6, possibly reached Force 7 for short periods.
Weather: rather cloudy with light rain
Visibility: good
Seastate: Moderate Seas at first increased Rough

APPENDIX 8.3

8.3. Appendix 3 Photograph showing deck area where Mr. O'Leary was standing prior to falling overboard.

8.4. Appendix 4 Copies of Marine Notices No's. 14 of 2000 and 7 of 2002, dealing with the wearing of personal flotation devices.

Department of the Marine and Natural Resources

Roinn na Mara agus Acmhainní Nádúrtha

Marine Notice

No. 14 of 2000

NOTICE TO ALL OWNERS, OPERATORS, SKIPPERS, SECOND HANDS AND CREWS OF FISHING VESSELS, AND TO NAUTICAL SCHOOLS

Re: Use of Lifejackets(LJ) & Personal Flotation Devices(PFD).

It is a statutory requirement for all fishing vessels to carry a suitable lifejacket for every person on board.

A Lifejacket or Personal Flotation Device essentially fulfil the same safety function i.e. keeps a person afloat in the water. Personal Flotation Devices are also known in some countries as Personal Buoyancy Aids (PBAs). Lifejackets & Personal Flotation Devices can be manufactured from a variety of materials and can be an air type or a mixture of air & buoyancy material.

In essence there are many different types of Lifejackets & Personal Flotation Devices, which vary considerably in quality from country to country.

LIFEJACKETS

Lifejackets of an approved type as used by the Merchant Marine & Fishing fleet are manufactured to a standard set by the International Maritime Organisation, this basic standard requires, inter alia, that they:

- can be donned within 1 minute;
- are of a highly visible colour;
- can be worn correctly in only one way;
- allow wearer to jump into the water from a height of at least 4.5m without injury;
- will lift the mouth of an exhausted or unconscious person not less than 120mm clear of the water;
- turn the body of an unconscious person in the water from any position to one where the mouth is clear of the water in not more than 5 seconds;
- allow a person wearing it to swim a short distance & board a liferaft;
- if the Lifejacket is of an inflatable type, can keep a person afloat with one chamber gone (lost buoyancy).

PERSONAL FLOTATION DEVICES

There are many differing standards for Personal Flotation Devices some of which are set out by International Organisation for Standardisation (ISO), **however only those with the CE mark (European Community Approval) can be sold or used in Ireland or Irish Waters.**

Advantages of PFDs

- are donned very easily.
- are attractive to wear.
- are usually much lighter than Lifejackets.
- quality & standard usually being such that you get what you pay for
- are smaller & easier to carry & stow.
- can usually be worked in when worn over working gear particularly those of the waistcoat type also known as "Work Vests".

Disadvantages of PFDs

- can come in a variety of colours, not always highly visible.
- are at times manufactured to no common identifiable standard.
- are sold to facilitate a body weight (60 kg, 70 kg etc.).
- have in many cases no self righting facility for a person who is exhausted or unconscious.

All PFDs should have a standard mark (kite mark) on them setting out clearly their standard and their recommended usage.

It is very common for PFDs to be confused with lifejackets, however it should be stressed they are not lifejackets and should not be treated as such.

USAGE

The various scenarios in which a LJ/PFD should be used:

(a) abandon ship situations;
(b) launching rescue boat;
(c) working close to water, on a pier for instance;
(d) leisure boat activities of all sorts, both sail, motor, skiing etc;
(e) working overside on a merchant ship;
(f) working on the deck of fishing vessels;
(g) working on tugs and small harbour craft;
(h) working on pilot boats;
(i) angling or shooting from a boat;
(j) all activities on or near water not covered by the above.

All the above scenarios cover a multitude of activities in various types of weather. No matter whether professional seamen are involved or amateurs, when an accident/disaster happens at sea, on a lake or on a river it usually happens very quickly and as a rule there is not much time to re-act.

In the scenarios listed above:-.

- **(a) and (b) are in all probability the most hazardous for any crew involved, in these situations lifejackets should always be used**. For the rescue boat crew an airtype may be used.

- In (f), to work on the deck of a working fishing vessel in any sort of weather means in most cases whether the boat is large or small, that there are seas coming inboard. With seas coming inboard, given normal circumstances there is at all times the possibility, even for the most experienced fisherman, of being knocked down, washed around the deck and swept over the side.

- There is no more hazardous work platform anywhere in the world than the deck of a fishing vessel. There is always the chance of a person working on the deck being struck by gear and knocked overboard whether shooting or recovering nets. In small fishing vessels with little freeboard, many lives are lost hauling in nets, when the persons involved stand-up in the boat and haul at the same time, with a resulting capsize.

- Snagging the bottom with fishing gear can, unless great care is involved, lead to complete loss of stability of the vessel and subsequent capsize.

OTHER AIDS

Outside of LJs & PFDs there are a number of "Survival Kits", e.g. special working suits & jackets with built in inflation collars etc. Many of these are used by specialised services, sometimes they are obtained as an additional safety item of personal choice. In some Pilotage Districts, Anorak Working Jackets with inflatable collars are provided for the Pilots; on some standby, anchor handling vessels and large fishing vessels special survival suits are worn by crew working on deck.

Research has indicated that in order to be sure & safe a lifejacket should be usually worn in addition to these additional devices.

CONCLUSIONS

There is no doubt in all the scenarios outlined above, providing the person involved is fully conscious and fit, the wearing of a LJ/PFD will in all probability save their lives.

If a person is unconscious, injured, or incapacitated in any way the PFD may be useless depending on how a person floats and how quick a rescue can be effected. Without wearing a LJ/PFD there will be little chance of survival at all.

1. Only PFDs or LJs which comply with the European Commission/ISO standards are to be used in Irish Waters. These standards are set out hereunder:

   EN 393 Lifejackets and personal buoyancy aids – Buoyancy aids 50 N*.

EN 394 Lifejackets and personal buoyancy aids – Additional items.

EN 395 Lifejackets and personal buoyancy aids – Buoyancy aids 100 N.
Intended for use in relatively sheltered waters when normal clothing is being worn.

EN 396 Lifejackets and personal buoyancy aids – Buoyancy aids 150 N.
Intended for use offshore or where foul weather clothing is being worn.

EN 399 Lifejackets and personal buoyancy aids – Buoyancy aids 275 N.
Intended for use in extreme conditions, when heavy protective clothing is being worn or loads are being carried..

*A Newton (N) is a unit of force, the force which acting for one second on a mass of one kilogram, produces an acceleration of one metre per second per second. This is a measure of the ability of the LJ/PFD to keep a person afloat. 10 Newtons approximate to 1 Kilogram/2.2 lbs of buoyancy.

2. When choosing a LJ/PFD consideration should be given to the area of use, clothing worn and to working practices.

3. In very broad terms 50N are for small adults or children. 100N and above are for adult use. The size of LJ/PFD used will be entirely dependent on chest size and body weight. All LJ/PFD should be fitted with a body or lifting loop by which a wearer can be hauled from the water and should also be fitted with retro-reflective material in the upper part to ensure an ability to be seen at night by a searchlight.

4. **It is strongly recommended that a Personal Flotation Device of at least 100 Newtons buoyancy be worn at all times when on the deck of any Fishing Vessel or boat irrespective of size, and, that it be donned as a routine measure prior to putting to sea.**

5. **Remember, it is a statutory requirement for all fishing vessels to carry a suitable lifejacket for every person on board.**

All enquiries concerning Marine Notices should be addressed to Maritime Safety Division - Tel: 01-6199359; Fax: 01-6620774.

Secretary-General
Department of the Marine and
Natural Resources
Dublin 2.

11 May, 2000.

Department of the Marine and Natural Resources

Roinn na Mara agus Acmhainní Nádúrtha

Marine Notice
No 7 of 2002

To all Fishing Vessel Owners, Agents, Skippers, Fishing Vessel Crew Members, Fishermen, and Chandlers.

GUIDANCE ON THE SELECTION OF PERSONAL FLOTATION DEVICES (PFDs) FOR USE ON-BOARD FISHING VESSELS

WITHDRAWAL OF MARINE NOTICE NO. 14 OF 2000

Marine Notice No. 14 of 2000: Use of Lifejackets (LJ) & Personal Flotation Devices (PFDs) is hereby withdrawn.

GENERAL

The Department of the Marine and Natural Resources wishes to remind skippers and those working onboard fishing vessels about the new Regulations on Personal Flotation Devices, PFDs, which came into operation on the 1st of March 2002.

These regulations are the Fishing Vessel (Personal Flotation Devices) Regulations, 2001 (S.I. No. 586 of 2001). These regulations apply to all crewmembers on board fishing vessels, other than those registered under the laws of another state. The regulations require that every fishing vessel carry a suitable personal flotation device for every person onboard. The personal flotation device shall be worn at all times by the crew when on an exposed deck, or for undecked vessels when on board the vessel, whether at sea, in harbour or coming to and from moorings. The skipper shall take all reasonable steps to ensure that all crewmembers wear a personal flotation device. The criteria, which the regulations refer to for determining suitability, include:

1. The device is sufficient to give a person using it a positive buoyancy in waters which are likely to be encountered where the vessel on which it is required to be used is reasonably likely to be.

2. The device is appropriate to the body weight of the person who is to wear it and also to the type of work being done.

3. The device has on it the CE conformity marking consisting of the initials "CE" taking the form of the specimen given (shown below) in Annex IV of Council Directive 89/686/EEC of 21 December 1989 (as amended by Council Directive 93/68/EEC of 22 July 1993 and Council Directive 96/58/EC of the European Parliament and the Council of 3 September 1996).

CE

TYPES OF PERSONAL FLOTATION DEVICES

The term personal flotation device is an all-encompassing term, which covers all forms of personal protective equipment, intended to help keep a person afloat. These range from 'CE' marked lifejackets through to 'CE' marked buoyancy aids. The following table lists the different types of PFDs acceptable under this legislation and a brief description is given together with suggestions for areas of use.

Type and Markings	Suggested Uses
 EN 399 - 275N	For offshore use in extreme conditions when heavy protective clothing is being worn or when extra loads are being carried. Turns unconscious wearers face up in water under almost all circumstances. May be suitable for use in situations where there may be a delay in rescue.
 EN 396 - 150N	For swimmers and non-swimmers of any age. For offshore use. Turns most unconscious wearers face up in water (depending on the clothing worn). These may be suitable for use in tidal waters or when foul weather clothing is being worn and where the wearers may not be capable of helping themselves due to injury or exhaustion.
 EN 395 - 100N	For swimmers of any age. For use in relatively sheltered waters, will not turn unconscious wearers face up in water (depending on the clothing worn). May be suitable in instances where the wearers remain capable of helping themselves.
 EN 393 - 50N	Only for good swimmers and for use in sheltered waters where help is close at hand. Will not hold the face of an unconscious wearer clear of the water. For adults only (+40kg). May be suitable in circumstances where more bulky or buoyant devices could impair the user's activity or actually endanger them. Not a lifejacket.

Note: EuroNorm (EN) refers to European wide standards, which are used for ensuring the uniformity and minimum standards for products and services.

The above table is for guidance only and skippers are to assess the risks appropriate to their area of operation and select personal flotation devices appropriately.

NOTES FOR SELECTION OF PFDS

The selection of PFDs is a complex issue and it is dependent on many factors such as area of operation for the vessel, seasonal variations, night and day time work, type of work being carried out, ease of use etc.... In this section we have attempted to deal with these issues and to highlight concerns and issues which should be considered in selecting a PFD.

Inherently buoyant flotation suits are popular especially in cold weather. A particular benefit of these suits is their thermal protection offered against cold-water shock and hypothermia. However, in warm weather they become very hot to work in. Fishermen should also be aware that because the suit floats in a horizontal position an unconscious person might float either face-up or face-down.

Inflatable PFDs such as those complying with EN 396 and EN 399 are lightweight and less restrictive and can be worn comfortably in both warm and cold weather. They can also be fitted with automatic inflation devices and may turn the wearer face upwards in the water, depending on clothing worn. These types of PFDs are also available in versions where they are incorporated into clothing such as oilskins and work suits.

If the wearer is unconscious when entering the water, only automatically activated devices will inflate and fishermen who have the manually activated type must be aware of this limitation.

Consideration should also be given to fitting personal flotation devices with lights. These lights should comply with the EuroNorm standard EN394.

GUIDANCE FOR CORRECT USE OF PFDS

1. Inflatable personal flotation devices must be worn over all clothing and not underneath. This is to ensure that there is sufficient space for the device to inflate and that the wearer's breathing is not restricted.

2. PFDs should be worn correctly to prevent them from riding up above the wearer's shoulders.

3. Wearers should be fully familiar with the operation of their inflatable PFDs both manually and automatically.

4. Inflatable PFDs should be checked regularly and maintained in accordance with the manufacturer's instructions. As a minimum, checks should include ensuring that the gas cartridges have not been

punctured, that the zips, buckles, fasteners and webbing straps are functioning correctly and that lights, if fitted, are functioning.

5. Automatically inflatable PFDs, which operate by means of a soluble bobbin, may activate in error if left in a damp condition. When inflatable PFDs are not being worn they should be hung to dry vertically to ensure that all moisture drains away from the bobbin. Covers are available which reduce the problem of accidental inflation.

ABANDON SHIP LIFEJACKETS

It is important not to confuse personal flotation devices which are required under the Fishing Vessel (Personal Flotation Devices) Regulations, 2001 (S.I. No. 586 of 2001) with the abandon ship lifejackets which all fishing vessels must carry. Personal flotation devices are in addition to these lifejackets and both types must be carried on board. The abandon ship lifejackets must fulfil the requirements of the IMO SOLAS/EU Marine Equipment Directive (MED) and they are required to be carried as part of the normal lifesaving equipment for all fishing vessels. IMO SOLAS/EU MED lifejackets are marked as follows.

Type and Markings	Suggested Uses
 IMO SOLAS/EU Marine Equipment Directive	Use for abandoning ship. Required under Merchant Shipping Legislation. Not intended for everyday use as they are generally bulky and they need to be kept in good condition for use in abandon ship situations.

SUMMARY

This Marine Notice has attempted to provide guidance to support the regulations requiring all crewmembers on fishing vessels to wear personal flotation devices. The skipper of a fishing vessel should identify the hazards faced by the crew and based on this assess the risks and select suitable personal flotation devices based on the guidance given in this marine notice.

Secretary-General
Department of the Marine and Natural Resources
Leeson Lane
Dublin 2

19th April 2002

Any enquiries concerning Marine Notices should be addressed to:
Maritime Safety Division
Tel: 01-6199358 Fax: 01-6620774 email: marine.notices@marine.gov.ie

8.5. Appendix 5 Marine Notice No. 16 of 2002, dealing with the dangers of falling overboard from the deck of a fishing vessel.

Department of the Marine and Natural Resources

Roinn na Mara agus Acmhainní Nádúrtha

Marine Notice No. 16 Of 2002

NOTICE TO ALL FISHING VESSEL OWNERS, SKIPPERS AND ALL FISHERMEN

Dangers of falling overboard when working on the deck of a fishing vessel

A number of recent incidents, resulting in deaths, have occurred when fishermen have been lost overboard when working on the decks of fishing vessels. In each case the fishermen were wearing no form of personal flotation device. This made their recovery from the water slow and difficult and in one case impossible.

The Department of the Marine and Natural Resources wishes to remind skippers and those working onboard fishing vessels that **the Fishing Vessel (Personal Flotation Devices) Regulations 2001 (S.I. No. 586 of 2001) came into operation on the 1st of March 2002.** These regulations apply to all crewmembers on board Irish registered fishing vessels. The regulations require that every Irish registered fishing vessel carry a suitable personal flotation device for every person onboard. **The personal flotation device shall be worn at all times by the crew when on an exposed deck, or for undecked vessels when on board the vessel, whether at sea, in harbour or coming to and from moorings.** The skipper shall take all reasonable steps to ensure that all crewmembers wear a personal flotation device. Guidance on the selection of personal flotation devices (PFDs) for use on-board fishing vessels is covered in Marine Notice No. 7 of 2002.

When working on deck, fishermen should also consider the following matters:

1. Always keep clear of any fishing gear while it is being shot. If the gear snags inform the skipper so he can take the weight off the gear. The snag can then be cleared without danger. A torn net or broken rope can be repaired later.

2. When hauling gear always keep clear of bights in ropes. If a person is standing in the bight of a rope and the weight suddenly comes onto the rope then there is the danger of being pulled overboard, or being seriously injured or both.

3. Recovering a person overboard is extremely difficult. He/she will most likely be very cold, extremely tired, weighed down by waterlogged clothing and almost certainly unable to help himself or herself. Body temperature falls fast and even the fittest person becomes exhausted within a short

period of time, so speed of any recovery is essential. Although there are some well-documented cases of people surviving immersion in the water for several hours the normal experience is that time is generally measured in minutes rather than hours.

4. Tossing a lifebuoy to someone in the water is a sensible first step; it provides an additional means by which people overboard can keep themselves afloat. But exercise extreme caution when trying to pull someone along by it. Hanging on to a moving lifebuoy is infinitely harder than it looks. If the victims cannot help themselves, some means of getting a strop around the body must be sought. Ideally this strop will be the same means by which he/she is lifted back on board.

5. Every skipper should plan how he would recover a person from the water onto the boat. The conscientious skipper will carry out "man overboard" drills on a regular basis and have an effective system for retrieving casualties from the water. All personal flotation devices should be fitted with a body or lifting loop by which the wearer can be hauled from the water and should also be fitted with retro-reflective material in the upper part to ensure their visibility at night by a searchlight.

6. To enter the water to aid a person overboard is commendable but very risky and it should be undertaken only when absolutely essential, and then only with the aid of a safety line and a lifejacket. If a wet suit is available and worn, then the rescuer's task will be made easier.

Director General
Maritime Safety Directorate
Department of the Marine and
Natural Resources
Dublin 2.

29th May 2002

Any enquiries concerning Marine Notices should be addressed to:
Maritime Safety Directorate
Tel: 01-6199358 Fax: 01-6620774 email: marine.notices@marine.gov.ie

8.6. Appendix 6 Copy of S.I. No. 544 of 1998 dealing with Fishing Vessel (Radio Installations) Regulations, 1998.

S.I. No. 544 of 1998

FISHING VESSEL (RADIO INSTALLATIONS) REGULATIONS, 1998.

"satellite emergency position-indicating radio beacon" and "satellite EPIRB" mean an earth station in the mobile-satellite service the emissions of which are intended to facilitate search and rescue operations;

"Sea Area A1" means an area within the radiotelephone coverage of at least one VHF coast station in which continuous DSC alerting is available;

"sea area A2" means an area, excluding sea area A1, within the radiotelephone coverage of at least one MF coast station in which continuous DSC alerting is available, as may be defined in a Marine Notice;

"*sea area A3*" means an area, excluding sea areas A1 and A2, within the coverage of an INMARSAT geostationary satellite in which continuous alerting is available;

"sea area A4" means an area outside sea areas A1, A2 and A3;

"ship earth station" means a mobile earth station in the maritime mobile-satellite service located on board a ship;

"*Very High Frequency*" and "*VHF*" mean the frequency spectrum between 30 MHz and 300 MHz;

(2) In these Regulations, a reference to a regulation, paragraph or subparagraph is to the regulation, paragraph or subparagraph of the provision in which the reference occurs, unless it is indicated that reference to some other provision is intended.

(3) A term or abbreviation which is used in these Regulations and is defined in the Radio Regulations shall have in these Regulations the meaning that it has in those Regulations.

Equivalents and exemptions.

3. (1) Where these Regulations require that a particular fitting, material, appliance or apparatus, or type thereof, shall be fitted or carried in a vessel, or that any particular provision shall be made, the Minister may permit any other fitting, material, appliance or apparatus or type thereof to be fitted or carried, or any other provision to be made in that vessel if he is satisfied by trial thereof or otherwise that such other fitting, material, appliance or apparatus, or type thereof, or provision, is at least as effective as that required by these Regulations.

(2) The Minister may exempt any individual vessel which complies with certain criteria specified by him or any class or description of vessels from any of the provisions of Regulations 5 to 16, Regulations 18 to 25, Regulations 27 to 36 and Regulations 40 to 46, subject to such conditions as he may think fit.

PART 2

CLASS I FISHING VESSEL REQUIREMENTS

Functional requirements.

4. Every Class I fishing vessel, and all other fishing vessels to which Part 2 of these Regulations apply, while at sea, shall be capable:

(a) except as provided in Regulations 7(1)(a) and 9(1)(d)(iii), of transmitting ship-to-shore distress alerts by at least two separate and independent means, each using a different radiocommunication service;

(b) of receiving shore-to-ship distress alerts;

(c) of transmitting and receiving ship-to-ship distress alerts;

(d) of transmitting and receiving search and rescue co-ordinating communications;

(e) of transmitting and receiving on-scene communications;

(f) of transmitting and receiving signals for locating;

(g) of transmitting and receiving maritime safety information;

(h) of transmitting and receiving general radiocommunications to and from shore-based radio systems or networks subject to regulation 14(8), and

(i) of transmitting and receiving bridge-to-bridge communications.

Installation, location and control of radio equipment.

5. (1) Every vessel shall be provided with radio installations capable of complying with the functional requirements prescribed by regulation 4 throughout its intended voyage and, unless exempted under regulation 3, complying with the requirements of regulation 6 and, as appropriate for the sea area or areas through which it will pass during its intended voyage, the requirements of either regulation 7, 8, 9 or 10.

Class I - Every existing fishing vessel of 45 metres or more in length shall comply with all the Regulations specified in Part 2 of these Regulations with effect from 1 February, 1999;
Every existing fishing vessel of 24 metres or more but under 45 metres in length shall comply with the following Regulations :-
Regulation 6(1)(a)(ii) - (VHF Radio installation)
Regulation 6 (1)(f) - (Satellite EPIRB)
Regulation 12 - (Sources of Energy)
with effect from 31 March 1999 and shall comply fully with all of the Regulations specified in Part 2 of these Regulations with effect from 1 January, 2000.

Class II- Every existing fishing vessel of this Class shall comply with the following Regulations
Regulation 19(1)(a)(ii) - (VHF radio installation)
Regulation 19 (d) - (Satellite EPIRB)
Regulation 23 - (Sources of energy);
with effect from 31 March, 1999 and shall comply fully with all of the Regulations specified in Part 3 of these Regulations with effect from 1 January, 2000.

Class III- Every existing fishing vessel of this Class shall comply with the following Regulations
Regulation 30(1)(a)(ii) - (VHF radio installation)
Regulation 30(1)(d) - (Satellite EPIRB)
Regulation 33 - (Sources of energy);
with effect from 31 March, 1999 and shall comply fully with all of the Regulations specified in Part 4 of these Regulations with effect from 1 January, 2000.

Class IV- Every existing fishing vessel of this Class shall comply with the following Regulations
Regulation 40(1)(a) - (VHF radio installation)
Regulation 40(1)(b) - (Satellite EPIRB)
Regulation 43 - (Sources of energy);
with effect from 31 March, 1999 and shall comply fully with all of the Regulations specified in Part 5 of these Regulations with effect from 1 January, 2000

(5) Part 2 of these Regulations shall apply to:
All Class I fishing vessels

(6) Part 3 of these Regulations shall apply to
All Class II fishing vessels

(7) Part 4 of these Regulations shall apply to:
All Class III fishing vessels

(8) Part 5 of these Regulations shall apply to:
All Class IV fishing vessels

(9) No provision in these Regulations shall prevent the use by any vessel, survival craft or person in distress, of any means at their disposal to attract attention, make known their position and obtain help.

Interpretation

2. (1) In these Regulations:-

"*assigned frequency*" means the centre of a frequency band assigned in accordance with the Radio Regulations;

"*bridge-to-bridge communications*" means communications between vessels from the positions from which the vessels are normally navigated;

"Consolidated Text" means the Consolidated text of the regulations annexed to the Torremolinos International Convention for the Safety of Fishing Vessels, 1977, as modified by the Torremolinos Protocol of 1993 relating thereto, as reproduced in the publication "1993 Torremolinos Protocol and Torremolinos International Convention for the Safety of Fishing Vessels, Consolidated Edition, 1995"; published by the International Maritime Organisation, London, 1995;

"*continuous watch*" means a radio watch that is not interrupted or is interrupted only for brief intervals when the vessels receiving capability is impaired or blocked by its own communications or when the facilities are under periodical maintenance or checks;

"*digital selective calling*" and "DSC" mean a technique using digital codes which enables a radio station to establish contact with, and transfer information to, another station or group of stations, and complying with the relevant recommendations as specified by the Minister for Transport, Energy and Communications;

"*direct-printing telegraphy*" means automated telegraphy techniques which comply with the relevant recommendations as specified by the Department of Transport, Energy and Communications;

"*fishing vessel*" or "*vessel*" means any vessel equipped or used commercially for catching fish or other living resources of the sea;

"*new fishing vessel*" means a fishing vessel which is registered for the first time under the Merchant Shipping Acts, 1894 to 1998 on or after 1 January, 1999;

"*existing fishing vessel*" means a fishing vessel which is not a new fishing vessel

"*general radio communications*" means operational and public correspondence traffic, other than distress, urgency and safety messages, conducted by radio;

"*High Frequency*" and "*HF*" mean the frequency spectrum between 3000 kHz and 30 MHz;

"*INMARSAT*" means the Organization established by the Convention on the International Maritime Satellite Organization (INMARSAT) done in London on the 3rd day of September, 1976;

"*International NAVTEX Service*" means the co-ordinated broadcast and automatic reception on 518 kHz of maritime safety information by means of narrow-band direct-printing telegraphy using the English language;

"length" means unless provided otherwise, 96% of the total length on a waterline at 85% of the least moulded depth measured from the keel line, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In vessels designed with rake of keel the waterline on which this length is measured shall be parallell to the designed waterline;

"locating" means the finding of ships, aircraft, units or persons in distress;

"maritime safety information" means navigational and meteorological warnings, meteorological forecasts and other urgent safety related messages broadcast to ships;

"*Medium Frequency*" and "*MF*" mean the frequency spectrum between 300 kHz and 3000 kHz;

"*Marine Notice*" means a Notice described as such, issued by the Department of the Marine and Natural Resources;

"the Minister" means the Minister for the Marine and Natural Resources;

"polar orbiting satellite service" means a service which is based on polar orbiting satellites which receive and relay distress alerts from satellite emergency position-indicating radiobeacons (satellite EPIRBs) and which provides their position;

"radar transponder" means a survival craft radar transponder for search and rescue between ships or aircraft and survival craft;

"*radio communication*" means telecommunication by means of radio waves;

"radio communication service" means a service as defined in the Radio Regulations involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes;

"Radio Regulations" means the Radio Regulations annexed to, or regarded as being annexed to, the most recent International Telecommunication Convention for the time being in force;

(2) Every radio installation shall :

(a) be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;

(b) be so located as to ensure the greatest possible degree of safety and operational availability;

(c) be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;

(d) be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls and for operating the radio installation; and

(e) be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

(3) Control of the VHF radiotelephone channels, required for navigational safety, shall be immediately available on the navigating bridge convenient to the conning position and, where necessary, facilities should be available to permit radiocommunications from the wings of the navigating bridge. Portable VHF equipment may be used to meet the latter provision.

(4) Each radio transmitter and receiver fitted in accordance with these Regulations shall be provided with a suitable antenna or antennas. The antennas shall be so constructed and sited to enable each radio installation to perform effectively its intended communication function.

(5) (a) Where wire antennas are provided as part of a radio installation they shall be fitted with suitable insulators and, if suspended between supports liable to whipping, be protected against breakage. In addition, a spare wire antenna completely assembled for rapid replacement shall be carried.

(b) Where MF and MF/HF radio installations are provided with an antenna which is not a supported wire antenna, a spare antenna of similar electrical characteristics shall be carried.

Radio equipment to be provided for all sea areas.

6. (1) Every vessel shall be provided with :

(a) a VHF radio installation capable of transmitting and receiving :

(i) DSC on the frequency 156.525 MHz (channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the vessel is normally navigated; and

(ii) radiotelephony on the frequencies 156.300 MHz (channel 6), 156.650 MHz (channel 13) and 156.800 MHz (channel 16);

(b) a radio installation capable of maintaining a continuous DSC watch on VHF channel 70 which may be separate from, or combined with, that required by subparagraph (a)(i);

(c) a radar transponder capable of operating in the 9 GHz band, which :

(i) shall be so stowed that it can be easily utilized.

(d) a receiver capable of receiving International NAVTEX service broadcasts if the vessel is engaged on voyages in any area in which an International NAVTEX service is provided;

(e) a radio facility for reception of maritime safety information by the INMARSAT enhanced group calling system[1] if the vessel is engaged on voyages in any area of INMARSAT coverage in which an international NAVTEX service is not provided. The Minister may exempt a vessel from this requirement if he is satisfied that the vessel shall be engaged on voyages exclusively in areas where an HF direct-printing telegraphy maritime safety information service is provided and that the vessel is fitted with equipment capable of receiving such service.

(f) subject to the provisions of regulation 7(3), a satellite emergency position-indicating radio beacon (satellite EPIRB) which shall be :

(i) capable of transmitting a distress alert either through the polar orbiting satellite service operating in the 406 MHz and 121.5 MHz bands or, in Sea Areas A1, A2 and A3 only, through the INMARSAT geostationary satellite service operating in the 1.6 GHz band;

(ii) installed in an easily accessible position;

(iii) ready to be manually released and capable of being carried by one person into a survival craft;

(iv) capable of floating free if the vessel sinks and of being automatically activated when afloat; and

[1] See "Carriage of Inmarsat Enhanced Group Call SafetyNET recievers under the Global Marine Distress and Safety System (GMDSS)" adopted by the International Maritime Organisation by resolution A.701(17)

(v) capable of being activated manually.

Additional radio equipment to be provided for sea area A1.

7. (1) In addition to meeting the requirements of regulation 6, every vessel engaged on voyages exclusively in sea area A1 shall be provided with a radio installation capable of initiating the transmission of ship-to-shore distress alerts from the position from which the vessel is normally navigated, operating either :

(a) on VHF using DSC; this requirement may be fulfilled by the EPIRB prescribed by paragraph (3), either by installing the EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated; or

(b) through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by regulation 6(1)(f) either by installing the satellite EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated; or

(c) if the vessel is engaged on voyages within coverage of MF coast stations equipped with DSC, on MF using DSC; or

(d) on HF using DSC; or

(e) through the INMARSAT geostationary satellite service; this requirement may be fulfilled by :

(i) an INMARSAT ship earth station; or

(ii) the satellite EPIRB, required by regulation 6(1)(f), either by installing the satellite EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated.

(2) On every vessel engaged on voyages exclusively in sea area A1 the VHF radio installation, required by regulation 6(1)(a), shall also be capable of transmitting and receiving general radiocommunications using radiotelephony.

(3) Vessels engaged on voyages exclusively in sea area A1 may carry, in lieu of the satellite EPIRB required by regulation 6(1)(f), an EPIRB which shall be :

(a) capable of transmitting a distress alert using DSC on VHF channel 70 and providing for locating by means of a radar transponder operating in the 9 GHz band;

(b) installed in an easily accessible position;

(c) ready to be manually released and capable of being carried by one person into a survival craft;

(d) capable of floating free if the vessel sinks and being automatically activated when afloat; and

(e) capable of being activated manually.

Additional radio equipment to be provided for sea areas A1 and A2.

8. (1) In addition to meeting the requirements of regulation 6, every vessel engaged on voyages beyond sea area A1, but remaining within sea area A2, shall be provided with :

(a) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

(i) 2,187.5 kHz (assigned frequency) using DSC; and

(ii) 2,182 kHz using radiotelephony;

(b) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz (assigned frequency) which may be separate from, or combined with, that required by subparagraph (a)(i); and

(c) means of initiating the transmission of ship-to-shore distress alerts by a radio service other than MF operating either :

(i) through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by regulation 6(1)(f), either by installing the satellite EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated; or

(ii) on HF using DSC; or

(iii) through the INMARSAT geostationary satellite service; this requirement may be fulfilled by :

(a) the equipment specified in paragraph (3)(b); or

(b) the satellite EPIRB, required by regulation 6(1)(f) either by installing the satellite EPIRB close to, or by remote

(b) installed in an easily accessible position;

(c) ready to be manually released and capable of being carried by one person into a survival craft;

(d) capable of floating free if the vessel sinks and being automatically activated when afloat; and

(e) capable of being activated manually.

Additional radio equipment to be provided for sea areas A1 and A2.

8. (1) In addition to meeting the requirements of regulation 6, every vessel engaged on voyages beyond sea area A1, but remaining within sea area A2, shall be provided with :

(a) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

(i) 2,187.5 kHz (assigned frequency) using DSC; and

(ii) 2,182 kHz using radiotelephony;

(b) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz (assigned frequency) which may be separate from, or combined with, that required by subparagraph (a)(i); and

(c) means of initiating the transmission of ship-to-shore distress alerts by a radio service other than MF operating either :

(i) through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by regulation 6(1)(f), either by installing the satellite EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated; or

(ii) on HF using DSC; or

(iii) through the INMARSAT geostationary satellite service; this requirement may be fulfilled by :

(a) the equipment specified in paragraph (3)(b); or

(b) the satellite EPIRB, required by regulation 6(1)(f) either by installing the satellite EPIRB close to, or by remote

activation from, the position from which the vessel is normally navigated.

(2) It shall be possible to initiate transmission of distress alerts by the radio installations specified in paragraphs (1)(a) and (1)(c) from the position, from which the vessel is normally navigated.

(3) Every vessel shall, in addition, be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by either :

(a) a radio installation operating on working frequencies in the bands between 1,605 kHz and 4,000 kHz or between 4,000 kHz and 27,500 kHz. This requirement may be fulfilled by the addition of this capability in the equipment required by paragraph (1)(a); or

(b) an INMARSAT ship earth station.

(4) The Minister may exempt vessels constructed before 1 February 1997 which are engaged exclusively on voyages within sea area A2, from the requirements of regulation 6(1)(a)(i) and 6(1)(b) provided such vessels maintain, when practicable, a continuous listening watch on VHF channel 16. This watch shall be kept at the position from which the vessel is normally navigated.

Additional radio equipment to be provided for sea areas A1, A2 and A3

9. (1) In addition to meeting the requirements of regulation 6, every vessel engaged on voyages beyond sea areas A1 and A2, but remaining within sea area A3, shall, if it does not comply with the requirements of paragraph (2) be provided with :

(a) an INMARSAT ship earth station capable of :

(i) transmitting and receiving distress and safety communications using direct-printing telegraphy;

(ii) initiating and receiving distress priority calls;

(iii) maintaining watch for shore-to-ship distress alerts, including those directed to specifically defined geographical areas;

(iv) transmitting and receiving general radiocommunications, using either radiotelephony or direct-printing telegraphy; and

(b) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies :

(i) 2,187.5 kHz (assigned frequency) using DSC; and

(ii) 2,182 kHz using radiotelephony; and

(c) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz (assigned frequency) which may be separate from or combined with that required by subparagraph (b)(i); and

(d) means of initiating the transmission of ship-to-shore distress alerts by a radio service operating either :

(i) through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by regulation 6(1)(f), either by installing the satellite EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated; or

(ii) on HF using DSC; or

(iii) through the INMARSAT geostationary satellite service, by an additional ship earth station or by the satellite EPIRB required by regulation 6(1)(f), either by installing the satellite EPIRB close to, or by remote activation from the position from which the vessel is normally navigated;

(2) In addition to meeting the requirements of regulation 6, every vessel engaged on voyages beyond Sea Areas A1 and A2, but remaining within Sea Area A3, shall, if it does not comply with the requirements of paragraph (1) be provided with :

(a) an MF/HF radio installation capable of transmitting and receiving, for distress and safety purposes, on all distress and safety frequencies in the bands between 1,605 kHz and 4,000 kHz and between 4,000 kHz and 27,500 kHz :

(i) using DSC;

(ii) using radiotelephony; and

(iii) using direct-printing telegraphy; and

(b) equipment capable of maintaining DSC watch on 2,187.5 kHz, 8,414.5 kHz (assigned frequencies) and on at least one of the distress and safety DSC frequencies 4,207.5 kHz, 6,312 kHz, 12,577 kHz or 16,804.5 kHz (assigned frequencies); at any time, it shall be possible to select any of these DSC distress and safety frequencies. This equipment may be separate from, or combined with, the equipment required by subparagraph (a); and

(c) means of initiating the transmission of ship-to-shore distress alerts by a radiocommunication service other than HF operating either:

(i) through the polar orbiting satellite service on 406 MHz; this requirement may be fulfilled by the satellite EPIRB, required by regulation 6(1)(f), either by installing the satellite EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated; or

(ii) through the INMARSAT geostationary satellite service; this requirement may be fulfilled by :

(a) an INMARSAT ship earth station; or

(b) the satellite EPIRB, required by regulation 6(1)(f), either by installing the satellite EPIRB close to, or by remote activation from, the position from which the vessel is normally navigated.

(d) in addition, vessels shall be capable of transmitting and receiving general radiocommunications using radiotelephony or direct-printing telegraphy by an MF/HF radio installation operating on working frequencies in the bands between 1,605 kHz and 4,000 kHz and between 4,000 kHz and 27,500 kHz. This requirement may be fulfilled by the addition of this capability in the equipment required by subparagraph (a).

(3) It shall be possible to initiate transmission of distress alerts by the radio installations specified in 9(1) and 9(2), subparagraphs (1)(a), (1)(b), (1)(d), (2)(a) and (2)(c) from the position, from the position from which the vessel is normally navigated.

(4) The Minister may exempt vessels constructed before 1 February 1997 which are engaged exclusively on voyages within sea area A2 and A3, from the requirements of regulation 6(1)(a)(i) and 6(1)(b) provided such vessels maintain, when practicable, a continuous listening watch on VHF channel 16. This watch shall be kept at the position from which the vessel is normally navigated.

Additional radio equipment to be provided for sea areas A1, A2, A3 and A4.

10. (1) In addition to meeting the requirements of regulation 6, vessels engaged on voyages in all sea areas shall be provided with the radio installations and equipment required by regulation 9(2), except that the equipment required by regulation 9(2)(c)(ii) shall not be accepted as an alternative to that required by regulation 9(2)(c)(i), which shall always be provided. In addition, vessels engaged on voyages in all sea areas shall comply with the requirements of regulation 9(3).

(2) The Minister may exempt vessels constructed before 1 February 1997 which are engaged exclusively on voyages within sea area A2, A3 and A4, from the requirements of regulation 6(1)(a)(i) and 6(1)(b) provided such vessels maintain, when practicable, a continuous listening watch on VHF channel 16. This watch shall be kept at the position from which the vessel is normally navigated.

Radio watches

11. (1) Every vessel while at sea shall maintain a continuous watch :

(a) on VHF DSC channel 70, if the vessel, in accordance with the requirements of regulation 6(1)(b), is fitted with a VHF radio installation;

(b) on the distress and safety DSC frequency 2,187.5 kHz (assigned frequency), if the vessel, in accordance with the requirements of regulation 8(1)(b) or 9(1)(c), is fitted with an MF radio installation;

(c) on the distress and safety DSC frequencies 2,187.5 kHz and 8,414.5 kHz (assigned frequencies) and also on at least one of the distress and safety DSC frequencies 4,207.5 kHz, 6,312 kHz, 12,577 kHz or 16,804.5 kHz (assigned frequencies), appropriate to the time of day and the geographical position of the vessel, if the vessel, in accordance with the requirements of regulation 9(2)(b) or 10 (1), is fitted with an MF/HF radio installation. This watch may be kept by means of a scanning receiver;

(d) for satellite shore-to-ship distress alerts, if the vessel, in accordance with the requirements of regulation 9(1)(a), is fitted with an INMARSAT ship earth station.

(2) Every vessel, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the vessel is navigating.

(3) Every vessel while at sea shall maintain, when practicable, a continuous listening watch on VHF channel 16. This watch shall be kept at the position from which the vessel is normally navigated.

Sources of energy.

12. (1) There shall be available at all times, while the vessel is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source or sources of energy for the radio installations.

(2) A reserve source or sources of energy shall be provided on every vessel, to supply radio installations, for the purpose of conducting distress and safety radiocommunications, in the event of failure of the vessel's main and emergency sources of electrical power. The reserve source or sources of energy shall be capable of simultaneously operating the VHF radio installation required by regulation 6(1)(a) and, as appropriate for the sea area or sea areas for which the vessel is equipped, either the MF radio installation required by regulation 8(1)(a), the MF/HF radio installation required by regulation 9(2)(a) or 10 (1), or the INMARSAT ship earth station required by regulation 9(1)(a) and any of the additional loads mentioned in paragraph (5), (6) and (9) for a period of at least ;

(a) on new vessels:

(i) 3 hours, or.

(ii) 1 hour, if the emergency source of electrical power complies fully with all relevant requirements of the Consolidated Text including the requirements to supply the radio installations and is capable of serving for a period of at least 6 hours;

(b) on existing vessels:

(i) 6 hours, if the emergency source of electrical power is not provided or does not comply fully with all the relevant requirements of the Consolidated Text including the requirements to supply the radio installations[1]; or

(ii) 3 hours, if the emergency source of electrical power complies fully with all relevant requirements of the Consolidated Text including the requirements to supply the radio installations; or

(iii) 1 hour, if the emergency source of electrical power complies fully with all the relevant requirements of the Consolidated Text including the requirements to supply the radio installations and is capable of serving for a period of at least 6 hours.

(3) The reserve source or sources of energy need not supply independent HF and MF radio installations at the same time.

(4) The reserve source or sources of energy shall be independent of the propelling power of the ship and the ship's electrical system.

[1] For guidance, the following formula is recommended for determining the electrical load to be supplied by the reserve source of energy for each radio installation required for distress conditions: ½ of the current consumption necessary for transmission + the current consumption necessary for reception + current consumption of any additional loads.

(5) Where, in addition to the VHF installation, two or more of the other radio installations, referred to in paragraph (2), can be connected to the reserve source or sources of energy, they shall be capable of simultaneously supplying, for the period specified, as appropriate, in paragraph (2) the VHF radio installation and :

(a) all other radio installations which can be connected to the reserve source or sources of energy at the same time; or

(b) whichever of the other radio installations will consume the most power, if only one of the other radio installations can be connected to the reserve source or sources of energy at the same time as the VHF radio installation.

(6) The reserve source or sources of energy may be used to supply the electrical lighting required by regulation 5(2)(d).

(7) Where a reserve source of energy consists of a rechargeable accumulator battery or batteries :

(a) a means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within 10 hours; and

(b) the capacity of the battery or batteries shall be checked, using an appropriate method, at intervals not exceeding 12 months, when the ship is not at sea.

(8) The siting and installation of accumulator batteries which provide a reserve source of energy shall be such as to ensure:

(a) the highest degree of service;

(b) a reasonable lifetime;

(c) reasonable safety;

(d) that battery temperatures remain within the manufacturer's specifications whether under charge or idle;

(e) that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions; and

(f) that the batteries are situated in the upper part of the fishing vessel.

(9) If an uninterrupted input of information from the ship's navigational or other equipment to a radio installation required by these Regulations is needed to ensure its proper performance, means shall be provided to ensure the continuous supply of

such information in the event of failure of the ship's main or emergency source of electrical power.

Performance standards.

13. Equipment required to be provided under these Regulations and radio equipment required for Life Saving shall:

(1) comply with the requirements specified in Council Directive 96/98/EC of 20 December, 1996[1], and

(2) conform to appropriate performance specifications issued by the Director of Telecommunications Regulation, and the references to those standards and specifications shall be deemed to include references to any standards or specifications set out in any document amending the same which is considered by the Director to be relevant from time to time.

Serviceability and maintenance requirements.

14. (1) Equipment shall be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.

(2) Where applicable, equipment shall be so constructed and installed that it is readily accessible for inspection and on-board maintenance purposes.

(3) Adequate information shall be provided to enable the equipment to be properly operated and maintained.

(4) Adequate tools and spares shall be provided to enable the equipment to be maintained.

(5) Radio equipment required by these Regulations shall be maintained to provide the availability of the functional requirements specified in regulation 4 and to meet the recommended performance standards of such equipment.

(6) On vessels engaged on voyages in sea areas A1 and A2, the availability shall be ensured by using such methods as duplication of equipment, shore-based maintenance or at-sea electronic maintenance capability, or a combination of these, as approved by the Minister.

(7) On vessels engaged on voyages in sea areas A3 and A4, the availability shall be ensured by using a combination of at least two methods such as duplication of

[1] OJ No. 46, 17.2.97, p.25

equipment, shore-based maintenance or at-sea electronic maintenance capability, as approved by the Minister. However, the Minister may exempt a vessel from the requirement of using two methods and allow the use of one method, taking account of the type of vessel and its mode of operation.

(8) While all reasonable steps shall be taken to maintain the equipment in efficient working order to ensure compliance with all the functional requirements specified in regulation 4, malfunction of the equipment for providing the general radiocommunications required by regulation 4(h) shall not be considered as a contravention of regulation 4 (h), or of making a ship unseaworthy or as a reason for delaying a vessel in a port where repair facilities are not readily available, provided the vessel is capable of performing all distress and safety functions.

(9) In all vessels registered in the State, a person nominated by the Skipper shall, while the vessel is at sea, carry out the appropriate tests and checks specified in Schedule I to these Regulations. If any of the radio installations required by these Regulations is not in a working order, the Skipper shall be informed and the details recorded in the Radio Log.

Radio personnel.

15. (1) Every vessel shall carry personnel qualified for distress and safety radio communication purposes as specified in paragraph (2) of this regulation. The personnel shall be holders of certificates specified in the Radio Regulations as appropriate, one of whom shall be designated to have primary responsibility for radio communications during distress incidents, and be holders of an authorization granted by the Director of Telecommunications Regulation to operate a radio station established in a vessel under a licence granted by the said Director.

(2) The personnel of stations on board vessels which operate in sea area A1 shall hold at least a GMDSS Restricted Operators Certificate (ROC). The personnel of stations on board vessels which sail in any other sea area shall hold at least a GMDSS General Operator Certificate (GOC).

Radio records.

16. A record shall be kept, as specified in Schedule II and as required by the Radio Regulations, of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.

PART 3

CLASS II FISHING VESSEL REQUIREMENTS

Functional requirements.

17. Every Class II fishing vessel, while at sea, shall be capable :

(a) of transmitting ship-to-shore distress alerts

(b) of receiving shore-to-ship distress alerts

(c) of transmitting and receiving ship-to-ship distress alerts;

(d) of transmitting and receiving search and rescue co-ordinating communications;

(e) of transmitting and receiving on-scene communications;

(f) of transmitting and receiving signals for locating

(g) of transmitting and receiving maritime safety information;

(h) of transmitting and receiving bridge to bridge communications.

Installation, location and control of radio equipment

18. (1) Every vessel shall be provided with radio installations capable of complying with the functional requirements prescribed by regulation 17 throughout its intended voyage unless exempted under regulation 3.

(2) Every radio installation shall :

(a) be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;

(b) be so located as to ensure the greatest possible degree of safety and operational availability;

(c) be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;

(d) be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls and for operating the radio installation; and

(e) be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

(3) Control of the VHF radiotelephone channels, required for navigational safety, shall be immediately available on the navigating bridge convenient to the conning position and, where necessary, facilities should be available to permit radiocommunications from the wings of the navigating bridge. Portable VHF equipment may be used to meet the latter provision.

(4) Each radio transmitter and receiver fitted in accordance with these Regulations shall be provided with a suitable antenna or antennas. The antennas shall be so constructed and sited to enable each radio installation to perform effectively its intended communication function.

(5) (a) Where wire antennas are provided as part of a radio installation they shall be fitted with suitable insulators and, if suspended between supports liable to whipping, be protected against breakage. In addition, a spare wire antenna completely assembled for rapid replacement shall be carried.

(b) Where MF and MF/HF radio installations are provided with an antenna which is not a supported wire antenna, a spare antenna of similar electrical characteristics shall be carried.

Radio equipment to be provided for all sea areas.

19. (1) Every Class II fishing vessel shall be provided with:

(a) a VHF radio installation capable of transmitting and receiving :

(i) DSC on the frequency 156.525 MHz (channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the vessel is normally navigated; and

(ii) radiotelephony on the frequencies 156.300 Mhz (channel 6) 156.650 Mhz (channel 13), and 156.800 Mhz (channel 16)

(b) a radio installation capable of maintaining a continuous DSC watch on VHF channel 70, which may be separate from, or combined with, that required by sub-paragraph (a)(i);

(c) a radar transponder capable of operating in the 9GHz band, which shall be stowed so that it can be easily utilized.

(d) a satellite emergency position-indicating radio beacon (satellite EPIRB) which shall be :

(i) capable of transmitting a distress alert either through the polar orbiting satellite service operating in the 406 Mhz and 121.5 Mhz bands, or in sea areas A1, A2 and A3 only, through the INMARSAT Geostationary Satellite Service operating in the 1.6GHz band;

(ii) installed in a readily accessible position;

(iii) ready to be manually released and capable of being carried by one person into a survival craft;

(iv) capable of floating free if the vessel sinks and of being automatically activated when afloat; and

(v) capable of being activated manually.

(e) a receiver capable of receiving International NAVTEX service broadcasts if the vessel is engaged on voyages in any area in which an International NAVTEX service is provided.

(f) a radio facility for the reception of maritime safety information by the Inmarsat enhanced group calling system if the vessel is engaged on voyages in any area of Inmarsat coverage in which an International NAVTEX service is not provided.

(g) a portable VHF radiotelephone which shall:

(i) be waterproof, and capable of transmitting and receiving radiotelephony on the frequencies 156.300MHz (Channel 6), 156.650MHz (Channel 13) and 156.800 Mhz (Channel 16),

(ii) be located in a readily accessible position in the wheelhouse,

(iii) have a fully charged power pack available at all times while the vessel is at sea.

Additional radio equipment to be provided for sea areas A1 and A2

20 In addition to meeting the requirements of Regulation 19, every vessel engaged on voyages beyond Sea Areas A1, but remaining within Sea Area A2, shall be provided with:

(a) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

(i) 2187.5 kHz (assigned frequency) using DSC; and

(ii) 2182 KHz using radiotelephony; and,

(b) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 KHz (assigned frequency) which may be separate from, or combined with, that required by subparagraph (a) (i).

Additional radio equipment to be provided for sea areas A1, A2 and A3

21. (1) In addition to meeting the requirements of Regulation 19 and 20, every Class II fishing vessel engaged on occasional voyages beyond Sea Areas A1 and A2, but remaining within Sea Area A3, shall be provided with:

(a) an INMARSAT ship earth station capable of:

(i) transmitting and receiving distress and safety communications using direct-printing telegraphy;

(ii) initiating and receiving distress priority calls;

(iii) maintaining watch for shore-to-ship distress alerts, including those directed to specifically defined geographical areas;

(iv) transmitting and receiving general radiocommunications, using either radiotelephony or direct-printing telegraphy; or

(b) an MF/HF radio installation capable of transmitting and receiving, for distress and safety purposes, on all distress and safety frequencies in the bands between 1,605 Khz and 4,000 Khz and between 4,000 Khz and 27,500 Khz:

(i) using DSC;

(ii) using radiotelephony.

(c) equipment capable of maintaining DSC watch on 2,187.5 Khz, 8,414.5 Khz (assigned frequencies) and on at least one of the distress and safety DSC frequencies 4,207.5 Khz, 6,312 Khz, 12,577 Khz or 16,804.5 Khz (assigned frequencies); at any time, it shall be possible to select any of these DSC distress and safety frequencies. This equipment may be separate from, or combined with, the equipment required by regulation 20(a) and (b).

(2) It shall be possible to initiate transmission of distress alerts by the radio installations specified in regulation 19(1)(a), regulation 20(a)(i) and regulation 21(1)(a) and regulation 21(1)(b)(i) from the position from which the vessel is normally navigated.

Radio watches

22. (1) Every vessel while at sea shall maintain a continuous watch :

(a) on VHF DSC channel 70, if the vessel, in accordance with the requirements of regulation 19 (1) (b), is fitted with a VHF radio installation;

(b) on the distress and safety DSC frequency 2187.5 kHz, if the vessel, in accordance with the requirements of regulation 20 (1) (b), is fitted with an MF radio installation;

(c) on the distress and safety DSC frequencies 2,187.5 kHz and 8,414.5 kHz and also on at least one of the distress and safety DSC frequencies 4,207.5 kHz, 6,312 kHz, 12,577 kHz or 16,804.5 kHz, appropriate to the time of day and geographical position of the vessel, if the vessel, in accordance with regulation 21(1)(c) is fitted with an MF/HF radio installation. This watch may be kept by means of a scanning receiver;

(d) for satellite shore-to-ship distress alerts, if the vessel, in accordance with the requirements of regulation 21(1)(a) (iii), is fitted with an INMARSAT ship earth station.

(2) Every vessel, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the vessel is navigating.

(3) Until February 2005, every vessel while at sea shall maintain, when practicable, a continuous listening watch on VHF Channel 16. This watch shall be kept at the position from which the vessel is normally navigated.

Sources of energy

23. (1) There shall be available at all times, while the vessel is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source or sources of energy for the radio installations.

(2) A reserve source or sources of energy shall be provided on every vessel, to supply radio installations, for the purpose of conducting distress and safety radiocommunications, in the event of failure of the vessel's main source of electrical power. The reserve source or sources of energy shall be capable of simultaneously operating the VHF radio installation required by Regulation 19, and any of the additional loads mentioned in Regulation 20 and Regulation 21 for a period of at least six hours:

(3) The reserve source or sources of energy shall be independent of the propelling power of the vessel and the vessel's electrical system.

(4) The reserve source or sources of energy may be used to supply the electrical lighting required by regulation 18(d)

(5) Where a reserve source of energy consists of a rechargeable accumulator battery or batteries :

(a) a means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within 10 hours; and

(b) the capacity of the battery or batteries shall be checked, using an appropriate method, at intervals not exceeding 12 months, when the vessel is not at sea.

(6) The siting and installation of accumulator batteries which provide a reserve source of energy shall be such as to ensure :

(a) the highest degree of service;

(b) a reasonable lifetime;

(c) reasonable safety;

(d) that battery temperatures remain within the manufacturer's specifications whether under charge or idle; and

(e) that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions.

(f) that the batteries are situated in the upper part of the fishing vessel.

(7) If an uninterrupted input of information from the ship's navigational or other equipment to a radio installation required by these Regulations is needed to ensure its proper performance, means shall be provided to ensure the continuous supply of such information in the event of failure of the ship's main or emergency source of electrical power.

(8) For the purpose of calculating the required capacity of the reserve source or sources of energy, the following formula is recommended for determining the electrical load to be supplied by the reserve source or sources of energy for each radio installation required for distress conditions:

- ½ of the current consumption necessary for transmission + the current consumption necessary for reception + the current consumption of any additional loads.

Performance standards

24. Equipment required to be provided under these Regulations shall conform to appropriate performance specifications issued by the Director of Telecommunications Regulation, and the references to those specifications shall be deemed to include references to any specifications set out in any document amending the same which is considered by the Director to be relevant from time to time.

Serviceability and maintenance requirements

25. (1) Equipment shall be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.

(2) Where applicable, equipment shall be so constructed and installed that it is readily accessible for inspection and on-board maintenance purposes.

(3) Adequate information shall be provided to enable the equipment to be properly operated and maintained.

(4) In all vessels registered in the State, a person nominated by the Master shall, while the vessel is at sea, carry out the appropriate tests and checks specified in Schedule I to these Regulations. If any of the radio installations required by these Regulations is not in a working order, the Master shall be informed and the details recorded in the Radio Log.

Radio personnel

26. (1) Every vessel shall carry personnel qualified for distress and safety radio communication purposes as specified in paragraph (2) and (3) of this regulation.

(2) The personnel of stations on board vessels which operate in sea area A1 shall hold at least the Radio Operator's Short Range Certificate granted by the Director of Telecommunications Regulation, or an equivalent certificate recognised by the Director as being equivalent, and be the holder of an authorization granted by the Director of Telecommunications Regulation to operate a radio station established in a vessel under a licence granted by the said Director.

(3) The personnel of stations on board vessels which operate in sea areas A2 and A3 shall hold at least the Radio Operator's Long Range Certificate granted by the Director of Telecommunications Regulation, or an equivalent certificate recognised by the Director as being equivalent, and be the holders of an authorization granted by the Director of Telecommunications Regulation to operate a radio station established in a vessel under a licence granted by the said Director.

Radio records

27. A record shall be kept, as specified in Schedule II and as required by the Radio Regulations, of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.

PART 4

CLASS III FISHING VESSEL REQUIREMENTS.

Functional requirements.

28. Every Class III fishing vessel, while at sea, shall be capable:

(a) of transmitting ship-to-shore alerts

(b) of receiving shore-to-ship distress alerts

(c) of transmitting and receiving ship-to-ship distress alerts;

(d) of transmitting and receiving search and rescue co-ordinating communications;

(e) of transmitting and receiving on-scene communications;

(f) of transmitting and receiving signals for locating;

(g) of transmitting and receiving maritime safety information;

(h) of transmitting and receiving bridge to bridge communications.

Installation, location and control of radio equipment.

29. (1) Every vessel shall be provided with radio installations capable of complying with the functional requirements prescribed by Regulation 28 throughout its intended voyage unless exempted under Regulation 3.

(2) Every radio installation shall:

(a) be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;

(b) be so located as to ensure the greatest possible degree of safety and operational availability;

(c) be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;

(d) be provided with reliable, permanently arranged electrical lighting, independent of the main and emergency sources of electrical power, for the adequate illumination of the radio controls and for operating the radio installation; and

(e) be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

(3) Control of the VHF radiotelephone channels, required for navigational safety, shall be immediately available in the wheelhouse, convenient to the conning position.

(4) Every radio transmitter and receiver fitted in accordance with these Regulations shall be provided with a suitable antenna or antennas. The antennas shall be so constructed and sited to enable each radio installation to perform effectively its intended communication function.

(5) Where wire antennas are provided as part of a radio installation they shall be fitted with suitable insulators and, if suspended between supports liable to whipping, be protected against breakage.

Radio equipment to be provided for all sea areas.

30. (1) Every Class III fishing vessel shall be provided with:

(a) a VHF radio installation capable of transmitting and receiving:

(i) DSC on the frequency 156.525 MHz (channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the vessel is normally navigated; and

(ii) radiotelephony on the frequencies 156.300MHz (channel 6), 156.650MHz (channel 13), and 156.800MHz (channel 16).

(b) a radio installation capable of maintaining a continuous DSC watch on VHF channel 70, which may be separate from, or combined with, that required by sub-paragraph (a)(i);

(c) a radar transponder capable of operating in the 9 GHhz band, which:

(i) shall be stowed so that it can be easily utilised.

(d) a satellite emergency position-indicating radio beacon (satellite EPIRB) which shall be:

(i) capable of transmitting a distress alert either through the polar orbiting satellite service operating in the 406MHz and 121.5MHz bands;

(ii) installed in a readily accessible position;

(iii) ready to be manually released and capable of being carried by one person into a survival craft;

(iv) capable of floating free if the vessel sinks and of being automatically activated when afloat; and

(v) capable of being activated manually.

(e) a receiver capable of receiving International NAVTEX service broadcasts

Additional radio equipment to be provided for Sea Areas A1 and A2.

31. In addition to meeting the requirements of Regulation 30, every Class III fishing vessel engaged on occasional voyages beyond Sea Area A1 but remaining within sea area A2 shall be provided with:

(a) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

(i) 2187.5 Khz (assigned frequency) using DSC; and

(ii) 2182 kHz using radiotelephony;

(b) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 kHz (assigned frequency) which may be separate from, or combined with, that required by subparagraph (a)(i);

(c) a portable VHF radiotelephone which shall:

(i) be waterproof, and capable of transmitting and receiving radiotelephony on the frequencies 156.300MHz (Channel 6), 156.650 MHz (Channel 13) and 156.800 MHz (Channel 16);

(ii) be located in a readily accessible position in the wheelhouse; and

(iii) have a fully charged power pack available at all times while the vessel is at sea.

Radio Watches.

32. (1) Every vessel while at sea shall maintain a continuous watch:

(a) on VHF DSC channel 70 if the vessel, in accordance with the requirements of Regulation 30, is fitted with a VHF radio installation;

(b) on the distress and safety DSC frequency 2,187.5kHz, if the vessel, in accordance with the requirements of Regulation 31 is fitted with an MF radio installation;

(2) Every vessel, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the vessel is navigating;

(3) Until February, 2005, every vessel while at sea shall maintain, where practicable, a continuous watch on VHF channel 16. This watch shall be kept at the position from which the vessel is normally navigated.

Sources of energy.

33. (1) There shall be available at all times, while the vessel is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source or sources of energy for the radio installations.

(2) A reserve source or sources of energy shall be provided on every vessel, to supply radio installations, for the purpose of conducting distress and safety radiocommunications, in the event of failure of the vessel's main and emergency sources of electrical power. The reserve source or sources of energy shall be capable of simultaneously operating the VHF radio installation required by Regulation 30, and any of the additional loads mentioned in Regulation 31 for a period of at least six hours.

(3) The reserve source or sources of energy shall be independent of the propelling power of the vessel and the vessel's electrical system.

(4) The reserve source or sources of energy may be used to supply the electrical lighting required by Regulation 29 (2)(d).

(5) Where a reserve source of energy consists of a rechargeable accumulator battery or batteries:

(a) a means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within 10 hours; and

(b) the capacity of the battery or batteries shall be checked, using an appropriate method, at intervals not exceeding 12 months, when the vessel is not at sea

(6) The siting and installation of accumulator batteries which provide a reserve source of energy shall be such as to ensure:

(a) the highest degree of service;

(b) a reasonable lifetime;

(c) reasonable safety;

(d) that battery temperatures remain within the manufacturer's specifications whether under charge or idle; and

(e) that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions.

(f) that the batteries are situated in the upper part of the vessel.

(7) If an uninterrupted input of information from the vessel's navigational or other equipment to a radio installation required by these Regulations is needed to ensure its proper performance, means shall be provided to ensure the continuous supply of such information in the event of failure of the vessel's main or emergency source of electrical power.

(8) For the purpose of calculating the required capacity of the reserve source or sources of energy, the following formula is recommended for determining the electrical load to be supplied by the reserve source or sources of energy for each radio installation required for distress conditions:

- ½ of the current consumption necessary for transmission + the current consumption necessary for reception + the current consumption of any additional loads.

Performance standards.

34. Equipment required to be provided under these Regulations shall conform to appropriate performance specifications issued by the Director of Telecommunications Regulation, and the references to those specifications shall be deemed to include references to any specifications set out in any document amending the same which is considered by the Director to be relevant from time to time.

Serviceability and maintenance requirements.

35. (1) Equipment shall be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.

(2) Where applicable, equipment shall be so constructed and installed that it is readily accessible for inspection and on-board maintenance purposes.

(3) Adequate information shall be provided to enable the equipment to be properly operated and maintained.

(4) On all vessels a member of the crew, nominated by the Skipper shall, while the vessel is at sea, carry out the appropriate tests and checks specified in Schedule I to these Regulations. If any of the radio installations required by these Regulations is not in a working order, the Skipper shall be informed and the details recorded in the Radio Log.

Radio personnel.

36. (1) Every vessel shall carry personnel qualified for distress and safety radio communication purposes as specified in paragraph (2) and (3) of this Regulation.

(2) The personnel of stations on board vessels which operate in sea area A1 shall hold at least the Radio Operator's Short Range Certificate granted by the Director of Telecommunications Regulation, or an equivalent certificate recognised by the Director as being equivalent, and be the holders of an authorization granted by the Director of Telecommunications Regulation to operate a radio station established in a vessel under a licence granted by the said Director.

(3) The personnel of stations on board vessels which operate in sea areas A2 and A3 shall hold at least the Radio Operator's Long Range Certificate granted by the Director of Telecommunications Regulation, or an equivalent certificate recognised by the Director as being equivalent, and be the holders of an authorization granted by the Director of Telecommunications Regulation to operate a radio station established in a vessel under a licence granted by the said Director

Radio records.

36. A record shall be kept, as specified in Schedule II and as required by the Radio Regulations, of all incidents connected with the radiocommunication service which appear to be of importance to safety of life at sea.

PART 5

CLASS IV FISHING VESSEL REQUIREMENTS

Functional requirements.

38. Every Class IV fishing vessel, while at sea, shall be capable:

(a) of transmitting ship-to-shore alerts

(b) of receiving shore-to-ship distress alerts

(c) of transmitting and receiving ship-to-ship distress alerts;

(d) of transmitting and receiving search and rescue co-ordinating communications;

(e) of transmitting and receiving on-scene communications;

(f) of transmitting and receiving maritime safety information;

(g) of transmitting and receiving ship to ship communications.

Installation, location and control of radio equipment.

39. (1) Every vessel shall be provided with radio installations capable of complying with the functional requirements prescribed by Regulation 38 throughout its intended voyage unless exempted under Regulation 3.

(2) Where, in the opinion of the Minister, it is feasible to comply with the functional requirements prescribed by Regulation 38 by means of a fixed installation, every radio installation shall:

(a) be so located that no harmful interference of mechanical, electrical or other origin affects its proper use, and so as to ensure electromagnetic compatibility and avoidance of harmful interaction with other equipment and systems;

(b) be so located as to ensure the greatest possible degree of safety and operational availability;

(c) be protected against harmful effects of water, extremes of temperature and other adverse environmental conditions;

(d) be clearly marked with the call sign, the ship station identity and other codes as applicable for the use of the radio installation.

(3) Control of the VHF radiotelephone channels, required for navigational safety, shall be immediately available in the wheelhouse, convenient to the conning position.

(4) Every radio transmitter and receiver fitted in accordance with these Regulations shall be provided with a suitable antenna or antennas. The antennas shall be so constructed and sited to enable each radio installation to perform effectively its intended communication function.

(5) Where, in the opinion of the Minister, it is not feasible to comply with the requirements prescribed by Regulation 38 by means of a fixed installation, every radio installation shall:

(a) be an approved portable waterproof transmitter and receiver;

(b) be provided with a suitable antenna; and

(c) be provided with a fully charged sealed reserve power pack at all times while the vessel is at sea.

Radio equipment to be provided for all sea areas.

40. Every Class IV fishing vessel shall be provided with:

(a) a VHF radio installation capable of transmitting and receiving radiotelephony on the frequencies 156.300MHz (channel 6), 156.650MHz (channel 13), and 156.800MHz (channel 16).

(b) a satellite emergency position-indicating radio beacon (satellite EPIRB) which shall be :-

(i) capable of transmitting a distress alert either through the polar orbiting satellite service operating in the 406MHz and 121.5MHz bands, or the 1.6GHz band;

(ii) installed in a readily accessible position;

(iii) ready to be manually released and capable of being carried by one person into a survival craft;

(iv) capable of floating free if the vessel sinks and of being automatically activated when afloat; or

(v) capable of being activated manually.

Additional radio equipment to be provided for sea areas A1 A2.

41. In addition to meeting the requirements of Regulation 40, every Class IV fishing vessel engaged on voyages beyond Sea Area A1, but remaining within Sea Area A2, shall be provided with:

(a) a VHF radio installation capable of transmitting and receiving

(i) DSC on the frequency 156.525 MHhz (Channel 70). It shall be possible to initiate the transmission of distress alerts on channel 70 from the position from which the vessel is normally navigated; and

(ii) radiotelephony on the frequencies 156.300MHz (Channel 6) , 156.650 MHz (Channel 13), and 156.800MHz (Channel 16).

(b) a radio installation capable of maintaining a continuous DSC watch on VHF channel 70, which may be separate from, or combined with, that required by sub-paragraph (a)(i).

(c) an MF radio installation capable of transmitting and receiving, for distress and safety purposes, on the frequencies:

(i) 2187.5 kHz (assigned frequency) using DSC; and

(ii) 2182 KHz using radiotelephony; and,

(d) a radio installation capable of maintaining a continuous DSC watch on the frequency 2,187.5 KHz (assigned frequency) which may be separate from, or combined with, that required by subparagraph (c) (i) ;

Radio Watches.

42. (1) Every vessel while at sea shall maintain a continuous watch:

(i) on VHF channel 16;

(ii) on VHF DSC channel 70, if the vessel, in accordance with the requirements of Regulation 41 (1) (a) (i) , is fitted with a VHF installation.

(iii) on the distress and safety DSC frequency 2187.5 kHz (assigned frequency), if the vessel, in accordance with the requirements of Regulation 41 (1) (c) (i) , is fitted with an MF radio installation

(2) Every vessel, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the vessel is navigating.

Sources of energy.

43. (1) There shall be available at all times, while the vessel is at sea, a supply of electrical energy sufficient to operate the radio installations and to charge any batteries used as part of a reserve source or sources of energy for the radio installations.

(2) A reserve source or sources of energy shall be provided on every vessel complying with the provisions of Regulation 40, to supply radio installations, for the purpose of conducting distress and safety radiocommunications, in the event of failure of the vessel's main source of electrical power. The reserve source or sources of energy shall be capable of simultaneously operating the VHF radio installation required by Regulation 40, and any of the additional loads mentioned in Regulation 41 for a period of at least six hours.

(3) The reserve source or sources of energy shall be independent of the propelling power of the vessel and the vessel's electrical system.

(4) Where a reserve source of energy consists of a rechargeable accumulator battery or batteries:

(a) a means of automatically charging such batteries shall be provided which shall be capable of recharging them to minimum capacity requirements within 10 hours; and

(b) the capacity of the battery or batteries shall be checked, using an appropriate method, at intervals not exceeding 12 months, when the vessel is not at sea

(5) The siting and installation of accumulator batteries which provide a reserve source of energy shall be such as to ensure:

(a) the highest degree of service;

(b) a reasonable lifetime;

(c) reasonable safety;

(d) that battery temperatures remain within the manufacturer's specifications whether under charge or idle;

(e) that when fully charged, the batteries will provide at least the minimum required hours of operation under all weather conditions; and

(f) that the batteries are situated in the upper part of the vessel.

(6) If an uninterrupted input of information from the vessel's navigational or other equipment to a radio installation required by these Regulations is needed to ensure its proper performance, means shall be provided to ensure the continuous supply of such information in the event of failure of the vessel's main or emergency source of electrical power.

(7) For the purpose of calculating the required capacity of the reserve source or sources of energy, the following formula is recommended for determining the electrical load to be supplied by the reserve source or sources of energy for each radio installation required for distress conditions:

- ½ of the current consumption necessary for transmission + the current consumption necessary for reception + the current consumption of any additional loads.

Performance standards.

44. Equipment required to be provided under these Regulations shall conform to appropriate performance specifications issued by the Director of Telecommunications Regulation, and the references to those specifications shall be deemed to include references to any specifications set out in any document amending the same which is considered by the Director to be relevant from time to time.

Serviceability and maintenance requirements.

45. (1) Equipment shall be so designed that the main units can be replaced readily, without elaborate recalibration or readjustment.

(2) Where applicable, equipment shall be so constructed and installed that is readily accessible for inspection and on-board maintenance purposes.

(3) Adequate information shall be provided to enable the equipment to be properly operated and maintained.

Radio personnel.

46. (1) Every vessel shall carry personnel qualified for distress and safety radio communication purposes as specified in paragraphs (2), and (3) of this Regulation.

(2) In the case of fishing vessels complying with the requirements of Regulation 41, the personnel shall be holders of at least the Restricted Certificate of Competency in Radiotelephony (VHF) granted by the Director of Telecommunications Regulation, or an equivalent certificate recognised by the Director of Telecommunications Regulation as being equivalent, and be the holders of an authorization granted by the Director of Telecommunications Regulation to operate a radio station established in a vessel under a licence granted by the said Director.

(3) In the case of fishing vessels complying with the additional requirements of Regulation 41, the personnel shall be holders of at least the Radio Operator's Long Range Certificate granted by the Director of Telecommunications Regulation, or an equivalent certificate recognised by the Director of Telecommunications Regulation as being equivalent, and be the holders of an authorization granted by the Director of Telecommunications Regulation to operate a radio station established in a vessel under a licence granted by the said Director.

SCHEDULE I

EQUIPMENT TESTS AND RESERVE POWER CHECKS

1. **Daily**

(a) The proper functioning of the DSC facilities shall be tested at least once daily without radiation of signals, by use of the means provided by the equipment.

(b) Batteries providing a source of energy for any part of the radio installations shall be tested daily and, where necessary, brought up to the fully charged condition.

(c) Where the reserve source of energy is not a battery (for example, a motor generator), the reserve source of energy shall be tested daily.

2. **Weekly**

The proper operation of the DSC facilities shall be tested at least once each week by means of a test call, when within communication range of a coast radio station fitted with DSC equipment. Where a ship has been out of communication range of a coast radio station fitted with DSC equipment for a period of longer than one week, a test call shall be made on the first occasion that the ship is within communication range of such a coast radio station.

3. **Monthly**

(a) Each EPIRB and satellite EPIRB shall be tested at least once each month to determine its capability to operate properly using the means provided on the device and without using the satellite system.

(b) Each search and rescue radar transponder shall be checked at least once each month for security and signs of damage.

(c) Each survival craft two-way VHF equipment shall be tested at least once each month on a frequency other than 156.800 MHz (VHF channel 16)

(d) A check shall be made at least once each month on the security and condition of all batteries providing a source of energy for any part of a radio installation. The battery connections and compartment shall also be checked.

SCHEDULE II

RADIO LOG

The following shall be recorded in the Radio Log :

(a) the time and source of each communication relating to distress, urgency and safety traffic and a summary of its contents,

(b) the occurrence and time of important service incidents,

(c) the position of the ship at, at least, one given time each day,

and the recording shall be made as soon as may be after the event concerned.

Given under my Official Seal,

this 22nd day of December, 1998

Michael Woods

Minister for the Marine and Natural Resources

Pn. No. 6660
Price. £3.60, Postage 72p

EXPLANATORY NOTE

(THIS NOTE IS NOT PART OF THE INSTRUMENT AND DOES NOT PURPORT TO BE A LEGAL INTERPRETATION)

These Regulations prescibe the radio equipment to be carried on board all fishing vessels for the purpose of safety and distress communications and alerting.

They implement the provisions of EU Council Directive 97/70/EC of 11 December, 1997[1] in relation to such equipment to be carried on board fishing vessels of 24 metres and over.

[1] OJ No. L34, 9.2.98, p.1

9. INDEX OF CORRESPONDENCE

Irish Coast Guard
GARDA CÓSTA na hÉIREANN

Mr Dick Heron
Secretary MCIB
Department of Communications,
Marine & Natural Resources
Leeson Lane
Dublin 2.

28th Nov. 2003.

Re **MCIB 47 Draft Report IFV Spailpin Fanach – man overboard 13/5/2000.**

Dear Mr Heron,

The Irish Coast Guard wishes to point out the following with regard to section **5. EVENTS AFTER THE INCIDENT** in paragraph 5.6 of the above report.

The position of the incident as indicated in the Draft Report is 52 52n 011 14w. This location is approximately 60 nautical miles from the nearest Shannon and Clifden Coast Guard VHF radio sites and, as such, would be outside the normal range for reception of VHF radio signals from a fishing vessel transmitter. Marine VHF range is normally line of sight range between aerials. No mayday call was heard from the IFV Spailpin Fanach at the time of the incident, at either of these sites that are remotely operated by Valentia and Malin Head Coast Guard Stations respectively. The published range for VHF coverage provided by the Irish Coast around the Irish coast is 30 nautical miles out from land.

The VHF site at Glen Head referred to in paragraph 5.6, remotely operated by MRSC Malin Head, is approximately 140 nautical miles from 52 52n 011 14 w. It may be possible in certain situations, due to high atmospheric pressure, the height above mean sea level of the Glen Head VHF site and the power of the transmission equipment at this site, that transmissions could be heard from Glen Head Radio by vessels operating in that location. It would not, however, be normally possible for VHF signals from vessels in position 52 52n 011 14w to be received at Glen Head due to the relative low height of aerials on fishing vessels, the low power of their transmitters and the distance involved. Vessels operating outside normal VHF range should use their MF equipment due to its greater range for transmission and reception.

Yours sincerely,

Eamon Torpay
SAR Operations Manager

Department of Communications, Marine and Natural Resources, Leeson Lane, Dublin 2, Ireland.
An Roinn Cumarsáide, Mara agus Acmhainní Nádúrtha, Lána Chill Mochargán, Baile Átha Cliath 2, Éire.
Tel: +353 1 678 2324, Fax: +353 1 678 2269, Email: admin@irishcoastguard.ie

MCIB RESPONSE TO IRISH COAST GUARD'S LETTER DATED 28TH NOVEMBER, 2003

The MCIB has noted these comments and amended the report where appropriate.

Kilmurray Cross
Lissarda
Co. Cork
7-11-03

MR Dick Heron,

With Reference to your Recent correspondance - REF MCIB47, Regarding the death of my brother John O'Leary.
The only question that I would like to raise is why didn't the crew of the "Spailpin Fanach" sail into Galway Harbour and alert the Relevant people instead of sailing to Castletownbere Harbour and not Raise the alarm for hours.

Other than this query I have no further comments or observations to offer.

Yours sincerely,
Sarah M. Casey

MCIB RESPONSE TO SARA MCCARTY'S LETTER DATED 07TH NOVEMBER, 2003

The MCIB cannot answer this query, please see section 5 of this report for Events after the Incident.

Ballydonegan,
Allihies,
Beara,
Co. Cork.
6-11-'03.

LEESON LANE,
DUBLIN 2.

Dear Mr. Heron,

I would like to make the following observation on the Draft Report (REF. MCIB 47)

In case the statement attributed to me in paragraph 4.3 may give a misleading impression, I should point out that the power block is raised and lowered at intervals, between the two men working aft —

II

— depending on what operation is being carried out.

At the time of the incident on the "Spailpin Fanach", I belive the power block was in fact in the raised position, to allow the manauver described.

Wherefore the only obstacle between me and Mr. O'Leary at deck level was the share, not ends.

This is a more accurate description of the situation than, I gave to Mr. Purcell at the investigation in Castletownbere.

Yours sincerely
John Kelly

MCIB RESPONSE TO MR. JOHN KELLY'S LETTER DATED 06TH NOVEMBER, 2003

The MCIB has noted these comments and amended the report where appropriate.