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# REPORT OF THE INVESTIGATION INTO A FATAL INCIDENT AT CASTLETOWNBERE ON 17th AUGUST 2012

REPORT NO. MCIB/225 (No.2 OF 2014)

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### 1. SUMMARY

On the morning of 17th August 2012 the boat owner (henceforth referred to in this Report as the Casualty) decided to go out alone in his boat to take in his lobster pots as it was coming to the end of the fishing season. He had a number of strings of lobster pots laid off Pulleen harbour west of Castletownbere. At about lunch time his upturned boat was seen from the shore. The boat was stationary and not moving with the tide. A search operation was mounted and the Casualty's body was recovered from the water adjacent to the boat a short time later.

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## 2. FACTUAL INFORMATION

## 2.1 Boat Particulars

Marking:	At the bow \$174 painted in black lettering.
History:	Custom built in Cobh, Co. Cork to the Casualty's own design approximately 12 years before the incident.
Hull:	GRP (Glass Reinforced Plastic) with timber trim at bow, gunnels and transom.
Dimensions:	Length 5.8m, Breadth 1.9m, Depth 1m, Top of gunnel to deck 750mm.
Arrangement:	Open Boat with longitudinal bilge/buoyancy space under deck in void space between the deck and the hull.
	One fully covered locker forward at the bow. Locker extended 1m back from the bow and was 1.22m at its widest. Access to the locker was via one 300mm x 345mm rectangular hatch in the transverse bulkhead. The access hatch was covered with one removable timber door. The timber door was held in place by a single timber cleat. The cleat was held in the bulkhead by a single screw. The cleat was tapered and measured 70mm long x 15mm deep x 25mm wide at its largest.
	One transverse timber seat located 740mm to the rear of the locker (1.7m from the bow). The seat measured 1.57m wide x 220mm long x 45mm deep.
	One transverse timber seat located at and incorporated into the stern 1.47m wide x 490mm long and 300mm below the top level of the transom.
	One locker located under the stern seat. Access to the locker was via a hinged timber door 520mm x 330mm. There was no clasp on this door.
	One stainless steel hinged foldable access ladder mounted on starboard side at the transom stern. Dimensions 300mm wide with three steps, 570/480mm long. Held, folded in place by a fibre rope tied to a piece of steel rebar slotted into the starboard gunnel to transom timber knee piece.
	Mounting for the outboard engine was on the transom stern in a "cut-out" 585mm wide x 270mm deep. There was an up- stand incorporated into the transverse timber seat in-way of the engine mounting to accommodate the engine parts.

# FACTUAL INFORMATION Cont.

Lines:	One painter forward 10mm diameter attached to a forward cleat and onto trailer winch.				
	One fibre rope tied at the forward seat and tied at the forward cleat at the bow 15mm diameter 2.2m long with 2 x stainless steel carbineer clips.				
	Fibre ropes used to tie boat to trailer at bow and along the hull.				
Fenders:	Port side, one buoy and three fenders. Held in place by fibre rope tied to the oar lock and by fibre rope tied between the oar lock and to a piece of steel re-bar slotted into the port side gunnel to transom timber knee piece.				
Boat Contents:	Two timber oars 2.69m long.				
	One oar lock.				
	One fish box forward. This was used to hold the donkey engine for the pot hauler.				
	Pot hauler mounted on starboard side rear quarter 740mm forward of transom.				
	Control lever for pot hauler mounted on starboard gunnel rear quarter.				
	Two hydraulic hoses that connected donkey engine to pot hauler.				
	Bilge pump fitted at the port side on transom stern.				
Outboard Engine:	Make Honda				
	No. BAMJ-1024516				
	Year 2007				
	CE marked				
	Rated Power 14.7kW				
Fuel Tank:	Plastic Make Honda				
	Capacity 3-US Gallons				
	360mm x 220mm x 250mm				
Pot Hauler:	Make Hydro Slave 8 inch diameter				
	Capacity 400lbs				
	Support bracket stainless steel round section (40mm diameter) and box section (50mm x 25mm) Height 505mm. Pot hauler attached to support bracket by two 6mm stainless steel bolts.				

Donkey Engine for Pot Hauler:	Make Honda GX160 No. GOAFT29500656				
Hydraulic Pump:	HPI France				
Emergency Equipment:	One Life jacket - Personal Floatation Device (PFD)				
	Make Mullion				
	No. 004273				
	Type Neptune 150				
	Manufactured 26/11/03				
	Body No. 30042094				
	Rating 150-newtons				
	Standard: BS EN 396 1900				

See Appendix 7.1 Photos P8281497 & P8281501 of the boat taken after the incident.

#### 2.2 Voyage Particulars

The 2012 fishing season was coming to a close and the Casualty was anxious to get his lobster pots ashore. On the 17th of August having decided that the weather and sea conditions were favourable he left home at about 9:30a.m. and went to his boat which was moored at Pulleen harbour inshore of Lanhatten Island.

The Casualty proceeded out to sea and whilst he was engaged in lifting a string of pots that had been set-high in about 30 to 40m of water just off the steep cliffs in the locality of Garranes he got into difficulties and the boat capsized.

Please see Appendix 7.2 which has two Google® Maps of the area:

The first map is of the Castletownbere area showing the location of Pulleen harbour in relation to Castletownbere harbour.

The second map shows Pulleen harbour where the Casualty kept his boat and the sea area off Garranes where the string of lobster pots had been laid and the incident took place.

The weather conditions in the area:

Winds: Light to Moderate, Force 2 to 4, from a south to south east direction. Weather: A few sunny spells at first, but mostly cloudy later.

Visibility: Good.

Sea state: Moderate, from a south-westerly direction.

Please see Appendix 7.3, Met Éireann weather report for the area on 17th August 2012.

It was reported by members of the rescue party that the sea state was not as moderate as that recorded in the Met Éireann report and that, on the day, there was a very heavy swell and that the sea was breaking heavily on the rocks below the cliffs at Garranes.

#### 2.3 Marine casualty or incident information

There were no direct witnesses to the circumstances of the incident. However, from observations from the attending rescue personnel it appears possible that the Casualty had lifted a number of lobster pots and had them on board when he got into difficulties and the boat capsized.

#### 2.4 Shore authority involvement and emergency response

When it was seen that the boat was floating, partially submerged with only a small section of the bow out of the water, the alarm was raised from shore.

The Castletownbere all weather lifeboat was tasked and it proceeded to the scene. The lifeboat personnel recovered the Casualty's remains from the water approximately 60 to 70m from his boat. The Casualty had managed to take off his wellington boots and oil skins in the course of the unfolding events. The lifeboat then returned to Castletownbere with the Casualty's remains on board. Two small fishing boats, a local angling boat and three passing trawlers also took part in the search.

The Post Mortem Report recorded the cause of the death as:

1A. - Acute cardio-respiratory failure

1B. - Drowning

## 3. NARRATIVE

### 3.1 General

The Casualty was an experienced fisherman. He had an intimate knowledge of the handling and operation of his boat and its equipment. He was a recreational fisherman and fished in the locality during the summer months only. On the day of the incident he was working alone and it is understood that he did not have a VHF radio with him.

When the emergency services arrived at the scene of the incident they reported that there were a lot of ropes coming out from the boat which appeared stuck or attached to fishing gear on the seabed keeping the boat moored in the same spot. Subsequently it was discovered that one lobster pot had become lodged on the bottom of the seabed. The lifeboat attempted to lift the fishing gear from the seabed but failed and it took the services of a local trawler to dislodge the lobster pot from the seabed and bring it to the surface.

#### 3.2 Technical Examinations

#### 3.2.1 The Boat

The boat was in good condition overall with no damage to the hull or fittings. The marking painted on the bow of the boat (S174) related to the registration of a previous boat owned by the Casualty, namely the Cliona. The Cliona was decommissioned but was not taken off the register of sea fishing boats. The current boat that was involved in the incident was used for recreational use only. It was not registered and should not have had the marking (S174) displayed on it.

### 3.2.2 Engine

The outboard engine, fuel tank and donkey engine were seen separately after the incident. Both engines had been washed out and dried and were found to be in good order. Both engines ran correctly with no evidence of malfunction. It is understood that the outboard engine was serviced on a regular basis and that the donkey engine was virtually new.

#### 3.2.3 Pot Hauler

The hydraulically powered pot hauler winch was fitted on the starboard side stern quarter. See Appendix 7.4 photograph showing the pot hauler fitted into its mounting bracket. The donkey engine for the hydraulic pot hauler was located forward in the boat.

After the incident on 13th May 2013 the pot hauler and donkey engine were fitted to the boat to test its operation. Both the pot hauler and the donkey

engine operated correctly with no evidence of malfunction. The pot hauler was then load tested to determine its capacity. A calibrated scale was attached to a piece of 15mm diameter synthetic rope and the rope was engaged in the pot hauler sheave. The pot hauler relief valve that is incorporated into the control valve lifted and the hauler stalled at a load of 50kgs (110lbs). The test was repeated using a 10mm diameter synthetic rope with the same result.

When the control valve for the pot hauler is activated by the lever, the pot hauler rotates at a fixed speed in the desired direction only. It will not reverse and allow a rope to pay-out or be released if a load greater than the capacity of the pot hauler is applied to it. The control lever for the control valve has three positions. The mid position is neutral with no movement of the sheave. The up position is to pay-out a rope and the down position is to haul-in a rope. The lever remains in the position to which it is set and does not return to the neutral position of its own volition when it is released.

#### 3.2.4 Emergency Equipment

In the course of the rescue an un-inflated Personal Floatation Device (PFD), was found floating in the water adjacent to the boat. The PFD was visually examined on 24th August 2012 and the details were recorded but it was not opened out or examined in any detail at that time.

Please see Appendix 7.5 photograph P8281538 of the PFD. Taken on 24th August 2012.

It is understood that the Casualty normally stowed the PFD in the forward locker of the boat with some other equipment during the fishing season and then kept it hanging in the shed in which the boat was stored during the winter months. It is understood that the Casualty did not wear the PFD at any time when he used his boat on the basis that he could get access to it in the forward locker in the event of an emergency.

The life jacket was of the Personal Floatation Device (PFD) type. The maker of the life jacket confirmed that it was manufactured on 26th November 2003 and had been sold as part of a batch of life jackets on the 2nd December 2003.

On 12th February 2013 the PFD was examined and tested by a manufacturer approved agent.

The PFD was unfolded and the details such as make, type and serial number as stated earlier were confirmed. Please see Appendix 7.6 photo taken on 12th February 2013 after the PFD was unfolded and shows the cartridge, body and gas cylinder.

#### Results of examination:

- The fabric service record tab on the jacket was ripped away at the stitching and any records that may have existed had been obliterated for some time. The green plastic activation indicators on the cartridge and the pull cord mechanism were missing.
- The cartridge was found to have operated and was expended.
- The gas cylinder was found to have been operated.
- The seal had been punctured by the knife in the pin mechanism.
- The gas cylinder was heavily corroded externally.
- The corrosion was encrusted into and had stained the fabric of the bladder where the latter folded around the cylinder.
- The bladder was intact and not punctured.

#### **Results of tests:**

The bladder was inflated using compressed air. It inflated and maintained pressure. A new gas cylinder was fitted and the bladder was inflated manually, it inflated and maintained pressure. A new gas cylinder and a new cartridge were fitted to the jacket and it was immersed in water, it inflated and maintained pressure. The corroded gas cylinder that was removed from the jacket was pressure tested to 10-bar for a period of about 15 minutes and immersed in water. During that time no leakage or deformation was observed and the conclusion is that the external corrosion had not perforated the wall of the cylinder and allowed the gas to seep out over time.

Anecdotally it was recounted that the PFD was inadvertently immersed in sea water at a regatta and had inflated some years prior to the incident but that to their knowledge this had been attended to following that incident.

It was found that the serial number for the cartridge did not match the original number that was recorded at the time the PFD was manufactured and dispatched for sale.

The original cartridge serial number was 30077086 and it had an expiry date of 11/06. The actual cartridge fitted was number 30042094 and had an expiry date of 06/06. This expiry date predates the one that was fitted when the PFD was manufactured. The usual expiry for cartridges is three years.

It was not possible to read the serial number on the gas cylinder due to degree of corrosion on the external surfaces. Thus it was not possible to determine if the gas cylinder fitted to the PFD at the time of the incident was the original or if it had been changed.

Checks were carried out of local maintenance records for life jackets. No records were found that could be linked to maintenance/service work on the Casualty's PFD.

In respect of emergency equipment on board the boat, no evidence was found that the Casualty carried the recommended safety equipment for Inshore motor boats of less than 13.7m for coastal operation such as hand held distress flares, parachute rocket red flares and orange smoke signals, as detailed in the Code of Practice for the Safe Operation of Recreational Craft.

## 4. ANALYSIS

- 4.1 The Casualty generally operated alone and had the boat built to his specification. The boat was in good condition with no evidence of damage or degradation to the hull or fittings. The equipment on board was positioned in such a way that there was ready access to the pot hauler, the control lever for the pot hauler and the engine controls at the stern of the boat. The reason for this was that working with lobster pots close-in to the shore under the cliffs on an exposed rocky coastline may require rapid responses to changing sea conditions and work locations.
- 4.2 The pot hauler was found to be in good condition and was capable of hauling-in a maximum load of 50kgs. It is the opinion of the Investigation that it would not have been sufficiently powerful to pull the boat over and capsize it under normal circumstances.
- 4.3 The fitting of the pot hauler on the starboard stern quarter was evidently the Casualty's preference. However, it is considered that this is the least stable location on the boat for the pot hauler. The recommended position for a pot hauler on a small boat is approximately 1/3 of the overall boat length aft of the bow. In the course of the incident, if the stern/starboard quarter of the boat was pulled-over it would have offered the least amount of resistance to the ingress of water and it also would have allowed the lobster pots and associated ropes stowed on board to cascade towards the stern adding to the instability.
- 4.4 As stated earlier, the control valve for the pot hauler was of a type that drives the pot hauler at a fixed speed and the operating lever does not return to the neutral position of its own volition when it is released. The fitting of a control lever or of a foot pedal control that requires continued positive action by the operator to maintain the desired speed and movement may have been a better option in this instance because such a system requires constant supervision.
- 4.5 The knife of the pot hauler can be set in four different positions on the frame of the pot hauler. Please see Appendix 7.7 photograph of the knife. In the photograph it can be seen that the knife is fixed in the last position, thus as a rope is hauled-in and it travels over the sheave it goes to the 5 o'clock position before it meets the knife. It may have been better if the knife had been fitted in the 4 o'clock position so as to reduce the tendency of the rope to embed itself on the sheave but there is nothing to link this to the incident.
- 4.6 The height of the pot hauler above the gunnel was about 500mm. This may have been somewhat low because in operation, as a lobster pot came to the surface, the Casualty would have had to lean down to lift it over the gunnel but there is nothing to link this to the incident.

- 4.7 The Investigation has not been able to establish the history of the PFD in respect of servicing and maintenance. When the incident happened and the PFD was immersed in the water it did not inflate because the gas cylinder charge had been activated at some time prior to the incident and was exhausted.
- 4.8 Regarding the history of the PFD the cartridge fitted to the life jacket pre-dates the original unit fitted at the time of manufacture according to the manufacturer's records. The Investigation has not been able to determine a satisfactory explanation for this anomaly.
- 4.9 The Casualty was working alone and there were no witnesses to the incident. From the load test of the pot hauler, it alone, would not have had the ability to pull the boat over and capsize it.
- 4.10 However, it is possible that some other event such as jamming of the rope in the pot hauler sheave or on part of the boat effectively anchored the boat to the seabed. This could have resulted in the boat being pulled over to starboard and down by the stern, being inundated with water while still anchored to the seabed by the rope and lobster pot. In the course of the inundation the contents of the boat would have been thrown towards the stern. However, there would have been sufficient buoyancy forward to prevent the boat from sinking completely.
- 4.11 The Investigation determined that the Casualty had proven in the past to have been very well able to cope with adverse conditions and emergencies in connection with the boat. This is supported by the fact that in the course of the incident he had removed his wellingtons and oilskins and he may have tried to access the PFD from where it was stowed in the forward locker but the stress of the capsize may have proved to be too much for his physique to deal with and he was overcome by the magnitude of the unfolding events on this occasion.

## 5. CONCLUSIONS

- 5.1 The boat was in good condition both structurally and mechanically.
- 5.2 The sea swell on the day of the incident was reported by the emergency responders to have been more severe than that which was forecasted and as such not safe for the lifting of lobster pots both in respect of the size of boat and the Casualty working alone.
- 5.3 While there were no immediate witnesses to the incident, it is considered likely that the sea swell coupled with the lobster pot becoming lodged on the bottom of the seabed and possible jamming of the rope for the string of lobster pots on the pot hauler contributed to the boat becoming inundated with water and capsizing.
- 5.4 It is considered that the pot hauler should not have been fitted on the starboard stern quarter. If it had been fitted in a forward position the boat would have been more stable and it would have had a greater resistance to capsizing and inundation.
- 5.5 The Casualty's upturned boat was seen from the shore and the alarm was raised. On the boat, there was no emergency alert equipment such as distress flares. Thus there was no means of alerting rescue personnel to the fact of the incident that had happened.
- 5.6 The Casualty did not wear a PFD. The PFD on board did not inflate and it had not been examined or serviced for an indeterminate number of years.
- 5.7 The marking S174 should not have been displayed as it was related to the registration of a previous boat owned by the Casualty.
- 5.8 This incident reiterates the need for recreational craft users to familiarise themselves with the Code of Practice for The Safe Operation of Recreational Craft. In addition there appears to be a lack of familiarity of the Marine Notices issued by the Department of Transport, Tourism and Sport relating to the use of PFD's.

## 6. SAFETY RECOMMENDATIONS

- 6.1 That the Minister for Transport, Tourism and Sport should issue a Marine Notice reminding boat owners that they should comply with the Code of Practice for The Safe Operation of Recreational Craft and familiarise themselves with:
  - The Department of Communications, Marine and Natural Resources Marine Notice No. 36 of 2005. Notice to all users of Inflatable PFD / lifejackets, including Commercial Operators, Fishermen and Recreational Boat Owners and Crew. The section on Periodic Inspection by owners - Standard Models gives detailed guidance on how an owner should inspect a PFD.
  - The Department of Transport, Tourism and Sport Marine Notice No. 39 of 2013 Notice to all Owners, Charterers, Masters, Skippers and Crew of Fishing and Commercial Vessels. This Notice augments, reinforces and adds to the information in Notice No. 36 above.

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Appendix 7.1 Photographs of the Boat.



Photo P8281497. Photograph of the Vessel on Trailer



Photo P8281501. Photograph of the Vessel

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Appendix 7.2 Google Maps of Area.



Google® Maps Screen shot taken showing location



### Appendix 7.3 Met Éireann Report.

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 reanr www.met.ie E-mail: met.eireann@met.ie **Mr** Anthony Bates Marine Casualty Investigation Board Leeson Lane **Dublin 2** 28/8/2012 Our Ref. WS3018/2\_14735 Your Ref. MCIB/12/225 Re: Estimate of weather conditions in the sea area at 51°36.8'N, 9°58.5'W, on the 17th August 2012, between 6 and 18 hours. Dear Mr Bates, Please find enclosed the above report. Yours sincerely, Ehby Evelyn Murphy B.Sc. M.Sc. Meteorologist (Research, Environment & Applications Div) Ph 01- 8064290 Fax 01 - 8064247 Email: evelyn.murphy@met.ie <u>IA IA IA IA IA IA IA IA IA I</u>A I

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## Appendix 7.3 Met Éireann Report.

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	The Irish Mele	orological service	
<b>MET</b> éireann	Glasnevin Hill, Dublin 9, Ireland.	Cnoc Ghlas Naíon Baile Átha Cliath 9, Éire. www.met.ie	Tel: +353-1-806 4200 Fax: +353-1-806 4247 E-mail: met.eireann@met.in
Our Ref. WS30 Your Ref. MCIB	18/2_14735 /12/225		28/8/2012
Estimate of weath	other conditions in the 17 <sup>th</sup> August 2012,	he sea area at 51°36 between 6 and 18 h	.8'N, 9°58.5'W, on ours.
6 to 12 hours			
Winds: Light to Mo Weather: a few sum Visibility: good Seastate: moderate,	derate, Force 2 to 4, from ny spells at first, but mos from a south-westerly di	n a south to south-east d tly cloudy later. rection	irection
12 to 18 hours			
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*Attached also M3	(52° 13'N, 10° 33'W) wa	eather Buoy hourly obse	rvations
Sp Very			
Evelyn Murphy B. Research, Environm Met Éireann	Sc. M.Sc. Meteorologis aent & Applications Divi	t sion	

## Appendix 7.3 Met Éireann Report.



MET ÉIREANN The Irish Meteorological Service

Glasnevin Hill, Dublin 9, Ireland.

Cnoc Ghlas Naíon Tel: +353-1-806 4200 Baile Átha Cliath 9, Éire. Fax: +353-1-806 4247 www.met.ie E-mail: met.eireann@met.ie

M3 time	Air Temperature (°C)	Significant wave height (metres)	Maximum significant wave height (metres)	mean wave direction	Sea Temperature (°C)	mean wind direction	wind gust speed (knots)	mean wind speed (knots)
17-aug- 2012 06:00:00	15.1	2.5	4	216.6	15.9	(degres from North)	11.5	8
17-aug- 2012 07:00:00	15.1	2.8	4.4	203.9	15.9	143.8	13.1	9.5
17-aug- 2012 08:00:00	14.7	2.8	4.6	206.7	15.8	127.6	17.2	11
17-aug- 2012 09:00:00	14.7	2.8	4.1	203.9	15.8	119.5	15.4	10.8
17-aug- 2012 10:00:00	14.4	2.8	3.9	203.9	15.8	119.5	17.9	13
17-aug- 2012 11:00:00	14.6	3	4	196.9	15.8	118.5	17.4	12.4
17-aug- 2012 12:00:00	14.9	3	3.9	199.7	15.8	112.9	16.9	9.8
17-aug- 2012 13:00:00	15.1	2.7	3.7	210.9	15.8	111.8	13.4	6.5
17-aug- 2012 14:00:00	15.3	2.7	3.9	220.8	15.9	111.4	9.8	7
17-aug- 2012 15:00:00	15.8	2.5	5	198.3	16.1	202.9	8.3	5.1
17-aug- 2012 16:00:00	15.7	2.7	3.6	215.2	16.2	224.6	13	9.3
17-aug- 2012 17:00:00	15.7	2.8	4.2	208.1	16.1	225.4	15.2	11.7
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## Appendix 7.3 Met Éireann Report.

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## Appendix 7.3 Met Éireann Report.



## Appendix 7.4 Photo of Pot Hauler fitted into its mounting bracket.

Support bracket for the pot hauler. Control lever for the pot hauler.



# APPENDIX 7.5

Appendix 7.5 Photograph of Personal Flotation Device.



Photo P8281538.





# APPENDIX 7.7

Appendix 7.7 Pot Hauler Knife.



Pot hauler knife

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PAGE

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## 8. CORRESPONDENCE RECEIVED

8.1	Next of kin correspondence and MCIB Response.	30

**Note:** The name and contact details of the individual respondent have been obscured for privacy reasons.

asualty Investigati 3 1 JAN 2014 scrúdú Tasim 29-1-714 Dear da Bates, Thank you for sending me the deaft report and for a flowing me and my family the opportunity of reading same. We as a family would like to stress the unportance of mot only wearing a lifejacket, but equally, if not more importantly getting lifejackets serviced annually. your Tauty,

Correspondence 8.1 Next of kin correspondence and MCIB Response.

MCIB RESPONSE: The MCIB notes the contents of this correspondence.

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# NOTES

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