d. The next transmission was made at approximately 0313-0314 as follows:

MELBOURNE — JULIET SEVEN THIS IS MIKE TWO- -
YOU ARE ON A COLLISION COURSE OVER
(Pause) JULIET SEVEN YOU ARE ON A
COLLISION COURSE - - JULIET SEVEN OVER

e. The next transmission was made at approximately 0314S hrs, as follows:

EVANS — ROGER - - MY RUDDER IS RIGHT FULL OVER
(Note: This signal was received and understood in MELBOURNE)

f. The next transmission was commenced and completed within 15 seconds after 5 above, as follows:

MELBOURNE — JULIET SEVEN THIS IS MIKE TWO - - I
AM GOING HARD LEFT OVER
(Note: This signal was received and understood in EVANS)
(Exhibit 27)

134. (U) The evidence establishes that:

a. There was a delay of ten to fifteen seconds between the time of transmission by EVANS of "Roger, my rudder is right full" and the time this information reached CO MELBOURNE at the conning position.

b. There was a delay of ten to fifteen seconds between the time CO MELBOURNE ordered that radio advice be sent to EVANS that MELBOURNE was going hard left and the time that this information was heard by LTJG Ramsey and LTJG Hopson on the bridge loudspeakers aboard EVANS.

135. (U) On board MELBOURNE, the arrangement for reception and transmission of tactical signals on the Primary Tactical Circuit (PRITAC) was as follows:

a. The bridge operator was an enlisted rating who listened to the circuit on headphones from a position a few steps removed from the conning officer, made all transmissions on a microphone attached to his headphones, and entered in a log all signals heard and transmitted.

b. A senior tactical operator rating moved back and forth between the conning officer's position and that of the circuit operator, relaying and assisting in the translation of incoming and outgoing messages.

c. The conning officer did not himself hear incoming transmissions or personally transmit outgoing messages. (R, p. 236).

136. (U) On board EVANS, as in most USN ships, the arrangement for reception and transmission of tactical signals on the Primary Tactical Circuit was as follows:

a. Transmissions were heard on loudspeakers at the conning position (Pilot House or Open Bridge, or both), and in Combat Information Center (CIC).

b. The Officer of the Deck or his Junior Officer of the Deck guarded the circuit, recorded incoming signals for immediate use, and personally made all outgoing transmissions.

c. CIC monitored the circuit, logged signals heard (incoming or outgoing) and provided the conning officer with its interpretations of the meanings of signals heard on the circuit. (R, p. 120).

137. (U) Both the RAN and the USN systems for guarding PRITAC have advantages and disadvantages. Among these are:

a. With the RAN system the senior tactical operator shows the OOW the translation of signals as appropriate, thereby allowing the latter to devote a greater proportion of his time to navigational and deck matters. This system permits the loudspeaker on the bridge to be switched off, but if this is done there is an inherent delay for both incoming and outgoing signals, and the oral relay between circuit operator, senior tactical operator and conning officer introduces possibilities for error.

b. With the USN system, the PRITAC loudspeaker is a source of distraction on the bridge, but there is less requirement for oral relay and less time delay between transmission and the conning officer.

Miscellaneous

138. (U) According to the Local Operations Plot in MELBOURNE's Ops Room, EVANS was at 0237G, out of her assigned screening sector and in BLACKPOOL's sector. There is no evidence that this was noted by anyone in the Task Group, except LTJG Hopson's testimony that EVANS was off station shortly after he took the conn between 0230G and 0300G (Exhibit 59).

139. (U) At the time of execution of "form column" signal about 0310G, the evidence leads to the deduction that EVANS was again out of her sector and inside BLACKPOOL's sector to the left as viewed from MELBOURNE (Deduction).

140. (C) Available tactical data (turning circles and acceleration) on USS FRANK E. EVANS and HMAS MELBOURNE are not current. The latest data obtainable for EVANS were trials on USS MOALE (DD-693) in 1944 (pre-FRAM) and for MELBOURNE were from trials on HMS TRIUMPH in 1948 (Exhibits 18 and 68).

POST COLLISION

Immediate Results and Actions

141. (U) The angle between the heading of the two ships at the time of collision was approximately 90-95 degrees (Deduction).

142. (U) The force of impact initially caused EVANS to roll deeply and violently to starboard and then divided her into two sections. The line of division was located in the vicinity of the expansion joint at frame 92 1/2 (numerous witnesses).

143. (U) The bow section rolled initially to an angle approaching 90° to starboard and did not recover appreciably (R, p. 545).

144. (U) The bow section began to settle with a marked stern down trim (R, p. 545).

145. (U) As the bow section of EVANS floated down the port side of MELBOURNE its list to starboard increased to about 150° (R, p. 458).

146. (U) The bow section rotated further to starboard and became completely inverted (R, p. 458).

147. (U) Thereupon the bow section rose up in the air by the head to an angle of about 60° and sank completely, after end first, at about 0324G (R, p. 458).

148. (C) The bow section sank with classified items of ordnance, electronic, communications and cryptographic equipment and classified publications in 1100 fathoms of water, within approximately 600 yards of the position shown in finding of fact number 132 (H.O. Chart No. BC5498A).

148A. (U) The bow section sank in 1100 fathoms of water. (H.O. Chart No. BC5498A).

149. (U) An unknown number, not more than 73, of EVANS crew were trapped within the bow section and died as a result of traumatic injury or drowning, their bodies remaining within the ship (deduction).

150. (U) The force of the collision rolled the after section of EVANS over to starboard to an angle approaching 90°, for an undetermined but short space of time. As the ship broke into two pieces the after section righted itself (various).

151. (U) The stern section of EVANS moved slowly down the starboard side of MELBOURNE until it came abreast of MELBOURNE's starboard quarter (R, p. 418).

152. (U) In that location it was secured alongside at approximately 0325G (R, p. 418).

153. (U) at 0323G FOCAF ordered the termination of Exercise SEA SPIRIT (R, p. 26).

154. (U) At 0321G BLACKPOOL, LARSON, CLEOPATRA and KYES were ordered to close MELBOURNE to pick up survivors (R, p. 226).

155. (U) These ships encircled MELBOURNE and their boats assisted in searching the water for survivors (R, p. 229).

156. (U) Shortly after 0325G FOCAF ordered the remainder of TF 472 to close MELBOURNE for rescue operations (R, p. 12).

157. (U) Consideration was given to the use of international distress frequencies to call for assistance in the search. FOCAF decided against such action as the number of available naval ships and aircraft was more than adequate (R, p. 16).

Escape from Forward Section of EVANS

158. (U) At the time of the collision there was a total of 111 persons (10 officers and 101 enlisted men) in the portion of EVANS forward of the point where the ship broke (Exhibit 81).

159. (U) Four officers and 31 enlisted men were on watch in the forward section, distributed in the following positions: Open Bridge (3), Pilot House (5), Forward Lookout Station (atop Pilot House) (2), Signal Bridge (2), CIC (15), Radio Central (3), Forward Fireroom (4), and IC and Plotting Room (1) (Exhibit 81).

160. (U) Six officers and 70 enlisted men in the forward section were off-watch and the great majority were asleep in their assigned quarters (Exhibit 81; R, p. 453, 490, 507, 510, 544).

161. (U) There were 11 Chief Petty Officers asleep in their compartment (A-303-L); they were awakened by the collision which threw them out of their bunks (R, p. 453).

162. (U) Chief Hospital Corpsman Charles W. CANNINGTON obtained a "penlight" from his locker and passed it to the Chief Petty Officer who was at the head of the line climbing towards the hatch. HMC CANNINGTON took last place in the line (R, p. 453).

163. (U) All Chief Petty Officers except HMC CANNINGTON exited the Chief Petty Officers' compartment (R, p. 453).

164. (U) HMC CANNINGTON did not survive (Exhibit 90).

165. (U) Chief Boatswain's Mate Willie L. King and Chief Engineman Edward P. Hess, who are known to have exited the Chief Petty Officers' compartment, did not survive (R, p. 454, Exhibit 90).

166. (U) Thirty two enlisted men were asleep in the First Division compartment (A-304-L). They were awakened by the collision which threw them from their bunks (R, p. 487, 507).

167. (U) The collision caused some confusion and shouting in the First Division compartment (R, p. 488, 490).

168. (U) Either Boatswain's Mate Second Class Brian L. CROWSON or Boatswain's Mate Second Class Gary L. SAGE, called out "Keep quiet, stay together and we will get out of here" and this quieted the men in First Division compartment (R, p. 490).

169. (U) Six enlisted men from First Division Compartment survived. Petty Officer Sage was not a survivor (R, p. 507, Exhibit 81, 90).

170. (U) In the OI Division compartment (A-305-CL) 20 enlisted men were asleep. They were awakened by the collision which threw them from their bunks (R, p. 510).

171. (U) Radarman First Class George J. Laliberte called out "Let's get out of here", and this started a general movement towards the ladder (R, p. 510).

172. (U) Ten enlisted men from OI Division compartment survived. Petty Officer Laliberte did not survive (Exhibit 90, R, p. 511).

173. (U) In the forward section the only others to survive from among those off watch were two officers (Commander McLemore and Lieutenant Commander George L. McMichael), two Chief Petty Officers sleeping in a room just forward of the Wardroom, and one enlisted man who was awake in the crew's Messroom (A-205-L) (R, p. 70, 544, Exhibit 81, 90).

174. (U) Of those on watch in the forward section, 2 officers on the open bridge, the Boatswain's Mate of the Watch in the pilot house, 1 lookout, 2 signalmen and 2 enlisted men in Radio Central, were the only survivors (Exhibit 81, 90).

175. (U) No one survived from the Forward Fireroom, CIC, Forward Officers Quarters and the IC and Plotting Room (Exhibit 81, 90).

176. (U) Of the total of 10 officers and 101 enlisted men in the forward portion of the ship, 4 officers and 33 enlisted men survived (Exhibit 81, 90).

177. (U) Those in the forward section who were awakened by the collision, by being thrown from their bunks, found themselves standing or lying on the starboard side of their compartments and had great difficulty in orienting themselves and selecting an escape route (R, p. 453, 490, 507, 510, 544).

178. (U) There was little or no panic in any portion of the forward section of the ship (R, p. 490, 510).

179. (U) Whenever one man found a hatch or escape route he called out the way to those around him (R, p. 453, 488, 489, 512, 544).

180. (U) There was no available general means of communication from leaders to their men (deduction).

202. (U) At about the time of collision, in the forward engineroom, a sound powered telephone cord became entangled on the foot of FN Terry L. Baughman, but he managed to free himself and escape (R, p. 571).

203. (U) All personnel in the Forward Engineroom except one fireman received first and second degree burns from high temperature steam escaping from the severed main steam line requiring their hospitalization (R, p. 398, 402, etc; Exhibit 33).

204. (U) Whenever one man found the hatch he called out the way to others in the Forward Engineroom (R, p. 398, 402, etc.).

205. (U) Fireman LOCKWOOD pulled Machinist's Mate Third Class Roy E. PETERS over to the hatch and assisted PETERS through before leaving the engineroom himself (R, p. 402).

206. (U) Machinist's Mate First Class Richard M. FRITZ, Jr., in charge of watch in the After Engineroom, ordered everyone to evacuate the engineroom immediately after he picked himself up after being thrown down to the starboard side by the collision (R, p. 410, 414).

207. (U) Four enlisted men, followed by Petty Officer FRITZ, immediately evacuated the After Engineroom (R, p. 414).

208. (U) LT G. W. DUNNE, USN, EVANS Operations Officer, was the senior officer in the after section. He was asleep in his stateroom at the time of collision (R, p. 433, 432).

209. (U) As soon as LT DUNNE left his stateroom a few seconds after collision he began to shout orders for the crew to go to their General Quarters Stations (R, p. 432, 450).

210. (U) When LT DUNNE saw that EVANS was no longer a complete ship, he went to the fantail and took charge of the men assembled there. He was assisted in this and in other actions which he initiated by the other officers on board (R, p. 433 and numerous witnesses).

211. (U) LTJG Robert M. HILTZ, was in his stateroom at the time of collision. He heard a shouted order to go to General Quarters. When he left his stateroom and found the forward part of the ship gone, he told members of the crew assembling on the main deck of the situation and ordered them to the fantail (R, p. 450).

212. (U) The crew of EVANS assembled on the fantail were orderly and calm (R, p. 450, 463, numerous).

213. (U) LTJG HILTZ, among others, undertook the gathering of lifejackets from various storages in the after section (R, p. 450).

214. (U) LTJG HILTZ directed men on EVANS in assisting to secure lines passed from MELBOURNE to secure the stern section (R, p. 451).

215. (U) Lieutenant Robert B. SUHR, USNR, the Supply Officer of EVANS, rendered first aid to the injured personnel who had been assembled on the fantail (R, p. 557/8).

216. (U) LT SUHR used bandages and aspirins from the EVANS first aid bags stowed in the EVANS stern section, and gave the injured some relief for the short period before they were evacuated to MELBOURNE (R, p. 558).

217. (U) Machinery Repairman First Class Donald A. BAKKEN, after attempting to go to his General Quarters Station, returned to his berthing compartment, R. Division (C-203-L) and ordered the men to clear the compartment and go to the fantail (R, p. 498).

218. (U) Petty Officer BAKKEN assisted with the securing of lines passed by MELBOURNE to the stern section and directed the movement of men from the midships section to the MELBOURNE (R, p. 499, 502).

219. (U) Signalman First Class Byron R. PRUDEN, after attempting to go to his General Quarters Station, returned to his berthing compartment, OC Division (C-205-L) and ordered the men to clear the compartment and go to the fantail (R, p. 503).

220. (U) Signalman PRUDEN and Quartermaster Second Class Joseph M. SISSEL passed through the after berthing compartments, setting damage control condition ZEBRA and ordering the men to clear the compartments and go to the fantail (R, p. 504).

221. (U) Signalman PRUDEN and QM SISSEL searched the berthing compartments to ensure that no one remained (R, p. 504).

222. (U) Seaman Apprentice Thommy R. VEJR was on watch in After Steering (C-206-E), ready to take control should a casualty occur to the normal steering system (R, p. 390, 504, 392).

223. (U) SA VEJR was thrown against the starboard side by the collision; as soon as he picked himself up he went to his post, engaged the controls and tried to contact the bridge on the 1JV telephone (R, p. 390, 394).

224. (U) SA VEJR remained at his post, put the rudder amidships and kept calling the bridge until told by Signalman PRUDEN to secure the phones and leave the compartment (R, p. 390, 504).

225. (U) Signalman PRUDEN reported to LT DUNNE that the after berthing compartments were clear and that condition ZEBRA was set. In response to LT DUNNE's call for volunteers, Signalman PRUDEN and Boiler Tender Third Class Frederick L. ARRINGTON went into the water to attempt to tow three of MELBOURNE's inflated liferafts about 75 feet to EVANS (R, p. 504).

226. (U) Electrician's Mate Third Class Charles N. FREY and Fireman Aaron C. FUCHS entered the After Fireroom, which by then had been evacuated, to search for a man after they had heard knocking. They found no one. They also entered the After Engineroom (R, p. 519, 524).

227. (U) Petty Officer PERKINS took charge in R Division compartment (C-203-L) (R, p. 521).

228. (U) Petty Officers in "M" Division berthing compartment calmed the men who were thrown out of their bunks by the collision (R, p. 523).

229. (U) LT DUNNE organized the collection and distribution of lifejackets (R, p. 433).

230. (U) LT DUNNE ordered life rafts to be launched and an attempt to be made to cut free the boat which was hanging by one fall from her starboard davits (R, p. 433).

231. (U) LT DUNNE organized a collection of all wounded personnel on the fantail and ordered that they be evacuated to MELBOURNE as soon as he was informed there was a ladder connecting the ships (R, p. 433).

232. (U) MM3 PETERS was lifted on board MELBOURNE by stretcher; the other injured climbed the ladder to MELBOURNE's quarterdeck (R, p. 463).

233. (U) LT DUNNE ordered a search of the after section to ensure that all compartments were clear of men and that damage control condition ZEBRA was set (R, p. 434).

234. (U) LTJG J. W. COVERT, USN, Engineer Officer, was asleep in his stateroom at the time of collision. When he left his room after the collision he went immediately to the Forward Engineroom; he found it flooded and empty of personnel. He dogged the hatch closed (R, p. 438).

235. (U) LTJG COVERT proceeded from the Forward Engineroom direct to the After Engineroom, where he found the plant secured; he checked that the bulkhead stops were closed (R, p. 438).

236. (U) LTJG COVERT went from the After Engineroom to the After Fireroom and completed securing of the boiler by switching off one burner. He also inspected the forward bulkhead observed that it was "panting" and made an unsuccessful attempt to discover from whence the water he could see in the bilges was entering the fireroom (R, p. 438, 439).

237. (U) LTJG COVERT then went to the fantail and reported to Lieutenant DUNNE that the after engineroom and fireroom were secured and informed Lieutenant DUNNE that in his opinion the ship was in a critical condition. He recommended that those on the ship be evacuated (R, p. 439).

238. (U) LTJG COVERT ordered First Class Interior Communications Man Jessie A. PERKINS and First Class Shipfitter John D. GUSTAFSON to search all the spaces below decks aft of the engineering spaces and to set condition ZEBRA. LTJG COVERT also made two personal searches before he left the ship (R, p. 440).

239. (U) LT DUNNE, who had also received advice from the Executive Officer of MELBOURNE to the effect that the after section was in a dangerous condition, ordered the USN personnel on EVANS to be evacuated to MELBOURNE (R, p. 441, 420).

240. (U) The stern section of EVANS was evacuated under the supervision of officers and senior enlisted men via a ladder, scrambling nets and jacob's ladders led from the flight deck and from the quarterdeck of MELBOURNE to the ECM Deck and to the main deck of EVANS (R, p. 420 and numerous).

241. (U) By 0400G the Engineer Officers of MELBOURNE and EVANS concurred in the view that the stern section of EVANS was settling by the head and was in a critical condition (R, p. 420, 439).

242. (U) The Executive Officer of MELBOURNE consulted individually with both of these officers. All three concluded that the stern section would shortly sink (R, p. 420, 441).

243. (U) The Executive Officer of MELBOURNE reported the situation to the CO MELBOURNE and advised that the stern section be cast off as it might cause damage in settling to MELBOURNE's starboard screw (R, p. 228, 420).

244. (U) CO MELBOURNE withheld permission to cast off until the Executive Officer had personally conducted a thorough search of all compartments in the after section (R, p. 228).

245. (U) LTJG COVERT left EVANS followed by Lieutenant DUNNE who was the last of the USN personnel to leave (R, p. 441).

246. (U) Having received an assurance from his Executive Officer that there were no survivors in EVANS, CO MELBOURNE, after consultation with FOCAF, gave permission to cast off (R, p. 16).

247. (U) At 0407G lines were cast off and with a touch ahead on MELBOURNE's port engine the stern section drifted clear (R, p. 420).

MELBOURNE Search and Rescue Operations

248. (U) At the moment of impact CO MELBOURNE ordered "Emergency Stations" (R, p. 226).

249. (U) By such action crews were stationed at all boats, personnel stood by to lower ladders of all types and medical parties and storeroom personnel were alerted (R, p. 226, 418).

250. (U) Immediately after the collision CO MELBOURNE called away all boats and ordered the release of liferafts and lifebuoys (R, p. 226, 418).

251. (U) MELBOURNE's number 2 motor cutter was lowered into the water from davits on the port side forward within 4-5 minutes of the collision (R, p. 472).

252. (U) This boat picked up approximately 29 survivors on its first trip, the majority of whom were concentrated in a small area the center of which was located between 60 and 200 yards from MELBOURNE (R, p. 472).

253. (U) The crew of No. 2 motor cutter also recovered a body from the water and lifted it into the boat (R, p. 478).

254. (U) Resuscitation measures (Cardiac massage) were initiated immediately but discontinued due to concern over chest injuries noted. This body was later identified as that of Seaman Apprentice Kenneth W. Glines (R, p. 476).

255. (U) On her second trip the motor cutter towed back three liferafts containing approximately five survivors (R, p. 473).

256. (U) FOCAF's barge, though manned, could not be lowered into the water until approximately 10 minutes after impact because the stern section of EVANS fouled the boat's gantry (R, p. 419).

257. (U) The barge picked up eight men (R, p. 419).

258. (U) MELBOURNE's other boat, known as the utility boat, was unserviceable having suffered damage in Manila Bay (R, p. 419).

259. (U) Scrambling nets, drifter ladders and later the port accommodation ladder were lowered to assist survivors to board MELBOURNE (R, p. 419).

260. (U) A number of men from MELBOURNE, some acting on their own initiative, entered the water to assist survivors. A complete list of those in this category is not available but it is known that ME James, AB Richardson and LT R. J. Burns entered the water and assisted survivors into liferafts (R, p. 418, 428, 481).

261. (U) LT Burns jumped from 3 deck (18 feet above water) to assist an injured man into a liferaft and rendered first aid (R, p. 428).

262. (U) When the liferaft had drifted 150-200 yards away from MELBOURNE, LT Burns swam a further 150-200 yards from the ship to assist a second survivor into a raft (R, p. 429).

263. (U) LT Burns subsequently swam away to search an area of water of unknown size before returning to the second raft (R, p. 428-430).

264. (U) At least 6 liferafts were released from MELBOURNE's port side forward and one from each quarter. Four lifebuoys were thrown from the stern. In the area investigated by LT Burns, that is in the general direction of where the bow section of EVANS sank, there were several liferafts some of which were Australian and others American (R, p. 430).

265. (U) The combined capacity of the 8 MELBOURNE rafts was 160 men.

266. (U) In addition to the rafts dropped by MELBOURNE, EVANS dropped at least three more, which had a combined capacity of 45 men (R, p. 430, 587).

267. (U) CO MELBOURNE used his engines to place MELBOURNE's starboard quarter alongside EVANS stern section and noted that action was taken to secure EVANS alongside (R, p. 227).

268. (U) Petty Officer Scott took charge on the quarterdeck of MELBOURNE initially and provided the first line used to secure EVANS stern section alongside MELBOURNE (R, p. 462).

269. (U) LCDR Colin J. Patterson and others used MELBOURNE's safety nets to go aboard EVANS via her hangar top (R, p. 292).

270. (U) Wessex helicopter cargo nets were rigged from the starboard quarter of MELBOURNE's flight deck to EVANS by Chief Aircraftman Aircraft Handler Stanley R. Heares and others (R, p. 292, 366).

271. (U) CPO Heares reported to an officer on EVANS fantail that nets had been rigged "up top" and he could start getting men off (R, p. 366).

272. (U) LCDR Patterson assisted in directing survivors to board MELBOURNE via an aluminum ladder and Wessex helicopter cargo nets between the ships (R, p. 293).

273. (U) LCDR Patterson searched under debris on EVANS decks and searched for men in the compartments he was able to enter below decks (R, p. 293).

274. (U) CPO Heares persisted in his efforts to help in EVANS until he had to be ordered off the ship by LCDR Patterson (R, p. 294).

275. (U) FOCAF ordered that all wreckage in the water was to be picked up to ensure that the search was complete in all respects (R, p. 16).

276. (U) A final systematic search by ships assisted by helicopters was initiated at 0900G and continued until about 1900G. This search covered an area of approximately 100 square miles (Exhibit 6; R, p. 15).

277. (U) Two MELBOURNE helicopters (831 and 823) were airborne at the time of collision were recalled 2 minutes after impact (Exhibit 78).

278. (U) At 0330 Helicopter 831 rescued LCDR McMichael, Executive Officer of EVANS. The loading of this aircraft limited its capacity to lifting one survivor at a time (R, p. 465, 466).

279. (U) Helicopter No. 823 was not fitted with a winch and used its landing lamp to direct a boat to swimmers (Exhibit 78).

280. (U) Shortly after 0325G FOCAF asked COMASWGRU ONE to send helicopters and ordered MELBOURNE to launch helicopters (R, p. 12).

281. (U) Within 14 minutes of impact Helicopters no. 830 and 828 were launched by MELBOURNE equipped with rescue winches (Exhibit 78).

282. (U) At 0340G Helicopter no. 830, while searching beyond the wreckage perimeter, lowered his SAR diver and rescued an exhausted swimmer (R, p. 455, Exhibit 78).

283. (U) This survivor, SKC Larry I. Mallay, was the last man to reach MELBOURNE (R, p. 467, 455).

284. (U) At about 0335, SH3 helicopters from KEARSARGE joined the search having flown a distance of about 40 miles (Exhibit 78; R, p. 355).

285. (U) The search area was divided by MELBOURNE into 60 degree sectors and each helicopter was ordered to search within his sector to a depth of 5 miles. Subsequently, the area was divided into 8 sectors (R, p. 422; Exhibit 45, 71).

286. (U) Air search was continued throughout the day and discontinued at 1803G (R, p. 467).

287. (U) During hours of darkness helicopters gave assistance to search boats by illuminating survivors and wreckage (R, p. 470, Exhibit 78).

288. (U) The number of helicopters in use varied from 2 to 8 at any time, of which five were provided by USS KEARSARGE (R, p. 355, Exhibits 71, 78).

289. (U) By 0345 all survivors were on board MELBOURNE (R, p. 421).

290. (U) By 0440 it had been established that the survivors totalled 199 and details of their next of kin were at hand (R, p. 421).

291. (U) After CO EVANS had been rescued from the water and brought aboard MELBOURNE he expressed to CO MELBOURNE the desire to return to his ship. CO MELBOURNE, observing him to be very shocked and in pain, convinced him that he should remain aboard MELBOURNE and look after his men (R, p. 229, 583).

292. (U) Injured survivors were treated in MELBOURNE's sick bay or wardroom (R, p. 421).

293. (U) Survivors were provided with hot beverages, food, clothing, and cigarettes (R, p. 421).

294. (U) Many of the survivors paid special tribute to the quality of the treatment extended to them by MELBOURNE personnel (R, p. 403, 406, 499, 505, 513, 517).

295. (U) Between 0900G and 1000G the uninjured survivors were transferred via boat to KEARSARGE while the more seriously injured were transported by helicopter (R, p. 421).

Reboarding and Salvage of Stern Section of EVANS

296. (U) CO LARSON took charge of the abandoned stern section of EVANS (R, p. 444, 550).

297. (U) At about dawn, 3 June 1969, LTJG Covert, accompanied by Boiler Tender First Class Rudolph M. Hanna and Machinery Repairman First Class Donald A. Bakken, left MELBOURNE by MELBOURNE's No. 2 Motor Cutter to return to the stern section of EVANS (R, p. 443, 444).

298. (U) LTJG Covert's boat circled the stern section and LTJG Covert observed that the forward end had settled about one foot since his last inspection before evacuating the ship (R, p. 443).

299. (U) LTJG Covert then proceeded to LARSON and joined the Engineer Officer of LARSON, Lieutenant James R. Haugh, USN, who was organizing a party to board the stern section of EVANS (R, p. 444).

300. (U) LTJG Covert and LT Haugh, accompanied by LARSON's Damage Control Assistant, two Chief Petty Officers and four other enlisted men boarded the stern section of EVANS from a boat to ascertain salvage possibilities, assist therein and to recover such essential records, classified, accountable and pilferable materials as possible (R, p. 444).

301. (U) They found flooding in the After Fireroom to a level above the mud drum of the boiler (R, p. 444).

302. (U) Water was entering the After Fireroom through one hole about 8" in diameter and another smaller hole, both apparently caused by pipes being pulled through the bulkhead between the After Fireroom and the After Engineroom (R, p. 444).

303. (U) The holes between the After Fireroom and After Engineroom were plugged under LTJG Covert's direction by Damage Control Plugs (R, p. 444).

304. (U) LARSON's portable P250 gasoline pump was used to pump water from the After Fireroom (R, p. 444).

305. (U) EVANS' portable P250 gasoline pump was found to have broken spark plug wires, but would not function when these had been replaced (R, p. 444).

306. (U) The salvage party cut loose EVANS' motor whaleboat, which was hanging by one fall. The boat floated and was recovered by KYES (R, p. 445).

307. (U) LARSON came alongside the starboard side of the stern section and secured it, LARSON's bow towards EVANS' stern (Photo).

308. (U) 440 volt electric power was led from LARSON to EVANS and the leads were plugged directly into EVANS' portable electric pumps, which were then put to work pumping out the After Fireroom. EVANS' portable cutting torch was used to cut free equipment to lighten the ship (R, p. 445).

309. (U) Water was also removed by pumping from After Officers' Quarters and passageways (R, p. 445).

310. (U) Pumping the water out of the flooded spaces noticeably improved the stability of the stern section which had been sluggish but now had better reaction characteristics (R, p. 445).

311. (U) EVANS' Variable Depth Sonar towed body, which was streamed to a depth of about 150 feet, was raised by the salvage party using power from LARSON (R, p. 446).

312. (U) The salvage party rigged a towing bridle (R, p. 446).

313. (U) Before he was required to leave the stern section, LTJG Covert checked that Condition ZEBRA was set in the stern section, and inspected and closed down the magazines (R, p. 447).

314. (U) At approximately 0900G, the Supply and Disbursing Officer of EVANS, LTJG Robert B. Suhr, SC, USNR, reboarded the after section. On that and a subsequent visit, he recovered essentially all currency, treasury checks, and money orders for which he was accountable, in addition to records he considered essential (R, p. 559).

315. (U) Ship's store stock stores, repair parts remained aboard EVANS until arrival Subic Bay and were subsequently disposed of in accordance with applicable directives (R, p. 560).

316. (U) Prior to the collision the Supply and Disbursing Officer of EVANS had attempted and was unable to find any official instructions or guidance relating to steps he should follow in the event of a disaster such as actually happened. (R, p. 560).

317. (U) Navy Regulations, 1948, Art. 1902, and NAVCOMP Manual, Art. 042553, address the duties of accountable officers in the event of disaster and the procedures for the disposition of funds in the hands of disbursing officers. These apply to EVANS' situation in only a general manner. (Relevant publications).

318. (U) USS TAWASA (ATF-92) arrived at the scene at 1140G and placed salvage personnel on board the stern section to complete preparations for tow (Exhibit 86).

319. (U) Lieutenant Commander William N. Klorig, Salvage Engineer for Harbor Clearance Unit I, assumed the duties of Officer in Charge of Salvage Operations at 1700G. CO USS TAWASA assumed duties as On Scene Commander (Exhibit 86).

320. (U) LCDR Klorig fully approved the actions taken prior to his arrival by LARSON and EVANS' personnel towards salvage and preparation for tow (R, p. 563).

321. (U) TAWASA commenced the tow of the stern section of EVANS at 1515G, 4 June. The tow proceeded uneventfully except for the parting of the towing bridle at 0130, 8 June. The tow was resecured. The stern section of EVANS was transferred to CO EVANS on arrival Subic Bay at 0600H, 9 June (Exhibit 86).

Emergency Lighting in EVANS

322. (U) From the moment of the collision, normal ship's lighting failed in the forward section of EVANS (R, p. 70, 453, 487, 507, 544).

323. (U) EVANS' forward diesel generator room is on the starboard side, second platform (below the waterline) approximately 35 feet forward of the point of collision impact (Exhibit 44).

324. (U) There is no evidnce regarding the condition or functioning of EVANS' forward diesel generator after the collision.

325. (U) EVANS' after diesel generator set functioned as designed, in that it automatically started and generated power immediately after the collision (R, p. 440, 496).

326. (U) Emergency power was thereby made available direct to the steering gear, and to the after emergency switchboard (R, p. 440, 574, 575).

327. (U) Emergency power, though available, was not distributed to other vital circuits in the after section of the ship due to interruption of emergency power distribution circuitry from the diesel generator through the after emergency switchboard (located in the after diesel generator room) (R, p. 574, 575).

328. (U) Two types of emergency lights were installed in EVANS. On both, the light source is battery powered. They differ principally in the manner in which the light is turned on. They are:

a. Manually-operated on-off switch.

b. Relay-actuated on-off switch, such that the light is turned on automatically upon loss of ship's power to the lighting circuits (Knowledge of Board).

329. (U) Subsequent to the collision one emergency battle lantern actuated automatically in B-2 (Forward Engineroom) (R, p. 403).

330. (U) Subsequent to the collision, one or more emergency battle lanterns actuated automatically in A-303-L (CPO Berthing), A-304-L (1st Division's Berthing), B-101-ACEL (After Officers' Quarters), B-4 (After Engineroom), B-101-ACEL (fore and aft main passage), C-202-E (After Emergency Diesel Room), C-203-E (General Machine Shop), C-203-L (M Division Berthing), C-204-LM (OC Division Berthing), C-205-L (2nd Division Berthing), C-206-E (After Steering) (R, p. 212, 392, 413, 438, 453, 496, 498, 507, 515).

331. (U) Subsequent to the collision, emergency battle lanterns did not actuate in A-203-1M (CPO Mess), A-101-LM (Wardroom), or A-101-LM (passageway forward of Wardroom), either because of defective fucntioning, or because no automatic types were located in those spaces (R, p. 510, 544).

332. (U) Subsequent to the collision, one manually operated battle lantern was found lying on the deck near its normal mounting, and at least one relay actuated lantern was forcibly removed from its mounting and used as a portable light (R, p. 519, 522).

333. (U) "General specifications for Building ships in the U.S. Navy," as interpreted by CO EVANS, contain conflicting specifications with regard to installation of relay actuated battle lanterns.

Example:

a. Sect. 9640-2, Page 4A (Rev. 10 Oct 1968) provides for installation of these lanterns to mark escape routes.

b. Sect. 9640-2, Page 5, of 1 July 1967, prohibits installation in spaces not manned during battle conditions (R, p. 590).

334. (U) Evidence was presented to the effect that CO's of individual USN ships have wide latitude in determining the numbers, types and locations of emergency lights (R, p. 578).

Life Rafts

335. (U) Twenty-one 15-man inflatable rafts were installed in EVANS, equating to 115% of persons on board (Exhibit 96; R, p. 587).

336. (U) In August - September 1968 all rafts had been checked and defective units replaced (R, p. 587).

337. (U) Five rafts were stowed port side in the bridge area, 4 below the signal bridge level, 1 further aft. These rafts were in the vicinity of the point of impact (R, p. 587).

338. (U) Two uninflated rafts with broken static lines were found port side forward main deck of EVANS during salvage operations (R, p. 501).

339. (U) LTJG Lare assisted by Gunner's Mate Second Class Lester launched 3 - 4 life rafts from starboard side racks and inflated 2. They left the others uninflated in their valises when ordered to board MELBOURNE (R, p. 529).

340. (U) In the general area of the bow section there were about 4 U.S. rafts and 4 Australian rafts seen to be functioning properly (R, p. 429, 430).

Life Jackets

341. (U) According to an inventory of life jackets conducted in February 1969 EVANS had on board a total of 315 life jackets of the following types:

70 Kapok

245 Yoke type CO_2 inflatable

This equates to 115% of personnel on board the EVANS (R, p. 493).

342. (U) EVANS' inflatable life jackets were distributed in the vicinity of General Quarters Stations. Kapok life jackets were distributed in the vicinity of line working stations for underway replenishment and in the ship's motor whaleboat (R, p. 493; Exhibit 84).

343. (U) Personnel whose General Quarters stations were on the bridge or in exposed areas also used Kapok jackets (R, p. 493).

344. (U) EVANS checked that all hands had life jackets each time the crew exercised at General Quarters. Any maldistributions were immediately corrected. No inadequacies in the number available had ever been reported (R, p. 493).

345. (U) Life jackets had been available to all hands (273 people) at abandon ship drills (R, p. 490).

346. (U) The total number of personnel in the after section of the ship at the time of collision was 162, of whom 139 were asleep or in their quarters and 23 were on watch or working (Exhibit 84).

347. (U) There were 95 General Quarters stations in the section of EVANS which remained afloat. All General Quarters stations in the after part of the ship had inflatable life jackets at those stations (Exhibit 84).

348. (U) The approximate total number of life jackets available in the after part of the EVANS was 140 of which 92 were of the inflatable type and 48 were Kapok type (R, p. 494; Exhibit 84).

349. (U) In the forward section of EVANS, there is no evidence that anyone attempted to obtain life jackets prior to making his escape from the ship even though at least one person (XO EVANS) had two life jackets in the immediate vicinity of his bunk (R, p. 547, numerous witnesses).

Deaths and Injuries

350. (U) As a result of the collision, Seaman Apprentice Kenneth W. GLINES, USN, 864 83 82, was drowned. His body was recovered and returned to KEARSARGE from MELBOURNE. The body was identified by dental records (Exhibits 34, 102).

351. (U) SA GLINES' body was thereafter transferred to Tan Son Nhut Air Base, RVN, for preparation and shipment to CONUS (Exhibit 102).

352. (U) Although the Senior Medical Officer, KEARSARGE, had intended that an autopsy should be performed on SA GLINES, no request was made to Tan Son Nhut Air Base to this effect and no autopsy was performed (Exhibit 102).

353. (U) As a result of the collision, the following named naval personnel were lost at sea, their deaths being attributed to traumatic injuries or drowning and their bodies not being recovered:

ARMSTRONG, Alan H., ENS, 734324/1100
BRANDON, Robert G., ENS, 734145/1105
NORTON, John T., ENS, 732553/1105
OGAWA, Gregory K., ENS, 748383/1105
PATTEE, Dwight S., ENS 731886/1100
STEVER, Jon K., LTJG, 733570/1105
BAKER, James R., SN, 848 68 71
BOTTO, Andrew J., SN, 881 39 26
BOX, Thomas B., SN, 842 37 06
BRADLEY, James F., ETN3, 810 55 28
BROWN, Harris M., SA, 854 18 27
BROWN, William D. II, BT2, 898 07 23
CANNINGTON, Charles W., HMC, 996 14 06
CARLSON, Christopher J., RD2, 915 50 84
CLAWSON, Michael K., SN, 884 61 94

Damage to Ships

357. (U) As a result of the collision, MELBOURNE suffered extensive damage to her bow, both above and below water, as described in Exhibit 110. The full extent of damage and cost of repair were not available to the Board prior to the submission of its report (Exhibit 110).

358. (U) Flooding occurred in MELBOURNE's No. 1 and 2 trim tanks and shoring operations were commenced against number sixteen bulkhead from five deck to the keel. This was completed by 1500G, 3 June, and the ship was able to proceed to Singapore at 15 knots when search operations were completed (R,p. 396).

359. (U) As a result of the collision, the hull of EVANS forward of frame 92 1/2 was lost, together with all equipment, supplies and ammunition installed or stored therein (various; Exhibit 89).

360. (U) The after section of EVANS was salvaged, but reconstruction of the missing half was found to be unwarranted. Condition of the stern section upon arrival at Subic Bay was as described in Exhibit 89 (Exhibit 89).

Disposition of EVANS

361. (U) On 12 June 1969 the Chief of Naval Operations ordered that EVANS be decommissioned on 1 July 1969 (R, p. 583).

362. (U) CO EVANS decommissioned EVANS on 1 July 1969 and transferred custody of the hull to the Commander, Ship Repair Facility, Subic Bay.

OPINIONS

EVENTS PRIOR TO COLLISION

Command and Control, and Tactical Documents

1. (U) There was no misunderstanding in screening ships as to the identity of the OTC of TG 472.1 or TU 472.1.0 at any time.

2. (U) Any misunderstanding between FOCAF and CO MELBOURNE as to the identity of the OTC of TG 472.1 or TU 472.1.0, which may have existed prior to 021530Z, was not a contributing cause of the collision.

3. (C) Although no publication effective for this exercise clearly so stipulated as a matter of doctrine, all ships in the MELBOURNE Task Group understood that the zigzagging so ordered was to be based upon zero hour 2300G, 2 June, or 0200, 3 June; both are correct.

4. (U) Ships in the same formation were using their knowledge of different documents as basic authority for zigzagging plans and doctrine. Hence, if they had attempted to use plans or doctrine from their respective basic authorities, dangerous confusion could have ensued.

5. (C) ATP 1(A) Volume I, as effective for the Exercise SEA SPIRIT (namely with changes 1 through 4), contained adequate doctrinal material to provide a common understanding for zigzagging except as to determination of zero hour in a multi-hour plan, which could be misconstrued if not signalled.

6. (U) The fact that some ships held ATP 3 and some held ATP 3(A) and that different basic authorities might have been applied by different ships did not in actuality contribute to the collision.

7. (U) If zigzagging is contemplated during an operation, the operation order should either contain all plans and doctrine necessary, or should specifically reference the document wherein such are contained and specifically exclude the use of other possibly applicable publications.

8. (U) For allied operations, a specific definition of "patrolling sectors" is required for ASW screening.

9. (C) Certain signals transmitted by CO MELBOURNE as CTU 472.1.0 were procedurally incorrect.

Example 1

"Form 1" was addressed to the Task Unit collectively (at 022010Z), although only MELBOURNE and EVANS were to act on the signal. A proper address for this signal would have been: action to MELBOURNE and EVANS, information to the Task Unit.

Example 2

Receipts for the "Turn R" (resume previous zigzag) signals at 021915Z and 021953Z were requested by the originator (CTU 472.1.0) only from MELBOURNE. This practice does not provide positive assurance that the signal was received by anyone outside the Flagship and can lead to dangerous consequences (which it did not in this instance). At least one additional station outside the ship should have been required to receipt to insure that the signal was emitted from the ship.

Status of Ships

10. (U) An open hatch in the main deck, and open doors at main deck level and above contributed to the intake of a large amount of water in the after section when EVANS rolled deeply to starboard at collision. This contributed to a marked free-surface effect and a dangerously marginal stability in the after section.

11. (U) The damage control and watertight integrity conditions in effect in EVANS were entirely reasonable under the circumstances.

Lights

12. (U) Ships in TU 472.1.0 had been following the motions of MELBOURNE's lighting measures as prescribed in the MOP and outlined in the Escort Handout.

13. (U) It appears that EVANS' navigation lights were not on during the early part of the maneuver, but this did not hinder CO MELBOURNE or the OOW from determining what her movements or aspects were during the period prior to collision.

83. (U) Removal of a battle lantern from its mounting in the after portion of EVANS, reported by one crew member, did not impede orientation and egress of personnel.

84. (U) The various commands concerned with design, procurement, distribution and installation of ships' emergency lighting systems should review specifications and installation plans to ensure that adequate provision is made for automatic emergency lighting in crew's compartments and egress routes, as well as battle stations. This review should take account of evidence that USN specifications may not be clear and that individual USN ships have at present wide latitude in determining the number, types and locations of emergency lights.

Life Rafts

85. (U) There was on board EVANS an adequate number of rafts in serviceable condition.

86. (U) Five rafts mounted on the port side of EVANS' bridge were destroyed or severely damaged in the collision so as not to be completely serviceable.

87. (U) Two rafts found on the main deck port side forward during salvage operations came from the EVANS' bridge stowage.

88. (U) Three or four U.S. rafts seen astern of MELBOURNE after the collision were those released by LTJG Lare prior to boarding MELBOURNE.

Life Jackets

89. (U) Unless large reserve supplies of life jackets are provided, which would cause major stowage problems on most warships, no known system of life jacket distribution suitable for extended use in peacetime could avoid a maldistribution of life jackets in a catastrophe such as this, in which EVANS was cut in half during the night without warning.

90. (U) The practice of stowing life jackets at or in the vicinity of General Quarters stations, with upper deck stowage of those for special use and reserve supply, is sound and should be continued.

Deaths and Injuries

91. (U) In the absence of further evidence and of a full autopsy report, it is not possible to say whether the death by drowning of SA Glines was contributed to by his being entangled in the cord of his headset, or by difficulty in keeping himself above water due to his injuries, or to a combination of these factors.

92. (U) The injuries to the following personnel were received in the line of duty and not as a result of their own misconduct:

MACAYAN, Florentino F., BTCS, 455 11 02
BAUGHMAN, Terry L., FN, B52 18 25
LOCKWOOD, Robert E., FN, B21 13 26
PEACOCK, Michael W., FA, B63 44 81
PETERS, Roy E., MM3, B50 37 61
RODRIGUES, Marcus (n), Jr., SA, B82 64 47

Miscellaneous (Post-Collision)

93. (U) Studies are required to redesign sound powered telephone headsets and cords to prevent the impediment underfoot caused by lengths of cord lying on deck unneeded at a given moment.

94. (U) The collision revealed no significant deficiencies in EVANS with respect to the ship's design or outfitting.

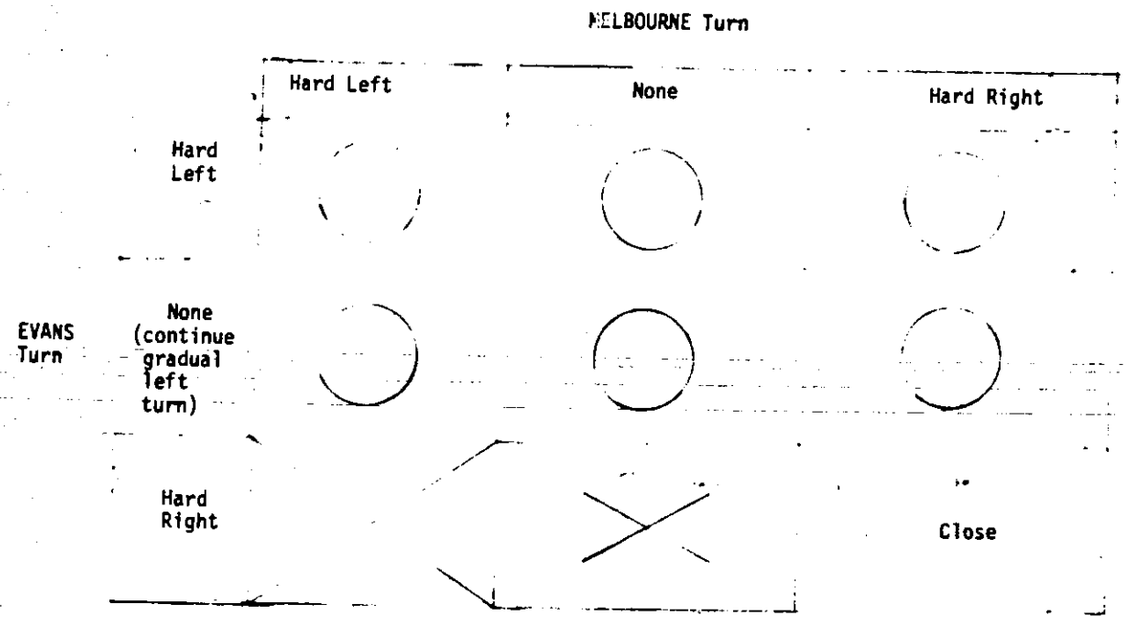
95. (U) The design, outfitting and functioning of the equipment of EVANS in no way contributed to the collision.

96. (U) Steam burns suffered by personnel in EVANS' forward engineroom would not have been prevented if they had been required to wear long-sleeved shirts, or special clothing of any practical kind known to the board.

Reconstruction

97. (U) A reconstruction based on the board's analysis is attached. The notes thereon are an integral part of the opinion.

98. (U) The following table displays the Board's best estimates of hypothetical alternative final turns by each ship based on reconstruction.



Note: 1. ρ - miss; x - hit; close - 100 yards or less.

2. Actions referred to are alternatives to be considered in lieu of and at the respective times of EVANS' "Right Full Rudder" and MELBOURNE's "Port 30 - Port 35"

3. Engine orders are a separate subject.

Responsibility for Collision

99. (U) Inasmuch as EVANS had the duty to remain clear of MELBOURNE in taking station in column astern of her, and she did not do so, primary responsibility for the collision rests upon EVANS.

100. (U) As the Conning Officer of EVANS from the time of execution of the "form column" signal until the order "right full rudder," LTJG Hopson was responsible for the orders which placed EVANS on a collision course with MELBOURNE. His subsequent action in ordering a left turn was sufficient to relieve but not to eliminate the hazard in which he had placed both ships. His failure in the following respects were failures to exercise due care which contributed to the collision:

a. His failure to ascertain correctly the base course of the formation before turning.

b. His failure to ascertain correctly EVANS' position relative to MELBOURNE before turning.

c. His failure to ascertain correctly MELBOURNE's course before turning.

d. His failure to request information from the Combat Information Center.

e. His failure to keep track of MELBOURNE's movements relative to EVANS from the time the maneuver began either visually or by radar or preferably by a combination of both methods, which would have revealed to him among other things, that he was on a collision course.

f. His failure to make a more decisive turn to the left which would have eliminated all hazard to both ships.

101. (U) As the Officer of the Deck, LTJG Ramsey was personally responsible for the conning actions taken by LTJG Hopson, to whom he had delegated conning authority and is equally responsible for conning EVANS into a collision course with MELBOURNE and the subsequent left turn.

102. (U) By the order, "Right full rudder," LTJG Ramsey assumed the sole responsibility for the conning of EVANS.

103. (U) As Officer of the Deck, LTJG Ramsey was the officer on watch in charge of the ship, and his primary responsibility was the safe navigation of that ship. Therefore, the basic responsibility for the collision flows from the manner in which LTJG Ramsey discharged his duties as Officer of the Deck aboard EVANS during the midwatch on the morning of 3 June 1969.

His failures either to take or direct action in the following respects were failures to exercise due care which contributed to the collision:

a. His failure to ensure that the conning officer knew the base course of the formation before turning.

b. His failure to ascertain correctly EVANS' position relative to MELBOURNE before turning.

c. His failure to ensure that the conning officer knew MELBOURNE's course before turning.

d. His failure to request information from the Combat Information Center.

e. His failure to keep track of MELBOURNE's movements relative to EVANS from the time the maneuver began either visually or by radar or preferably by a combination of both methods, which would have revealed to him among other things, that he was on a collision course.

f. His failure to make a more decisive turn to the left which would have eliminated all hazard to both ships.

g. His failure to call CO EVANS as he was required to do.

h. His failure to decode MELBOURNE's CORPEN signal correctly.

104. (U) As CO EVANS, COR McLENORE had the responsibility to insure that adequate provision was made for the safe navigation of his ship under all foreseeable conditions. This included responsibility to insure:

a. That a qualified and trained watch was posted.

b. That adequate instructions, including standing and current night orders, were provided to meet all foreseeable contingencies.

c. That adequate instructions, including standing and current night orders, were provided as to calling him during the night to advise, among other things, of signals for EVANS to change station within the formation.

d. That adequate measures were taken to insure that his orders and instructions in these respects were carried out.

105. (U) CO EVANS adequately discharged these responsibilities.

106. (U) Although the Board finds no acts or omissions of CO EVANS which contributed to the collision, it recognizes the inherent accountability of a Commanding Officer for his ship, and his absolute responsibility for the actions of his ship.

107. (U) Captain Stevenson must bear a share of responsibility for the collision since as Task Unit Commander, he was responsible for the safe operation of all ships in the Task Unit. He failed to exercise due care in that he did not positively direct the movements of EVANS at a time not later than when EVANS was determined by him to have come into a collision course. It is considered that the informatory signal sent at that time, that EVANS was on a collision course, was in the circumstances not positive enough.

108. (U) Although it is doubtful that MELBOURNE's speed would have been appreciably reduced before collision, Captain Stevenson, as Commanding Officer MELBOURNE should have backed his engines at the time he put his rudder over. Such an action, though not avoiding collision, might have lessened the effects thereof.

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