

ATTACHMENT E.4

Appendix 1. Continued.

Date	Species struck	Fate of whale	Vessel type, name/size	Speed	Location	Description of event	Source
9/9/93	Fin whale	Killed	Bulbous bow ferry; <i>Ile de Beattie</i> ; 159 m	~20 kn	Mediterranean; Toulon harbor, France	At 0200, the crew felt a shock followed by strong vibrations and a 4-km/h decrease in vessel speed. The cause of shock and strong vibrations was unknown until the ferry entered port three hours later and the port pilot advised the captain a whale was caught on the bow of the vessel.	A. Collet ^k
10/7/93	Humpback whale	Severe injury	Private sport fishing vessel; name unknown 10 m	>10 kn	2 km off Atlantic City, New Jersey, USA	The animal was hit at 1030 as the vessel was accelerating but not yet on plane. About 15 min later the animal was observed "wobbling" as it attempted to dive and blood was seen in the water. The animal also was observed on its side and moving slowly from a Coast Guard helicopter. Rough weather prevented a determination of the extent of the injury. The vessel's propeller, propeller shaft, and rudder were damaged.	MME15658, Cetacean Distributional Database, Smithsonian Institution
8/14/94	Fin whale	Minor injury	Whale-watching vessel; name/size unknown	Unknown	Tadoussac, St. Lawrence Estuary, Canada	The vessel called to report colliding with a fin whale while whale watching. The impact was hard enough to make the hull vibrate. A wound was subsequently seen on the whale.	N. Menard
10/31/94	Unknown	Severe injury	High-speed jetfoil ferry; <i>Saisei</i> ; 31 m	Unknown	22 km W of Niigata, Japan, Sea of Japan	Following a collision with an object in the water, a 193-g sample of bone and muscle tissue was removed from the left waterjet suction pipe at the stern of the ferry and examined microscopically. Tissue examination strongly indicated it was from a large marine mammal.	Honmaet <i>al.</i> 1997
2/1/95	Unknown, right whale?	Unknown	Navy submarine; name/size unknown	Unknown	Off North Carolina, USA	After leaving port and while on the surface, a small black whale breached in front of the submarine, struck the bow, and slid down the starboard side of the vessel. The whale may have received injuries to its right side, mid-length. No other whales were observed in the area.	U.S. Navy 1995
6/1/95	Unknown, humpback whale?	Minor injury	Fishing vessel; <i>Lady Kath</i> ; ~27 m	9 kn	Summer Sound, Southeast Alaska, USA	The captain of the fishing vessel reported that, while moving at 17 km/h, the vessel struck what was believed to be a humpback whale. The report indicated the whale was struck almost head-on along the port bow. After striking the whale, it was observed swimming in circles before contact with the animal was lost. There was no damage to the vessel.	M. Sternfeld ¹¹

Appendix 1. Continued.

Date	Species struck	Fate of whale	Vessel type, name/size	Speed	Location	Description of event	Source
8/1/95	Fin whale	Killed	Bulbous bow passenger ship; <i>Royal Majesty</i> ; 173 m	Unknown	48 km SE of Cape Cod, Massachusetts, USA	Upon arriving in St. George, Bermuda, a 17-m fin whale was discovered on the ship's bow. Based on a major vibration of unknown cause felt about 30 miles southeast of Cape Cod, the captain concluded the whale was struck at that location and carried to Bermuda, a distance of at least 2,037 km. The whale had a broken spine and extensive bruises.	MME12124, Cetacean Distributional Database, Smithsonian Institution
9/26/95	Minke whale	Unknown	Whale-watching vessel; name unknown; 11 m	>30 kn	Bergeronnes, St. Lawrence Estuary, Canada	The vessel, a pneumatic rigid-hulled craft capable of 74 km/h, collided with a minke whale while traveling at speed. The operator could not see directly in front of the craft due to its high bow.	N. Menard ¹
10/9/95	Unknown, hump-back whale?	Unknown	Coast Guard cutter; <i>Reliance</i> ; 64 m	15 kn	>185 km E of Cape Cod, Massachusetts, USA	Whales were observed in the area and the watch on the starboard bridge wing was instructed to look for whales. He subsequently reported a whale directly off the bow. At about the same time, another seaman saw a whale surface 5–6 m off the starboard bow. Before a warning could be issued, a thud was heard and a shudder felt. The ship stopped to search the area but no injured animal was found. The ship sustained no damage.	National Marine Fisheries Service 1996
5/16/96	Unknown	Severe injury	Coast Guard cutter; <i>Jarvis</i> ; 115 m	15 kn	Southeast Coast of Kenai Peninsula, Alaska, USA	An unidentified large whale surfaced ~46 m ahead of the vessel at ~1630. An attempt was made to avoid the whale, but a shudder was felt throughout the ship indicating a collision. The ship circled back and found blood in the water, but no dead or injured whale. No ship damage was reported.	M. Sternfeld ¹
5/30/97	Unknown	Unknown	Whale-watching vessel; <i>Kenai Fjords</i> ; ~18 m	22 kn	Resurrection Bay, Prince William Sound, Alaska, USA	Early in the afternoon in clear, calm weather, the vessel was moving at speed towards a group of humpback whales seen in the distance. The captain on the bridge and passengers at the bow suddenly saw a large whale surface immediately ahead of the vessel. The captain immediately throttled down to avoid a collision, but the whale was hit hard. Hull damage was suspected and passengers were asked to don life vests. The port stabilizer was subsequently found to have been lost in the collision. No injured animal was seen after the strike or in searches of the area in the following days.	M. Sternfeld ¹

Appendix 1. Continued.

Date	Species struck	Fate of whale	Vessel type, name/size	Speed	Location	Description of event	Source
7/20/97	Humpback whale	Unknown	Coast Guard cutter; <i>Campbell</i> , 82 m	18 kn	40 miles east of Cape Cod, Massachusetts, USA; 42°09'06"N, 69°12'09"W	Between 1143 and 1225 up to seven humpback whales were seen along the ship's track. At one point two whales were seen 3.7 km ahead. The course was altered and the speed reduced from 33 km/h to 5 km/h to avoid the whales. After passing them 914 m to starboard, a speed of 33 km/h was resumed. At 1415 in clear weather, visibility 16 km, the watch reported a whale 15.3 m below the surface immediately ahead of the ship. Almost immediately, a shudder was felt and the whale was struck a glancing blow on the starboard side. Despite a several hour search immediately after the collision, the whale was not resighted and no evidence of an injured whale was found. The vessel sustained no damage.	D. Hirman ^m
9/27/97	Humpback whale	Minor injury	Whale-watching vessel; name/size unknown	Unknown	St. Lawrence Estuary, Canada	At 1400, while approaching a site where two other boats and three or four zodiacs were already watching a whale, the vessel, a pneumatic rigid-hulled vessel, struck a humpback whale. The whale surfaced just in front of the vessel before the operator could stop or avoid the animal. After the collision, the whale was much less active and seemed to be injured.	N. Menard ⁱ
10/12/97	Sperm whale	No apparent injury	Fishing vessel; <i>Aléutian Isle</i> ; size unknown	~6 kn	Southern Prince William Sound, Alaska, USA	While longline fishing for black cod, the vessel's bow struck the whale's tail. At the time, several whales were following the vessel feeding on black cod caught on lines. The captain reported that the whale seemed unaffected by the collision and resumed feeding on black cod after being hit. The vessel sustained no damage.	M. Sternfeld ^l
1997	Sperm whale (cow-calf pair)	Killed	Commercial ferry; name unknown; 100 m	25 kn	Canary Islands; 28°11'N, 15°32'W	A sperm whale cow-calf pair was observed resting on the surface as the ship approached the animals. The captain saw no movement by the animals to avoid the vessel. A loud sound was heard and the bodies of both animals were observed behind the vessel amidst blood. Subsequent necropsies determined that the animals went through the propellers.	M. André ^a

Appendix 1. Continued.

Date	Species struck	Fate of whale	Vessel type, name/size	Speed	Location	Description of event	Source
3/3/98	Blue Whale	Killed	Bulbous bow tanker; <i>Botany Bay</i> ; 148 m	Unknown	North Atlantic	A juvenile blue whale was found draped across the ship's bulbous bow by a port pilot on 3 March as the ship approached Narragansett Bay on route from northern Europe. Before then the crew was unaware a whale had been struck and caught on the bow. To remove the whale from the bow, reverse engine thrust was needed. The precise time and location of the event are unknown. Date of death and the animal's age were estimated by the necropsy team.	National Marine Fisheries Service 1998
8/5/98	Unknown	Unknown	High-speed ferry; <i>Asa</i> ; Size unknown	~30 kn	Mediterranean; Nice Harbor, France	At about 2230 offshore Ajaccio (west of Corsica) the vessel hit an unidentified whale. A T-foil on the vessel was broken and the ferry arrived in Nice harbor two hours late as a result of the collision.	A. Collet ^d
August 1998	Humpback whale	Severe injury	Whale-watching vessel (high-speed catamaran); <i>Millennium</i> ; 36 m	18 kn	Stellwagen Bank, Massachusetts, USA	At ~1300 in good weather, the vessel was leaving two humpback whales under observation. About 450–900 m away from the two whales, a third whale surfaced immediately in front of the vessel. The captain turned to starboard to avoid the whale, but it went between the two hulls and was struck by the port hull about two-thirds of the way down the hull. The whale did not resurface after being hit, but a humpback whale with a deep bleeding wound about one foot wide across the back was seen in the same area about one hour later.	M. Weinrich ^e
9/12/98	Minke whale	Killed	Whale-watching vessel; <i>Whale Watcher</i> ; 24 m	25 kn	Stellwagen Bank, Massachusetts, USA	While returning from an afternoon whale watching trip, a 6-m minke whale surfaced about 14 m in front of the vessel's bow and dove quickly. The vessel lurched and the whale came up immediately behind the vessel with a deep bleeding gash believed to be mortal. At least one propeller was damaged.	M. Weinrich ^e
9/24/98	Humpback whale	No apparent injuries	Charter whale-watching vessel; name unknown; 7 m	15–18 kn	North Pass, Southeast Alaska, USA	The vessel reportedly ran up on the dorsal surface of the animal behind the blowhole, tipped the boat, and dove. Other whales in the area came and circled the struck whale and all swam off together. Other charter boats in the area observed no apparent change in whales behavior or any injuries. Vessel sustained a cracked hull.	Cetacean Distribution Database, Smithsonian Institution

Appendix 1. Continued.

Date	Species struck	Fate of whale	Vessel type, name/size	Speed	Location	Description of event	Source
7/28/99	Humpback whale	Killed	Bulbous bow passenger ship; <i>Westerdam</i> ; 730 m	19 kn	Stephens Passage, Southeast Alaska, USA	At ~0900 while traveling the mid-channel route through the passage, there was a slight vibration. It was felt by the chief engineer, but not the crew on the bridge. Shortly thereafter, a passenger on the bow reported a dead whale, estimated at 11–12 m long, draped over the ship's bulbous bow at the water line. It remained there until the ship slowed and the whale slipped off and sank down. The vessel sustained no damage.	J. Straley ^o
1/11/00	Bryde's whale	Killed	Bulbous bow passenger ship; <i>Nieuw Amsterdam</i> ; 214 m	22 kn	Southwest of Bonaire, Caribbean Sea	Upon arriving at Bonaire, the harbor master noticed a whale on the ship's bulbous bow. Until then, the crew was unaware a whale had been hit. From an unexplained decrease in speed to 35 km/h noted in the vessel log, it was determined that the whale was struck in darkness at 0430 about 100 km southwest of Bonaire. The crew did not feel the impact and there was no damage to the ship.	K. De Meyer ^p
2/1/00	Humpback whale	Severe injury	Passenger ship; <i>Akademik Sergey Vavilov</i> ; 118 m	14.3 kn	Off the Antarctic Peninsula, Southern Ocean	At about 1930 in good visibility with a 37-km/h wind and 4-m seas, two whales were seen surfacing about 3 km and again about 1.6 km ahead of the ship. Officers on the flying bridge then saw two whales surface about 14 m off the port bow, alter course, and swim directly in front of the ship. One whale, with its mouth wide open, came up directly before the bow and was hit. There was a loud thud and a shudder. Both whales resurfaced about 183 m off the stern, one with blood behind it. Both whales were seen breathing at the surface for 5–10 min as the ship proceeded on course. The ship sustained no damage.	J. Wikander ^{r1}

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Date	Species struck	Fate of whale	Vessel type, name/size	Speed	Location	Description of event	Source
			a William C. Cummings, unpublished data held by the Marine Mammal Commission, 4340 East-West Highway, Rm. 905, Bethesda, Maryland, 20814, U.S.A., 28 April 1999.				
			b Personal communication, Captain Joseph. S. Murphy, II, Massachusetts Maritime Academy, 101 Academy Drive, Buzzards Bay, Massachusetts 02532 U.S.A., 6 July 1999.				
			c Personal communication, Mason T. Weinrich, Cetacean Research Unit, P.O. Box 159, Gloucester, Massachusetts 01930 U.S.A., 1 August 1998.				
			d Personal communication, T. J. Tucker, unpublished data, Head, Information Management Systems Department, Naval Safety Center, Department of the Navy, 275 A Street, Norfolk, Virginia 23511-4399 U.S.A., 24 November 1999.				
			e Personal communication, Kevin R. Sullivan, unpublished data, Office of Enforcement, National Marine Fisheries Service, 53 North 6th Street, Room 214, New Bedford, Massachusetts 02740 U.S.A., 15 June 1999.				
			f Personal communication, Sharon Young, Humane Society of the U.S., 22 Washburn Street, Bourne, Massachusetts 02523 U.S.A., 16 July 1999.				
			g Personal communication, David G. Ainley, H. T. Harvey & Associates Ecological Consultants, 906 Elizabeth Street, P.O. Box 1180, Alviso, California 95002 U.S.A., 16 July 1998.				
			h Personal communication, Hans Wapstra, Australian Parks and Wildlife Service, Tasmania, Australia, 6 August 1998.				
			i Personal communication, Nadia Menard, unpublished data, Saguenay-St. Lawrence Marine Park, Quebec, Canada, 19 November 1998.				
			j Personal communication, Robert K. Bonde, Necropsy Examination Report RKB-1424, Sirenia Project, U.S. Geological Survey, 412 NE 16th Street, Gainseville, Florida 32601 U.S.A.				
			k Personal communication, Anne S. Collet, Center for Marine Mammal Research, Museum of Oceanography, La Rochelle 17000, France, 30 April 1999.				
			l Personal communication, Mary Sternfeld, unpublished Investigation Report Nos. 95010, 96006, 97025, and 97056, Office of Enforcement, National Marine Fisheries Service, Juneau Alaska 00802 U.S.A., 30 July 1998.				
			m Personal communication, LTJG Diane Hirman, unpublished Incident Report, August 18, 1997 Fisheries Law Enforcement, U.S. Coast Guard, 2100 Second Street, S.W., Washington, DC 20593 U.S.A., 30 March 1999.				
			n Personal communication, Michel André, c/o Suarez Calvan 24, Santa Maria de Guia, Gran Canaria, Canary Islands 35450, Spain, 8 July and 18 August 1999.				
			o Personal communication, Janice M. Straley, University of Alaska, Southeast, 1332 Seward Avenue, Sitka, Alaska 99835 U.S.A., 29 July 2000.				
			p Personal communication, Kalli De Meyer, Manager, Bonaire Marine Park, Netherlands Antilles, 20 January 2000.				
			q Personal communication, Jonas Wikander, Expedition Leader, Quark Expeditions, 980 Post Rd, Darien, CT 06820 U.S.A., 14 February 2000.				