

From: [REDACTED] [USCG MSU PORTLAND \(USA\)](#)
To: [REDACTED] [USCG MSU PORTLAND \(USA\)](#)
Cc: [REDACTED] [USCG \(USA\)](#); [REDACTED] [USCG MSU PORTLAND \(USA\)](#); [REDACTED] [USCG D13 \(USA\)](#)
Subject: MV MAUNALEI TIME 04AUG2022-29AUG2022
Date: Monday, August 29, 2022 10:05:47 PM

Good Day [REDACTED]

Below is the narrative for the history of the MV MAUNALEI with technical specifications and shipyard details provided generously by [REDACTED]. I have CC'd inspections command for their awareness.

04AUG2022: at approximately 2155, the MAUNALEI (O.N. 1181627) was enroute to Alaska when its Controllable Pitch Propeller (CPP) system suffered a leak. The vessel's engineering watch stander received a CPP alarm notifying him of a leak in the system when the vessel was just west of Vancouver Island, Canada. He notified the pilot house of the problem and they continued to monitor the system. They noticed the CPP system was losing about one liter an hour at full speed and when they brought the throttle back to three quarters ahead the flow lessened to .45 liters an hour.

05AUG2022, USCG Sector Anchorage reported that the MV MAUNALEI, a 600' container ship located outside of Dixon Entrance and travelling north to Anchorage while leaking Controllable Pitch Propeller (CPP) SHC Lubricant oil. NOAA Scientific Support Coordinator Catherine Berg prepared an Incident Information brief on the impact of the oil being discharged into the waterway.

According to SDS, this hydraulic fluid is made almost of triglycerides, which are the primary components of biologically-derived oil and fats, such as vegetable fats. Generally has low toxicity to aquatic organisms by ingestion but can cause physical fouling if it comes into contact with animals with fur or feather.

07AUG2022: Vessel arrived at Port of Anchorage, Alaska to offload cargo and determine extent of CCP Hydraulic Oil leak.

08AUG2022: Vessel completed cargo operation and determined necessary options for repair.

09AUG2022: Determination of damage was vessel was going to be required to dry-dock to inspect propeller for suspected damage.

10AUG2022: Sector Columbia River is notified that the M/V MAUNALEI is requesting permission to transit through AOR to Vigor Shipyard in Portland for Repair. Sector Columbia River and MSU Portland Inspections and IMD coordinate to minimize oil leakage while vessel transits to drydock for repair.

10AUG2022 @ 1611T: Sector Columbia River issued COTP 2022-080 to M/V MANALEI due to leaking oil from controllable pitch propeller.

11AUG22: At 0919T, SCRcc received a call from MATSON Navigation Company Inc. reporting M/V MAUNALEI is DIW approx. 410NM NW of the Columbia River entrance, the leak on the controllable

pitch propeller has worsened. The agent has planned arrangement for offshore tugs to take the M/V MAUNALEI to Vigor dry docks for repairs. At 1030T, a conference call was conducted with IO, WWM, IMD, DMI, sp and sd to discuss logistic concerns and complications of a dead vessel tow into Columbia River.

At 1807T, SCR sd authorized Amendment 1 to COTP order 2022-080. Amendment 1 details activation of Matson's Navigational Response Plan to include Salvage and Marine Fire Fighting requirements, Tug vessels of adequate size to maintain positive control of the M/V MAUNALEI in all expected weather and river conditions to the satisfaction of the Columbia River Bar and River Pilots until moored, and coordination of transit during times of minimal traffic within the river system. D13ccnotified. PENDS

As of 2100T, M/V MAUNALEI secured its propulsion to prevent leaking/flooding occurring on its screws. Vessels current position is approx. 245NM WNW of Columbia River entrance. Tug Vessel SAMANTHA S has been contracted to rendezvous with the M/V MAUNALEI estimated time of arrival OOA 1900T on 12 Aug 22. The tow to the CR sea buoy is estimated to be a 40hr transit, OOA 1300T on 14 Aug. The Tug BLACK HAWK will be standing by at Astoria anchorage in the event Tug SAMANTHA S encounters difficulties. SCRcc established a 6hr communications schedule with the M/V MAUNALEI. AMI, DMI, IO, sp, s (sd acting), D13cc notified. PENDS

12Aug2022: At 0800, Tug SAMATHA S departed to rendezvous with M/V MAUNALEI and take into tow with an approximate on scene time of 1800T. As of 1824T, M/V MAUNALEI posn is 46-27.4N 130-06.2W. They currently sit 246.8 NM from the CR buoy. Tug SAMANTHA is currently approx. 14 NM away making 11 kts with an ETA of 1900T. Next update with be 13Aug2022 at 0000T. PENDS.

13AUG2022: At 0013T, M/V MAUNALEI reported being in tow 223NM west of the Columbia River. Their Current Speed Under Tow is 7.5 kts. ETA CR Buoy 0800/14th. Wind W 8kts, Seas 1-3 ft.

14 AUG 2022: At 1200T, M/V MAUNALEI passed the Columbia River entrance buoy. Winds N 6-8kts, seas 2ft. Current speed under tow 7.2kts through the bar. CG47317, CG29145 and CG29213 conducting escort with the stand by Tug BLACK HAWK trailing the tow.

15 AUG 22: At 0347T, M/V MAUNALEI safely moored Vigor Shipyards Portland, OR.

16AUG22: Vessel remained moored pier-side in the lagoon, with its port side adjacent to the pier.

17AUG22: Vessel went up on the blocks in Dry Dock No. 6 at Vigor Shipyard. MV MANUALI was attended by Coast Guard Marine Inspectors, Propeller Manufacturer and MATSON Port Engineers. After the vessel was dry-docked, the propeller blades were pressure washed and inspected. It was immediately obvious that the No. 4 Controllable Pitch Propeller (CPP) blade was fractured at the base/foot. Water from the CPP head tank was visibly draining from the No. 4 blade in the vicinity of blade bolt holes No. 6 and No. 7. (Please see pictures from the PPT that was submitted.) All remaining blades were subjected to dye-penetrant testing in the base/foot (Zone "A") area of the blades. A smaller fracture, approximately 4" long, was subsequently identified near the No. 7 blade hole on the No. 2 CPP blade. (Please see pictures from the PPT that was submitted.) Both the No. 4 and the No. 2 CPP blades were removed from the CPP hub.

18AUG22: The No. 2 CPP blade was moved to Bay 5 at Vigor Shipyard for closer evaluation and discussions of possibly attempting a temporary repair of the fractured blade. Weld repairs are normally not conducted in Zone "A" of propeller blades as per Class rules, however no additional/spare blades are available from the manufacturer (MAN-ES). The No. 4 CPP blade was replaced with a spare that was owned by Matson Shipping Company (owner/operator).

19AUG22: Sheffield Marine Propeller representatives (sub-contracted to Vigor) started the process of grinding out the fracture noted in the No. 2 CPP blade.

20 AUG22: Sheffield Marine Propeller representatives continued their excavation of the fracture on the No. 2 CPP blade via grinding and arc-gouging.

21AUG22: Sheffield Marine Propeller representatives completed their excavation of the fracture, and additional dye-penetrant testing indicated that the fracture had been completely removed. A "strong-back" was fabricated for the palm of the propeller to prevent warpage of the base during the upcoming weld repairs. No approved weld consumables were available locally, so they were shipped overnight from Wisconsin.

22AUG22: Sheffield Marine Propeller representatives commenced weld repairs of the fracture using an approved Weld Specification Procedure (WPS) approved by both MAN-ES and Class (DNV) completing over 250 weld passes to return material to original thickness.

23AUG22: Final weldment of the No. 2 CPP blade was completed by Sheffield Marine Propeller representatives.

24AUG22: After the final post-weld heat treatment was completed, the No. 2 CPP blade was transferred via a flat-bed truck to Western Machine Works for milling.

25AUG22: Milling of the No. 6 and No. 7 blade bolts holes was commenced at Western Machine Works.

26AUG22: Final milling of the bolt holes was completed. Some minor warpage was discovered on the palm of the blade, so 5mm was removed from the palm of the blade to bring it within manufacturer's specifications.

27AUG22: Final NDT was completed on the weld repairs at Western Machine Works. The No. 2 CPP blade was loaded back on a flat-bed truck and transferred back to Vigor Shipyard. The Vigor nightshift crew rigged the No. 2 CPP blade for installation above the CPP hub.

28AUG22: The No. 2 CPP blade was installed and torqued to manufacturer's specifications on the CPP hub. The CPP and stern tube lubricating systems were re-filled with hydraulic oil. Verified the zero pitch positions of each blade. After a 4-hour wait time, all seals were verified to be leak free. This inspection also included verifying both the aft and forward stern tube seals; all sat.

29AUG22: At 0630, verified that the stern tube's aft seal and CPP blade seals (5) were still leak free.

At 0700, Vigor commenced flooding the No. 6 Dry Dock. At approximately 0900, the vessel was refloated and moved to Berth 312. A second blade pitch test was conducted at the pier; all sat. Verified that no change in fluid levels had occurred in both the CPP and stern tube head tanks. Vessel was placed under an operational control with limitations to pitch, engine rpm and speed to reduce pressure on face of blades till manufacturer could produce a re-engineered design and had casted for the propulsion system. At approximately 1300, the Domestic Branch Chief briefed the completed repairs up the chain-of-command; associated COTP order was lifted by [REDACTED].

Very Respectfully,

[REDACTED]

MSU Portland

Marine Inspections

Education Service Officer

Alt. Prevention Training Manager

[REDACTED]

[REDACTED]