UNITED STATES COAST GUARD

Address Reply to: COMMANDANT U. S. Coast Guard Headquarters Washington 25. D. C.

MVI 19 February, 1951 File: (RUSSELL R. JONES C-7 Bt)

From: Chief, Merchant Vessel Inspection Division

To: Commandant

Via: Chief, Office of Merchant Marine Safety

Subj: Marine Board of Investigation into fire on SS RUSSELL R. JONES at sea on 18 August, 1950.

- 1. Pursuant to the provisions of Title 46 C.F.R. Part 136, the record of the Marine Board convened to investigate subject casualty, together with its Findings of Fact, Opinions and Recommendations, has been reviewed and is forwarded herewith.
- The SS RUSSELL R. JONES, a Liberty type vessel, on 18 August, 1950, was enroute from Norfolk, Va. to Wilmington, Calif., with general cargo on board for West Coast ports. The No. 2 'tween deck, among other cargo, contained 200 drums of HTH and 18 tons of 5 lb. cans of HTH, outside of which were 21 tons of steel girders. The HTH, though variously termed, is classed as calcium hypochlorite. After encountering hurricane weather, accompanied by heavy rolling for approximately 20 hours, the above cargo shifted and became ignited which resulted in a serious fire in Nos. 1 and 2 holds. The fire was brought under control by the valiant efforts of the crew and was finally extinguished by the Jacksonville, Florida, fire department when the vessel anchored in St. Johns River. The cargo in No. 1 and 2 holds was destroyed but no injuries or loss of life resulted from this casualty nor was the vessel seriously damaged.
- 3. The Board made the following Findings of Fact:
 - "1. The SS RUSSELL R. JONES, official number 247197, sustained a fire in Nos. 1 and 2 holds, while enroute from Norfolk, Var, to Lilmington, California, on 18 August, 1950.
 - 2. The SS RUSSELL R. JONES is a U. S. cargo vessel, type EC-2, 7247 gross tons, built in 1944 of steel hull, steam propelled, owned by Pope & Talbot Inc., 520 California Street, San Francisco, Calif. The master of the vessel at the time of the casualty was
 - 3. The weather when the fire was first discovered was: Wind south, force 12, high seas, rain squalls, visibility zero. The vessel had been rolling heavily for approximately 19 to 20 hours before the fire was discovered.
 - 4. The vossel after departing Philadelphia, which was the origin of the voyage stopped at Chester, Pa., Baltimore, Md., and Norfolk, Va. At all ports cargo was loaded in the No. 2 hold. At Ealtimore,

75 cases of HTH 15 (2400 lbs.), 50 cases of HTH 70% (2950 lbs.), 20 cases of HTH 15 (640 lbs.) and 250 drums of HTH (ICC 37D, yellow label, 28000 lbs.) were loaded consigned to various ports on the west coast. This shipment was stowed in two holds - one part in No. 2 hold tween-decks, starboard wing abreast of the hatch and the other in No. 1 hold. That part of the shipment stowed in No. 2 hold was secured with & Talbot Inc. The vessel departed Paltimore 13 August, 1950 at 1600. It departed Norfolk 14 August, 1950 at 2212, bound for Wilmington, Calif., with all hatches properly battened down and all cargo properly shored for a normal voyage. On approximately 15 August, 1950, the master received a notice of a hurricane centered at approximately 25 degrees north latitude and 69.5 degrees west longitude. The vessel since departing Cape Hatteras had been on a course of 177 degrees true until 8:13 a.m., 17 August, 1950, at which time the course was changed to 085 degrees true. At 10:30 a.m., 17 August, 1950, a broadcast advised the hurricane was centered approximately 400 miles east of Miami, Florida, near latitude 25.6 degrees north, longitude 73 degrees west and was moving westward at approximately 10 miles per hour. At this time, the SS RUSSELL R. JONES was located at approximately latitude 27.34 degrees north and longitude 73.44 degrees west, which placed the vessel between 160 to 200 miles north of the center of the hurricane. Course was changed to due east in an effort to avoid the hurricane, which was moving westward. At 10,30 p.m., the Miami Reather Bureau Advisory stated the hurricane to be centered at approximately 27.1 degrees north latitude and 73.9 degrees west longitude. This location was near the SS RUSSELL R. JONES, which had made little headway since turning east. Weather at this time consisted of 40 foot seas, force 12 wind, and the vessel was rolling heavily. At approximately 3:30 a.m., 18 August, 1950, the master was on the bridge with the second mate and the weather at this time was so bad, the forward part of the vessel could not be seen from the bridge. The master observed a sheet of flame burst from the No. 2 hatch and immediately sent the second mate below to rouse the crew and sounded the general alarm. All hands responded and all efforts to fight the fire were made. Steam smothering was turned on and all fire hoses were connected. At approximately 3:40 a.m., an SOS was broadcast. The smothering system was ineffective except in the lower hold, due to the fact the hatches were either blown or burned off due to the intense heat. The cargo in No. 1 hold caught fire from the intense heat generated in No. 2 hold and was discovered at approximately 5:00 a.m., at which time the fire hoses were divided between Wos. 1 and 2 holds. The smothering system was effective in No. 3 hold where whiskey was stowed. The entire crew fought the fire until approximately 10:00 p.m., when it was brought under control. At 4:00 p.m., the vessel was sighted by a Coast Guard plane. At 10:00 p.m., a Norwegian vessel TULANE came alongside and stood by. At 10:30 p.m., a U. S. Mavy vessel came alongside and stood by. On 19 August, 1950, at approximately 6:30 a.m., the vessel was headed towards Jacksonville, Florida. At 3:30 p.m., the U. S. Coast Guard Cutter AMDROSCOGGIN came alongside. On the morning of 20 August, 1950, the U. S. Navy vessel and the Norwegian vessel were released. The ANDROSCOGGIN stood by until the vessel reached the Sto Johns River Light-

- ship. During the trip the fire was burning in both hatches and continued to burn until the vessel anchored at Jacksonville, and the Jacksonville Fire Department took over; which department extinguished the fire.
- 5. Cargo stowed in the No. 2 hold tween-decks contained 200 drums of HTH bearing a yellow label. In the vicinity of said drums were also stowed 18 tons, 5 pound cans of HTH bleach, which bore a label "Calcium Hypo Chlorite Sanitizing Agent" and the active ingredients were Calcium Hypo Chlorite (available chlorine) but not less than 70%, the other ingredients not more than 30%. Outside of these drums and cans were 21 tons of steel girders.
- 6. The No. 2 hatch was covered with two old and one good hatch covers, standard tuck at the corners and battened down with customary iron straps, which under normal conditions would have been proper.
- 7. Megger readings were taken of the electrical lines in the No. 2 hold and found to be non-defective after the vessel arrived in Jacksonville.
- 8. Inspection of the hold after the fire was extinguished indicated the steel beams stowed outboard of the drums had shifted inboard. It was also noted that inboard of the drums were stowed reels of wire.
- 9. According to table 146.22-100, page N=175 of the Explosive or other Dangerous Articles Aboard Vessels, this HTH is required to be marked with a yellow label and be contained in steel barrels or drums meeting ICC specifications; the only exception being that under 146.22-8 this material, when shipped in inside containers of not over 1 pound net weight, if packaged in outside containers, not exceeding 25 pounds net weight, is exempt from specific package markings other than the name of the contents and label requirements. The outside containers of the HTH, which came aboard the vessel, were destroyed by the fire. Most of the drums and all of the containers were destroyed in the fire; however, two drums which were damaged and spilled open were examined and no markings indicating ICC approval or nature of the contents could be found, although as stated above, witnesses allege the drums bore yellow labels.
- 10. Experiments made by the Fire Department in Jacksonville, disclosed the chemical marked HTH when mixed with water gives off a yellowish vapor. Page N=17b of Coast Guard publication No. 187, states 'Calcium Hypo Chlorite may be decomposed by moisture vapors which are ignitible and must bear a yellow label.'
- ll. There were no injuries as a result of this casualty.
- 12. Cargo in the Mos. 1 and 2 holds were destroyed. No estimate of damage available.
- 13. The vessel was deemed not to be seriously damaged, which opinion is subject to change upon the vessel's inspection in drydock."

- 4. The Board made the following Opinion:
 - It is the opinion of the board, as evidenced by change in location, the cargo shifted due to the excessive rolling of the vessel in heavy seas prior to the fire. It is believed the vessel was near the center of the hurricane. The shifting of the cargo caused some of the drums or cans of disinfectant to be punctured. Water or moisture entered the hold through the ventilators, or seeped, or drained through the hatch cover. The moisture contacted the spilled chemicals causing decomposition thereof, which created vapors. Due to some spark from metal striking metal in the further shifting of the cargo, or possibly spontaneous heat of the chemicals during its decomposition, the fire started. This fire could not be discovered due to the wind blowing the smoke away from the vessel, until the hatch had burned through, at which time flames burst through the opening. All hands performed their duties properly. There appears to be no basis for preferring action against any of the ship's personnel. It is understood that shipment of HTH in 5 pound inside containers was not in conflict with ICC regulations."
- 5. The Board made the following Recommendation:
 - "1. In view of the above opinion, it is recommended no further action be taken and that the case be closed."

REMARK \$

- 1. The regulations of the Interstate Commerce Commission, by specific exemption, exclude shipments of calcium hypochlorite in cans of not over 5 pounds whether or not carried by common carrier. In the absence of positive Interstate Commerce Commission's regulations, the regulations of the Coast Guard are applicable. Under Coast Guard regulations, 46 USC 146.22-100, calcium hypochlorite may be carried on cargo vessels when packed in specified steel barrels or drums and marked with a yellow label. The only exemption from these requirements is contained in 46 CFR, 146.22-8, which provides that calcium hypochlorite may be shipped when packed in inside containers of not over 1 pound net weight each and packed in outside containers not exceeding 25 pounds net weight each, which must be properly marked with the name of the contents.
- 2. The shipping papers issued by both the shipper and the carrier did not correctly describe the so-called HTH bleach in the 5 pound cans in accordance with its true name, as shown in the commodity list, as was required by 46 CFR 146.05-12.
- 3. Poth the shipper and the carrier knowingly violated the above requirements of the regulations in shipping calcium hypochlorite in cans weighing 5 pounds contained in packages considerably exceeding 25 pounds net weight and failing to mark outside packages with yellow labels. Accordingly, the Mathieson Chemical Corporation and the Pope and Talbot, Incorporated, are to be assessed the civil penalty for such violations as provided in the Act of 9 October, 1940 (46 USC 170 Par. (14)).

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4. The action of the master, officers, and crew in this emergency was in keeping with the highest traditions of the sea. The master and officers, nevertheless, failed to use due diligence in ascertaining the nature of the cargo laden on board and whether or not such cargo was taken on board and stowed in conformance with applicable safety regulations. However, under the circumstances, no disciplinary action is indicated.

5. Subject to the foregoing remarks, it is recommended that the Findings of Fact, Opinion and Recommendation of the Marine Board of Investigation be approved.

/s/

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7 March 1951 (RUSSELL R. JONES C-7 Pd)

From: Chief, Office of Merchant Marine Safety

To: Commandant

Forwarded, recommending approval.

/s/
H. C. SIEPHEARD

APPROVED: March 8, 1951

/s/
WERLIN O'NEILJ.

Vice Admiral, U. S. Coast Guard Commandant