From: Chief, Merchant Vessel Inspection Division
To: Commandant
Via: Chief, Office of Merchant Marine Safety

Subj: Marine Board of Investigation; collision MV ATLANTIC SUN and MV A. C. DODGE on 21 December, 1960, on Liston Range in the Delaware River.

1. Pursuant to the provisions of Title 46 CFR Part 156, the record of the Marine Board convened to investigate subject casualty, together with its Findings of Fact, Conclusions, and Recommendations, has been reviewed and is forwarded herewith.

2. The tanker MV NORTHERN SUN of 8900 gross tons and the tanker MV A. C. DODGE of 1147 gross tons were downbound and the tanker MV ATLANTIC SUN was upbound in the Delaware River. All tankers were loaded. The weather was clear, wind NNW force 3, no sea and ebb tide. The NORTHERN SUN passed the starboard side of the A. C. DODGE. Shortly after such passing and upon meeting the ATLANTIC SUN all vessels were in close proximity to each other. The A. C. DODGE then took an uncontrollable sheer sharply to port which resulted in a collision between the A. C. DODGE and the ATLANTIC SUN. The collision occurred at 0017, 21 December, 1960, near the eastern edge of the main ship channel approximately 0.8 miles above buoy No. 4-L. There were no personnel injuries or loss of life nor did either tanker catch fire as a result of this casualty.

3. The Board made the following Findings of Fact:

"1. At 0017 EST on 21 December, 1960 while the MV A. C. DODGE (hereafter called the DODGE) was downbound on Liston Range, Delaware River, with the downbound MV NORTHERN SUN (hereafter called the NORTHERN) close on her starboard bow, the DODGE suddenly sheered left into collision with the upbound MV ATLANTIC SUN (hereafter called the ATLANTIC). There were no personnel injuries.

2. The DODGE attributes the sheer to the suction of the NORTHERN, claiming that the latter vessel had overtaken but failed to pass well clear of the DODGE. The NORTHERN denies responsibility, claiming that she had passed well ahead and clear but the DODGE subsequently increased speed and forged ahead.

3. All testimony is in general agreement that the distance between the DODGE and the NORTHERN did appreciably decrease shortly before the sheer, but each insists that their speed was constant."
4. The weather was clear, wind NNW, force 2, no sea, ebb tide. The visibility was good, all vessels had sighted each other at about midnight, and all the maneuvers subsequent to that time were with full knowledge of the proximity of the other vessels.

5. The vessels involved are

<table>
<thead>
<tr>
<th>Name</th>
<th>MV ATLANTIC SUN</th>
<th>MV A. C. DODGE</th>
<th>MV NORTHERN SUN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official No.</td>
<td>244086</td>
<td>241603</td>
<td>230490</td>
</tr>
<tr>
<td>Type</td>
<td>Tanker</td>
<td>Tanker</td>
<td>Tanker</td>
</tr>
<tr>
<td>Built</td>
<td>1943</td>
<td>1942</td>
<td>1913</td>
</tr>
<tr>
<td>Gross Tons</td>
<td>11,401</td>
<td>11,414</td>
<td>8,900</td>
</tr>
<tr>
<td>Length</td>
<td>524.6 ft.</td>
<td>245.7 ft.</td>
<td>480 ft.</td>
</tr>
<tr>
<td>Beam</td>
<td>70.2 ft.</td>
<td>37.1 ft.</td>
<td>66 ft.</td>
</tr>
<tr>
<td>Depth</td>
<td>39.7 ft.</td>
<td>14.5 ft.</td>
<td>36.3 ft.</td>
</tr>
<tr>
<td>Drafts</td>
<td>31.6 ft.</td>
<td>13' 11&quot; ftwd.</td>
<td>29.5 ft ftwd.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13' 11&quot; aft.</td>
<td>30.0 ft aft.</td>
</tr>
<tr>
<td>Engines</td>
<td>Diesel</td>
<td>Diesel</td>
<td>Diesel</td>
</tr>
<tr>
<td>H. P.</td>
<td>7500</td>
<td>805</td>
<td>2800</td>
</tr>
<tr>
<td>Owner</td>
<td>Sun Oil Co.</td>
<td>Diesel Tanker</td>
<td>A.C. Dodge Inc. (N.Y.)</td>
</tr>
</tbody>
</table>

6. The ATLANTIC, bound from Ingleside, Texas, to Marcus Hook, Pa., with a cargo of crude oil entered the Delaware Capes at 2047 and proceeded up river at full speed, piloted by her master, Jacob Pypelink, License No. 45181. Averaging 12.0 knots she reached Liston Range, passed buoy No. 42 and at 2358 and continued up the eastern (N. J.) half of the main ship channel, sighting two downbound vessels, the NORTHERN, in the western half of the channel with the DODGE on her port quarter. Whether the DODGE was mid channel or somewhat on her "wrong" side is disputed. After exchanging one blast passing signals with the NORTHERN and passing about 350 to 400 feet off, the ATLANTIC heard a danger signal blown by the DODGE which suddenly came left and despite right rudder and full astern by the ATLANTIC struck the DODGE on her port bow.

7. The DODGE had departed Eagle Point, N. J., at 2037 with a cargo of diesel oil, bound for Bayonne, N. J., being piloted by [illegible], License No. [illegible], master of record. Proceeding down the main channels, Delaware River, she was about turning from Baker on to Liston Range, speed approximately nine knots, when a one blast overtaking request signal from the NORTHERN was answered by the DODGE. The NORTHERN, passing to starboard, reached a position on the starboard bow of the DODGE. Whether she was ever well clear is in dispute. A reduction in the intervening distance was subsequently noticed by the DODGE which, at 0010, slowed
her engines about 40 rpm's intending that the NORTHERN should draw farther ahead, as the ATLANTIC was approaching. The steering of the DODGE was subsequently effected and despite drastic rudder and engine movements a sudden sheer to the left caused the stem of the DODGE to strike the port bow of the ATLANTIC at an angle approximating 90 degrees.

8. The NORTHERN had departed Marcus Hook, Pa. at 2100 bound for New York, piloted by her master, [name redacted]. License No. [redacted]. At full speed approximating 10.3 kts she drew abeam to starboard of the DODGE on the upper section of Liston Range and attained a position with the DODGE on her port quarter. She subsequently noticed that the DODGE appeared to have increased speed and, with the oncoming upbound ATLANTIC, a situation with all three ships abreast in the channel seemed to be developing. The DODGE was observed to go suddenly to her port and collide with the ATLANTIC. The NORTHERN, seeing that neither damaged vessel required assistance, continued on to her destination.

9. The collision occurred near the eastern edge of the main ship channel, Liston Range, approximately 0.8 miles above Buoy No. 4-L. Liston Range is 18 miles in length, the center line of which is indicated by powerful front and rear range lights located at the upper end. The true course when downbound with ranges astern is 138 degrees. On the upper 9 miles of this range, where the collision occurred, the channel is 300 feet wide. The Engineers Corps, U.S. Army, conducted a channel examination on 12, 15 and 18 December, 1950, and subsequently published the findings (drawing Drawer 69 - file #23962). This drawing indicates that this channel down to buoy No. 4-L has a depth varying from 43.8 feet to 39.0 feet.

10. There is an irreconcilable conflict of testimony as to whether or not the NORTHERN ever reached a position clear ahead of the DODGE.

11. With respect to the time and place of overtaking, the testimony of the witnesses aboard the DODGE is in such striking contrast with that of those aboard the NORTHERN that the acceptance of one version appears to necessitate the rejection of the other. With both sides fixing the time from the change of the watch at 2400, the DODGE insists she was then ahead of the NORTHERN. The master's mate and quartermaster on the NORTHERN are equally positive that the DODGE was then on their port quarter.

12. The over-the-ground speed of the ATLANTIC SUN (12.1 knots) is based upon time-distance computation. Overfalls to point of collision. The estimated over-the-ground speed of the NORTHERN SUN (10.3 kts) is based on her logged run between Pea Patch Island and Buoy 42. This estimated speed plots quite closely with testimony and also places the NORTHERN within 500 yards below the collision positions indicated by both the master of the ATLANTIC and the master of the NORTHERN.
13. Using the speed of the NORTHERN (10.3) as a basis for further calculation, an evaluation may be made of the conflicting testimony as to the time when the NORTHERN and DODGE were abeam. Mr. second mate of the DODGE puts the time and place as 0005 when abeam of 6-L (P. 222, Q. 24). At 0005 the NORTHERN's computed position was at least one mile above 6-L.

14. Mr. Dukes, acting master of the DODGE testified (P. 179, Q. 100) that the ships were abeam at 6-L and at that time their speed was reduced (P. 179, Q. 108). The DODGE's reduction of speed is logged at "1210" (Exh. 41A). Later (P. 184, Q. 163) this witness states speed was not reduced until 2 1/2 minutes after being abeam. The helmsman on the DODGE states (P. 251, Q. 18) that the went on watch about 2357 and the NORTHERN was "just behind" (P. 252, Q. 30) and "very close" (P. 253, Q. 39) on their starboard quarter (Exh. 36).

15. Contradicting this testimony as to time and place of passing, the master of the NORTHERN testifies the vessels were "abeam at 10-1" (P. 110, Q. 62). "When NORTHERN was at 8-L the DODGE was on (our) quarter a good ship's length away" (P. 109, Q. 50) and "the hulls were not overlapping" (P. 109, Q. 51). At 2400 the DODGE was "at least 600 feet astern" (P. 117, Q. 126). We passed (the DODGE) before 12 o'clock" (P. 132, Q. 261). The quartermaster of the NORTHERN went on watch at "about four minutes before midnight" (P. 89, Q. 10) and he then "noticed a ship about a ship's length off on the port quarter" (P. 90, Q. 15).

16. On this disputed point the ATLANTIC witnesses state: "At 2355 the small (vessel) was in back of the other one" (Lookout P. 140, Q. 14 to 20). The DODGE was behind the NORTHERN when the vessels were first sighted - over 15 minutes before collision (Master P. 8, Q. 59-60; P. 9, Q. 67; Exh. 8).

17. The DODGE was not manned as required by her Certificate of Inspection. There was a deficiency of one (1) Chief Mate, one (1) Assistant Engineer, one (1) A. B. and one (1) Ordinary Seaman.

18. James P. Dukes, who stated he was alternate master of the DODGE was not recorded as such on the vessel's document until 27 December 1950. This information was furnished by the Collector of Customs, New York, N. Y.

4. The Board expressed the following Conclusions:

"1. At some time prior to 0010 there was a reduction in the distance which separated the stern of the NORTHERN from the bow of the DODGE. The cause of this change is undetermined but, in the absence of any
evidence indicating an ability of the DODGE to increase speed beyond that of the NORTHERN, it must be assumed that this resulted from a deceleration by the NORTHERN. The channel examination published by navy engineers indicates that between buoys No. 7-L and 5-L outside of the westward main channel the water shoals to 27.9 feet. Although the master of the NORTHERN denies being outside the channel after being abeam of the DODGE he may have run sufficiently to the westward to permit the reduced depth to have a decelerating effect on his ship's speed with his drafts at 29.5 ft. forward, 30.0 ft. aft.

2. With the DODGE on his port quarter, insufficient water to starboard and no reserve speed, the master of the NORTHERN was then unable to prevent the dangerous situation from further developing. Any action to relieve it had to be taken by the DODGE. There was nothing to prevent a further reduction of speed by the DODGE after her master found the initial reduction to 250 rpm's insufficient to cause her to drop back astern of the NORTHERN.

3. The master of the DODGE appears to have been maintaining his required course and speed, whether or not the NORTHERN was ever past and well clear of the DODGE in an uneasy position. The DODGE's reduction of rpm's to 250 now appears to have been inadequate, but at the time, it was considered sufficient until the nearness of the NORTHERN and the attendant effect upon steering made more drastic evasive action necessary. Any delay in acting or failure to further reduce speed can only be attributed to an error in judgment by the DODGE and negligence, if any, is insufficient to warrant disciplinary action against the licenses of the officers on the DODGE.

4. The crew deficiencies on the DODGE did not contribute to the cause of this casualty. There is no evidence of culpable negligence on the part of anyone aboard the NORTHERN. There is no evidence of negligence reflecting upon those aboard the ATLANTIC. There is no evidence of misconduct or incompetence on the part of any person.

5. The Board made the following Recommendations:

1. That the owners of the DODGE be cited for the penalties provided for operation in violation of 46 USC 222 (crew deficiencies).

2. That James P. Dukas, Master of the DODGE be cited for the penalties provided by 46 USC 222 for failure to report in writing the crew deficiency within twelve hours of arrival.

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3. That the collector of customs, New York, be advised of the apparent violation of 46 USC 276 in the operation of the DODGE without the presence on board of a master or an alternate master entered of record on her enrollment and license.

4. That no further action be taken and the case closed."

**Remarks**

6. It is recommended that the Findings of Fact, Conclusions, and Recommendations of the Marine Board of Investigation be approved.

/s/ EDW. C. CLEAVE
EDW. C. CLEAVE

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From: Chief, Office of Merchant Marine Safety
To: Commandant

(Forwarded, recommending approval.

/s/ H. C. SHEPHERD
H. C. SHEPHERD

APPROVED: April 19, 1951

/s/ MERLIN O'NEILL
MERLIN O'NEILL
Vice admiral, U. S. Coast Guard
Commandant