



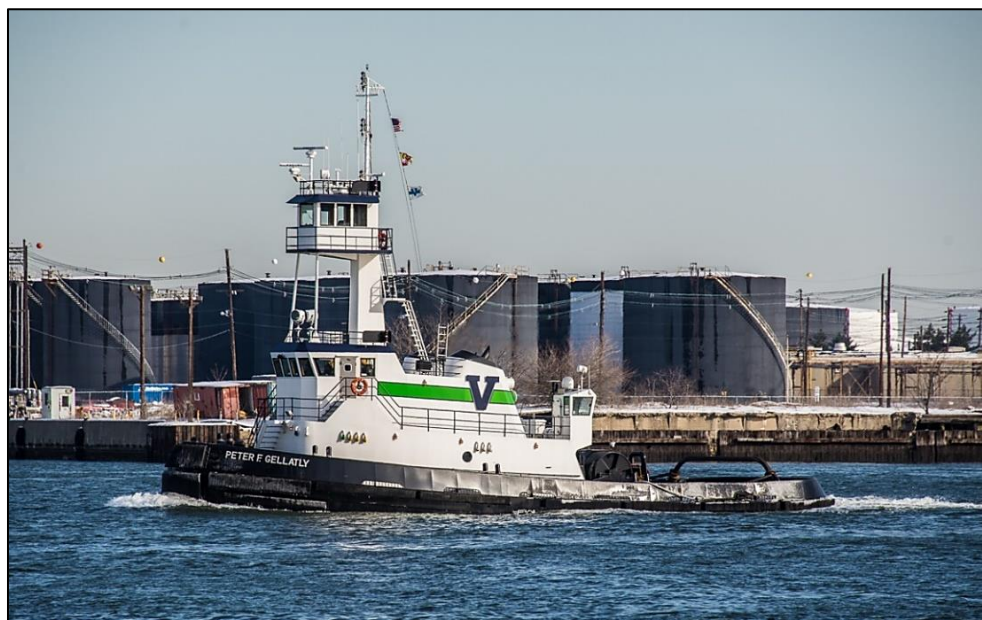
National Transportation Safety Board

Marine Accident Brief

Allision of *Peter F Gellatly* Tow with IMTT Bayonne Pier A

Accident no.	DCA15LM030
Vessel names	<i>Peter F Gellatly</i> , <i>Double Skin 501</i>
Accident type	Allision
Location	New York Harbor, Kill Van Kull waterway at IMTT Bayonne Pier A, Bayonne, New Jersey
Date	August 1, 2015
Time	2147 eastern daylight time (coordinated universal time – 4 hours)
Injuries	None
Property damage	\$2.7 million est.
Environmental damage	630 gallons of no. 6 fuel oil released into the waterway
Weather	Partly cloudy, visibility 10 miles, winds west at 8.1 mph, air temperature 80°F
Waterway information	Kill Van Kull separates the southern shore of the city of Bayonne, New Jersey, from Staten Island, New York, and connects the Upper Bay of New York Harbor with Newark Bay and Arthur Kill. Kill Van Kull is a major channel for container, petroleum, and bulk cargo in New York Harbor and has extensive through-traffic.

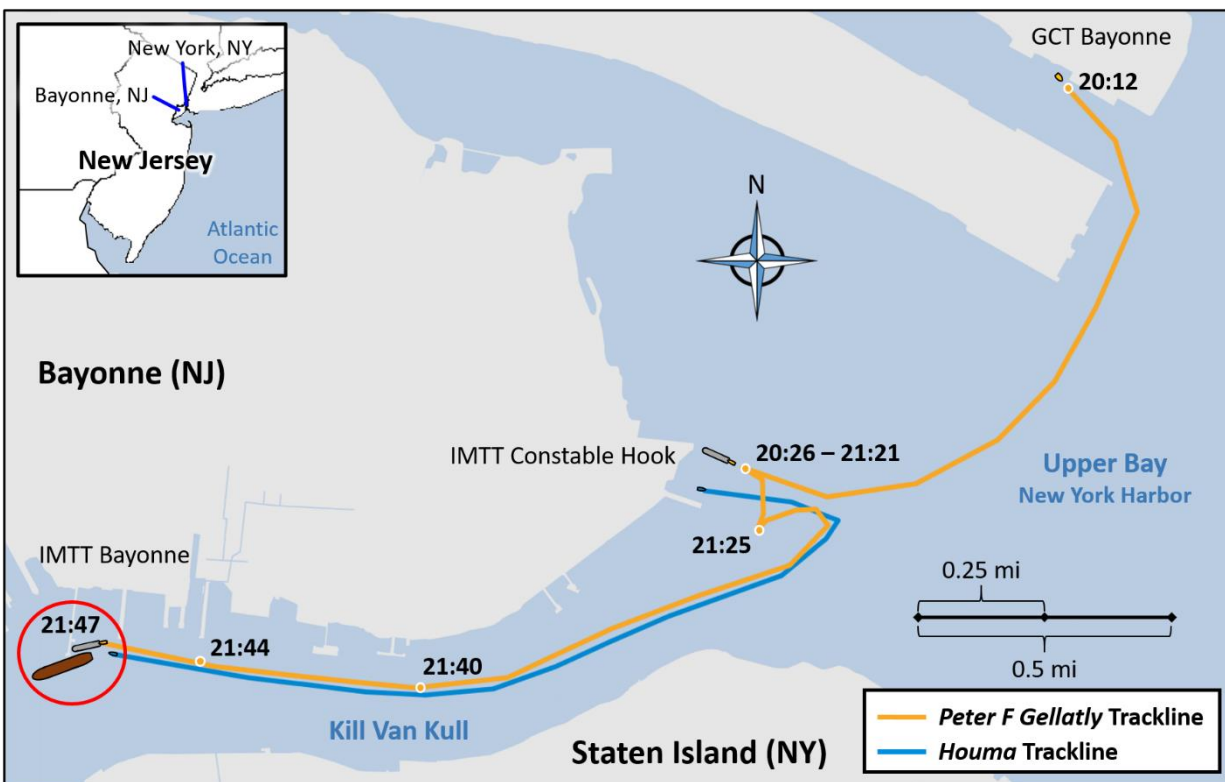
On August 1, 2015, at 2147 local time, the tank barge *Double Skin 501* being pushed by the uninspected towing vessel *Peter F Gellatly* allided with International Matex Tank Terminals (IMTT) Bayonne Pier A in Bayonne, New Jersey, as the captain attempted to dock the tow at a nearby pier. Damage to the barge, pier, and an adjacent ship, the *Isola Bianca*, totaled an estimated \$2.7 million. The allision also damaged pipelines on the pier, resulting in the discharge of 630 gallons of no. 6 fuel oil into the waterway.¹ There were no injuries.



Towing vessel *Peter F Gellatly*. (Photo by Mr. John Skelson)

¹ No. 6 fuel oil, also known as Bunker C fuel oil, is a dense, highly viscous oil used primarily as fuel aboard ships.

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Automatic identification system (AIS) tracks of *Peter F Gellatly* and assist tugboat *Houma* leading up to the accident. The accident site is marked by a red circle. (Background by Google Maps)

Accident Events

About 2012 on the evening of the accident, the *Peter F Gellatly* got under way from the Global Container Terminals (GCT) Bayonne pier en route to IMTT Constable Hook (New Jersey) to pick up the loaded tank barge *Double Skin 501*. According to crew statements, the towing vessel's starboard engine was "surging" during the transit, so the captain asked the engineer to investigate the problem. The engineer diagnosed the problem as low fuel pressure and requested to change out the engine's fuel and air filters while the vessel was stopped in Constable Hook. The captain agreed.



Double Skin 501 moored at IMTT Bayonne Pier 1 after the accident. (Photo by US Coast Guard)

The vessel arrived at Constable Hook about 2026. Over the next 55 minutes, the engine fuel and air filters were replaced and the *Peter F Gellatly* was made up to the *Double Skin 501*. The captain told investigators that, during this time, he called the operating company's port engineer to inform him of the engine problem. The captain was unable to reach the port engineer, so he left him a voice mail.

About 2121, the tow got under way bound for IMTT Bayonne, less than a mile and a half away. As the tow was backing away from the IMTT Constable Hook pier, the captain noted that the tugboat *Houma*,

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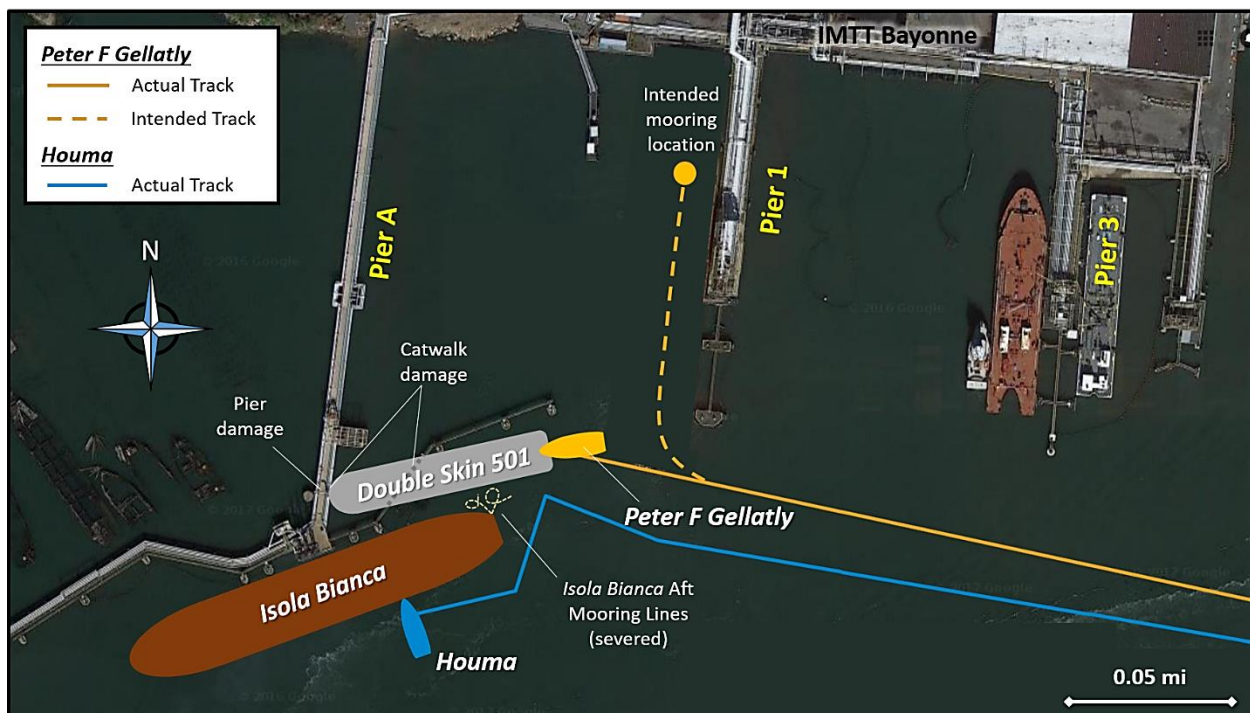
an assist tugboat owned by the same company, was just finishing a job at a nearby pier. The *Peter F Gellatly* captain asked the *Houma* captain if the tugboat could assist with the transit, to which the *Houma* captain agreed.

The *Peter F Gellatly* captain told investigators that, after backing out of the berth, the vessel's starboard engine would not engage in the forward position. At the direction of the captain, the mate informed the engineer, who proceeded to the engine room to investigate the starboard engine control unit. The engineer found the electronic propulsion solenoid switch indicator light oscillating between forward and astern. Normally, only one solenoid would light, depending on whether the engine's gearbox was engaged ahead or astern.

The engineer told investigators that he examined the solenoid valves but could not identify a problem. He also pushed both control knobs on the end of the solenoid valves with his hand to see if they were stuck.

As the engineer was on his way to report his findings to the captain, he heard and felt the starboard engine re-engage. He assumed that the problem had "worked itself out," so he did not go to the bridge to report to the captain as originally planned. Instead, he went to the galley to watch television. The captain noticed he had control of the starboard engine and assumed the engineer had fixed the problem.

The captain intended to moor the *Double Skin 501* at IMTT Bayonne Pier 1. Just beyond, or to the west, of Pier 1 was Pier A, where the tank vessel *Isola Bianca* was discharging no. 6 fuel oil. The tanker was moored roughly parallel to the channel at the end of Pier A, with its stern facing east.



At 2140, as the *Peter F Gellatly* approached the terminal, the captain attempted to slow the tow for its approach to Pier 1. He moved both engine throttles astern, but the starboard engine did not disengage from forward propulsion. The captain told investigators that he did not look at instruments in the wheelhouse, such as the shaft tachometers, that would have showed him both the revolutions per minute of the propeller and the ahead, astern, or neutral position of the propeller

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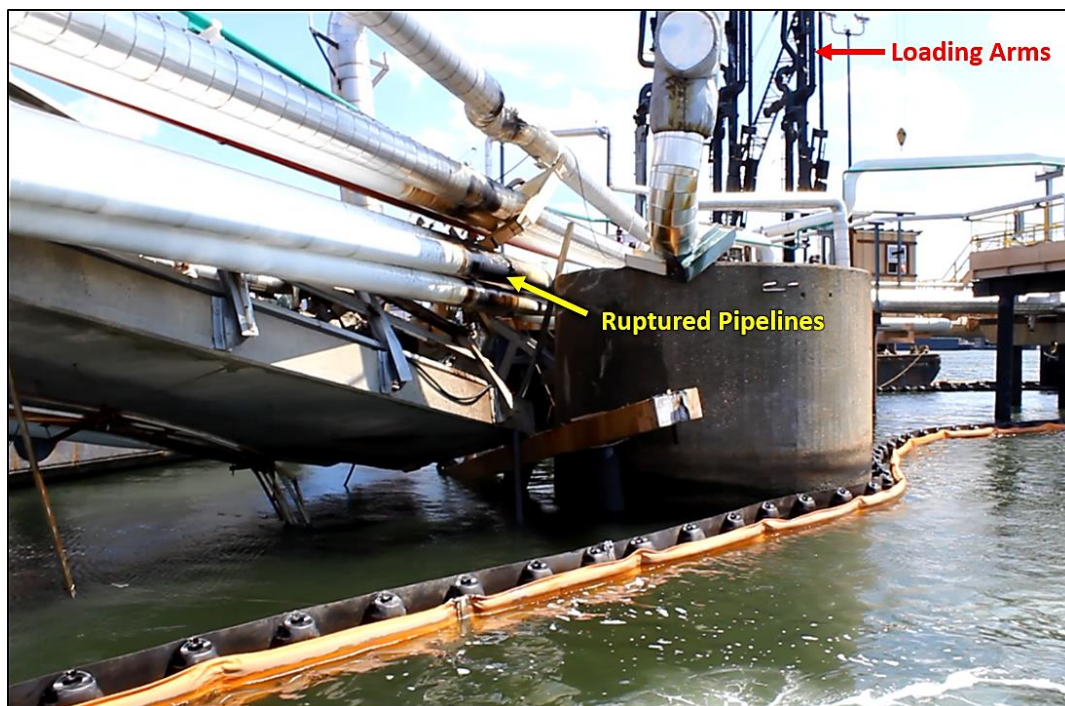
shafts. Thus, he did not understand why the tow did not slow as expected. The captain radioed the *Houma* captain, asking him to place a line on the towing vessel's stern and to back his vessel down in order to assist with slowing down the tow.

With the assistance of the *Houma*, the speed of the *Peter F Gellatly* was reduced to 3 knots as the tow neared the head of Pier 1 at 2144, but the tow was still in danger of colliding with the *Isola Bianca* directly ahead. In response, the *Houma* detached from the stern of the *Peter F Gellatly*, raced ahead, and began pushing on the port bow of the *Double Skin 501* to keep the barge from making contact with the *Isola Bianca* stern.

At 2146, the *Peter F Gellatly* captain sounded the danger signal. The crew of the *Isola Bianca* responded with the same signal and shut down oil discharge operations. At 2147, the *Double Skin 501*'s forward mast caught the two stern lines on the starboard quarter of the *Isola Bianca* when the barge passed between the tanker and the catwalk that connected mooring stations at the head of Pier A.

When the *Peter F Gellatly* captain saw the mooring lines snap, he directed the *Houma* captain to move to the port side of the *Isola Bianca* and push to keep the tanker alongside the dock. As the *Houma* backed away, the assist tugboat captain told the *Peter F Gellatly* captain that he still had prop wash coming from the starboard engine, indicating that the starboard shaft was propelling the *Peter F Gellatly* forward.

The *Peter F Gellatly* tow came to a stop after the *Double Skin 501* went through the mooring catwalk adjacent to Pier A and hung up on the pier's main structure. At 2150, the *Peter F Gellatly* captain shut down his vessel's engines, stopping the forward force of the tow.



Damaged pipelines leading to loading arms on IMTT Bayonne Pier A.

The force of the allision caused pipelines on the west side of the pier to rupture, with one of the ruptured pipelines discharging 630 gallons of no. 6 oil into Kill Van Kull. Damage to the pier, catwalk, and pipelines totaled about \$2.7 million. Repairs to the *Double Skin 501* foremast, which toppled when it struck the *Isola Bianca* mooring lines, totaled \$10,000. The *Peter F Gellatly* was undamaged.

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After the accident, technicians examined the *Peter F Gellatly*'s reduction gear mechanisms and electronic control systems and found loose wires on the astern connector for the electronic selector valve solenoid on the starboard marine gear unit. The company concluded that the loose wires caused a mechanical failure of the shift solenoid. The technicians found no other indications of mechanical failure that contributed to the locking or jamming of the selector valve that held the transmission in the ahead position. Several anomalous issues were noted during test operations of the control system, resulting in the technicians recommending replacement of the logic processor in the control system.



Reintjes starboard engine reduction gearbox. The astern wiring harness on the electronic selector valve solenoid had loose 12-volt wires at the terminal connection, circled in red.

Analysis

The captain and the engineer had indications that the starboard engine control system was not operating as designed; however, they did not take adequate steps to address the issue prior to the accident. Both crewmembers assumed that the problem was resolved once the engine re-engaged, and they took no further action to verify the operability of the system. The engineer did not communicate his findings once he left the engine room, and the captain did not follow up with him.

Although not required for an uninspected towing vessel at the time of the accident, the *Peter F Gellatly* owner had provided written instructions, known as a safety management system (SMS), for the company and its fleet.² Marine SMSs are programs designed to identify hazards and reduce risk in order to ensure safety at sea, prevent injury or loss of life, and avoid damage to the environment and to the vessel. An SMS documents procedures to use aboard a ship during normal operations and emergencies. SMSs must also include an audit process to identify when the SMS is not followed and a system for implementing corrective actions.

The *Peter F Gellatly*'s SMS Towing Vessel Operations Procedures Manual stated, "Towing Vessel Masters have the authority to stop any work that they reasonably believe may cause a serious accident." Additionally, the manual directed that "the Master should be on the lookout and immediately report any hazardous conditions to the Fleet Operations Department." In accordance

² Federal regulations and the International Safety Management (ISM) code require SMSs for certain ships depending on gross tonnage or the nature of the ship's work. The Coast Guard lists the functional requirements of a general safety management system in Title 33 *Code of Federal Regulations (CFR)* Part 96.240. At the time of the accident, SMSs were not required for towing vessels. However, because the owner operated two integrated tugboats and barges that had to comply with the ISM requirements, the owner included all fleet vessels under the company's SMS and used that system to meet the requirements of the American Waterways Operators' Responsible Carrier Program (RCP), a towing industry safety management framework.

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with these procedures, the *Peter F Gellatly* captain had the authority to stop operating the vessel when the starboard engine did not respond while backing out of IMTT Constable Hook. Empowering marine crewmembers to take action to prevent accidents is a key element of an effective SMS. The captain of the *Peter F Gellatly*, however, was not familiar with the company's SMS. The captain and the engineer told investigators that they were required to and did read the SMS manual within the first 2 weeks of employment, but never looked at it again. The captain told investigators that he did not always notify the dispatcher of mechanical issues and was unaware of a policy or procedure describing when he should.

As a member of the towing industry advocacy group the American Waterways Operators (AWO), the *Peter F Gellatly* owner was required to participate in the Responsible Carrier Program (RCP), a safety management framework developed by the AWO. The company used its SMS to meet the RCP requirements, which included periodic third-party audits of the SMS. Investigators found that a third-party audit was completed on four of the owner's towing vessels in 2013. The auditor's letter report stated, "The SMS Operation manual is certainly very detailed. I did get the impression that most crewmembers are not using the manual, and I stress utilization of same for the safety meetings, et al."

The owner's health, safety and environmental manager told investigators that after the 2013 RCP audit, the first using the SMS, the company incorporated portions of the operations manual into drills and monthly training and referenced the manual in its company safety alerts. He said with those and newer efforts, the company strived to have "the guys get into the manuals more frequently" to become familiar with and then use the manual for guidance.

Following the accident, the *Peter F Gellatly* owner investigated the circumstances that preceded the allision and produced a corrective action report. The owner also conducted internal audits of the vessel under the revised AWO RCP, which became effective on January 1, 2016.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the allision of the *Peter F Gellatly* tow with IMTT Bayonne Pier A was the captain and the engineer's poor communication, their inadequate assessment of the hazardous condition posed by the starboard engine control malfunction, and the captain's decision to continue operations without ensuring that the malfunction had been adequately corrected. Contributing to the accident was the crew's unfamiliarity with the provisions of the company's safety management system that addressed actions in response to hazardous conditions.

Management Plays the Key Role in the Safety Management System

The NTSB has investigated numerous accidents across all modes of transportation where a safety management system (SMS) or similar program could have prevented injuries, loss of life, or material damage. As a result, the NTSB has recommended that marine, aviation, railroad, and highway organizations establish safety management programs.

The key to a functional SMS is a systematic way to identify hazards and control risks while maintaining assurance that these risk controls are effective. The major components to an SMS include the following:

- **Safety policy** - *management's* commitment to continually improve safety; the policy defines the methods, processes, and organizational structure needed to meet safety goals.
- **Safety risk management** – the determination of the need for, and adequacy of, new or revised risk controls based on the assessment of acceptable risk.
- **Safety assurance** – *management's* system of internal evaluation intended to assure the execution of safety-related measures and to make certain that employees understand their roles.
- **Safety promotion** - the organization's promotion of safety as a core value using practices that support a sound safety culture.

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Vessel Particulars

Vessel	<i>Peter F Gellatly</i>	<i>Double Skin 501</i>	<i>Houma</i>	<i>Isola Bianca</i>
Owner/operator	Vane Line Bunkering Inc	Vane Line Bunkering Inc	Vane Line Bunkering Inc	Finaval Spa 8
Port of registry	New York, New York	Baltimore, Maryland	New York, New York	Palermo, Italy
Flag	United States	United States	United States	Italy
Type	Towing vessel	Tank barge	Towing vessel	Tank ship
Year built	2008	2014	2008	2008
Official number (US)	1212432	1251823	528526	NA
IMO number	NA	NA	7029811	9396737
Construction	Steel	Steel	Steel	Steel
Length	94.8 ft (28.9 m)	348 ft (106 m)	87.5 ft (26.7 m)	600.4 ft (183 m)
Draft	14.5 ft (4.4 m)	17.6 ft (5.4 m)	12 ft (3.7 m)	30.2 ft (9.2 m)
Beam/width	34 ft (10.4 m)	62 ft (18.9 m)	29 ft (8.8 m)	105.6 ft (32.2 m)
Gross tonnage	99 gross tons	4,530 gross tons	223 gross tons	30,040 gross tons
Engine power	4,200 hp (3,132 kW)	NA	1,950 hp (1,454 kW)	12,712 hp (9,479 kW)
Persons on board	5	0	Not available	Not available

NTSB investigators worked closely with our counterparts from Coast Guard Sector New York throughout this investigation.

For more details about this accident, visit www.nts.gov and search for NTSB accident ID DCA15LM030.

Issued: June 6, 2017

The NTSB has authority to investigate and establish the probable cause of any major marine casualty or any marine casualty involving both public and nonpublic vessels under Title 49 *United States Code*, 1131. This report is based on factual information either gathered by NTSB investigators or provided by the Coast Guard from its informal investigation of the accident.

The NTSB does not assign fault or blame for a marine casualty; rather, as specified by NTSB regulation, “[NTSB] investigations are fact-finding proceedings with no formal issues and no adverse parties . . . and are not conducted for the purpose of determining the rights or liabilities of any person.” Title 49 *Code of Federal Regulations*, 831.4.

Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by conducting investigations and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. Title 49 *United States Code*, 1154(b).