

USS Secota YTM-415 Incident

March 22, 1986 the U.S. Navy tug USS Secota YTM-415 – which was crewed by a contract crew consisting of a U.S. tugmaster and a Sri Lankan deck and engineering crew. The Secota YTM-415 lost power and collided with the starboard vertical stabilizer on the stern planes of the Ohio Class TRIDENT submarine USS Georgia SSBN-729 and sank off of Midway Island.



Unsolicited Comments: The remarks below are from my perspective as a tug captain and are written down in this manner to promote thought and discussion in regards to Safety and Emergency Ship Handling.

These are my unsolicited thoughts in regards to an incident which is somewhat haunting to say the least as I've been alongside both submersibles such as the USS Dolphin AGSS-555 and a wide variety of submarine classes both U.S. and friendly foreign navies. My intent is to submit the Secota video in DVD format for review to promote Navy Junior Officer ship handling training.

My experience level on U.S. Navy tugs started as a BM-1 NEC-0162 Craftmaster on Harbor Tugs Small (YTL's). The command I was assigned did not allow anyone starting out on tugs to go to a "Big Boat," which then were Harbor Tugs Medium (YTM's) at this particular command until the BASICS were learned on a YTL. The YTL was single screw, 300 s.h.p. and the steering was manual with a five foot diameter helm. If you're rolling your eyes and thinking to yourself, "...oh, that's nothing..." I bet you can't operate the tug efficiently right off the bat. If you will, the object of placing someone new to tugs on the YTL was first to see if there was any level of boat handling skills and as stressed by the Chief Pilot how to use the engine power in

conjunction with the correct utilization of the rudder. In other words, for example, if you were in a maneuvering situation and were running at full speed and attempted to put the rudder over full, good luck as one was trying to manually position the rudder against the force of the propeller discharge. That is, 300 s.h.p. against your “boney butt.” The object lesson to be learned was to momentarily reduce speed to an idle, put the rudder hard over then immediately reapply the speed. Therefore learning how to get the most out of the vessel’s maneuverability and perform competently as the Chief Pilot required for successful vessel movements. A most important lesson I’ve never forgotten, because while learning that lesson the hard way and trying to put brute strength into turning the helm, the propeller force would win and the helm would be yanked out of my hands. I have the cracked wrist bone and still broken nose to prove it. The Chief Pilot saw the blood on my chambray shirt and just laughed and said, “...are you learning yet?...” That lesson learned, and I still employ the lessons learned today, which is always put your rudder over before applying speed. Before one comments on this I need also to say with the submarine’s telltale rudder poking up from the surface of the water I note more often than not that the “blast” of the 56,000+ s.h.p. of the “boomer’s” propeller is seen well in advance to the placement of the rudder. All the pilots I’ve known over the years tell me “...those sewer pipes don’t steer worth a damn...,” so I’d imagine if the rudder isn’t placed as it should be prior to the order for “Warp Factor 8” steering in the direction intended is even more difficult. So, as I’ve been taught I believe most strongly in learning how to use the rudder and engine in concert for optimum maneuverability is most important regardless of the vessel.

Learning that lesson and developing new skill sets I was later promoted to BMC NEC-0161 Tugmaster and graduated up to the “Big Boats.” With the Big Boats came a whole other set of circumstances, skill sets and responsibilities where I was most fortunate to be in the (unofficial but allowed) Tugmaster Closed-Loop Community and again was most privileged in being a Plank Owner of the Navy’s newest tug at the time the N/V Skenandoa YTB-835. All in all I served as a Navy Enlisted Tugmaster for fourteen continuous years going from BM-1 to Senior Tugmaster BMCM on Navy Harbor Tugs which was up to the time the U.S. Congress killed the Navy’s YTB-839 Class proposed new construction tugs In 1984. Ultimately I witnessed the Navy Tugmaster program slowly faded away. With the new tug program eliminated I finished out my Navy career as Command Master Chief, Major Command, underway.

Upon transferring to the Fleet Reserve I sat for and obtain a Master of Steam or Motor Vessels 1600 g.t. with First Class Radar Observer and Towing Endorsements including STCW, GMDSS and AB Unlimited. After 21+ years all licenses and documents are still current, renewed and I am still employed as a Tug Captain for a contractor at the Naval Base Kitsap, Bangor, WA.

As stated above I’ve worked nearly every class of U.S. Navy submarine with the exception of those which were only on the East Coast. Additionally, I had the privilege of being the first Pacific Northwest Navy Tugmaster to conduct a personnel transfer to the then brand new USS Ohio SSN-726 on her first arrival, at night in the Straits of Juan de Fuca with COMSUBPAC and his staff on board my tug and enter into the escorting security convoy. I made the port side of the Ohio and PUT UP A SAFETY LINE on cleat 3 port side and using the SAFETY LINE as a sea-painter riding line with the engine engaged ahead at idle prior to putting over the transfer brow. That is the TRIDENT quartered the swells off of the opposite bow to create a lee for the

tug. Cleats 3 rigged for the tug's riding line and 5 for safety in the event the tug lost power so as to have a possible "second chance."

Again this was the early '80's so in regards to the Secota incident Safety measures should have already been in place for Navy tugs anywhere.

Discussion:

Search as I may in regards to the Secota incident, I have not been able to find the "Official" report of the incident. I would very much like to know what was said and "...just the facts..." All I heard was unofficial and that the tug captain was blamed. However, I believe that there was plenty of blame to go around from the commanding officer of the submarine, the tugmaster, the Base Services Contract Company's hiring practices, the Navy Contracting practices and as seen in the video an apparent disregard for "Safety" on all sides.

There are numerous interpretations as to what is happening in the video and depending on whether one might be a "Boomer" crew member, a Safety Officer, or a tug captain one's personal perspective is primarily based on their position, perspective and experience level.

Before reviewing the DVD (video) please note that I believe the tugmaster of the Secota may have been unlicensed with little experience operating around submarines of any class. This is to say, with the various Base Services Contracts overseas during the time period of the video, someone in BUPERS without official permission released the names of retired Navy Enlisted Tugmasters (NEC-0161) to contractors bidding on the overseas Base Services Contracts. The scam, as I believe it to be, one was hired at the then rate of around \$60,000 a year tax free Out-of-CONUS and since the tugmaster would be running a Government Vessel (Public Vessel), in accordance with the Code of Federal Register a license is not required. Therefore, an unlicensed tugmaster is paid under the Department of Labor Wage Determination which is far less than a maritime union's tug captain's wages. By far less. Additionally, if the individual agreeing to work for the base services contractor didn't ask "all" the questions, when he arrived at the island or overseas base he learned that approximately \$20,000 dollars was subtracted from the \$60,000 for "room and board!"

This isn't to say that "all" unlicensed tug captains are anything one way or the other. I know of one in particular who did an exemplary job at Diego Garcia for many, many years.

However, in the case of the Secota one possible scenario, submitted for review here is the tugmaster by U.S. law had to be a U.S. Citizen operating a "Public Vessel" while the rest of the crew was made up of Sri Lankans who were paid on an all together different pay scale. To me, one very telling event regarding the tugmaster's experience or lack thereof working with submarines is while the Georgia is making bare headway, the tugmaster attempts to back away from the submarine. One most important thing someone new to tugs should have been taught while working around submarines is that 99.9999% of the time "You Never Back A Conventional Single Screw Tug Away From The Side Of A Submarine Moving Ahead!" Never! Most especially with a conventional single screw tug boat which backs to port. Not that backing

away can't be done in certain circumstances. Rather as in this case when things go wrong, they go wrong quickly with very bad results.

You'll note in the video that the wash of the tug, just before the alarm sounds, appears to be a full backing bell. One can see the wash and hear the engines rev up. I believe this was one of the precursors to the Secota's death. This is to say that almost immediately after the backing bell is put on and the wash starts with the engines revving up, then quiet and then the alarm sounds. The alarm sounds possibly because either the DC electric motor tripped the breaker and/or the main engines tripped off the line.

Please note the Secota is a USS Sassa YTM-364 Class tug and being in the 400 Series is a twin diesel engine, DC electric, single screw tug of approximately 1200 s.h.p. when new.

One possible answer as to why the alarm sounded just after the backing bell seems to me that there was no engine room watch stander. This was indicated in the video by two crew members heading aft directly after the alarm sounded.

Why is that point important one might ask. Having myself run several types of U.S. Navy diesel electric YTM's, namely General Electric and Westinghouse where there were differences in the excitation and time delay for rung up orders to actual propeller rotation. My preference was always for the General Electric diesel electric YTM's as there was finer and more responsive controls. Regardless, the real success in running any of the diesel electric YTM's was setting the "Restricted Maneuvering Doctrine" when operating around ships, submarines, barges and making landings or during various maneuverings. This means that an Electricians Mate, when the Restricted Maneuvering Doctrine was set, was at the DC Electric Switchboard in the engine room and had the Rheostats knobs (2), one in each hand standing by to answer all power demands. That is, while maneuvering the Electricians Mate's primary mission at the switchboard was to keep the Rheostats Red-Lined at 1500 Amps. Additionally, there were 2 Rheostat repeaters mounted in the overhead of the pilot house just forward of the helm station so the tugmaster could monitor the settings. Keeping the Rheostats Red-Lined provided the full power requirements for whatever bell was being utilized during maneuvering, but most importantly kept the over speed tripping breakers from tripping the DC electric motors or main engines off the line. Meaning a reset was immediately required if that were to occur. Resetting the breakers wouldn't be much of a problem if there was a watch stander at the switchboard. Also, restarting the engines requires someone in the engine room.

As noted in the video "something" trips off the line requiring two crew members to go aft apparently down to the engine room. Something "tripping off the line" could be the DC breaker(s), one or both diesel engine's over speed trip or other such problem.

I also have a problem with the two crew members seen going aft and down into the engine room because that access is an Escape Trunk with a vertical ladder. I'm willing to bet that they didn't secure, close and dog down, the Escape Trunk water tight door on their way down into the engine room. This may very well have exacerbated the rapid flooding of the engine room after the contact of the tug's hull with the vertical stabilizer of the Georgia. Additionally, this may

very well have been the main cause of those two crew members going down with the tug losing their lives.

The original video which was on VHS tape and appears to be underway documentation of repairs and events until the moment of the incident. After the incident the video runs for seemingly a long time while the USS Georgia SSBN-729 is attempting to recover the tug's crew.

I recommend viewing the video three times and also looking for three separate sections or events. To me, the first event starts with the "Sky Diving" method of personnel transfer including the Mail and Guard Mail transfer; second is the sounding of the alarm and that approximate 60 seconds of time elapses until "contact" with the vertical stabilizer and then the finale where the tug is on the vertical stabilizer prior to being entrusted to Davy Jones's Locker. In all, depending on the video player an approximate time lapse, from the time the alarm sound until the bow of the tug disappears under the waves, is approximately 3 minutes 20 seconds.

First it is recommended to watch the DVD (video) through just for content once, starting just prior to the "Sky Diving."

During the second viewing however, it is recommended to have a pen and paper and list all the Safety Violations. That is, no cleats rigged on the submarine. The transferring of the departing sailor by the "Sky Diving" method plus tossing of the Mail and Guard Mail over to the tug is of particular note. Why did anyone allow that to occur? So, how many violations can one list? Please note that this includes the fact that the submarine wasn't "quartering the swells" taking the seas on the port bow in this case which would have created a lee on the starboard side while moving ahead at approximately 5 knots which may have made things somewhat easier for the tug to be "in-step" to conduct the personnel transfer by boarding-ladder. From my past experiences this "quartering of the swells" works well and does help.

View the DVD (video) a third time and with a stop watch. At the sound of first tone of the tug's siren start the stop watch. You will note the two engineering crew members heading aft on the tugs port main deck. The tug captain is hanging out of the port window and there really doesn't seem to be any urgency to the alarm as if, "...oh, this happens all the time..." From my experience this is how the scene struck me. Note also that the submarine is on a slow ahead bell and the tug is sliding aft. This portion takes almost a full minute with, as stated with seemingly little or no concern BY ANYONE.

Why?

Why no "real" concern from anyone?

Again, please note that the Secota is diesel electric. Did the "tripping-off-the-line" of the main engines constitute a routine event?

Then, all of a sudden, into the second minute after the alarm is the "...oh SHIT ..." moment where you can hear, I believe, the submarine's commanding officer issue the order, what sounds to me as, "...right full rudder. Ahead full."

It is my firm opinion, as a prior Senior Navy Enlisted Tugmaster and now a licensed tug captain working Ohio Class submarines on a regular basis, that the order for a full ahead bell and full rudder was the death sentence for the Secota.

That is, look closely at the starboard quarter of the submarine and notice with the full bell and full right rudder ordered there is a tremendous suction at the starboard quarter of the submarine which physically sucks the Secota into the vertical stabilizer.

Keep in mind also that the Ohio Class beam is 42 feet and the aft diving planes with their vertical stabilizers extend out from the side of the hull an additional 4 feet on either side. In the tug community working the Ohio's those stabilizers are referred to as "Can Openers" and "we're" ever mindful of the fact that not only they're there, but they also stick out further than the side of the hull.

Again, and most importantly, this is submitted for review, consideration and discussion. I don't have all the answers.

However, with all the new advancing technology and simulators this incident is still most relevant not only to submarine crews but also for tug captains and harbor pilots working in close proximity to submarines.

Most sincerely,
Ray F. Longaker Jr.