



National Transportation Safety Board

Washington, D.C. 20594

K. L. Peterson
Director of Operations
TOTE Maritime Puerto Rico
5250 William Mills Street, Jacksonville, FL 32256

Re: Tech review of the Meteorology Group Factual Report

Mr. Peterson:

The NTSB investigative team has reviewed all factual comments submitted by the parties as part of the technical review and has decided on a disposition for each one, as reflected below.

All editorial suggestions have been considered and will be incorporated as appropriate.

The deadline for providing party submissions pursuant to 49 CFR 831.14 is March 17, 2017.

Sincerely,

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Technical Review of Draft Factual Reports: TOTE, Inc.

Party Comments by email/letter dated: November 23, 2016

NTSB Draft Factual Report for Tech. Review

Page/Line	COMMENTS OF TOTE, INC.	NTSB – Disposition of Party Comments
8/§3/¶ line 8	The draft report states the Master reported “that the ship was experiencing flooding.” Replace with what the Master actually reported, “that a scuttle popped open on two deck and we have free communication of water into three hold.” This is more factually accurate.	Agree. Revised sentence will be similar to: <i>Just minutes before the distress alerts were received, the El Faro master had called TOTE’s designated person ashore and reported that a scuttle had popped open on two deck and there was free communication of water into three hold.</i>
8/§3/¶2 line 3-4	Consider making it clear that the deceased crewmember was not recovered.	Agree. A new sentence will be added that will be similar to: <i>A Coast Guard rescue swimmer tagged the body in the immersion suit and left to investigate reported signs of life elsewhere, but then could not relocate the tagged suit.</i>
86/§5.72 and Attachment 14, p. 6/bottom ¶/line 2 and p. 17/fig. 17/top left hand corner graphic	There appears to be an error as to the position at which the model shows the eye to have been located at 0600Z (0200 EDT). It appears that the model is showing the forecasted position and not the National Hurricane Center’s best track position. This error will affect the model’s wind radii modeling as well as the timeline of the vessel’s wind and wave observations. The error seems to originate from the blending of the small scale winds with the large scale winds and should be adjusted to generate a correct analysis.	We are pursuing these concerns with the authors of the work found in Attachment 14, and will address needed changes (if any) to the factual material after they have had a chance to review. We will provide a separate response to TOTE once this is completed. Until then, the authors’ original work will remain in Attachment 14.

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89/§5.9	<p>While the report states that the “computers on EL FARO [that were] connected to Inmarsat’s Fleet Broadband service could not access the internet for web browsing,” despite the non-validated nature of much online weather sources, the ship did receive other services (Sat C, etc.) that were duplicative and contained the same “source” data those other online sources might have contained. We believe if the author thinks it necessary to call out the lack of internet access, then the fact the same data was available via other sources on the vessel should be specifically mentioned in this section.</p>	<p>We believe that establishing that El Faro did not have access to weather information via web browsing through Inmarsat’s Fleet Broadband service, identifying that it was not an “onboard weather receipt option” for any internet weather source, or for “broadband” access to BVS weather information, is valid. The subsections of section 5.9 detail the weather sources available to El Faro.</p> <p>However, we recognize that the NWS does publish a disclaimer (footnote 89) that states (in part): <i>The Internet is not part of the National Weather Service’s operational data stream and should never be relied upon as a means to obtain the latest forecast and warning data.</i> Because the NWS is considered a weather authority, we are deleting the sentence in section 5.9 “<i>Many sources of real-time authoritative weather information are available via the internet</i>” and are adding a footnote to the remaining (sole) sentence in that paragraph that identifies part of the NWS internet disclaimer found here: http://www.weather.gov/disclaimer Also, footnote 78 has been removed.</p>
96/§5.9.2	<p>The report states “according to Inmarsat, EL FARO did not request the GlobeWeather data available to it in between Sept 28 and Oct 1, 2015.” Data was not requested because it was on an automatic download. Further, we believe that even if this resource were utilized, it would be duplicative of what was already available on the vessel. If this detail is to be raised at this point in the draft factual report, then a discussion of the duplicative resources available on the vessel for essentially the same information should be mentioned in this same section of the report.</p>	<p>TOTE’s indication that these data “were not requested because it was on automatic download” will be included in the same section of the report.</p> <p>We disagree that GlobeWeather provides “essentially the same information” as other onboard sources.</p>
98/§5.9.3/ bottom ¶	<p>The report mentions AWT’s “assumptions” regarding computer installation location on EL FARO (it assumes the EL FARO captain’s office and vessel’s bridge both had BVS installed). We confirm that the Master’s computer and the bridge computer had the BVS program installed.</p>	<p>A sentence will be added to this section indicating TOTE’s confirmation that the Master’s computer and the bridge computer had the BVS program installed.</p>

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<p>99/§5.9.3/¶3 starting “Users”</p>	<p>This section contains further implications that EL FARO did not use Broadband service and so did not possess the ability to have “immediate access to AWT’s frequently updated data” and ability to handle “larger data files than email generally supports” including “higher spatial-resolution graphical data.” See comments above for 89/§5.9 and 96/§5.9.2. However, the ship could not access the “immediate data” but could request the latest file. In addition, essentially the same information was accessible from other sources available on the vessel. We believe that each time there is an implication raised that certain data could not be accessed on the vessel, there should be a discussion that essentially the same data was available via other means on the vessel.</p>	<p>We disagree that by establishing what capabilities were not available onboard El Faro (and describing what those capabilities were, or would have allowed), immediate discussion about data available via all other means is required. Content and timeliness of weather information available via onboard means is discussed extensively in the report, including in section 5.9.3.</p>
<p>102/¶2</p>	<p>The draft report states EL FARO did not request or receive the “separately emailed tropical update BVS weather files.” It appears the Tropicals Updates box was not checked by the vessel user. Again, it should be noted in this section that this information was available from Sat C, weather fax, Navtex and satellite television. See comments above for 89/§5.9 and 96/§5.9.2.</p>	<p>On page 111, the report states: <i>The storm location and forecast track in the tropical update BVS weather files emailed 30 minutes after the main BVS weather files were emailed (which El Faro did not elect to receive) were, however, consistent with the information provided by the NHC’s Tropical Cyclone Forecast/Advisory (delivered to El Faro via Inmarsat-C SafetyNET and available through other onboard weather receipt options) that was current at that time.</i></p> <p>We disagree that “this information” was necessarily available during the entire accident voyage via the remaining three options noted.</p>
<p>102/¶2 and 103</p>	<p>The draft report contains conflicting statements/recommendations. On p.102, it says that instead of requesting BVS for the earliest nominal time of 0500 EDT (as an example), requesting that report at 0600 instead would allow for the BVS file to contain the current NHC tropical cyclone information. However, on p.103 it says that to get the most up-to-date information, then the times of 0300z, 0900z, 1500z, and 2100z (i.e., 05EDT, 11EDT, 17EDT, and 23EDR) should be selected. Regardless, we note that the times listed (0300z, 0900z, 1500z and 2100z) were as recommended in the BVS Users Manual.</p>	<p>Disagree. Both statements are accurate. 1) a user may delay receipt of the main BVS weather file to allow it to include more current NHC tropical cyclone information if issued by the NHC, 2) the BVS manual states “Recommended times, when data is most up-to-date is shown above the drop-down delivery hour fields (03z, 09z, 15z & 21z).”</p> <p>The recommendation in the BVS manual is noted.</p>
<p>102/¶3</p>	<p>The draft report states BVS was emailed to only one address on the EL</p>	<p>Agree. Reference to testimony provided at the first USCG MBI will be made at this point in the report.</p>

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	FARO (capt.wfjk@globeemail.com) and AWT commented that when one person receives BVS by email the recipient usually distributes the information to others onboard by email. We believe witnesses have fully corroborated that the e-mail only went to the Master and he would forward it to the bridge after receiving it in his inbox.	
107/Attach 26	The document attached as Attachment 26 does not appear to be the correct email.	Disagree. This is the email from AWT at ~0500 EDT that contained the file. The timestamp of the sent email is 0202 <u>PDT</u> .
109/last ¶	These reports were not sent daily; instead, these reports were sent only if a formal alert was sent out by AWT.	The current text will remain, as this is what AWT indicated; however a sentence will be added after this sentence, which will be similar to: <i>According to TOTE, these reports were not sent daily; instead, these reports were sent only if a formal alert was sent out by AWT.</i>
111/fn78	The report states “open internet access would also have allowed access to the Intermediate Public Advisories” – the report should also document that the information in the “missing” advisories, was available to the crew via other sources.	Footnote 78 will be deleted, per previous comment. The report does identify an additional source for the Intermediate Public Advisories.
111-112	The draft report points out inconsistencies between BVS and SAT C (due mainly to delay, but in one case due to BVS error). At the end of page 112, the report comments that EL FARO did not elect to receive tropical updates, which would have provided info that was about 6 hours more current – the report should also state in this same section contemporaneous with this comment that this more “current” information was also available to the crew elsewhere (such as SAT C).	On page 111, the report states: <i>The storm location and forecast track in the tropical update BVS weather files emailed 30 minutes after the main BVS weather files were emailed (which El Faro did not elect to receive) were, however, consistent with the information provided by the NHC’s Tropical Cyclone Forecast/Advisory (delivered to El Faro via Inmarsat-C SafetyNET and available through other onboard weather receipt options) that was current at that time.</i>
141/fn89	After implying EL FARO was deficient in not having open internet access, this footnote states: “The Internet is not part of the national Weather Service’s operational data stream and should never be relied upon as a means to obtain the latest forecast and warning data. Become familiar with and use other means, such as NOAA Weather Radio, to obtain the latest forecasts and warnings.” We suggest citing this language earlier in the discussion, such as on page 89§5.9.	We agree that the NWS’ disclaimer regarding internet access should be established when discussing internet access to weather information. Per previous comment we have added similar language in section 5.9.

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146/§5.10. 1/ ¶2	Here it says “it is indicated by the PMO that the general wind observing practice was to use the true wind computed by the anemometer.” Port Meteorological Officer: Anemometer provides relative wind direction and speed. The crew then inputs that relative wind direction and speed into a program (WayPoint for Windows) to get the True wind direction and speed.	We agree that the quote from the NWS, by itself, suggests true wind was provided to the crew. We will add text immediately following this quote that will be something similar to: <i>According to TOTE, the anemometer provided relative wind magnitude and direction, and true wind was computed by the crew. A common practice employed on board El Faro was to input relative wind magnitude and direction into a program (WayPoint for Windows) to get the true wind magnitude and direction.</i>
149-153 /Figs 81-90	These would be more useful/visual if they included the EL FARO’s position at the time the forecast was issued and a projected DR track showing where it was to wind up at 0800 on 01 OCT.	We disagree that adding El Faro position/track is prudent. The intent of these images is to compare the results of various models for Joaquin forecast track along with the NHC’s best track. Though we agree that adding vehicle position/track often makes similar images more useful (as done in other areas of the report), in this case, adding current position or projected vessel track may somewhat mislead the reader and unintentionally suggest applicability of these data to El Faro <u>at a particular time</u> . While these different models (in each individual image) are initialized at the same time, results from these models may be publicized at different times, and several of these model results are not freely available to the public in real-time. The intention here is simply to depict performance of various model solutions.

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<p>Attach 24 - p.1</p>	<p>It is accurate that the vessel was forecast to encounter gale force winds (34 knots) and be 60 nm from the center of Joaquin based on the 30/2100Z BVS data download. This BVS data download for 30/2100Z (advisory # 11) was received on the 30th at 1700 EST. At this time, the vessel was at/approaching the entrance to Northeast Providence Channel. We believe it inappropriate to include AWT's analytical comments in this product, or in any attachment to this report (this gave [REDACTED]), as this is an analytical comment on the Master's decision-making process which should be solely within the NTSB's province at this point in the investigation. Such analysis should be redacted at this stage of the investigation, or, alternatively, all parties should be immediately invited to submit similar analysis so it can contemporaneously be included in the NTSB's Public Docket.</p>	<p>Agreed. Analytical text (and all figures on pages 3-10) regarding the vessel found in Attachment 24 will be redacted.</p>
<p>Attach 24 - p.5-9</p>	<p>Again, AWT's analysis is inappropriately mentioned here and in attachments as discussed above. The "[REDACTED]" or any other route has not been determined and is the subject of continued analysis, especially with the VDR transcript not having been released yet. Such analysis should be redacted at this stage of the investigation.</p>	<p>Agreed. Analytical text (and all figures on pages 3-10) regarding the vessel found in Attachment 24 will be redacted.</p>
<p>Attach 24 - p.10</p>	<p>AWT also criticizes the EL FARO for not using a vessel routing service which they say the parameters of which would have left a margin of "a minimum of the maximum gale radius plus 50nm. A wider margin is occasionally recommended in cases where the confidence in the forecast is low." Other than being commercially self-serving, it contradicts their own testimony about industry practice. According to their own MBI Hearing testimony, routing services are not common on near-coastal shuttle services but instead are used primarily on trans-oceanic voyages. This testimony is found at pages 95-96 on the attached transcript. This should be pointed out in the report.</p>	<p>Disagree with point on contradiction. USCG MBI testimony from AWT regarding their weather routing customer base (percentage of transocean-type shipping customers who utilize their weather routing service) does not contradict the information provided to the USCG found in the final paragraph of Attachment 24, titled as an "additional clarification" to their testimony, describing recommended wind radii avoidance margins.</p> <p>We have no objection to referencing AWT's MBI testimony in the report. We agree that it would be important to cite in context of the information in the report. However, the USCG has not yet publically released those transcripts.</p>
<p>End</p>		