

## APPENDIX B

### RESPONSES TO THE DRAFT REPORT: 'FATAL ALLISION WITH DRILLING RIG IN BOTLEK HARBOUR'

Reading guide: The fourth and fifth column show the literal responses of the review parties. The last column contains an explanation from the Dutch Safety Board on the way in which the responses of the parties are processed.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
1	Rotterdam-Rijnmond Regional Maritime Pilots Corporation		General observation	During all conversations with the Seaport Police and with the OVV, the pilots involved, the Regional Pilotage Corporation Rotterdam Rijnmond and the pilot from the Pilotage Technical Committee indicated that it is incomprehensible that work was carried out on the outside of Noble Regina Allen during the docking voyage. The pilots involved also indicated (which is confirmed by the Rotterdam-Rijnmond Regional Maritime Pilots Corporation) that the voyage would never have been carried out if they had known that work was being carried out on the outside of the Noble Regina Allen. This aspect is not sufficiently addressed in the report.	Partially	The Safety Board stated in a number of places in the report that the parties on board of the crane vessel were not aware people were working on the hanging scaffold of the drilling platform.
2	Rotterdam-Rijnmond Regional Maritime Pilots Corporation		General observation	The OVV assumes the one-sided position that without the collision there would have been no fatal accident. Another view could be that without work on the outside of the Noble Regina Allen during the voyage, there would have been no fatal accident.	Partially	<p>The investigations of the Dutch Safety Board aim to learn lessons from an incident. With that objective in mind, the Dutch Safety Board strives to understand how an incident could have occurred. The report investigates both the reason for the presence of the welder on the scaffolding and the cause of the collision.</p> <p>To emphasise this, the Dutch Safety Board looked again at the structure of Chapter 4 Conclusions and adjusted the order and added a passage.</p> <p>We would like to emphasise that a collision, regardless of the consequences, is an undesirable situation and that efforts should be made to prevent it.</p>
3	Rotterdam-Rijnmond Regional Maritime Pilots Corporation		General observation	The NMS system is a navigation tool that can only be used by well-trained persons. Within the Rotterdam-Rijnmond Regional Maritime Pilots Corporation, all pilots who are allowed to sail ships larger than 200 meters receive training. This training consists of half a day of theory and half a day of practice on the simulator in the use of the NMS system. Proper use of the NMS by untrained persons is not possible.	No	The Safety Board takes note of this.

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4	Rotterdam-Rijnmond Regional Maritime Pilots Corporation		General observation	According to the law, the pilot is the "direct advisor to the captain". The Rotterdam-Rijnmond Regional Maritime Pilots Corporation finds this insufficiently highlighted.	Partially	The Safety Board acknowledges that the following is stated in Article 2, first paragraph of the Pilotage Act: "The pilot advises the captain or traffic participant on board about the navigation to be conducted by him." A reference to the Pilotage Act is included in a footnote in Chapter 2.  At the same time, we believe that the role of the pilot in an operation such as the docking of the crane vessel goes beyond merely advising the captain. During a complex operation in which communication between different parties mainly takes place in Dutch and the pilot directs these parties or communicates with these parties, he in fact has control over the operation. In his way, a captain becomes more dependent on the pilot.
5	Rotterdam-Rijnmond Regional Maritime Pilots Corporation		General observation	Images throughout the document appear to be correct, but figure numbers and text explanations are not.	Yes	The figure numbers and references have been corrected throughout the report.
6	Pilot		General	Furthermore, the reader must understand that these projects and pilotage work in general are very difficult to describe in procedures	No	The Safety Board takes note of this.
7	Master crane vessel	Various	Dock Master	Replace with "Port Captain". In accordance with the Damen Docking Procedure, the Port Captain, and not the Dock Master, was responsible for all docking preparation and operations (This can be verified by checking the names listed in the Damen Docking Procedure, pag. 9)	No	In this situation, the port captain was also the dock master. He referred to himself as dock master. It is correct that the procedures states that the port captain is responsible for the docking preparation and operations.
8	Master crane vessel	N/A	This report is published in the Dutch and English languages. If there is a difference in interpretation between the Dutch and English versions, the Dutch text will prevail.	It is my understanding that in the Dutch version of the Report is stated that the English text is supposed to prevail on the Dutch one. Please clarify which version is to prevail in case an interpretation conflict should arise.	Yes	The Dutch report prevails. The text is adjusted.
9	Master crane vessel	1.1	During this maneuver, it veered off course, due to the weather conditions.	This statement is a deduction; therefore, it should be phrased using the conditional. "During this maneuver, the vessel veered off course, potentially due in part to the weather condition." Indeed, there are several factors that could have affected the movement of the vessel, including the traction exerted by the tugs, on which no analysis has been conducted due to the lack of relevant data.	Yes	The text is changed.
10	Bahamas Maritime Authority	1.5	Delete "subsequent"	This was part of the investigation, not a subsequent investigation	Yes	Changed.
11	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	1.5	Pilotage Service Rotterdam-Rijnmond	The name Pilotage Service is incorrect. The party involved was the Rotterdam-Rijnmond Regional Maritime Pilots Corporation	Yes	Changed Pilotage Service into Rotterdam-Rijnmond Regional Maritime Pilots Corporation
12	Saipem	1.5	Saipem SpA	To be replaced with "Saipem" because the subjects interviewed by the DSB are employed by different entities in Saipem Group.	Yes	Changed.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
13	Master crane vessel	1.5		As a general consideration, it would be beneficial to the report if the analysis was introduced by a preliminary disclaimer to explain to the readers that the analysis conducted by the DSB is based on the data available, which are not the whole set of data which would be useful to the analysis of the allision. Notably, the fact that the tugs did not have a VDR on board makes it impossible to trace the movement of the tugs and the force exerted by the tugs on the crane vessel and its impact on the maneuver. Moreover, given that the communication via the work channels is not retained, what was communicated between the parties is primarily based on the statements made by those involved.	No	Paragraph 2.3.1 explains the availability of the data for the investigation and which information was missing. The investigation is logically conducted based on the available information.
14	Master crane vessel	1.5	Saipem SpA	To be replaced with "Saipem" because the persons interviewed by the DSB are employed by different entities in Saipem Group.	Yes	Refer to reaction 12.
15	Saipem	2.1.1	Saipem SpA	To be replaced with: "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
16	Master crane vessel	2.1.1	Saipem SpA	To be replaced with: "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Refer to reaction 15.
17	Bahamas Maritime Authority	2.1.1	Consider adding air draught and reference to DP capability with minimal draught	Relevant for analysis (3.2.1 in particular)	No	The crane vessel did use its own means of propulsion during the manoeuvre, but the DP system was not activated. The ship could be kept in position with the tugs and its own propulsion on standby. This had also been practiced prior to the docking operation. As a result, the height of the ship in relation to the capacity of the DP system adds little.
18	Bahamas Maritime Authority	2.1.2	Add Nobel Regina Allen's beam	Relevant when referring to available space for mooring and cross reference with Appendix E p55 line 10.	Yes	Added the beam of the drilling rig.
19	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	2.2.1	The pilot ... the linesmen.	The notion that the pilot is in charge is incomplete and misleading. The pilot is the captain's advisor and can take part als traffic participant on behalf of him. See page 24 line 38 and 39, that rightly states that the captain remains formally responsible.	Yes	Changed.
20	Bahamas Maritime Authority	2.2.1	Consider referencing the use of line boats in this section	Relevant for Figure 3 and narrative.	Partially	The task of the linesmen was described in the beginning of the paragraph. The use of line boats by the linesmen was added to the narrative.
21	Master crane vessel	2.2.1	GO/NO GO meeting	Replace "GO/NO GO meeting" with "OK to proceed". The decision to proceed was made verbally and via "Storno" radio between Pilot, S7000 Captain, Damen Port Captain and Tugs Captains, rather than through a formal meeting. The wording "go-no-go meeting" could be confused with the official go-no-go meeting held the 20 February 2024 with the parties involved.	Yes	The text is changed in line with the proposal in the reaction.
22	Bahamas Maritime Authority	2.2.1	Replace "point" with "time"	Clarity	Yes	"point" replaced with time.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
23	Pilot	2.2.1	Just before the 12 allision, the captain ordered the officers to activate the stern thrusters full to starboard	This is factually incorrect. From the moment the stern moved in the direction of the platform, the stern thrusters were boosted step-by-step to full, on advice from the pilot. This took 80 seconds in total.	No	Both the VDR data and the audio bridge recordings in the possession of the Safety Board show that the rudder propellers were increased to full more quickly than gradually. The bow thrusters, on the other hand, were increased to full more gradually.
24	Bahamas Maritime Authority	2.2.1	Replace "in consultation with" with "at the direction of"	Clarity	Yes	Changed "in consultation with" with "at the direction of".
25	Bahamas Maritime Authority	2.2.1	Replace "veer of off course in an easterly direction" with "swing to port"	Clarity and continuity with language used in Analysis.	Yes	Changed "veer off course in an easterly direction" with "swing to port".
26	Master crane vessel	2.2.1	final GO/NO GO meeting	Replace "final GO/NO GO meeting" with "OK to proceed". The decision to proceed was made verbally and via "Storno" radio between Pilot, S7000 Captain, Damen Port Captain and Tugs Captains, rather than through a formal meeting. The wording "go-no-go meeting" could be confused with the official go-no-go meeting held the 20 February 2024 with the parties involved.	Yes	Refer to reaction 21.
27	Saipem	2.2.1	"Figure 5"	To be replaced with "Figure 4"	Yes	Refer to reaction 5.
28	Saipem	2.2.1	"Figure 4"	To be replaced with "Figure 5"	Yes	Refer to reaction 5.
29	Master crane vessel	2.2.1	"Figure 5"	To be replaced with "Figure 4"	Yes	Refer to reaction 5.
30	Master crane vessel	2.2.1	"Figure 4"	To be replaced with "Figure 5"	Yes	Refer to reaction 5.
31	Bahamas Maritime Authority	2.2.1	Replace references such as "tug that was positioned forward on the port side" with tug reference numbers in Figure 3	Clarity	Yes	Replaced references such as "tug that was positioned forward on the port side" with tug reference numbers in Figure 3.
32	Bahamas Maritime Authority	2.2.1	Replace references to compass directions. Eg: replace "to the westerly direction" with "position".	Clarity and continuity with language used in Analysis.	Yes	Replaced references to compass directions with port or starboard.
33	Bahamas Maritime Authority	2.2.1	Replace "collided" with "allided" or "made contact with"	Continuity	Yes	Changed.
34	Master crane vessel	2.2.1	The pilot and the captain did not respond immediately to the movement of the bow of the vessel to port.	Considering the context and without prejudice to the Master's role, the sentence should not quote "the captain", because at that moment the role of the Pilot and Tugs was predominant in the execution of manoeuvre, considering the plan, considering the agreement between Pilot and Captain and considering the fact that communication between Pilot and Tugs was executed in Dutch.  In this circumstance, the Captain cannot respond immediately because the manoeuvre is managed by the Pilot and Tugs and he can only intervene, in agreement with the Pilot, when the situation becomes critical using vessel propulsion to avoid a danger. Therefore, the sentence should state; "The Pilot did not respond immediately to the movement of the bow of the vessel to port."	Partially	The text has been adjusted, but with the following explanation. Although it is factually true that the captain could not react directly to the movement of the foreship, there was cooperation between the captain and the pilot, and the captain could intervene verbally in the event of a signal that the movement of the foreship to port was becoming too great.
35	Saipem	2.2.1	"Figure 9"	To be replaced with "Figure 8"	Yes	Refer to reaction 5.
36	Saipem	2.2.1	"Figure 8"	To be replaced with "Figure 9"	Yes	Refer to reaction 5.

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37	Master crane vessel	2.2.1	"Figure 9"	To be replaced with "Figure 8"	Yes	Refer to reaction 5.
38	Master crane vessel	2.2.1	"Figure 8"	To be replaced with "Figure 9"	Yes	Refer to reaction 5.
39	Bahamas Maritime Authority	2.2.4	Replace "collision" with "allision"	Continuity	Yes	Replaced "collided" with "allided"
40	Master crane vessel	2.2.4	final GO/NO GO meeting	Replace "final GO/NO GO meeting" with "OK to proceed" (this is true for the events of 18.02.24 h 7 and 21.02.24 h10). The decision to proceed was made verbally and via "Storno" radio between Pilot, S7000 Captain, Damen Port Captain and Tugs Captains, rather than through a formal meeting. The wording "go-no-go meeting" could be confused with the official go-no-go meeting held the 20 February 2024 with the parties involved.	Yes	A clarification of the GO/NO-GO meeting is given in the text just below the figure.
41	Bahamas Maritime Authority	2.3.1	Height of eye of wing guage would add context	Context	Yes	Added the lookout height (height above the water) of the wind gauge.
42	Saipem	2.3.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
43	Saipem	2.3.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
44	Master crane vessel	2.3.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
45	Master crane vessel	2.3.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
46	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	Tabel 4		The table contains incorrect numbers. The tug starboard aft has a pulling power 2024 (in practice) of 56.3 tons and not 68 tons. Due to the incorrect tonnages in the table, the total pulling power is also incorrect and should be 391.1 tons.	Yes	Adjusted to the right numbers.
47	Bahamas Maritime Authority	2.3.1	Format of time (HH.MM) different to rest of report	Continuity	Yes	The time format the Dutch Safety Board uses is HH.MM:SS. This is corrected throughout the report
48	Saipem	2.3.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
49	Master crane vessel	2.3.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
50	Bahamas Maritime Authority	2.3.3	replace "twice" with "2 x".	Clarity/ English	Yes	Changed.
51	Bahamas Maritime Authority	2.3.3	Replace 111 with 11	typo	No	Could not find error "111".
52	Bahamas Maritime Authority	2.3.3	Consider using tug numbers from Figure 11 in table	Clarity	No	Decided it to be confusing to reference tugboats to two different figures (numbers 3 and 11). Neither of the figures included all the positions so its decided to stick to references like: starboard forward, port aft etcetera.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
53	Pilot	2.3.4	This information is intended not only for the pilot but also for the dock master and tug captains who are involved.	Incorrect, the Vademecum is an internal document used for educational purposes and as guideline.	Partially	The Vademecum is an internal document, this information has been changed. Only the checklist from the Vademecum could be shared with those involved from the shipyard and harbour towage in the preliminary discussion. No use was made of this in the preparation of this docking.
54	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	2.3.5	The view of the Pilotage Service is that a second pilot with an NMS should always accompany exceptional transports.	This is not the view of the Rotterdam-Rijnmond Regional Maritime Pilots Corporation. Starting point is that special transports are executed by more than one pilot, but one pilot is possible as well. Using NMS is strongly advised, but not legally or otherwise mandatory, including in agreements with competent authorities.	Yes	The text is adjusted.
55	Saipem	2.3.3	Figure 111	To be replaced with "Figure 11"	Yes	Refer to reaction 5.
56	Master crane vessel	2.3.3	Figure 111	To be replaced with "Figure 11"	Yes	Refer to reaction 5.
57	Bahamas Maritime Authority	2.3.6	Delete repeated "work"	typo	Yes	Changed.
58	Pilot	3.2.1	Interviews with the parties involved revealed that they did not consider this to be problematic,	This is factually incorrect, the pilot communicated with the shipyard on 19 Feb that the first possibility to dock would be on Sunday 25 February and perhaps on Saturday and to work towards that. Until then there would be too much wind. There was indeed an objection, this meant a delay of 6 days, so unacceptable for certain parties. During the next meeting all parties agreed that on Wednesday despite the exceeding of the limits it should be possible to dock by adding extra safety measures (extra strong mooring lines of the crane vessel) and thus a new situation arose.	Yes	This is additional information, and is added at the end of the paragraph.
59	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	3.2.1	It is characteristic of the Pilotage Service that pilots act with a considerable amount of autonomy.	Incorrect use of terminology. Instead of mentioning the pilotage in general, it is about the pilot as an individual. It should say: ' <i>Characteristically, pilots are free to give advice according to their own insights and experiences.</i> '	Yes	Factual correction
60	Pilot	3.2.1		Safety risks were indeed discussed, see aforementioned go/no go meeting.	No	The Dutch Safety Board stated her view on the best and practical possible way to mitigate safety risks in attachment C. The Dutch Safety Board considers the verbal discussion of the risks alone insufficient.
61	Pilot	3.2.1	The pilot assessed the risk of an allision as high but still acceptable because, in his estimation, the consequences would be limited to purely material.	The following text would be more complete and accurate: "the pilot estimated the chance of allision as high, but the risk for the parties involved as acceptable because the consequences, estimated in advance, would be limited to minor material damage as the approach speed for the dock would be virtually zero."	Yes	This is a clarification.
62	Pilot	3.2.1	The risks were not in fact identified or defined, and nor were the control measures.	The Dutch Safety Board stated her view on the best and practical possible way to mitigate safety risks in attachment C. The Dutch Safety Board considers the verbal discussion of the risks alone insufficient.	No	The Dutch Safety Board stated her view on the best and practical possible way to mitigate safety risks in attachment C. The Dutch Safety Board considers the verbal discussion of the risks alone insufficient.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
63	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	3.2.1	meant that direction of the operation fell to the pilot.	"Meant that the execution of the manoeuvre of Saipem 7000 fell to the pilot" is textually better.	Yes	Clarification.
64	Bahamas Maritime Authority	3.2.1	Context for station holding capability with reduced draught might be beneficial here.	Stronger analysis	No	During the night, after leaving the quayside and before docking the next day, the crane ship was kept in position with the help of the DP-system. When the ship was brought to the dock, the DP-system was switched off.
65	Master crane vessel	3.2.1	After all, the crane vessel could also hold itself in position with its own propulsion.	This statement is not accurate. It is true that before the vessel approached the dry dock entrance, it is primarily handled by its own propellers. However, during the approach to the dry dock entrance, the vessel's propellers can only assist the tugs in maintaining the position.	Yes	The text is adjusted.
66	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	3.2.1	taking such decisions	This is incorrect and should be: 'giving such pilotage advice'	Yes	Changed.
67	Pilot	3.2.1	influence on the turning direction	This is inaccurate. The most important task of the tug in original position is to control the stern athwartships. The two tugboats push against each other at the stern so that the ship is wedged in front of the entrance to the dock. You want to avoid turning, and wedge the ship sideways and push the ship straight ahead of the dock. If you want to rotate, you use the tugs at the front of the vessel, as you are sailing backwards.	Partially	This is a clarification.
68	Pilot	3.2.1	had a pulling power of 56.3 tonnes. Given that this was the only tug that could still influence the turning direction of the stern, it would have been better to attach a tug at that position that had greater pulling power. This also emerged from an interview with a towmaster.	This is factually incorrect: firstly, this is not the only tugboat that can influence the direction of rotation of the stern. The bow thruster tugs on the fore ship can also influence the direction of rotation of the stern. Secondly, we are dealing with the bollard pull of the bollards on the Saipem 7000, so I wonder whether a stronger tugboat in that position would have made a difference (and if the supplied tugs are also taken into account here, then this layout was the only correct one).	Partially	This is a clarification.
69	Pilot	3.2.1		Incorrect: I did explain what can be seen on the NMS, the DPO did not have to operate the NMS. The added value of NMS was in watching along only.	Yes	Factual correction.
70	Master crane vessel	3.2.1	That was not explicitly stated.	This was not explicitly stated because it is implicit: it is a mandatory requirement of the Port Authority for a Pilot to be on board during vessel movements within Port limits.	No	It is true that it is legally required to have a pilot on board in waterways subject to compulsory pilotage. What is at issue here is that it was not explicitly established that the pilot would also be in charge of the operation.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
71	Pilot	3.2.1	There was no point at which the pilot talked through the manoeuvre and his plan for performing it with the entire bridge crew. Nor did the pilot make any additional arrangements with the captain, his crew, or the second pilot at which moments the pilot wished to receive information (for example, in the event of a course change of a certain number of degrees). A shared picture of the operation, additional arrangements, and communication with the captain, the crew, and the second pilot about what they saw during the operation could have helped the first pilot keep the vessel's movements under control.	Incorrect. I'm having trouble with this because everyone was spoken with separately and was made aware of the manoeuvre in that way. I was on board 60 hours in total and joined the crew waiting. During this time, the manoeuvre was discussed extensively and sufficiently.	Yes	The text is altered to describe the situation correctly.
72	Pilot	3.2.1	The decision to communicate with the tugs, the linesmen, and the shipyard in the Dutch language created an even greater challenge for the pilot to keep the bridge team engaged.	Incorrect representation: the text suggests that there is a choice, but in practice the official language of tugboats, lashers and the shipyard is Dutch. Furthermore, there is a shared responsibility here. Because I was on board for several days, slept and ate and participated in the waiting, there was a strong commitment and a good bridge team.	Yes	The text is adjusted.
73	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	3.2.1	This means that the Pilotage Service cannot guarantee that its approach to safety is in fact implemented and enforced.	Incorrect use of terminology. "Its approach to safety" does not exist. A pilot's professional practice is autonomous. It would be better to state here that "As a result, the Rotterdam-Rijnmond Regional Maritime Pilots Corporation has no general safety approach".	Yes	The text is adjusted.
74	Bahamas Maritime Authority	3.2.1	Please reconsider using the counter-factual argument "it would have been better"	Stronger analysis	Yes	English text was altered, a better translation of the original tekst is inserted.
75	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	3.2.1	Orange section as a whole	In this preliminary conclusion (?) the focus is entirely on the pilot, which paints an incomplete and misleading picture. The pilot is the captain's advisor and can act as a traffic participant on his behalf. See also page 24, lines 38 and 39, where it is rightly stated that the captain remains formally responsible.	Yes	The text is adjusted.
76	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	3.2.1	Final paragraph	Incorrect use of terminology. It is not clear what is meant with "Pilotage Service".	Yes	The text is clarified.
77	Pilot	3.2.1	The consequences of altering the configuration of the tugs had not been identified by the pilot. The tug that remained at the starboard stern of the crane vessel was one of those with less pulling power and had to keep the stern under control on its own.	This is factually incorrect. The consequences had been mapped out by the pilot and had been well thought out. Because the rudder propellers were available it was possible to carry out this operation. Without the availability of the rudder propellers the operation would never have started. The rudder propeller has a thrust of 60 tons, so it would replace the original tugboat portside aft. The rudder propellers were placed in the correct position by the DPO at my request before the start of the manoeuvre after switching off the DP system. I stood next to the DPO and supervised this. Portside rudder propeller was ready to move transversely to starboard and the starboard rudder propeller was ready to generate a transverse movement to port. With the rudder propeller to port and the tug attached to starboard aft, we had a combined force of about 115 tons. This has all been gone through and thought through in advance.	No	The original docking plan assumed that the crane ship's own propulsion would not be used. Partly due to the exceedance of the wind limits and the relocation of the tug, it was agreed between the captain and the pilot to keep the propulsion ready for use as a mitigating measure. The rudder propeller was not used during the manoeuvre as a replacement tug to keep the stern in place, this rudder propeller was ready for use. In the opinion of the Safety Board, this is not a replacement for a tug.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
78	Pilot	3.2.1	On the bridge, the pilot, the captain, his crew, and the second pilot did not have a shared view of the execution of the docking operation. The Dutch Safety Board would expect that, during an operation that is as complex as the docking operation, the pilot who was in the lead, optimally uses the crew involved and assures that all that are involved have the same idea of the operation.	I have difficulty with this because, as stated earlier, the manoeuvre was discussed extensively and sufficiently with all crew members and 2nd pilot involved. The entire journey of approximately 80 meters abeam and 130 meters aft was clear for everyone on board Saipem 7000.	Yes	The text is adjusted.
79	Bahamas Maritime Authority	3.2.1	Please reconsider using the counter-factual argument "could have helped..."	Stronger analysis	Yes	Tekst adjusted, in both Dutch and English
80	Pilot	3.2.2	Eenmaal dicht bij de dokingang voer de loods op het zicht. De loods en de kapitein namen de informatie van de NMS niet mee in de afwegingen voor de uit te voeren sleepboot-commando's. De eerste loods was ervan overtuigd – mede ingegeven door zijn ervaring – dat het blote oog betrouwbaar	This is an incorrect and distorted image. Of course the NMS was looked at. Close to the dock entrance, navigating by eye was much more reliable and faster.	Partially	The text has been partially adjusted to this response. The research data shows that on the NMS a movement of the foreship to port can be observed from 11.22 hrs. The prediction of this movement could also be observed earlier.
81	Bahamas Maritime Authority	3.2.2	Replace "bowbow" with "bow"	typo	Yes	Replaced with "bow".
82	Bahamas Maritime Authority	3.2.2	insert missing space into "driftof"	typo	Yes	Missing space is inserted.
83	Master crane vessel	3.2.1	On the bridge the pilot, the captain, his crew, the second pilot did not have a shared view of the execution of the docking operations.	Regarding this sentence, it has to be clarified that as far as the S7000 internal alignment is concerned, a toolbox meeting was held between S7000 Bridge Team, including S7000 Captain and Deck Officers (DPO). Moreover, the pilot, captain, and crew shared a common understanding of how to execute the docking maneuver. The Pilot discussed the maneuver with the captain, and the captain communicated the plan to the crew during the tool box talk.	Partially	The partial conclusion remains. However, it is clarified in the text preceding the partial conclusion, that toolbox meetings and discussions took place at various times between the captain and his crew and the pilot and the crew, but not with all those involved at the same time.
84	Master crane vessel	3.2.2	The pilot and the captain did not take account of the information from the NMS when deciding what commands to give to the tugs.	The NMS is primary a Pilot tool, and he is trained and experienced in its use. The information received from the NMS includes the vessel movements and vessel prediction movements, which depends on the vessel's reaction to the tugs forces, environmental conditions, and drift over a given period. This information, while valuable, may not always be precise enough to solely dictate the next command. Other factors must also be considered such as: Previous commands given to the tugs, visual observations from bridge wing, input received from other lookouts (e.g. the pilot on the opposite wing, officers on watch at the vessel's corners) and feedbacks received from tugs. These factors are crucial for maintaining vessel alignment with dry-dock entrance and avoiding contact of the vessel with any adjacent structures.  Considering the context and without prejudice to the Master's role, the sentence should not quote "the captain", because at that moment the role of the Pilot and Tugs was predominant in the execution of manoeuvre, considering the plan, considering the agreement between Pilot and Captain and considering the fact that communication between Pilot and Tugs was executed in Dutch.	No	The Safety Board agrees with the view that the NMS information should be seen in context of the operation. However, we also think the NMS showed valuable information during the docking operation that was not used optimally. See also reaction 34 regarding the captain's role.
85	Saipem	3.2.1	Figure 122	To be replaced with "Figure 12"	Yes	Refer to reaction 5.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
86	Master crane vessel	3.2.2	Figure 122	To be replaced with "Figure 12"	Yes	Refer to reaction 5.
87	Pilot	3.2.2	The added value of NMS – for example using the predicted movement of the vessel as an additional check – was not utilised during the manoeuvre. The first pilot preferred to navigate by sight, believing that to be more reliable in such a situation. The second pilot and the crew on the bridge also made no use of the information available on the NMS.	This is factually incorrect. I use the NMS a lot and I used it fully on this trip. Again: This is an incorrect and distorted image. During the interview, my colleague and I tried to clarify that if you are working with an object of 90m wide, 10m deep and cranes 200m high at meters distance from a wall and a drilling platform, then it is mainly visual work, you are not going to keep looking at a screen of 23cm wide. The NMS is not an approach tool like in space travel where you hold a point in a square and land exactly on the agreed spot in the desert. The NMS has been used very extensively and carefully. In the last phase, the NMS was also in front of us (Captain and pilot) and we looked at it. In practice, the human eye and brain work somewhat faster than the computer and radar, for example. It takes a while for the picture to build up. In practice, someone with experience sees the movement sooner than it is shown on the computer. Especially if it is a movement that goes through the zero position, such as a slight movement to port turns into a slight movement to starboard. It is therefore an incorrect representation to claim that not all available resources were used. In the final phase, you do focus more on the outside view. Anyone who maneuvers will confirm this.	Partially	Research data show that NMS can be used as an approach tool, for example to monitor mooring speeds to prevent damage to jetties. The speeds of vessel movements that are shown on the NMS screen and the prediction of those movements can contribute to safe and effective mooring or docking. The text has been partially adjusted.
88	Pilot	3.2.2	The second pilot was positioned on the starboard bridge wing. He had been told to keep an eye out to starboard to see whether all was going well, but he had not received any specific instructions and so he could not judge whether the movement to port was part of the plan.	This is too firmly stated and does not do justice to the task of the 2nd pilot. The 2nd pilot was on the starboard side to check on that side how the movement is proceeding. Specific instructions would not have contributed to him being able to judge the movement to port.	Partially	The sentence: 'He had been told to keep an eye out to starboard to see whether all was going well, but he had not received any specific instructions and so he could not judge whether the movement to port was part of the plan.' is replaced by: 'His role was to keep an eye on starboard to see whether all was going well, but he had not received any specific instructions and so he could not judge whether the movement to port was part of the plan.'
89	Pilot	3.2.2	Because the crew members involved in the operation did not have a shared idea of the execution of the operation, the Chief DPO did not know if the movement of the bow was part of the operation. He did not report what he observed on the cameras to the captain	Incorrect, as mentioned earlier the manoeuvre was discussed extensively with those involved. In addition, despite the fact that I gave an extra briefing to the CDPO and gave him access to NMS, his role was limited and is being overstated here.	No	We respect that, in experience of the pilot, the manoeuvre was extensively discussed with the entire team on the bridge. Several sources show that not all those involved had clear image of the manoeuvre.
90	Saipem	3.2.2	Figure 12	To be replaced with "Figure 13"	Yes	Refer to reaction 5.
91	Saipem	3.2.2	Figure 13	To be replaced with "Figure 14"	Yes	Refer to reaction 5.
92	Master crane vessel	3.2.2	Figure 12	To be replaced with "Figure 13"	Yes	Refer to reaction 5.
93	Master crane vessel	3.2.2	Figure 13	To be replaced with "Figure 14"	Yes	Refer to reaction 5.
94	Pilot	3.2.3	operate. The tug next to the bow also continued correcting the bow to starboard (No 7). The bow moved away from the drilling rig but the stern	For a more factual representation the following should be added: "because the bow had to be manoeuvred to the west to align with the dock."	Yes	The text is adjusted.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
95	Pilot	3.2.3	Because the initial off-course movement was not immediately recognised as a situation that required action, there was little time left to prevent an allision. A substantial correction with the bow thrusters was then required.	Incorrect, this is more nuanced: We deliberately approached the dock upwind so that there was more space and time to respond, as the drilling platform was downwind. We also used the wind to lower in front of the dock. It should also be clear to the reader that it took 80 seconds from a stable situation to contact. In that short time, many commands were given and everything was done to prevent contact. The image conveyed is not correct, there was an immediate response. The effect of the response of such a ship is delayed.	No	The following sentence has been added to paragraph 2 on page 12 in chapter 2.2.1: "The captain and the pilot let the crane vessel approach the dock upwind because the drilling rig was positioned downwind. This gave the captain and pilot more time and space to respond. They also used the wind to lower the crane vessel in front of the dock entrance."  The research data shows that the crane ship moves completely to port at 11.22. It can also be seen that the bow moves faster to port than the stern. The prediction of this movement could have been observed earlier, at 11.21 hours. Reference is made to reaction 59.
96	Saipem	3.2.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
97	Master crane vessel	3.2.2	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Changed.
98	Next of kin	3.3	'It was clear to the welder'. This text should be removed.	After all, he cannot tell us himself. It says that the ship would dock on that day (February 21). It does not say at what time. He had no chance to get himself to safety.	Partially	Interviews revealed that the welders and their supervisors knew that the crane ship would be docking that day. This had been discussed and they had seen the ship moving. What they were unaware of were the risks associated with docking.  To add this nuance, the sentence "It was clear to the welder, his colleagues and his supervisor that the crane ship would be docking that day; after all, they had seen the ship lying next to the drilling platform." has been replaced by: "The welders, his colleagues and their supervisors knew that the crane ship would be docking that day; after all, they had seen the ship lying next to the drilling rig and had discussed it before they started work that morning. The risks of the docking operation were unknown to them."
99	Next of kin	3.3	Since neither the welder's supervisor nor the welder himself... The welder should be removed.	The same substantiation applies as mentioned above.	No	See above.
100	Pilot	3.3	It was logical for the welder to be on the hanging scaffold on the day of the occurrence because that was in accordance with the work that had been assigned to him. The welder's work was not subject to any major time pressure.	Incorrect. At most, it was logical in the eyes of the welder, but the reader should know that it makes a world of difference in whether work is carried out on board the drilling platform or carried out on an outside scaffold on the edge. This reduces the passing distance even further and the people working here are completely unprotected.	Yes	It is understandable why the welder was working on the suspended scaffolding of the drilling platform during the docking operation and why it was logical for him and his supervisor to carry out the work. To clarify this, we are adjusting the tekst.
101	Saipem	3.2.2	Saipem SpA	To be replaced with SPCM (Saipem Portugal Comercio Maritimo) actual owner of the S7000	Yes	Adjusted.
102	Master crane vessel	3.2.3	Saipem SpA	To be replaced with SPCM (Saipem Portugal Comercio Maritimo) actual owner of the S7000	Yes	Adjusted.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
103	Pilot	3.4		This passage is too indefinite as to who is meant by "them"	Yes	"They" refers to the captain, pilot, dock master, shipyard project manager and the dock master.  The passage has been amended to: "The potential consequences of a collision were estimated by, among others, the dock master, shipyard project manager, the captain and the pilot as purely material damage that could easily be repaired, because both ships were already at a shipyard and no one assumed that anyone was working on the hanging scaffold."
104	Pilot	3.4	The measure implemented by those present to deal with the presence of the drilling rig (i.e. moving the tug to a different position) was a logical solution for the problem the presence of the drilling rig created but it was not a thought-through risk control measure. The issue of whether the distribution of the tugs was still effective in the new situation was not raised. The same applied to the control measure involving keeping the bow thrusters and stern thrusters on standby, to use, if necessary.	This is completely incorrect. The tugboat distribution was extensively thought through and discussed with all those involved, not only on the day itself but also in preliminary discussions and during attempt 1 on February 18. This did not only discuss the practical problem posed by the drilling platform, but also extensively discussed the safety risks and the technical possibilities of the Saipem 7000 itself.	Partially	The text is partially amended in line with the reaction. The consequences of the combined use of tugs and the vessel's own propulsion were not fully considered; by using the bow thrusters to turn the front of the vessel away from the drilling rig, the aft of the vessel turned to port.
105	Master crane vessel	3.4	In neither the docking procedure nor the step-by-step plan is the drilling rig that was located next to the dock entrance referred to or indicated in the drawings. Nor does the docking procedure include a risk analysis.	The presence of the overboard suspended scaffolding structures on the jack-up's waterside was not brought up by Shipyard during the go-no-go meetings, neither at the first nor at the second attempt. Also, the presence of the scaffolding was not brought up during the "ok to proceed" radio conversations.	Yes	Refer to reaction 1.
106	Bahamas Maritime Authority	3.4	Replace "collision" with "allision"	Continuity	Yes	Replaced "collided" with "allided"
107	Master crane vessel	3.4.	Prior to the docking operation, the crew on board the crane vessel were told to stay away from the side of the vessel that would pass by the drilling rig; this is in line with the 'stay out of the danger zone' rule in the IOGP's Life Saving Rules. There was no direct contact between the crane vessel and the drilling rig. The crew of the crane vessel did not therefore point out this rule to the persons on the drilling rig or the shipyard.	It was not for the crew on board of the crane vessel to impart instructions to the persons on the drilling rig or the shipyard.	No	This passage is included to show that a number of those involved did see the possibility of an allision and its potential consequences, but did not explicitly state it.  'The crew on board the crane vessel does not have to give instructions to the drilling rig or the people working on it. However, it is part of the responsibility of a team that is going to carry out such an operation to inquire about the activities that could be going on on the drilling rig.'
108	Master crane vessel	3.4.	The ownwer of the vessel / The vessel owner	For the sake of clarity, it is to be specified that in this instance the vessel owner is the owner of the drilling rig (Noble Regina Allen) and not the owner of the crane vessel (Saipem). Thus, "vessel owner" and "owner of the vessel" is to be replaced with "drilling rig owner" and "owner of the drilling rig" or "Noble Regina Allen".	Yes	The text is adjusted.
109	Master crane vessel	3.4	The risk associated with the docking were not systematically surveyed in advance by the crane vessel project team.	The context refers to the "shipyard project team dedicated to the crane vessel", not to crane vessel project team.	Yes	The text is adjusted.
110	Master crane vessel	3.4	The risk of an allision was considered to exist, and was assessed as high, by pilot, captain, dock master, and others involved in the docking operation.	As with any vessel maneuver, a risk of contact is inherently present and was considered for this event as well. To state that the risk of contact was assessed as high is a wrong assumption. Before the maneuver, nor myself nor, to my knowledge, none of the persons involved anticipated a high risk of contact with the jack-up.	Yes	The Dutch report states: "The chance of an allision was considered to exist, and was assessed as high, by pilot, captain, dock master, and others involved in the docking operation. This is wrongly translated to the English 'risk' and is adjusted to 'chance'. Several sources show that the chance was indeed assessed as high.

No.	Party	Chapter / paragraph	Text to be corrected (first ... last word)	Argumentation / substantiate your correction	Copy	Dutch Safety Board response
111	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	4.0	The captain, .... share with one another.	See previous comment on NMS use. An NMS cannot be used without proper training. This aspect seems to be completely underexposed.	partially	The message we want to convey in this paragraph is that the bridge team had no clear shared image of the execution of the operation and no clear agreements between the pilot, master and bridge team member about what to pay attention to and which information could possibly be relevant for the captain and pilot.  The text is amended in line with the reaction.
112	Pilot	4.0	the bow of the vessel. The captain, his team on the bridge, and the pilot had not made any arrangements as to how the manoeuvre could be monitored and what information was important to share with one another. The features of the NMS as an aid to manoeuvring were not utilised to the full. In the communication during the manoeuvre, those involved did not make any use of the information sources that were available on the bridge and that could assist the pilot and captain in carrying out the docking operation. The Pilotage Service responsible for ensuring that this in fact applies. Although the Pilotage Service has procedures for drawing up such a plan and reviewing it internally	This is incorrect: The possibilities of NMS are optimally utilised, as much as possible. The team on the bridge was also optimally utilised. The manoeuvre is extensively and sufficiently discussed with those involved.	No	See reaction number 78, 80 and 83.
113	Rotterdam-Rijnmond Regional Maritime Pilots Corporation	4.0	The Pilotage Service [is] responsible for ensuring that this in fact applies.	Incorrect use of terminology. See previous remarks connected to pages 5, 24 and 26; the difference between the pilot and the Rotterdam-Rijnmond Regional Maritime Pilots Corporation is either not made or incorrectly applied.	Yes	"Pilotage Service" replaced with "Rotterdam-Rijnmond Regional Maritime Pilots Corporation".
114	Master crane vessel	4	The captain, his team on the bridge, and the pilot had not made any arrangements as to how the manoeuvre could be monitored and what information was important to share with one another.	Regarding this sentence, it has to be clarified that as far as the S7000 internal alignment is concerned, a toolbox meeting was held between S7000 Bridge Team including S7000 Captain and Deck Officers (DPO).	Yes	This is adjusted in the text. See also reaction number 83.
115	Bahamas Maritime Authority	4.3	Replace "collision" with "allision"	Continuity	Yes	"Colliding" replaced with "alliding".
116	Bahamas Maritime Authority	4.4	Delete "a more"	Clarity	Yes	Adjusted.
117	Saipem	1	SAIPEM (Società Anonima Italiana Perforazione e Montaggi)	Please refer to the Company as Saipem. As of today, Società Italiana Perforazione e Montaggi is not part of the company name.	Yes	Adjusted.
118	Master crane vessel	N/A	SAIPEM (Società Anonima Italiana Perforazione e Montaggi)	Please refer to the Company as Saipem. As of today, Società Italiana Perforazione e Montaggi is not part of the company name.	Yes	Adjusted.
119	Saipem	2.1.1	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Adjusted.
120	Master crane vessel	N/A	Saipem SpA	To be replaced with "SPCM (Saipem Portugal Comercio Maritimo)" actual owner of the S7000	Yes	Adjusted.