

REACTIONS TO THE DRAFT REPORT

No.	Party	Para-graph	Text to be corrected in draft report (first ... last word)	Comments	Response Dutch Safety Board
1	DBS	1.1	'freight train ... goods?' in 'run-into train'	In this case, it was coincidentally a freight train carrying dangerous goods, but it could just as easily been a (passenger) train without dangerous goods.	In this investigation, the Dutch Safety Board specifically considered the question: how could the red signal passage by the passenger train result in a collision with a train carrying dangerous goods.
2	DBS	2.1	Between '... noted' and 'the red ... ' add: 'in part as a consequence of the systematic departure at yellow followed by a green signal, which arose due to a design error in the signal system'	Completeness in identifying the cause.	The report describes that the 'structural departure at yellow' contributed to the occurrence of the red signal passage. Because the investigation was not specifically focused on the occurrence of the red signal passage (this was investigated by the Human Environment and Transport Inspectorate (ILT)), the factors that played a role in that connection are not described in detail. This problem has been discussed in detail in previous investigations/ reports by the Board.
3	DBS	2.1	After 'figure 4).' Insert: 'This was done to prevent a flank collision occurring, but instead a head/tail collision which at low speed can to a large extent be absorbed by the buffers'	Clarification of the background as to why the switch leads to the rear of the train.	It is already indicated in the paragraph in question that a rear end collision resulted from the fact that points 87B and 87A/85 are linked. It is indicated elsewhere in the report that the crash buffers on a tank wagon are capable of absorbing part of the collision energy in the event of a rear end collision.
4	DBS	2.1	After ' ... collided.' Insert: 'whereby the towing eye on the front of the Mat '64 was the first item to hit the tank.'	Is not mentioned elsewhere, and may have contributed to the leak occurring in the inspection hatch, because it is a harder part of the front.	The technical investigation (see appendix B2) showed that the towing eye on the front of the passenger train came into contact with the tank. It is also described that this happened after the top section of the front of the passenger train (which is of comparable strength) had already collided with the rear wall of the tank, and had caused considerable deformation of that rear wall.
5	DBS	2.1	' ... several metres ... '	Request for replacement by 'three metres. Distance is precisely known on the basis of the ARR of the locomotive.	Using the ARR data for the locomotive of the run-into freight train, it is not possible to determine precisely the distance by which the vehicle was pushed forward as a result of the collision. In this connection (as explained in appendix B3) account must be taken of the fact that slippage occurred between the (braked) wheels and the railway tracks. As a consequence, the registered distance may deviate from the actual distance.
6	DBS	2.4	'...dangerous goods...'	Request for replacement by legally correct term ' ... RID goods ... '.	In various Dutch Acts and underlying Orders/ Ministerial Regulations, including those relevant to transport, reference is made to 'dangerous goods' (and not 'RID goods').
7	DBS	3.1	After ' ... involved' insert: 'DB Schenker is only responsible for transporting a share of this'	Placing in the correct context. DB Schenker is not the only undertaking that transports RID goods.	The text section in question provides a general description of the share of dangerous goods transported by rail. Elsewhere in the report (see 1.2) it is indicated that DB Schenker is responsible for a (considerable) share of freight transport by rail.
8	DBS	3.1	'In certain ... liquid cargo'	Leave out section. Here, a specific risk is removed from its context without further explanation. It provides no added value. The point is that wagons with RID goods in empty uncleaned or (partially) loaded condition must comply with the provisions of the RID.	In the text section in question, an explanation is given why tank wagons that have already been emptied but not yet cleaned still have to comply with the same safety provisions filled tank wagons.
9	DBS	3.2	'...dangerous goods...' replaced by ' ... RID goods ... '	Request for replacement by legally correct term ' ... RID goods ... '.	See explanatory notes to reaction 6.

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10	DBS	3.4	Replace '... a violent explosion and major fire ...' with '... the content leaked out and a flash-fire and pool fire occurred ...'	There was no explosion but the occurrence of a pool with a gas cloud above it which ignited due to an external ignition source (probably a hot engine) via a flash fire.	In various (formal and informal) descriptions of the accident in Viareggio, a report is made of an explosion. In the official final report from the Italian government (drawn up in Italian), repeated reference is made to 'deflagrazione' and 'esplosione'.
11	DBS	4.1	'the analysis ... had been braked'	Leave out passage. Is not underpinned in chapter 4, and should therefore not be referred to here.	The intention of the paragraph in question is that the collision in Tilburg cannot be characterised as a worst case and therefore - despite the relatively minor consequences - must be used to draw maximum lessons learned. That the consequences could have been more serious is shown in the analysis of the course of the collision (as explained in appendix B).
12	DBS	4.2	Replace '...which thereby ...' with '... which in the planning thereof ...'	Eventually with the ready message, the correct length was reported.	The Online Transport of Dangerous Goods (OVGS) system (in which the correct train length is reported) is primarily intended to rapidly provide the emergency services with the correct information about a train and its cargo, in the event of an accident. The Traffic Control Information System (IVSVL), in which the incorrect train length was designated, is the system according to which ProRail communicates with railway undertakings about the handling of train traffic, and that is the system with which those undertakings submit their rescheduling. This is explained in paragraph 4.4.2.
13	DBS	4.2.1	'... ATB vv actually ...' replaced by '... ATB vv and the non-functioning of ATB EG below 45 km/hour, actually ...'	Completeness	It is described in the report (in 2.1) that ATB-EG is not effective in situations like this (approaching signal at red in 40 km/hour zone).
14	DBS	4.2.1	'... only logistic ...' replaced by "... mainly logistic ..." and add behind '... operated' the sentence 'because the safety risks have already been assessed and mitigated in general by: 1. Moderated speed, and 2. Signals and ATB	It appears to be suggested here that an RI&E is drawn up with every timetable decision. This is of course not the case. These risk considerations are made in a more general sense at an earlier stage and for that reason mitigating measures are taken. As a result, you should be able to trust the safety measures.	It is not argued in the report or suggested that a (complete) RI&E is (or should be) prepared for every decision on the rescheduling of a train run. On the other hand, the Board does believe that the companies in question should instruct/train the employees affected in such a way that risk-raising decisions (such as introducing an interruption on an adjacent track not covered by the ATB-vv system) should be avoided as far as possible.
15	DBS	4.2.2	After '... at red', insert, 'whereby the first risk-limiting measures for a situation of this kind is therefore effective.'	There is a chain of limiting measures Signal at red, observation by driver, ATB and ATB vv. Three of these four measures failed to function.	Elsewhere in the report, a description is given of which safety measures were not effective in the occurrence of this red signal passage and/or collision.
16	DBS	4.2.2	Add a fourth bullet point: '... ProRail did not make use of the correct train length submitted in the OVGS. This notification is compulsory 5 minutes prior to departure.'	It is ProRail's choice not to use this non competition-sensitive information.	It is indicated in the report that in assessing/processing a rescheduling request in respect of train length, ProRail assumes the information supplied via the ISVL system (intended for the submitting of rescheduling requests) and not the information in the OVGS system.
17	DBS	4.2.2	After '... list of wagons' add 'including the actual train length'	In other words, no use is made of the most up-to-date information.	See explanatory notes to reaction 16.
18	DBS	4.3.1	This entire point is a one-sided incident-oriented observation of the situation.	The risk of a flank collision is greater than a head/tail collision (see also elsewhere in this document). It is therefore also questionable whether such a measure justifies the additional efforts which in themselves engender (marshalling) risks.	In the paragraph in question (4.3.1), one of the possibilities is described according to which the risk of leakage of a dangerous good as a consequence of a rear end collision (as in the case of Tilburg) can be reduced. The other possibilities are discussed in paragraphs 4.3.2 and 4.3.3. The fact that rear end collisions are a relevant proportion (approx. 30%) of all collisions with freight trains, is shown by the RIVM report which is referred to via a footnote. The Board views the ALARP consideration, where by the safety gain from a measure must be set off against the costs/consequences, as a matter for the companies involved. Potential management measures may not remain unused, without such a consideration.
19	DBS	4.3.1		Hot BLEVE-free running is irrelevant	In the footnote in question, the phenomenon of 'hot BLEVE' is explained. This explanation is included in the report in respect of the covenant according to which the majority of shippers/railway undertakings have promised to assemble trains carrying dangerous goods hot BLEVE-free. See also recommendation 3.b.

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20	DBS	4.4.2	Must be entirely rewritten.	The entire reasoning ignores the fact that precisely the basic risk 'the collision' was judged as an unwanted situation, and that mitigating measures were taken in that respect, which also reduces the risk involved in the necessary train crossing for example in the event of disruptions. In this specific case, the consideration (consciously or subconsciously) made to mitigate the risk of a tired driver by opting for a driver changeover. What then would have been the story if the driver had subsequently caused an accident due to fatigue, because we had been unable to make a stop, because the financial decision was taken to not install ATB-vv?	It goes without saying that measures must be taken to ensure that drivers do not exceed their maximum working hours. In the case of the accident in Tilburg, the threatened overrun was caused by the shifting of the departure time, and the solution chosen was to introduce an intermediate stop. In respect of both aspects, DB Schenker (and/or ProRail) could have made other choices. The essence of the paragraph in question is that in the judgement of the Board, insufficient attention is paid to choices that can help counter increased risks.
21	DBS	5.1	After ' ... bring', add the sentence 'One of the causes is the expectation pattern created by the systematic departure with signals at yellow, followed by a green signal, as a consequence of the incorrect positioning of the trigger point.'	See previous argument.	See explanatory notes to reaction 2.
22	DBS	5.2	After 'train length' insert 'in the planning phase' and after 'led to' add 'Despite the fact that prior to execution the correct train length was reported to ProRail via OVGS.'	See previous argument.	See explanatory notes to reaction 12.
23	DBS	5.4	Disagree.	On the basis of unelaborated theories, the Board reaches this conclusion. The Board assumes that at operational level, these considerations can always be made. In the dynamic railway world, however, that is not possible. Certain values must be assumed. It is impossible in the event of every (forced) rescheduling to consider whether a provision has or has not been applied at the level of detail expected by the Board.	See explanatory notes to reaction 14.
24	DBS	5.4	Add 'and with a government that chooses not to provide sufficient financial resources and regulations to create a gap-free protection system.'	See previous argument.	The Board has already expressed its opinion in previous reports on tackling red signal passages, and the role of the government. In this investigation/report, this aspect is beyond the scope.
25	DBS	Foreword	Change 'cause' to 'consequences'	As described in paragraph 1.1, this report is not an investigation into the cause but the consequences of the incident.	The Dutch Safety Board investigated in this accident 'the reason why the freight train became involved in the collision' and 'the tank wagon leaked'.
26	SABIC	1.1	Concerns activities of the emergency services	It could be worth considering pointing out that the cooperation between public and private fire brigade in tackling this accident functioned well.	In the case of this accident, the Dutch Safety Board did not investigate the tackling of the accident, for which reason the report contains no judgement of the quality of its implementation.
27	SABIC	3.4	Add that the accidents in Viareggio and Wetteren were not the consequence of a collision.	The causes of both accidents have no relation whatsoever to a collision. The current text may lead to the speculation that the collision in Tilburg could have led to an accident with the proportions of Viareggio/Wetteren, and should therefore offer greater nuance.	It is explicitly outlined in the report that the accidents in Viareggio and Wetteren were not the consequence of collisions but derailments. It is indicated (very briefly) in the text that these accidents were listed as a more general form of illustration that leaks from a tank wagon filled with a dangerous good could have very serious consequences. It should also be considered in this connection that the accident in Tilburg could have had more serious consequences for a number of reasons (see 4.1 and appendix B4).
28	SABIC	3.3.1		Drivers of passenger stock are not offered any awareness training in their training programme for risks relating to the transport of dangerous goods. They can however be confronted with those risks. This could also be useful in recognising unusual situations, such as drip leaks.	The text in question provides a summary of the RID and 'awareness training for drivers of passenger trains' does not appear in the RID.

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29	SABIC	4.4.2	Entire text	SABIC does indeed recognise a social responsibility for the safety of the transport of dangerous goods by rail. The choices made here were operational choices made by ProRail and DB Schenker, of which SABIC was not informed. This aspect is not reflected in the current formulation.	The information issued by SABIC (including the examination reaction) is not consistent, in the judgement of the Board. On the one hand, SABIC suggests its feels some responsibility for the safety of the rail operations carried out on its behalf, involving dangerous goods. On the other hand, however SABIC reached no agreements with the undertaking in question on the safety of the operational management of train runs. SABIC has also indicated that it views the operational implementation of train journeys as an issue for the railway companies in question.
30	SABIC	Appendix C2-2	Re ERTMS implementation plan	Comment on this implementation plan. All main routes from/ to Chemical clusters should be equipped at least with ATBvv (or even better ERTMS). Investigation has shown that in the ERTMS implementation plan, the choice for routes on which ERTMS would be rolled out is guided by 'rail capacity', with no consideration for 'safety for the transport of dangerous goods'. It would be in line with the conclusions of this investigation if the ERTMS implementation plan were reconsidered, thereby taking into account the transport of dangerous goods.	In previous reports, the Dutch Safety Board has discussed in detail the problem of red signal passages and the management of such events. It is also important to consider (the necessity of) an adequate ERTMS implementation plan. The Board has decided to not consider this subject in this investigation.