IN THE HIGH COURT OF THE REPUBLIC OF SINGAPORE

[2016] SGHC 232

Suit No 697 of 2014

Between

]

Te Deum Engineering Pte Ltd

… *Plaintiff*

And

Grace Electrical Engineering Pte Ltd

… *Defendant*

JUDGMENT

[Tort] — [Negligence] — [*Res ipsa loquitur*]
[Tort] — [Negligence] — [Causation]
[Tort] — [Negligence] — [Fire]
[Words and Phrases] — ["any fire accidentally begin"] — [Insurance Act (Cap 142, 2000 Rev Ed) s 63]

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v
Grace Electrical Engineering Pte Ltd

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Belinda Ang Saw Ean J
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19 October 2016

Belinda Ang Saw Ean J Judgment reserved.

Introduction

1 This action concerns a fire that broke out in the early hours of the morning of 6 September 2012, causing considerable damage to single-storey terrace factory units purpose-built for light industries and located along Kallang Way 1. Each single-storey terrace unit had a mezzanine floor. The plaintiff, Te Deum Engineering Pte Ltd, contends that the fire started in the defendant's property at 141 Kallang Way 1 ("Unit 141") and that the fire spread to the plaintiff's adjoining property at 143 Kallang Way 1 ("Unit 143"). A neighbouring property at 145 Kallang Way 1 ("Unit 145"), also sustained fire damage. This present action is between the occupants of Units 141 and 143.

2 The plaintiff's case is that the fire was caused by the negligence of the defendant, Grace Electrical Engineering Pte Ltd, and it has sued the defendant to recover loss and damage to Unit 143 and its contents. The defendant denies that it caused the fire. In response, the defendant argues that the fire actually started in the plaintiff's Unit 143 and later spread to Unit 141. The defendant's pleaded case is that the fire was caused by the negligence of the plaintiff. Consequently, the defendant filed a Counterclaim to recover loss and damage to Unit 141 and its contents.

3 Both liability and quantum are in dispute. The principal issues on liability relate to the following:

(a) Whether the fire broke out in Unit 141, the location alleged by the plaintiff, or in Unit 143, the location alleged by the defendant;

(b) If the fire broke out in the location alleged by the plaintiff (*ie,* Unit 141), was the fire caused by the negligence of the defendant; or

(c) If the fire broke out in the location alleged by the defendant (*ie,* Unit 143), was the fire caused by the negligence of the plaintiff?

4 The outcome of issue (a) will determine whether issue (b) or issue (c) arises for determination. For now, my comments in general are that issues (b) and (c) are to be examined as specific cases of negligence such that the careless acts or omissions which constitute negligence must be particularised and proved − there must be some facts in evidence sufficient to show some negligent act or omission that establishes the proximate cause of the fire. As will be seen in this judgment, there is no direct evidence of negligence to

resolve either issue (b) or issue (c). Both sides – the plaintiff's in its Statement of Claim and the defendant in its Counterclaim – thus rely on the evidential maxim *res ipsa loquitur*. The question that arises is whether the evidential maxim *res ipsa loquitur* is applicable in this particular case. The application of *res ipsa loquitur* means that the evidential burden is on the other party to show that the fire occurred without fault on its part. In the context of this evidential maxim, the determination of issue (a) above is significant in that a finding on issue (a) would lead to an examination and resolution of whether the elements of the evidential maxim are made out (see [91] below). If *res ipsa loquitur* applies, the inquiry that arises is whether the other party is able to rebut the *prima facie* inference of negligence by reasonably explaining some other cause of the fire. This judgment will adopt the approach outlined here.

5 There is also the matter of s 63 of the Insurance Act (Cap 142, 2002 Rev Ed). Both parties adopted, in the alternative, the fallback argument that the actual cause of the fire was unknown and that the probable cause of the fire was accidental in nature. On the basis that the fire was accidental, the defence under s 63 would be invoked. This judgment will consider whether or not the evidence before the court and the circumstances of the fire are clearly consistent with the theory that it be ascribed to a cause not actionable by virtue of s 63.

6 As for the quantum of damages, the plaintiff has quantified its claim for damages at $1,584,091.52. On the other hand, the defendant has quantified its Counterclaim at $896,895.75.

7 At the time of the incident, the defendant was insured against third party claims for fire damage by EQ Insurance Company Ltd ("EQ Insurance"). Suit No 565 of 2016 ("S 565/2016") is the defendant's action against EQ Insurance who has disclaimed liability to indemnify the defendant for the plaintiff's claim in this action.

Undisputed facts

The parties

8 The plaintiff was at all material times the lessee and occupier of Unit 143, and it was and is a wholesaler and retailer of cables, piping, electrical products and plumbing products and hardware. Unit 143 was used as an office and storage facility. It is not disputed that there were combustible materials stored in Unit 143.

9 The defendant was at all material times the occupier of Unit 141, and it was and still is in the business of an electrical contractor. The lessee of Unit 141 was M & E Grace Trading Enterprise whose sole proprietor, at the material time, was Mr Heng Sin Huat ("HSH"), a director and major shareholder of the defendant.

10 Unit 141 was used by the defendant to assemble, test and commission electrical cables and equipment, as well as to repack electrical cables. The mezzanine floor was its office. The ground floor of Unit 141 was used as a store and a work area. The store area was to the left side of the ground floor. It was divided into two sections, namely "Store Room 1" and "Store Room 2". Each store room was constructed with wire-mesh and separated by a wire-

mesh partition. There were multi-tier metal racks in both store rooms. On the multi-tier racks were stocks of cables, accessories and electrical items packed in carton boxes.

11 Unit 141 was also used as a "dormitory" for its foreign workers. I will adopt the expression "workers' quarters" in this judgment as it was a phrase used in various summonses issued against the defendant for fire safety violations. The defendant's workers were spread out in different parts of Unit 141. Some of them would occupy the back area (or the backyard) designated as "Rest Area 1" and "Rest Area 2"; others would be inside the main building where the rooms there were designated as "Room 1" and "Room 2". There were electrical cooking appliances, fans and refrigerators in the backyard for the workers' use. Each rest area also had a television set. It is not disputed that the defendant's workers cooked their meals in Unit 141. It is also not disputed that cooking in Unit 141 was known and permitted by the defendant.

Fire investigations

12 It is common ground that the defendant's worker, Manickasamy Ravi (DW2) ("Ravi"), placed the emergency call to the Singapore Civil Defence Force ("SCDF") on 6 September 2012. The call was recorded as having been made at 2.29 am. SCDF's personnel and fire engines arrived at the scene at about 2.34 am. The fire was brought under control within two hours, but the fire was only extinguished at 6 am.

13 SCDF's Fire Investigation Unit conducted investigations on-site and interviewed some witnesses on 6 September 2012. Following from that, SCDF

issued its computer-generated Fire Report (short version) and later on issued a full Fire Investigation Report dated 20 June 2013 ("the SCDF Report").

14 The respective insurers of the plaintiff and the defendant appointed one fire investigator each. On 20 September 2012, the defendant's insurer, EQ Insurance, appointed Approved Forensics Sdn Bhd ("Approved") to investigate the fire. Thereafter, Approved issued its report dated 15 January 2013 ("the Approved Report"). Dr J H Burgoyne & Partners (International) Ltd ("Burgoyne") was the other fire investigator appointed by the plaintiff's insurer, AXA Insurance Singapore Pte Ltd. A preliminary report on the fire was issued by Burgoyne on 18 September 2012. Subsequently, Burgoyne prepared a full report dated 1 February 2013 ("the 2013 Burgoyne Report").

Post-fire: SCDF's summonses

15 After the fire, SCDF charged the defendant for breach of two provisions of the Fire Safety Act (Cap 109A, 2000 Rev Ed) ("FSA"). The eight charges were as follows:

(1) 1st Charge (under s 30(1) of the FSA)

> Changed [the] use of part of driveway and open area at [Unit 141] to an accommodation area without any approval from SCDF.

(2) 2nd Charge (under s 30(1) of the FSA)

> Changed [the] use of part of an office space at [Unit 141] to an accommodation area without any approval from SCDF.

(3) 3rd Charge (under s 30(1) of the FSA)

Changed [the] use of part of the storeroom at [Unit 141] to an accommodation area without any approval from SCDF.

(4) 4th Charge (under s 30(1) of the FSA)

Changed [the] use of part of a staircase landing at [Unit 141] to a pantry room without any approval from SCDF.

(5) 5th Charge (under s 30(1) of the FSA)

Changed [the] use of part of open areas within the compound of [Unit 141] to storage areas without any approval from SCDF.

(6) 6th Charge (under s 24(1) of the FSA)

Carried out fire safety works involving erection of accommodation area using metal container at the driveway and open area of [Unit 141] without any plan approval from SCDF.

(7) 7th Charge (under s 24(1) of the FSA)

Carried out fire safety works involving erection of roof structure at the rear of [Unit 141] without any plan approval from SCDF.

(8) 8th Charge (under s 24(1) of the FSA)

> Carried out fire safety works involving erection of pantry area at the staircase landing of [Unit 141] without any approval from SCDF.

16 Representations were duly made through the defendant's solicitors to the Attorney-General's Chambers. Based on the Statement of Facts presented by SCDF and admitted to by the defendant, on 16 April 2013, the defendant pleaded guilty to five of the eight charges, namely the 1st, 2nd, 3rd, 5th and 6th charges. The remaining three charges, namely the 4th, 7th and 8th Charges were taken into consideration for the purpose of sentencing. The defendant was convicted and fined a total sum of $17,000.

17 In its Mitigation Plea dated 16 April 2013, the defendant acknowledged that the fire occurred in Unit 141. The defendant cited "administrative oversight" as an excuse for not seeking the pre-approval to use Unit 141 for accommodation and storage areas. This excuse was made despite the defendant's antecedents which were recounted in the SCDF's Statement of Facts and the fact that, in pleading guilty previously, the defendant had already admitted to committing similar offences for unauthorised changes of use of Unit 141 from factory space to accommodation in the past. The first time such an offence was committed was in October 2009 and, then again in May 2012. On both occasions fines were imposed and paid. The significance of such unauthorised change of use, if any, will be considered later in the course of this judgment.

Issue (a): Whether the fire started in Unit 141 or Unit 143?

The plaintiff's case

18 From the outset, there was no issue that the fire started in Unit 141. The defendant's Defence filed on 23 July 2014 admitted that the fire started in Unit 141 and then spread to Unit 143. The live issue on liability at that time was about the cause of the fire and the defendant's denial that the fire was due to its negligence. However, nearly three years after the fire, to the surprise of the plaintiff, the defendant changed its pleaded case to allege for the first time that the fire started in Unit 143 and spread to Unit 141. The plaintiff questions the defendant's motive for the about-turn which the plaintiff says happened once the defendant realised that it could be facing a sizeable claim on its own.

19 I pause to mention that a few months after the fire, the defendant's insurer declined engagement of policy liability to indemnify the defendant for the fire damage, and the defendant has since then sued its insurer, EQ Insurance. Initially, EQ Insurance was sued as a third party in this action. In the course of the third party proceedings, EQ Insurance gave discovery of the Approved Report on 15 December 2014. The Approved Report concluded that the probable cause of the fire was a short circuit of a degaussing coil in a television set in the backyard of Unit 141. The third party proceedings were subsequently discontinued and substituted by S 565/2016.

20 Ong Say Goh (PW2) ("OSG"), the plaintiff's Assistant General Manager, confirmed that Unit 143 was empty of staff members after office hours and that the premises were locked at around 7 pm. The plaintiff heard about the fire from the defendant's director, HSH. Apparently, HSH notified

the plaintiff's employee, one Alan Cheng, about the fire. Alan Cheng contacted the plaintiff's Managing Director, Tony Teo Kye Hwee (PW1) who then drove to the plaintiff's factory at Kallang Way 1. He later met the defendant's Project Director, Teo Boon Len (DW1) ("TBL"), who informed him that the fire started in Unit 141. The plaintiff relies on its contemporaneous police report dated 6 September 2012 to the same effect. The plaintiff also pointed to the defendant's Defence filed on 23 July 2014 that admitted to the fire starting in Unit 141. The reports prepared by SCDF, Approved and Burgoyne all concluded that the fire started within Unit 141.

21 Returning to the plaintiff's challenge to the defendant's new case, and this was notably based on the opinion of a fire expert appointed in March 2015. The defendant appointed Mr Tan Jin Thong ("Mr Tan") of J T Megan & Partners Pte Ltd ("Megan") to review the reports prepared by the SCDF, Approved and Burgoyne. Megan issued its report on 15 May 2015 ("the 2015 Megan Report"). In that report, Mr Tan opined that the three investigators were wrong in their respective conclusions that the fire started in Unit 141. I should mention that Burgoyne replied to the 2015 Megan Report on 20 July 2015 ("the 2015 Burgoyne Report").

22 The plaintiff vigorously challenges Mr Tan's theory that the fire started in Unit 143. I will deal with the dispute as to whether the fire started in Unit 141 or Unit 143 in the course of the judgment. Suffice to say for now that it is the plaintiff's case that the defendant's contention that the fire started in Unit 143 is simply an afterthought and is really the defendant's last ditch attempt to avoid liability. Counsel for the plaintiff, Ms Marina Chin ("Ms Chin"), goes about in submissions to make good the plaintiff's assertion by pointing to: (a)

the inconsistencies in the defendant's evidence; and (b) the defendant's illogical allegations and arguments. I will elaborate on these points later in the judgment. The plaintiff continues to maintain (as it did from the outset) that the fire started in Unit 141 and that Megan has not been able to substantially refute the views of SCDF and Burgoyne that the fire started within Unit 141. Even though the fire investigators differed in their respective findings as to the origin of the source of ignition, the common finding among the three reports is that the fire originated within Unit 141. The 2013 Burgoyne Report concluded that the probable area of origin of the fire was the rear northern store of Unit 141 (*ie*, Store Room 1), and the SCDF Report concluded that the probable area of origin of the fire was at the location of the severely damaged wooden shelves in the backyard of Unit 141. As stated, the Approved Report concluded that the fire started in the backyard of Unit 141 near the vicinity of a television set that caught fire (see [19] above).

The defendant's case

23 The defendant says that it amended its Defence and filed a Counterclaim after it realised that the fire started in Unit 143 and then spread to Unit 141. The defendant explains that it was initially under the mistaken impression that the fire started in Unit 141 and that it considered the possibility of the fire starting in Unit 143 after receiving the Approved Report. The defendant then took some time to find a fire expert, and eventually appointed Megan.

24 Adopting the 2015 Megan Report, the defendant amended its Defence and filed its Counterclaim against the plaintiff. The 2015 Megan Report was

amended on 17 June 2016 ("the 2016 Megan Report") with no change to the conclusions made in the 2015 Megan Report. I will discuss the 2016 Megan Report in due course. Suffice to say for now that whilst Mr Tan said that there were signs to indicate that the fire started in Unit 143, his reports: (a) did not identify the seat or origin of the fire; and (b) did not deal with the source and cause of the ignition. I will examine the evidence of the expert witnesses in due course.

25 The defendant's main defence to liability is that since the fire originated from Unit 143, the blame for the fire cannot fall on the defendant. Alternatively, the cause of the fire is unknown and the probable cause of the fire is accidental in nature; as such, the plaintiff's claim is not actionable under s 63 of the Insurance Act.

26 Unit 141 was used by the defendant as a store and working area for its business as an electrical contractor (see [10] above). As stated, Rest Area 1 and Rest Area 2 were located in the backyard of Unit 141. Several racks separated the two rest areas. The backyard was also used to store unused items including stocks. The backyard was completely enclosed to create a shed for the workers to rest and cook. The defendant's Opening Statement confirmed that there were "no means of access and egress from the outside to the backyard of [Unit 141]".[1]

27 Counsel for the defendant, Mr Ranvir Kumar Singh ("Mr Singh") explains that on the boundary wall separating Unit 141 and Unit 143 was a

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[1] Defendant's Opening Statement, para 10.

polyvinyl chloride ("PVC") cable duct with supply cables that stretched from inside that boundary wall across to the opposite external brick wall in the direction of the windows of Unit 141. The same PVC cable duct was above Store Room 1.

28 It is the defendant's case that the goods in Store Room 1 caught fire because of a line of fire that travelled along that PVC cable duct from the boundary wall separating Unit 141 and Unit 143 to the opposite external brick wall of Unit 141. This line of fire was below the roof structure of Unit 141 but was above Store Room 1, and particles of burning materials dropped from the line of fire onto the multi-tier metal racks in Store Room 1, and that caused the goods stored on the racks to burn. The defendant's workers' observation of a "travelling line of fire" and "dripping fire" resonated with Mr Tan's theory that super-heated fire gas travelled from Unit 143 to Unit 141 via the openings and gaps above the brick wall and below the roof at the boundary wall separating Unit 143 and Unit 141. This super-heated fire gas then ignited the PVC cable trunking in Unit 141.

29 Fire damage was observed in the mid-section of the backyard of Unit 141. The contents of Store Room 1 and Store Room 2 were severely damaged. It was observed that the fire damage on the mezzanine floor was more severe near the wall separating Unit 141 and Unit 143. The fire damage as described, so the defendant's argument develops, is consistent with Mr Tan's theory of the super-heated fire gas from the intense heat source in Unit 143.

30 Mr Tan reviewed photographs taken by SCDF, Approved and Burgoyne in their respective expert reports. He discerned a "V" pattern on the

brick wall caused by spalling of cement plaster, and to him that "V" pattern indicated the area of the origin of the fire in Unit 143. At the lower point of the "V" pattern were badly burnt cable drums. The cable insulations were burnt, exposing the copper wires and the roof structure above the "V" pattern was also found to have collapsed. As mentioned, the mezzanine floor of Unit 141 on the side of the boundary wall was found to be damaged (see [29] above). I will deal with Mr Tan's theory and the significance of all his tell-tale signs supporting his theory later in the judgment.

Discussion and decision

31 I start with Ms Chin's submissions that even though SCDF, Burgoyne and Approved differed as to the seat or origin of the fire and that each investigator suggested different possible causes of the fire, crucially the differences do not detract from the fact and conclusion that the fire started within Unit 141. In this regard, Ms Chin's argument is that the defendant has not debunked the factual bases each fire investigator relied upon to reach their conclusions that the fire started within Unit 141. Ms Chin notes that the three fire investigators had the opportunity to and did investigate at the scene of the fire back in 2012. In contrast, Mr Tan of Megan was only appointed in March 2015 and all that Mr Tan was asked to do, and could do, was to review the three reports and the accompanying photographs to render his opinion. She argues that even though Megan took statements from some workers on 23 April 2015 and 6 May 2015 ("the 2015 Statements"), the workers were interviewed very late in the day. Ms Chin's point is that except for Ravi, the four other workers who were interviewed by Megan were asked about the incident for the first time some years later after the fire.

Evidence of the foreign workers

32 As much of this important aspect of the case depends upon the credibility of the defendant's workers, it is appropriate that I should give my impressions of these witnesses when they gave their evidence in court. Without intending any disrespect to any of the workers, I am mindful that they are not educated people and probably none of them has given evidence in court before. The witnesses said that there was some panicking amongst the workers on the night of the fire which is not surprising. I am also mindful that the workers' memory of the fateful night would have faded with the passage of time, and so there would be some discrepancies in the details. Despite this latitude in mind, I find the workers to be unreliable witnesses. The inconsistences are not minor discrepancies from memory lapses. They are more serious and there are irreconcilable differences that affect the veracity of their evidence. I therefore give little or no weight to material aspects of their evidence. Let me elaborate.

33 Ms Chin brings up the similarities in the Affidavits of Evidence-in-Chief ("AEICs") of the respective witnesses and submits that these coincidences indicated that the witnesses had come up with similar stories about what they saw in a way that favoured the defendant's "new" case and theory about how the fire started in Unit 143 and spread to Unit 141. In effect, Ms Chin submits that the workers were lying – this was evident from a comparison of their signed 2015 Statements to Megan, their AEICs and their oral testimonies, as well as the similarities in both the language used and inconsistencies between them, and the illogical answers given to Ms Chin's questions in cross-examination. I agree with Ms Chin that there are

incongruities and irreconcilable discrepancies in their oral evidence in court, the signed 2015 Statements to Megan and their AEICs, and that the repeated incongruities and discrepancies call into question the veracity of their evidence.

34 I start with the defendant's Further and Better Particulars filed on 11 September 2014. The worker who supposedly first sighted the fire in Unit 141 was one Muthu Udayar Murugan ("MUM"). However, in the amended Defence filed on 16 June 2015, the defendant gave a different name and instead identified Ramachandran Kumar ("RK") as the worker who first saw the fire. In addition, the Further and Better Particulars identified six workers who slept in Unit 141 on the night of the fire, but Ravi in his oral testimony testified that as many as ten workers ran out of Unit 141 on the night of the fire.

35 Notably, the workers who spoke to the defendant's Project Director, TBL, in the canteen along Kallang Way 1 ("the JTC canteen") on 6 September 2012 were, *inter alia*, Ravi, RK, MUM and Perumal Mohan ("PM"). Although not all witnesses were named in the SCDF Report, SCDF interviewed these same four workers and this fact was confirmed by Ravi in cross-examination.[2] SCDF spoke to RK as the person who first saw the fire; and Ravi because he called the SCDF. Both MUM and Ravi were recorded by SCDF to have seen a "small fire in one of the stores" inside Unit 141.[3] The plaintiff subpoenaed SCDF's investigative officer, Major Rashid bin Mohd Noor (PW3) ("Major

[2] Transcript dated 20 July 2016, p 165.

[3] 1AB 299-300.

Rashid"), who testified on his interview with RK, confirmed that it was RK who advised him that the fire in Store Room 1 was "on the ground level" and "not more than 1 metre high".[4] In addition, Approved interviewed RK, MUM and PM for its investigations. Approved recorded RK as saying that "[t]he fire was not seen in [the] neighbour's place at that time".[5] RK was also recorded as saying that no cooking was done in Unit 141 and that the workers "Will go to the canteen to eat. Will bring food into the factory."[6] As for PM and MUM who were also interviewed, Approved recorded them as saying "We didn't see fire going next door" and "No cooking at the resting area".[7] Approved also recorded PM as having called TBL about the fire. It is not disputed that RK, PM and MUM had given signed statements to Approved. Significantly, none of these three workers were called to testify. Even though they had returned to India, Ravi disclosed that he was still in contact with them.[8]

36 I pause here to make two comments. Although the fire investigator from Approved was not called to testify at the trial, the Approved Report, which included annexures, is being used and referred to by the parties. As stated, Megan commented on the Approved Report. The Approved Report was disclosed in court and is being relied upon by the defendant for the fact that it contained no finding of the actual cause of the fire; that it differed in its conclusion on the probable area of origin of the fire and on the probable cause

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[4] Transcript dated 13 July 2016, p 67.

[5] 1AB 249.

[6] 1AB 249.

[7] 1AB 245.

[8] Transcript dated 21 July 2016, p 2.

of the fire. In my view, the entire Approved Report including annexures is admissible evidence for the fact that the report was made and contains the conclusions of the fire investigator. Put simply, the statements of the three workers were made and recorded in the presence of Approved's fire investigator in the course of investigation and for making the Approved Report. Again, in my view, the statements taken by Approved are admissible in evidence for the fact that the statements described in [35] above were made. This evidential treatment is quite different from one that seeks to establish the truth of the statements that were recorded. The defendant does not dispute that three of its workers met with and were interviewed by Approved. The fact that the statements were made is a relevant fact in considering the mental state and conduct thereafter of the fire investigator in whose presence the statements were made and recorded (see s 5 of Evidence Act (Cap 97, 1997 Rev Ed)).

37 A second and related comment concerns the expiry date of the work permit of MUM. At the time Mr Tan conducted his interviews on 23 April 2015 and 6 May 2015, MUM was still in Singapore; his work permit only expired on 13 May 2015. There is no satisfactory explanation as to why MUM was not interviewed by Megan, and if he was interviewed, why was his statement not produced.

38 I turn to Ms Chin's address to make good her contention that the workers' evidence in all aspects is unreliable and should be rejected. Major Rashid confirmed in his answer to Ms Chin's question in cross-examination that RK had reported that the fire in Store Room 1 was "on the ground level" and "not more than 1 metre high". This evidence is to be contrasted with the evidence of the other workers who testified at the trial that the fire was seen at

the *top* of the multi-tier rack in Store Room 1. Bearing in mind that the rack was 3 metres in height and that the mid-section of the rack was estimated to be at least 3 metres from where the workers stood, I agree with Ms Chin that Ravi's evidence that he tried to put out the fire at the top tier of the rack by pouring buckets of water "onto" the fire is dubious unless, the fire was on ground level as Major Rashid was advised. For the same reason, Ms Chin criticises TBL's AEIC wherein he stated that his workers tried to pour buckets of water "over" the fire. When confronted by Ms Chin, Ravi departed from his written version. He claimed that the workers threw buckets of water but the water could not reach the top of the rack and that as Store Room 1 was locked, the workers could not get close to the fire.[9]

39 Ms Chin submits that the workers' claim that the fire was spotted on the top tier of the metal rack and their account of their fire fighting efforts is unbelievable. I begin with Ms Chin's contention as to why the workers' account of the efforts to fight the fire in their AEICs is misleading. In their respective AEICs, Ravi and Govintha Konar Saravanan (DW3) ("Saravanan") deposed that a fire hose reel was used to fight the fire. Shanmugam Pushparaj (DW4) ("SP") said in his AEIC that he tried to fight the fire by using a fire hose reel but could not extinguish the fire. However, SP in his oral testimony clarified that he was the first person to reach for the fire hose reel but he did not have the opportunity to use it as he saw his co-workers leave the premises, and he dropped the hose reel and left with them. On further questioning by Ms Chin, he said that could not activate the hose reel and did not spray water on the fire. He then vacated the premises with the rest of the workers.[10]

[9] Transcripts dated 20 July 2016, pp 21-22.

40 I now turn to the workers' 2015 Statements to Megan and will compare them with their respective AEICs. I start with Ravi who testified at the trial on 20 and 21 July 2016. The AEICs filed by Ravi and Saravanan are strikingly similar. Ravi and Saravanan were co-workers and they appeared to get along well seeing that they would cook their evening meals and sat down to eat together. The similarities and inconsistencies in the two written testimonies and aspects of their oral testimony are set out below.

41 Ravi testified on 20 and 21 July 2016. He gave a signed Statement to Mr Tan on 23 April 2015 ("April Statement") and seven months later, he signed his AEIC on 27 November 2015. Yet, material differences can be found in the April Statement, his AEIC and his oral testimony. For example, in the April Statement, Ravi said that after he ran out of Unit 141, he stood in the main road, and from where he stood he saw "smoke and fire coming out from the roof *between* units 141 and 143". This statement is not in his AEIC. Instead, he said in paragraph 12 of his AEIC that from the JTC canteen, he "could see fire and smoke rising from the roofs of unit 141, 143 and 145 Kallang Way 1" and that "the fire above the roofs of 143 and 145 Kallang Way 1 was more ferocious". His oral testimony on the same matter is as follows:

> A: Roofs of 143 and 145 were on fire. Roof of 141 was fire but it was smaller compared to 143 and 145.
>
> …
>
> Q: All the three roofs are (sic) burning. But the roof of 141 doesn't have such a big fire?

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[10] Transcripts dated 22 July 2016, pp 13-14.

A: Yes, the fire was lesser.

42 Ravi's April Statement talked about a "line of fire" travelling below the roof structure from the wall separating Unit 143 and passing over the store room towards the roof structure. This line of fire was from "near the brick wall separating unit 143". He also saw fire on top of the multi-tier metal racks. There was no mention that a PVC cable duct was on fire in the April Statement. Neither was there any mention of particles of burning materials in the April Statement. However, in his AEIC at paragraph 8, Ravi said the "line of fire" was travelling along a PVC cable duct from the wall separating Units 141 and 143 Kallang Way 1 towards the opposite external brick wall of the defendant's premises. He said that the line of fire was below the roof structure but above Store Room 1. He also said that he saw "particles of burning materials falling from the line of fire onto the multi-tier metal racks in Store [Room] 1 causing the goods stored in the racks to burn." In the witness box, he was asked to draw the length of this line of fire on Exhibit P1. His marking was not the same as that which he described in the April Statement and his AEIC: it did not show the line of fire extending from boundary wall to the external brick wall in Unit 141. When questioned on his marking, he maintained that his marking was accurate and insisting that "I marked where I saw".[11] In re-examination, Ravi reconfirmed again that his marking on exhibit P1 was accurate.[12]

43 Ravi also did not mention "a travelling line of fire" to TBL in previous conversations. He was not able to explain why this information was not

[11] Transcript dated 21 July 2016, p 28.

[12] Transcript dated 21 July 2016, at p 46.

disclosed when he gave his account of the events to either TBL or the SCDF. Major Rashid confirmed during cross-examination that Ravi did not mention at the time of his interview that he saw a travelling line of fire.[13]

44 Next, in his April Statement, Ravi confirmed that he was standing under the mezzanine floor. Ms Chin asked Ravi to indicate the spot where he stood by marking on Exhibit P1 because Ms Chin's point to Ravi was that he would not have been able to see the alleged line of fire from where he said he stood in the April Statement. The spot he marked on exhibit P1 was beyond the mezzanine floor.[14]

45 Saravanan testified on 21 July 2016. Like Ravi, Saravanan gave a signed Statement to Megan on 23 April 2015 ("April Statement"). In his April Statement, Saravanan stated that the fire started "at about 2.20 am". However, in his oral testimony, he estimated this to mean a little earlier or a little after 2 am.[15]

46 In his April Statement, Saravanan said that he came out of his room and gathered at the hallway below the mezzanine floor with the other workers. He saw smoke and a line of fire burning along the PVC cable duct near the wall separating Unit 143, and the fire was travelling above Store Room 1 towards the external wall. In paragraph 8 of his AEIC, he mentioned "particles of burning materials" falling from the line of fire onto the multi-tier racks in

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[13] Transcript dated 13 July 2016, p 69.

[14] Transcript dated 21 July 2016, at p 27 line 16.

[15] Transcript dated 21 July 216, p 67.

Store Room 1. Like Ravi, this evidence in the AEIC was not in his April Statement though. When asked about why he had not mentioned falling particles from the PVC trunking in his April Statement, unlike what he mentioned in his AEIC, he merely gave the excuse that he did not know. In his oral testimony though,[16] Saravanan agreed and admitted that he would not actually know which end the fire first started on the PVC trunking:

> Q: …So you yourself don't actually know which end the fire first stated on the PVC trucking, correct?
>
> A: **I do not know that**.
>
> …
>
> Q: According to your evidence the fire seems to be moving in this direction to the outside of 141. So what you see is a whole stretch of burning PVC cable, correct?
>
> A: Yes.
>
> Q: How do you know whether the fire started from closer to the external wall, or whether the fire started closer to the boundary wall.
>
> A: **I do not know that**. But when I looked it was everywhere.
>
> …
>
> Q: So to you most of the PVC cable duct is already burnt, correct?
>
> A: I did not see in full or clearly.
>
> Q: So how do you then know that the fire is moving from the boundary wall towards the external wall?
>
> A: It was burning all over. However, in my panic**, I did not notice clearly**.
>
> Q: And so what you have highlighted in pink is not accurate?

[16] Transcript dated 21 July 2016, p 78 lines 7 and p 79 line 7.

> A: I have drawn what I have seen.
>
> …
>
> Q: You also said that there was fire at the PVC ducting. Do you remember that?
>
> A: Yes, when I saw it, it was a little bit visible.
>
> …
>
> Q: You say there was a path the fire was travelling. I want to understand from you, what was the direction the fire was travelling.
>
> A: …**I cannot tell**. However, when I saw, the fire was burning over here [as he had highlighted].
>
> [emphasis added]

47 Similar to Ravi, Saravanan's alleged sighting of a "line of fire" was not told to TBL previously. A similar inconsistency between his April Statement to Megan and his AEIC can also be observed: according to his April Statement, after Saravanan ran out of Unit 141, he saw from the main road "smoke and fire coming out from the roof *between* unit 141 and 143". In his AEIC at paragraph 13 though, he said, like Ravi, that from the JTC canteen, he "could see fire and smoke rising from the roofs of unit 141, 143 and 145 Kallang Way 1. The fire above the roofs of 143 and 145 Kallang Way 1 was more ferocious". In his oral testimony, Saravanan when asked about why Unit 145 was not mentioned in the April Statement, he merely said that he "[did] not known if [he] forgot at that point in time."[17]

48 Both Ravi and Saravanan testified that there was no fire in the backyard in Rest Area 1 and Rest Area 2. Although he did not go out to the

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[17] Transcript dated 21 July 2016, at p 94 line 14.

backyard, Ravi went to the toilet to fill his bucket with water and from where he was in the toilet, he could see into the Rest Area 1 and he did not notice any fire in the area within his line of sight. Saravanan went to wake up the workers in Rest Area 1 and Rest Area 2 on the night of the fire, and he did not notice any fire in the backyard when he was there. Four other workers who slept in Rest Area 1 and Rest Area 2 also testified that there was no fire in the backyard. These four workers were Chitturi Venkateswara Rao (DW5) ("CVR"), Udaiya Thevan Anbalagan (DW6) ("UTA"), Vellaiyan Kumar (DW7) ("VK") and SP (DW4).

49 Ms Chin doubts the truth of the workers' testimony by pointing to a flaw in the claim that there was no fire in the backyard of Unit 141 and submits that the court should treat their evidence with suspicion. First, Ms Chin submits that at least four of the workers were probably not living in Unit 141 at all. She reasoned that it is implausible that the defendant would house them in Unit 141 when the defendant paid for their assigned beds in purpose-built dormitories. Second, something is not right given the witnesses' unfamiliarity with the layout of the backyard and lack of knowledge of who slept in Rest Area 1 and Rest Area 2. All in all, I agree that their ignorance is troubling and it affects their credibility as witnesses who came forward to testify that there was no fire in the backyard of Unit 141 on the night of the fire.

50 To illustrate, UTA said that he had not been to Rest Areas 1 and 2 before. He did not even know that it was at the back of Unit 141.[18] The

[18] Transcript dated 22 July 2016, pp 46-47.

defendant's case is that UTA's roommate in Rest Area 2 was CVR, but UTA had not seen CVR around.[19] As for CVR, he claimed that he only saw UTA and VK in the rest area before he went to sleep. If he was there, it was inexplicable that he did not see SP and Arumugam Sakthivel ("AS"). The worker AS who did not testify at the trial supposedly slept in the backyard. As for VK, he said that UTA and CVR slept in the backyard. VK also testified that AS slept in the main building, but this aspect of his testimony contradicted TBL's AEIC: TBL had said that AS slept in the backyard.

51 Saravanan went to the backyard to wake up his fellow workers. CVR, UTA and VK said that they followed Saravanan and ran out from the backyard down the side of the apron to the main road. They saw the fire in Store Room 1 as they ran passed the windows on the way out. Ms Chin contends that their decision to run is consistent with the presence of a fire in the backyard. Be that as it may, my difficulty is with the route taken and described in the AEICs of CVR, UTA and VK. Their testimony on the route taken is inherently improbable when examined in light of the defendant's evidence that the backyard was completely enclosed. In particular, TBL in cross-examination[20] and in his signed statement to Megan confirmed that there "[was] no access into the backyard from outside". I also refer to the defendant's Opening Statement where the defendant confirmed that there was no means of access and egress from outside to the backyard of Unit 141. In the circumstances, it is difficult to understand how these workers could have taken the route as described. With the backyard enclosed, they would have to leave the building

[19] Transcript dated 22 July 2016, p 59.

[20] Transcript dated 19 July 2016, p 167.

through the hallway in the ground floor. The incongruity in this aspect of the testimony casts doubt on the truth of the witnesses' evidence and it lends support to Ms Chin's allegation that CVR, UTA and VK could not have slept in Rest Area 1 and Rest Area 2 on the night of the fire, and as such their testimony that there was no fire in the backyard should be rejected. SP, Ravi and Saravanan also testified that there was no fire in the backyard. I do not give any weight to the testimony of the six workers who testified that there was no fire in the backyard. Their overall evidence is riddled with inconsistences and lacks credibility. I do not find the six workers to be reliable witnesses.

52 In their respective AEICs, SP, UTA, CVR and VK claimed that from the JTC canteen they saw fire and smoke rising from the roofs of Units 141, 143 and 145, and that the fire above the roofs of Units 143 and 145 was "ferocious". The veracity of this aspect of the evidence is again put into issue. There is an appreciable difference in what the four workers deposed in their AEICs compared to what Ravi and Saravanan said in their respective 2015 Statements. Further inconsistencies appear when the AEICs are compared to the 2015 Statements to Megan. CVR in his 2015 Statement to Megan merely stated that he noticed fire and smoke rising from the roofs of both Units 141 and 143. There was no reference to seeing fire in roofs of Units 143 and 145 that was more ferocious in the 2015 Statement. VK's 2015 Statement said that he saw thick smoke (and there was no reference to fire at all) coming out from the roofs on Units 141 and 143. UTA's 2015 Statement said he noticed smoke and fire rising out from the roofs of Unit 141 and 143. There was no reference to the fire in the roofs of 143 and 145 being more ferocious in his 2015

Statement. SP appeared not to have been interviewed by Megan, or if he was interviewed, his statement was not produced.

Other factual witnesses

53 I will now turn to the testimony of the SCDF officer, Warrant Officer Ismail bin Jasman (PW4) ("WO Ismail"), who was subpoenaed by the plaintiff. WO Ismail arrived at the scene of the fire after the workers had gathered at the JTC canteen. Ravi said that he called SCDF from the JTC canteen. I prefer the testimony of WO Ismail over that of the workers for the reason that their testimonies on the matter are incompatible and inconsistent with their respective AEICs, and their 2015 Statements are also incompatible and inconsistent with their AEICs.

54 WO Ismail testified that when he arrived at the scene, the first responders led by Captain Khairuddin Hamid Ali ("Captain Khairuddin") were already fighting the fire in the rear section of Unit 141. WO Ismail observed that the fire was "well alight" in the rear section of Unit 141.[21] His team was supporting Captain Khairuddin's team of firemen. At that time, no fire was visible in Unit 143. In answer to Ms Chin's further questions, WO Ismail said:[22]

> Q: …Can you tell us if you all had noticed a fire at 143 when you arrived, would you also deployed fire-fighters to spray the jets at 143?
>
> A: Mm, 143?

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[21] Transcript dated 19 July 2016, p 4.

[22] Transcript dated 19 July 2016, p 5.

> Q: If you had seen fire at 143, would you have deployed men to also focus fire-fighting efforts …
>
> A: If I would have seen it, of course, yes, we would have jet directed to 143. But during that point of time when we arrived we were concentrating on 141 then.
>
> …
>
> Q: Do you recall approximately how long it was after your arrival that you noticed fire at unit 143?
>
> A: Specifically, no, ma'am.

55 Mr Singh cross-examined WO Ismail on what he saw when he arrived at the scene of the fire:[23]

> Q: Are you saying that you did not see any fire in unit 143 or 145?
>
> A: At that point of time, I wouldn't know if there's 143 or 145 involved in the fire, I only see fire well alight at the rear of the building, which happened to be 141. So initially I get my men to set up the water supply, and then they direct the hose, the nozzle to the rear of the building of 141.
>
> Q: Am I right to understand that you saw the fire coming from the rear of that block of building, but you are not able to identify whether they are 141 or 143 or…
>
> A: Not at the point of time, no.
>
> ….
>
> Q: While you were fighting the fire, did you notice whether the fire was spreading from the back of the block?
>
> A: Initially, no, sir. I was concentrating only on the 141, rear side of 141.
>
> Q: Later did you notice any spread of the fire?
>
> A: Yeah, eventually it was spread towards 143 and 145 then, yeah.

[23] Transcript dated 19 July 2016, p 14.

56 On re-examination by Ms Chin, WO Ismail confirmed that Unit 141 was on fire and that the fire in Unit 143 was visible from the outside much later:[24]

> Q: So in terms of what you saw, leaving aside how it actually may have spread in terms of what you saw when you first arrived, which unit, in your eyes, was on fire?
>
> A: Which unit?
>
> Q: Yes, which unit?
>
> A: Believed to be 141 then.
>
> Q: 141?
>
> A: Yes.
>
> Q: Then in terms of the fire that you later saw for yourself in unit 143, was it upon your arrival or was it later in?
>
> A: Later in time.
>
> …
>
> Q: Would it be later or at the same time or earlier than the fire you saw at 143? Which came first, 143 or 145?
>
> A: I can't recall that, ma'am.
>
> …
>
> Q: …But in terms of unit 141 versus 143 and 145, in your mind is it the case that you first saw the fire in 141?
>
> A: On my first arrival, yes, I saw the 141.

57 I agree with Ms Chin that if the roofs of Units 143 and 145 were already in flames, as the workers claimed, before the fire engines arrived, WO Ismail would have seen the roofs on fire when he arrived on the scene; it was clear from his testimony that the roofs of Units 143 and 145 could not

[24] Transcript dated 19 July 2016, p 27.

have been on fire as claimed by the defendant's witnesses. No fire was visible externally in Unit 143. Separately, Major Rashid testified that he interviewed an eye witness from a factory at 129 Kallang Way 2 ("Unit 129"). According to SCDF Report, the perimeter fence of Unit 129 was damaged and the contents in Unit 129 sustained heat, smoke and water damage. Major Rashid confirmed that he interviewed one Mamee Weeradet, the eye witness from Unit 129, and the SCDF Report recorded the eye witness as saying that from the rear of his factory building, he "saw black smoke" and it was "coming in the direction of No. 141 rear backyard area". SCDF's conclusion that the fire started in Unit 141 came from the interview, amongst other factors. Major Rashid also explained in re-examination that SCDF's conclusion that the fire started in Unit 141 was based on its overall investigations in terms of witness account, burn pattern, damage found in Unit 141, and also the physical evidence he and his team of investigators saw at the scene of the fire.

Mr Tan's expert evidence

58 Mr Tan opined that the fire started in Unit 143 and spread to Unit 141. There are a number of reasons why Mr Tan considers this to be the case: (a) burn pattern; (b) severity of fire damage; and (c) the path of fire travel.

59 Mr Tan attaches importance to the presence of what he observed from the photographs to be a distinctive "V" pattern on a concrete wall in Unit 143 and the nearby debris showing cable drums with insulation also severely burnt. The roof structure above this area of fire damage had collapsed. The "V" pattern on the concrete wall, which he observed, is a significant indicator that professional fire investigators use in determining the area of fire origin, taking

into consideration the fuel load, fire load, ventilation openings and path of fire travel. Mr Tan said that he was not relying on the spalled cement plaster on a "V" pattern as an indicator of the probable area where the fire had started. It was only to show that the concentration of the heat source on that section of the wall where the "V" pattern had formed. However, taking into account the "V" pattern and two other elements observed such as the severely burnt cable drums at the lower point of the "V" pattern, and the severe fire damage in the vicinity including the collapsed roof structure, he opined that the fire had probably started in the same area with prolonged burning.

60 In the witness box, Mr Tan conceded that if there was no "V" pattern on the wall, he would not conclude that the fire started in Unit 143.[25] This is an important concession on Mr Tan's part – the other two factors in [58] above are thus not independently supportive (whether singly or collectively) of Mr Tan's theory that the fire started in Unit 143. Before his late concession at trial, Mr Tan explained that the "V" pattern was considered together with photographic evidence of the cable drums with the cable insulations severely burnt and all of that suggested a strong heat source that resulted in the severe burning on the roof structure that eventually collapsed.[26]

61 Ms Chin tackles the issue of the spalled cement plaster head on. She submits that there is no distinctive "V" shaped profile in any of the photographs relied on by Mr Tan in the 2016 Megan Report, namely photographs 9 and 10 of Annex B and photographs 8 and 9 of Annex I. These

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[25] Transcript dated 28 July 2016, p 85.

[26] Transcript dated 28 July 2016, p 55.

photographs, so the argument develops, do not show the entire profile of the spalled cement plaster on the wall; the photographs were of the lower section of the spalled cement plaster on that wall. Ms Chin then refers to a more complete profile at photograph 7 of Annex I, where the pattern of spalling was tapered at the top so that the overall shape of the area of spalled cement plaster bore no resemblance to a "V" shaped profile.[27] I have examined all five photographs. I agree that it would be misleading to look at the lower section of the spalled cement plaster on the wall because the complete picture is not shown. I also agree with Ms Chin that in photograph 7 of Annex I, which is the picture of the entire area of spalled cement plaster on the wall, the overall shape captured on the photograph is not a "V" shape.

62 The plaintiff's fire expert, Mr Low Eng Huat ("Mr Low"), is from Burgoyne. Mr Low testified that there is no distinct "V" shape on the photographs used by Mr Tan; the "V" shape comes from two lines drawn on the photographs presumably by Mr Tan. He explains:[28]

> A: …The concept of V pattern is that this is physical. You can see it. Not imaginary, not illusion. You can see the V pattern on the wall. That is why V pattern of fire damage is a strong tool for fire investigator.
>
> If V pattern cannot be seen, then that is not a V pattern. I struggle to see from the photograph he has extracted indicating that that was a V. The only thing that was on the photograph to show a V were two highlight[ed] lines.

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[27] Plaintiff's Closing Submissions, para 64.

[28] Transcript dated 28 July 2016, pp 66-67.

63 According to Mr Low, what is being done by Mr Tan is to refer to the area of spalled cement plaster on the wall, and then speculate that a "V" pattern existed there earlier.[29] Besides, said Mr Low, there was no "V" shape profile on the wall where cement plaster had spalled off; it was something claimed by Mr Tan.[30] As explained, the "V" shape is from two lines drawn on the photographs. There is force in Mr Low's testimony.

64 Mr Low explained that the various factors could have resulted in the spalled cement plaster on the wall shown in the photograph. It could be due to fire load, differential temperatures when fire fighting water was introduced to the burning building. There would be differential expansion of different layers of material on the wall, weaknesses in the adhesion of the cement in certain areas. Another reason offered by Mr Low was the differential expansion between reinforcing rods or steel mesh and the surrounding concrete. In the photograph relied upon by Mr Tan, the spalled cement plaster was observed to be in the area of reinforced steel column.

65 Mr Low's criticisms of the "V" profile are not without basis; a simple study of the photographs would bear out his points. I further accept his explanation that a "V" pattern that professional fire investigators rely upon as indicative of the likely area of the fire origin would typically be a "V" pattern of *smoke staining* on the wall. Major Rashid holds the same view about visible soot stains.[31] The photographs relied upon by Mr Tan do not show any clear

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[29] Transcript dated 28 July 2016, p 70.

[30] Transcript dated 28 July 2016, p 73.

[31] Transcript dated 13 July 2016, p 112.

demarcation of soot stains on the wall. That was the state of affairs despite Mr Tan's unconvincing attempt to pick out semblance of soot stains on the plaster from the photographs. I am not persuaded by Mr Tan's attempt to rationalise and explain away the absence of soot stains on the wall: that the smoke could have been burned off; washed away or had fallen off with the plaster during fire-fighting. First, in any way, his comment – "there is no evidence to say that the spalled cement has no soot"[32] – is not helpful. Mr Tan was being argumentative and speculative. Second, from the photograph relied upon by Mr Tan,[33] as Mr Low pointed out, visually spalled cement is obvious; but the photograph does not show heavy soot stain. Mr Low was on-site in 2012 and he confirmed in the 2015 Burgoyne Report that there were no soot deposits on the particular "V" profile spalled cement plaster.[34] Third, Mr Low's explanation as to why fire-fighting activity would not likely wash away all traces of soot on the wall is reasonable. Mr Low explains :[35]

> A: … if there had been a V pattern of fire damage at that time, firemen's fire-fighting activity may be able to remove some of the smoke stain. But we should see traces of the V pattern on the wall.
>
> There are a few reasons to that: one, firemen do not aim at the wall to extinguish a fire. They will aim at the stock. They will try to establish that the fire can be fought by aiming at the stock, not the wall. There's no point to try to quench the wall. It will not help to slow down the fire spread. That doesn't make sense.
>
> …

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[32] Transcript dated 28 July 2016, p 106.

[33] 1AB 575.

[34] 1AB 407.

[35] Transcript dated 28 July 2016, pp 100-101.

> So although water jets [have] the potential to remove the stain on the wall, but it will be traces left. It cannot be completely no traces, like in this case.

66 On the overall evidence before this court, I find that the spalled cement plaster on the wall observed by Mr Tan is not a distinctive "V" pattern of smoke staining on the wall that would be indicative of a likely area of the fire origin. This finding is reinforced by the absence of evidence (whether photographic or otherwise) that would indicate that the fire started near an energised electrical source. Notably, the 2016 Megan Report regarded the "initial fire to be from the burning from insulation of the drums of cable" and that fire developed into a "fire plume with super-heated fire gas". No energised electrical source was identified. Neither was the location of Mr Tan's "V" pattern mentioned in any of the AEICs filed by the defendant nor pleaded in the amended Defence. A belated attempt was made during cross-examination to bring in the isolator switch that was next to the hoist crane in Unit 143 by the defendant.

67 In defending his theory that the fire started in Unit 143 and then spread to Unit 141, Mr Tan introduced the existence of super-heated fire gas that gave the impression of a developing fire that consumed the combustible material that was readily available as it travelled upwards and towards the "c.i. roof structure in unit 143". He opined that the super-heated fire gas would find its way through the gaps and openings between the c.i. roof and the brick wall separating Unit 141. Mr Tan referred to the photograph of the cable drums with insulation burnt exposing the copper wires. The exposed copper wires indicated that the heat source there was very strong; and that was why it burned upwards to the roof structure from the middle section to the rear end of

Unit 143. He relied on the collapsed roof as evidence of the intensity of the fire. The 2016 Megan Report said:

> I have analysed and carefully considered other relevant evidence surrounding the said "V" pattern on the brick wall in unit 143 separating unit 141. It shows that the flame from the initial fire (i.e. the burning from insulation of the drums of cable) had been impinging directly onto that particular section of the wall before the fire plume with the super-heated fire gas had risen to the c.i. roof in unit 143. …
>
> As the fire continued to burn at the area of the "V" pattern, the super-heated fire gas with flames would continue to rise to the c.i. roof in unit 143 (as mentioned above). The super-heated fire gas when trapped under the c.i. roofing sheets would mushroom sideways. Owing to the mushroom effect, the super-heated fire gas would find its way through the gaps and openings between the c.i. roof and the brick wall separating unit 141. It would then ignite the pvc trunking and the wire insulation at the roof in unit 141 and cause the fire to spread down the line of the pvc trunking.
>
> The burnt-through and collapse of the c.i. roofing at unit 143 which gives the indication that the fire plume had come from the developing fire at the area of origin at the brock wall in unit 143 separating unit 141.

68 Mr Low observed that Mr Tan had not explained how a fire starting in Unit 143 could have involved the opposite wall of Unit 141 with only the insulations of the cable drums burnt, but not igniting other nearby combustible materials along its burning path, such as the stock stacked against the partition wall that separated the two units. Mr Low also noted that there was no common electrical insulation between the units or electrical supply cables routed through the boundary walls of the units. Hence, there was no combustible trunking, plastic conduits or cable insulation that could have ignited and spread the fire to Unit 141. Mr Low opines:

> In my view, it would be **implausible that a fire ignited at one end of an [electrical] supply cable** (wall separating Unit 143)

> producing "*a line of fires* [sic]" along the cable and **missing all combustible materials in the path of the cable**, including burning materials dripping onto combustible stock below, but to start spreading the fire only after crossing almost the entire width of the premises. [emphasis in italics original; emphasis in bold added]

69 As I see it, Mr Tan's overall answers in cross-examination are actually compatible with Mr Low's observation and opinion in [68] above. In addition, his theory that the super-heated fire gas ignited the PVC trunking is impossible without a fuel load. Mr Tan said: [36]

> A: PVC is harder to ignite. But once ignite, it's a different matter. And even once it ignite, your Honour, if you don't have a supporting fire below to generate, to cause the PVC to … you see, all fires will not burn solid matters, even wood. It has to heat it up to an extent where you've got vapour. But you may think that, "My God, how can wood got vapour?" But that is our hypothesis, it must. All fire burn on the vapour. So PVC itself … if you don't have a supporting fire it will, it will also burn for a while then extinguish.
>
> …
>
> A: … you must have fire below to support the burning. And if there's no fire to support the burning, the dripping fire drips down, then that part of the PVC may have the fire… or may not have that fire. But eventually when you go to that store and they have a fire, they saw the fire in the store, the fire will be supporting the PVC trunking burning. It will continue to burn. You remove the fire, I bet you the PVC will slowly burn itself down. That's the characteristics of PVC. Check up … you can check up on the literature.

70 The 2015 Megan Report made reference to "dripping fires" and theorised that the super-heated fire gas from Unit 143 *could have* ignited the

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[36] Transcript dated 28 July 2016, pp 24-25; p 32.

cable trunking and the wire insulation at roof level and caused dripping fires to drop down onto combustible materials resulting in the small fire in the store room. Subsequently, in the 2016 Megan Report, Mr Tan used stronger language:

> The fire that they saw on top of the multi-tier racks in store room #1 **is the result of dripping fires** from the burnt pvc trunking and wire insulations onto combustive materials on top of the multi-tier racks. [emphasis added]

71 What caused the change in opinion to a stronger stance? None of the 2015 Statements made reference to "dripping fires", but this phrase only surfaced in the AEICs filed by Ravi and Saravanan in November 2015. Both Ravi and Saravanan could not explain why they did not mention the "dripping fires" in the 2015 Statements. There is some force in Ms Chin's submissions that in truth the workers who were interviewed by Megan, SCDF and Approved did not see "dripping fires" or "falling particles from PVC cable duct" and that the expressions "dripping fires" or "falling particles from PVC cable duct" were only made belatedly to give credence to Mr Tan's theory.[37]

72 As stated, there was no explanation in the 2016 Megan Report on what the source of ignition that developed into this "super-heated fire gas" was. Significantly, Mr Tan acknowledged that he did not deal with the cause of the fire at all. In his oral testimony, however, he brought in the hoist crane and isolator switch that were located very high above the ground and he opined that the cable to the isolator switch was still energised. He reckoned that the plaintiff's workers would use the remote control to operate the hoist crane and

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[37] Plaintiff's Closing Submissions, para 91.

would not switch off the isolator switch. He then went on to refer to incoming cables of "fans" that would be energised. He explained that the common cause of fire in electrical fires is loose connection.[38] Ms Chin rightly objected to the introduction of this possible source of ignition which she complained was not only late, and not pleaded, but also speculative.

73 I accept Mr Low's opinion that based on the as-built drawing, the distance between the so-called "V" profile and the PVC trunking was a distance of about 7 metres and the fire starting at the stem of the hoist crane would have to spread sideways more than 40 metres in order to ignited the PVC trunking, and thus the fire would have to be "really big".[39] Mr Low could not fathom Mr Tan's "super-heated fire gas" theory which Mr Low said he had not come across. For the sake of argument, Ms Chin submits that there is no scientific explanation (as well as forensic evidence) of how hot combustion air which rises could ignite the PVC trunking situated at a lower height in Unit 141 than the gap between the false ceiling and boundary. Given the "L-shape" of the PVC cable trucking in Unit 141, the "line of fire" alleged by the defendant would have to travel vertically downwards before it could move horizontally in the direction of the external wall. Mr Low made the point that if the fire in Unit 143 caused the super-heated fire gas to develop into a fire plume, the fire must have been very well developed and intense. The fire in Unit 143 had to be very big before it could have spread to Unit 141, and if it was big inside Unit 143 before it spread to Unit 141, it was odd that none of

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[38] Transcript dated 28 July 2016, p 59,

[39] Transcript dated 28 July 2016, p 76.

the defendant's workers inside Unit 141 noticed the glow of the fire or smoke in Unit 143 from the gaps between the roof and the concrete wall.[40]

74 OSG testified that there were three smoke detectors on the ground floor – one each was installed in the back yard store; general store; and utility office. One other smoke detector was installed in the general office on the mezzanine floor. OSG also testified that a few months before the fire, the plaintiff's store man accidentally set off the smoke detector and triggered the fire alarm during fogging. Besides, the fire alarm system would have had to undergo yearly maintenance before renewal of insurance, and the annual maintenance was carried out in May 2012 before the plaintiff renewed its insurance policy.[41] If the conditions that existed in Unit 143 were as Mr Tan postulated, smoke would have activated the smoke detectors and triggered the fire alarm. The workers claimed not to have heard the fire alarm from Unit 143 and the defendant tried to infer that something was wrong with the smoke detectors. OSG's testimony that there was nothing wrong with the smoke detectors is relevant to undermine the existence of the conditions needed to develop into a super-heated fire gas before the fire spread to Unit 141.

75 I find Mr Tan's last minute attempt in the witness box to suggest that the isolator switch for the hoist crane in Unit 143 was a source of ignition to be without factual basis and is hence speculative. Mr Tan was instructed long after the incident and the photographs he reviewed did not show items of electrical remains such as wiring, socket outlets, appliances in the fire debris

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[40] Transcript dated 28 July 2016, pp 75-77.

[41] Transcript dated 12 July 2016, pp 46-47.

to positively prove an electrical source of ignition in Unit 143. Save for the peripheral shots of the concrete column used to mount the hoist crane, there were no photographs of the actual hoist crane and the isolator switch. The 2015 Burgoyne Report exhibited a copy of a plan layout and a side view of the electrical supply line in Unit 143. More to the point, there is no evidence that Mr Tan's "V" profile was in the vicinity of the alleged electrical source of ignition. In another part of his oral testimony, Mr Tan said that the point of origin was at the location of the drums of cable. Mr Tan said:[42]

> A: … I've analysed it, I tested it, and dead apex, normally we call point of origin, we're pointing to the point of origin, and that is the drum. We choose not to go and say that is the point of origin, that's why we call an area of origin now in fire investigation. Because it is very difficult to identify a point, but an area of origin. But of course we are not talking about an area so big, but it must be that area. And that area where the V is pointing is the source that provide[s] the ignition, the fuel that was ignited and from that it started to burn and the fire began to develop. When it spread to the other combustible materials, of course, you would intensify the fire and burn upward. …that roof collapse …on this side … it is consistent to what I talk about the fire growth, the plume.

Notably, Mr Tan's analysis did not deal with the fact that the "drum" he referred to was at ground level whilst the isolator switch was more than 3 metres high above ground level.

76 Mr Tan relied on the factual account of the foreign workers who gave the 2015 Statements. He relied on the evidence of Ravi and Saravanan – they claimed to have seen a "travelling line of fire" at the roof level in Unit 141 and

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[42] Transcript dated 28 July 2016, pp 83 & 84.

Mr Tan opined that this line of fire was more likely to be the result of fire spreading from Unit 143 and igniting the PVC trunking and the wire insulation which ran above Store Room 1 towards the external wall of Unit 141. I have already commented on the unreliability of their evidence (see [40]-[52] above). The workers interviewed by SCDF shortly after the fire did not report that they saw a "travelling line of fire" or "dripping fires". Mr Singh accepts that the workers reported a small fire in Store Room 1 to SCDF.[43] There is also the matter of Mr Tan's evidence in the witness box that the workers were not "trained" and would not have been able to tell in what direction the line of fire was travelling and I accept Ms Chin's valid criticism of Mr Tan's theory that was built upon the workers' claim of a travelling line of fire moving from the boundary wall in the direction of the windows and external brick wall.

77 I will now deal with one other aspect of the evidence: the severely damaged offices located in the mezzanine floor of Unit 141. Mr Tan argued that this evidence of damage indicated that the fire started in Unit 143. Mr Tan's theory was not made out since I found the evidence of the foreign workers' unreliable as well as rejected the notion of a "V" pattern on the wall in Unit 143, which he conceded to be the crux of the basis of his theory (see [60] above). The extensive fire damage to offices in the mezzanine floor of Unit 141 is not persuasive evidence that the fire started in Unit 143. As Mr Low remarked, there could be other reasons such as the existence of combustible materials in the mezzanine floor.

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[43] Transcript dated 29 July 2016, p 5.

SCDF Report

78 The SCDF carried out investigations on-site after the fire and interviewed some witnesses. The SCDF Report concluded that the origin of the fire was in the backyard of Unit 141 in the vicinity of severely burnt wooden shelves, and the cause of fire was stated to be "Accidental (Electrical Origin at the wiring/connections)". A worker from Unit 129 also told SCDF that black smoke was from the rear of Unit 141.

79 SCDF's conclusion that the fire started within Unit 141 is further reinforced by the oral testimonies of Major Rashid and WO Ismail. They were both subpoenaed as factual witnesses. I have already discussed WO Ismail's evidence which I accept in [53]-[57] above. Major Rashid's evidence is clear on two points raised in cross-examination and I have no difficulty accepting his testimony.

80 Major Rashid, an SCDF investigative officer, was first questioned by Mr Singh as to whether he considered that the fire could have started in Unit 143. Major Rashid said:[44]

> Q: Did you know there was this crane in that unit 143 at that point in time?
>
> A: Probably I would have noticed but I can't recall.
>
> Q: Did you realise that it is from that section of unit 143 right down to the rear where the damage was very severe in unit 143?
>
> A: Yes, that's correct.

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[44] Transcript dated 13 July 2016, pp 95-96.

> Q: Did it occur to you that that area could have been the ignition source of the fire?
>
> A: Probably we have concluded that the fire has started in 141 and we in fact have considered whether the possibility of fire happening from 143, but we didn't make that conclusion.
>
> Q: But did it occur to you to make a more thorough investigation of 143 and 145, since they were so badly damaged in the rear section, that possible ignition source could have been in 143?
>
> A: I do agree with you. But again we have done our best conclusion on where the cause of fire was.

81 Major Rashid disagreed with Mr Singh's suggestion that SCDF had missed noticing the "V" pattern which Mr Tan observed on the photographs. In re-examination, Major Rashid agreed with Ms Chin that to denote a possible seat of fire, the characteristics of the "V" pattern includes traces of soot, not just spalling of cement plaster. Further, Major Rashid confirmed in re-examination two points:[45]

> Q: When the SCDF started investigations, did you all consider the possibility that the fire may have started in some other unit, and not necessarily 141, even though it was the worker from 141 who had called SCDF?
>
> A: Yes. We were very well aware that if … to consider where the fire have started from other units because it's … we have to find the correct cause of fire in order to be fair to everybody.
>
> Q: When you say you have no comment to JT Megan's report, can you let us know whether, as of today, as of now, SCDF still stands by its report?
>
> A: Yes.
>
> …

[45] Transcript dated 13 July 2015, p 112-114.

> Q: In terms of SCDF's conclusion [that the fire started in unit 141], what would SCDF have considered before it came to the conclusion that the fire started in unit 141 and not the other neighbouring units?
>
> A: In fact out conclusion is based on our overall investigation in terms of witness account, burn pattern damage, and also evidence that we can see at the scene.

82 Major Rashid's opinion on the path of the fire as explained in cross-examination is as follows:[46]

> Q: So can you tell us what was the path of the fire travel from the backyard to the store?
>
> A: Yes, that's marked as X2 and X1. So we believe the fire had already gone up to the ceiling of the rear backyard and have travelled in through the ceiling and into the area X1.
>
> Q: Which part of the ceiling? Is it near the wall or centre? Which part of the ceiling will the fire have travelled up from the shelves?
>
> A: Again? Which point of reference are you using?
>
> A: Let's look at page 306.
>
> A: Yes.
>
> Q: Are you able to explain from there where your investigation found the fire would have travelled?
>
> A: Yes. What we believe is that from X2, it passes through the cooking area, there's a … more or less a roof there, and it got into X1, into the building. Yes. That's our interpretation.

83 The marking "X2" is of the backyard resting area and the marking "X1" is of the store area. From photographs 20 and 21 in the SCDF Report, the marking "X2" is located near the severely burnt wooden shelves.[47] Mr

[46] Transcript dated 13 July 2016, p 87.

Singh pointed out that the workers saw a small fire in Store Room 1 which was nearer the main entrance, but there was no report of fire in Store Room 2 which was nearer the backyard. Major Rashid explained that the workers did not differentiate between Store Room 1 and Store Room 2 at the interview with SCDF, and that the whole stretch was damaged by heat.[48] The electrical cooking appliances that were seen in Unit 141 by Major Rashid included an electrical rice cooker and electrical heaters for cooking.[49]

84 Major Rashid was asked point blank in cross-examination whether it occurred to him that the section where the hoist crane was in Unit 143 and described as the cable cutting area could have been the source of ignition. This is what Major Rashid had to say in answer:[50]

> Q: Did it occur to you that that area could have been the ignition source of the fire?
>
> A: Probably we have concluded that the fire has started in 141 and we in fact have considered whether the possibility of fire happening from 143, but we didn't make that conclusion.
>
> …
>
> Q: I suggest to you, Major Rashid, that if SCDF had done a more thorough investigation, then they would not have missed out on the V pattern which Mr Tan saw on the photographs taken at the time of the fire.
>
> A: I do not agree on that.

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[47] Transcript dated 13 July 2016, p 110.

[48] Transcript dated 13 July 2016, pp 89-90.

[49] Transcript dated 13 July 2016, p 111.

[50] Transcript dated 13 July 2016, p 95 & p 102.

85 In re-examination, Ms Chin asked Major Rashid whether SCDF considered the possibility that fire could have started in some other units and not from Unit 141, and he confirmed again that SCDF was well aware that the fire could have started from another unit; it was considered because SCDF had to "find the correct cause of the fire in order to be fair to everybody".[51] Major Rashid was asked to clarify his refusal to comment on Mr Tan's report:[52]

> Q: When you say you have no comment to JT Megan's report, can you let us know whether, as of today, as of now, SCDF still stands by its report?
>
> A: Yes.

Burgoyne Reports: 2013 and 2015

86 Mr Low of Burgoyne concluded that the evidence as a whole indicated that the fire started within Unit 141. The defendant did not permit Burgoyne to interview the workers and Mr Low had to depend on what Approved was told. RK had indicated to Approved that he saw the fire to be at the rear northern store of Unit 141 (*ie*, Store Room 1); and there were heavy smoke stains on the exterior above the windows of the northern wall at the rear store of Unit 141. The smoke stains as described were consistent with RK's account of the location of the fire.

87 I am not persuaded by Mr Tan's criticism of Mr Low's findings, seeing that the criticism was based on a review of photographs and had its limitations. In contrast, Mr Low was on-site and saw the smoke stains on the external wall outside the windows of Store Room 1. He saw intense burn marks on the

[51] Transcript dated 13 July 2016, p 113.

[52] Transcript dated 13 July 2016, p 113.

underside of the drip cap of the windows which was consistent with evidence of fire venting out of the windows. I reject Mr Tan's bald suggestion that the stains on the exterior wall above the windows were due to burnt PVC pipes stored outside the windows along the side apron of Unit 141.

Conclusion on issue (a)

88 Given the findings above, the fire could not have started in Unit 143 and then spread to Unit 141. I am further satisfied that it was more probable than not that the backyard of Unit 141 was on fire. Another area of fire was in Store Room 1. Burgoyne described heavy smoke stains on the exterior above the windows of the northern wall at the rear store of Unit 141. The smoke stains as described were consistent with fire in the rear northern store of Store Room 1.

89 With the finding that the fire started within Unit 141, the defendant's Counterclaim is without merit, and it is therefore dismissed with costs.

Issue (b): Was the fire that broke out in Unit 141 caused by the negligence of the defendant?

90 The plaintiff's case is that the defendant was negligent in failing to take reasonable precautions to prevent a fire starting and/or spreading. To prove the defendant's negligence, the plaintiff has to show how the fire was caused. There is no direct evidence as to the cause of the fire, and it is not surprising that the main contest is whether *res ipsa loquitur* applies in this case.

Application of res ipsa loquitur

91 There are three elements to *res ipsa loquitur* and Gary Chan in *The law of Torts in Singapore* (Academy Publishing, 2nd Ed, 2016) describes the elements as follow (at 265):

(a) The defendant must have been in control of the situation or thing which resulted in the accident;

(b) The accident would not have happened, in the ordinary course of things, if proper care had been taken; and

(c) The cause of the accident must be unknown.

92 In *Teng Ah Kow and another v Ho Sek Chiu and others* [1993] 3 SLR (R) 43 (at [25]), the Singapore Court of Appeal cited Megaw LJ in *Lloyde v West Midlands Gas Board* [1971] 2 All ER 1240 (at 1246) who said that *res ipsa loquitur* is used to describe what is in essence no more than a common sense approach, not limited by technical rules, to the assessment of the effect of evidence in certain circumstances. Ms Chin argues that *res ipsa loquitur* applies to this case whereas Mr Singh takes the contrary view.

93 Some of the defendant's workers were in occupation of Unit 141 on the night of the fire. In Ravi's words, his boss, TBL, had "sent two people as security to stay" in Unit 141.[53] The two persons were Ravi and Saravanan.[54] Hence, the defendant had possession and control of the premises and it was a

[53] Transcript dated 20 July 2016, p 148.

[54] Transcript dated 20 July 2016, p 157.

position that is not rejected by the defendant. Mr Singh's point, during oral submissions, is that mere occurrence of a fire in the premises is not a sufficient basis for the application of *res ipsa loquitur,* relying on the Hong Kong Court of Appeal's decision in *Wayfoong Credit Ltd and others v Tsui Siu Man t/a Wilson Plastics Manufactory* [1984] HKCA 205 ("*Wayfoong HK*") for this proposition. In that case, a fire broke out in the defendant's flatted factory on the eighth floor of an industrial building, which caused damage to the plaintiff's premises above the factory. How the fire started was unknown, albeit the fact that several possible causes of the fire were advanced. The Hong Kong Court of Appeal held that the evidential maxim of *res ipsa loquitur* was not triggered by the mere occurrence of the fire, as other reasonable possibilities other than the defendant's negligence could not be excluded. The court adopted the words of Lord Goddard CJ in *Sochacki v Sas and another* [1947] 1 All ER 344 (at 345):

> Everybody knows fires occur through accidents which happen without negligence on anybody's part.

94 In addition, Mr Singh argues that an inference of negligence on the part of the defendant arises if the circumstances under which the fire originated and spread warranted such an inference, and much depends on the particular facts of the case. Mr Singh submits that there is no evidence to infer negligence on the part of the defendant. The cause of the fire was unknown. There was no shred of evidence to support the respective opinions of SCDF and Burgoyne as to the possible causes of the fire. Mr Singh's fallback argument is that even if *res ipsa loquitur* applies, the defendant was not negligent because: (a) it had a valid Electrical Installation Licence; and (b) its workers attempted to fight the fire as soon as they discovered the fire, and they

also called SCDF to fight the fire. The defendant's further alternative defence is that the fire was accidental in nature, and pursuant to s 63 of the Insurance Act, the plaintiff's claim is not actionable. As to what constitutes an accidental fire, Mr Singh cites *Filliter v Phippard* [1847] 11 QB 347 for the proposition that an "accidental fire" under the English equivalent of s 63 concerns cases of fire produced by a mere chance or incapable of being traced to any cause. The plaintiff's pleaded Reply, on the other hand, is that the defendant is not entitled to a defence under s 63 since the "accidental" nature of the fire as postulated in the SCDF Report is not within the meaning of "accidentally" as contemplated in s 63.

95 Ms Chin cites *Shimizu Corp v Lim Tiang Chuan and another* [1993] 2 SLR(R) 45 ("*Shimizu*"). In that case, Shimizu alleged that the fire originated from the defendant's building and was caused by overheating food left unattended on a kerosene stove on the top floor of the building and that the fire was caused by the defendant's negligence as owner and occupier of the building and/or by its servants or agents. Alternatively, Shimizu claimed that the defendant had allowed cooking by the use of a kerosene stove to be carried out in the building and had allowed fire to escape and damage Shimizu's building. The court held that although the true cause of the fire was not established, the fire, nonetheless, originated in the defendant's premises that were under the control of the defendant's servants or agents. Likewise in this case, there were workers in occupation of the building at the time of the fire. Thean J (as he then was) rejected as hearsay evidence the suggestion that "the fire was believed to be caused by the over-heating of food left unattended on a kerosene stove" (at [8] of the report). The court also refused to draw an inference that it was more probable than not that the presence of kerosene

stoves amongst other things destroyed in the fire meant that the kerosene stoves had been used by the defendant's workers in cooking food and the fire was caused by cooking or over-heating of food in the defendant's building. In *Shimizu*, the defendant did not call its workers as witnesses to provide an eye-witness account of the fire and there was no investigation conducted by any fire expert as to the probable cause of the fire. However, the court was of the view that the circumstances were such that the fire could not have started without some lack of care on the part of the defendant's servants or agents in the defendant's building. As the defendant had not shown that the fire was accidental and that it could have occurred without their negligence and that of their servants or agents, the inference that the fire was caused by the negligence of the defendant or that of their servants or agents was not displaced. Ms Chin's point is that in this present case, the workers who testified had been economical with the truth as to what had happened on the night of the fire. There is basis for *res ipsa loquitur* to apply.

96 Ms Chin argues that the facts in *Wayfoong HK* are distinguishable. In that case, the factory was vacant after business hours and the fire broke out three hours later after everyone had gone home for the day. By and large, the defendant in *Wayfoong HK* would not have known about the fire and how it started. Besides, no fire safety statutes or regulations were breached in *Wayfoong HK*. It is Ms Chin's contention that *res ipsa loquitur* applies in this case, especially when the defendant created an even risker situation by continuing to: (a) illegally house its workers in Unit 141; and (b) not comply with fire safety standards.

97 I accept Ms Chin's submission that this is a case of *res ipsa loquitur*. I will elaborate on this holding below. Suffice to say here that the outbreak of the fire on 6 September 2012 must have had something to do the defendant's use of the factory space in Unit 141 as workers' quarters. The existing fire safety measures in place were only adequate for the designated use of the premises as factory space but not as workers' quarters. There were evidential gaps arising from irreconcilable discrepancies in the workers' evidence. The cause of fire is thus unknown in the sense that it is not possible for the plaintiff to prove precisely what was the relevant act or omission which set in train the events leading to the fire. All in all, the environmental conditions and circumstances under which the fire originated and spread created an inference of negligence on the part of the defendant, its servant or agent, and the defendant had not shown that it was not negligent. The defendant was in control of Unit 141 and it was for the defendant to explain that the fire was not due to its negligence and that of its servants or agents. I will now examine Ms Chin's contentions in detail.

Use of Unit 141 as workers' quarters

98 As at the date of the fire, the defendant was aware that the factory space in Unit 141 was being used as accommodation for it workers. The defendant said that there were ten workers living in Unit 141 on the night of the fire. Notably, the defendant was fully aware that its use of factory space to house its workers was an unauthorised change of use contrary to s 30(1) of the FSA; and that it was a repeated offender despite being fined for breaching s 30(1) since 2009. Not only had the defendant erected a zinc roof to the boundary fence at the rear of Unit 141 to create an enclosed accommodation,

cooking and resting area in the backyard, the interior of the building at Unit 141 was also changed from an office space to an accommodation area. I will focus on s 30(1) of the FSA. The relevant portion of the provision reads:

> **Application for change of use of premises**
>
> 30—(1) Any person who changes the use of a premises shall, if such change of use would cause the existing fire safety measures to become inadequate, prior to carrying out the change, apply to the Commissioner for approval to change the use of the premises.

99 By s 30(3) of the FSA, permission for change of use of premises may be subject to conditions, and the conditions could include the provision of additional fire safety measures in relation to the premises. It is pertinent to note that, a few months before the fire, the defendant in May 2012 was fined a second time for violating s 30(1) of the FSA. The location and description of the defendant's fire safety violations in 2012 read:[55]

> **Location of Fire Safety Violation:** Entrance, Rear and within factory area of 141 Kallang Way 1 Singapore 349185
>
> **Description of Fire safety Violation:** Change the use of factory space to workers dormitory which would cause the existing fire safety measures to become inadequate

100 Besides a fine, the defendant was required to desist from the unauthorised activity, that is to say, "alleviate the said fire safety non-compliance/s within 14 days from the date of this notice [*ie*, 25 May 2012] and to prevent the recurrence of such fire safety non-compliance/s in the premises or part thereof".[56]

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[55] 3AB 1440.

[56] 3AB 1440.

101 As stated, the defendant was again found to have contravened s 30(1) of the FSA, and post-fire summonses were issued against the defendant in October 2012. I have so far been referring to the defendant's unauthorised change of use to workers' quarters. In addition, charge 5 of the post-fire summonses related to the unauthorised change of use of part of the open areas of the compound to storage areas in contravention of s 30(1) of the FSA. The defendant admitted to committing similar offences in the past as per the Statement of Fact prepared by SCDF. The first time the offence was committed was in 2009, and then again in 2012, and on both occasions fines were imposed and paid.

102 It is indisputable that the defendant has had a history of using part of the factory at Unit 141 as workers' quarters. To repeat, on 6 October 2009, the defendant had received notices of fire safety offences related to the unauthorised change of use from factory space to workers' quarters and cooking and resting areas, and on 25 May 2012, the defendant was again alerted that the use of the factory space as workers' quarters was an unauthorised change of use that would cause the factory's "existing fire safety measures to become inadequate". Specifically, the defendant was required by SCDF then to stop using the factory as workers' quarters, but the May 2012 contravention continued into the months before 6 September 2012. The defendant's workers continued to reside in Unit 141, and it is not disputed that they cooked dinner in the premises on the night of the fire that occurred in the early hours of 6 September 2012.

103 The factual position as described was not controverted by TBL, who was aware of the defendant's contravention of s 30(1) of the FSA. I reject his

lame excuse that the workers spent nights in the factory for convenience and that it was a temporary arrangement. As Ms Chin pointed out, there is nothing to the story that the factory was closer to the construction sites as compared to the addresses stated in their work permits. In fact, the distance between the factory and the constructions sites was further. The defendant had not adduced any countervailing evidence to refute Ms Chin.

104 The inadequacies of the existing fire safety measures following an unauthorised change of use are evident from the absence of fire extinguishers and fire hose reel in the backyard of Unit 141. TBL testified that the fire extinguisher that the SCDF officers found in the rear of Unit 141 was an expended fire extinguisher that the workers brought back from the construction sites to Unit 141. In my view, TBL appreciated that there were no fire extinguishers in the cooking area and that the nearest fire extinguishers were limited to those inside the building. The fire hose reel was also inside the building. Ravi's initial answer that the fire hose reel on the ground floor was in front of the building is probably true although he quickly feigned an inability to recall its location after realising that his initial answer was not helpful to the defendant.[57] On the whole, I find that the defendant did nothing to address SCDF's concerns that the existing fire safety measures that were applicable to a factory were inadequate for workers' quarters. Yet the defendant continued to use part of the factory space as workers' quarters even though it had come to light and to the knowledge of the defendant months before the fire on 6 September 2012 that the fire safety measures in Unit 141 were inadequate. Put simply, the fire on 6 September 2012 occurred in

[57] Transcripts dated 20 July 2016, p 159.

premises where the defendant's violation of fire safety measures meant that the defendant by its conduct had compromised the fire safety of the premises at Unit 141.

105 SCDF was aware that cooking was done in the backyard. The SCDF Report concluded that a possible cause of the fire was "Accidental (Electrical Origin at the wirings/connections)". The situation is more nuanced than that. In relation to the second requirement of *res ipsa loquitur*, what is relevant and applies is the defendant's knowledge of and opportunity to stop the contravention of s 30(1) or take steps to safeguard against the existing inadequate fire safety measures. Hence, the real question is whether or not the fire that broke out in Unit 141 and caused the property damage in Unit 143 is more likely than not effectively attributable to the inadequate fire safety measures in Unit 141 that was used not exclusively as factory space but also as workers' quarters for as many as ten workers at any one time.

106 Major Rashid recorded the fire as "Accidental" in the SCDF Report. He explained that although two categories appeared on the front page of the SDCF Report, SCDF had three main categories to choose from: (a) "Accidental"; (b) "Incendiary"; and (c) "Undetermined". This third category "Undetermined" is used if the SCDF fire investigator is not sure whether the cause of the fire was "Accidental" or "Incendiary". The "Incendiary" box would be ticked if the investigator believed that the fire was deliberately started. If the investigator did not believe that the fire was intentional, he would select the "Accidental" box.[58] In short, the word "Accidental" is used in

[58] Transcripts dated 13 July 2016, pp 53-55.

contradistinction to the word "Incendiary" which falls into another category where the fire was "deliberate" or "intentional". In the light of Major Rashid's explanation, if the third category "Undetermined" is used, it is then arguable, that the fire happened by mere chance in an accidental sense absent any hint of negligent act or omission.

107 On the night of the fire, the defendant's workers were in occupation of the premises; they were in actual possession of the premises from their occupation. TBL testified that Ravi was to take care of the stores in the factory. In this regard, the premises were under the defendant's care and control. Fire safety was the defendant's responsibility and in this case, fire would present a significant risk to the nearby properties and businesses. TBL confirmed that the defendant used Unit 141 as a store for electrical cables, conduits and fittings and a work area to prepare, assemble, test and commission electrical cables and equipment for its projects. It is not disputed that the premises had large quantities of stock items that were combustible but not dangerous in nature. In the backyard were several racks described in the layout plan of the ground floor and exhibited in TBL's AEIC as "cable tray racks" for the stocks and other unused items. From TBL's layout plan of the ground floor, the "cable tray racks" separated the two rest areas as well as separated one rest area from the cooking area.[59] I pause here to refer to the 2013 Burgoyne Report where Mr Low reported on what he saw at the site on 7 September 2012, which was one day after the fire broke out. He noted that almost all of the combustible materials at the rear half of Unit 141 had been destroyed by the fire, which he opined was consistent with the presence of

[59] TBL's AEIC at T39.

large quantities of combustible stock comprising cable insulation and plastic conduits in Unit 141. Despite the presence of large quantities of combustible materials inside Unit 141, the defendant made use of the place as workers' quarters for as many as ten workers who lived and cooked in parts of Unit 141. Saravanan testified that he had stayed at Unit 141 for about nine to ten months before the fire,[60] and Ravi said that he had done so for about a year prior.[61]

108 As stated, TBL was aware that the workers cooked their meals in the backyard where there were combustible materials in the area and where no fire extinguishers were installed. Ravi confirmed that the workers cooked their meals on the night of the fire. The workers' quarters with the environmental conditions as described above was a fire hazard that was foreseeable, but the defendant took no reasonable care to reduce the risk of fire from this unauthorised change of use and the defendant's conduct compromised the fire safety of the premises. It is worthwhile repeating, at this juncture, that in May 2015, a few months before the outbreak of fire on 6 September 2012, the defendant was alerted to the fact that the use of the factory space as workers' quarters was an unauthorised change of use that would cause the factory's "existing fire safety measures to become inadequate" and the defendant was duly fined then for contravening the FSA.

109 Major Rashid confirmed at the trial that electrical wirings were found near the severely damaged wooden shelves. There were cooking appliances like an electric rice cooker, electric cooking hot plates, and cooking utensils.

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[60] Transcript dated 21 July 2016, at p 51.

[61] Transcript dated 20 July 2016, p 153.

Some items were badly damaged and were no longer identifiable. Most electrical appliances and wirings were badly burned.[62] Paragraph 8(d) of the SCDF Report stated:

> Numerous electrical appliances and electrical wirings were observed at the determined area of the origin [ie in the vicinity of the damaged wooden shelves]. One of these electrical entities may be a possible cause of the fire.

Ravi also confirmed that cooking was done on the night of the fire, and that some workers were having their dinner past midnight.

110 The large amount of stock in the open area of Unit 141 obstructed the fire fighters. Major Rashid confirmed that the fire fighters fought the fire in Unit 141 from a small strip of land in between Unit 141 and No 139 Kallang Way 1.

Defendant's witnesses

111 Ms Chin submits the defendant selected the workers who were interviewed by SCDF and Approved, that they were workers who would normally sleep in the main building, and that none of the workers who testified at the trial who supposedly slept in Rest Areas 1 and 2 were interviewed by SCDF and Approved. I have already explained and concluded that the testimonies of the four witnesses who testified at this trial that they were asleep in the backyard on the night of the fire and that there was no fire in the backyard is wanting and not credible. In this case, the defendant had refused to allow the plaintiff's fire expert, Mr Low, to interview its workers back in

[62] Transcript dated 13 July 2016, p 91.

2012, and Mr Low was denied the opportunity to uncover more information about the events that evening before the fire started in the early hours of the morning and what the workers did for at least 20 minutes before Ravi called SCDF.

112 The defendant's workers were first alerted to the fire at about "2.00+ am",[63] "2+ a.m."[64] or "around 2 am".[65] The call to SCDF was at 2.29 am. On the night of the fire, a few workers said that they tried to but were unsuccessful in putting out the fire before evacuating the building. Could the call to SCDF have been placed earlier but was not done until at 2.29 am? Ravi said that he was able to reach TBL who told him to call SCDF which he did. The impression gathered from the inconsistencies and gaps in the evidence is that a lot more was happening in Unit 141 than what was revealed. It is quite inexplicable that a handful of workers spent a fair amount of time fighting what was described by them as a "small" fire at the top tier rack in Store Room 1. In this regard, there is merit in Ms Chin's submissions that the workers' evidence riddled with inconsistencies is illogical and irrational, and the upshot of the posturing gives the impression that the defendant has something to hide.[66] She also points to the defendant's propensity to lie about the workers' accommodation to different people at different times. She identifies three occasions that the defendant lied that the accommodation was purely temporary: (a) to Jackson Clark Insurance Brokers Pte Ltd; (b) to the

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[63] Megan Report, at T55, T56

[64] Megan Report, at T58

[65] SP and VK's AEICs, at para 7.

[66] Transcript dated 1 August 2016, p 26.

Attorney General's Chambers on 6 December 2013; and (c) to the plaintiff's lawyers in a letter dated 4 July 2016. At trial, TBL continued to maintain that the accommodation was temporary which could not be further from the truth.

Defendant has to explain

113 SCDF and Burgoyne do not (on the balance of probabilities) point to any one cause being the probable (or more probable than not) having not been able to identify the exact cause of the fire. Several possibilities were mentioned. SCDF opined that the fire could be of electrical origin; the electrical insulation of the wirings or combustibles in the area of fire in the vicinity of the severely damaged wooden shelves was the ignition fuel. SCDF concluded that the fire was "Accidental" in nature as there was no evidence that the fire was intentional. As for Burgoyne, Mr Low stated in his preliminary report (dated 18 September 2012) that to proceed with the investigation, he needed to interview the defendant's workers who saw the fire, but the defendant had rejected his request. He also picked up on the fact that Unit 141 was occupied by some workers at the time of the outbreak of fire, and Mr Low did not rule out the possibility that the fire was associated with human activities such as careless disposal of smokers' materials. Another possibility according to Mr Low was that of an electrical failure: lighting failure, or failure of the circuitry of the light fittings in Store Room 1.

114 Mr Singh argues that there is no evidence of negligence at all on the part of the defendant. SCDF's possible cause of the fire was not supported by evidence and should be excluded. Burgoyne's possible causes were also not supported by evidence and should be excluded. The matter, however, does not

stop at Mr Singh's observations. Notably, his observations alone are not enough to bar the application of *res ipsa loqutiur* in this case. On any realistic view of the case, the facts in evidence permit a finding that there was human activity which occurred on the night of the fire in premises under the control of the defendant, as compared to the situation in Unit 143 where everyone had left the place after 7 pm. I have already discussed the evidence in relation to the use of the premises as workers' quarters and the state of the evidence of the defendant's witnesses. The defendant, therefore, has an evidential burden to discharge which it has not done so.

Conclusion on issue (b)

115 From the analysis above, I find that the evidential maxim *res ipsa loquitur* applies in this case, and the requirements of the evidential maxim are made out. The inference of negligence is not from the mere occurrence of the fire; there are specific matters in evidence to infer the defendant's *prima facie* negligent conduct. As described above, on the balance of probabilities, the environmental conditions in which the fire started and then spread to Unit 143 give rise to a *prima facie* inference that the fire could not have occurred without some negligence on the part of the defendant and/or its servants, and the defendant has not proven that it was not negligent. In this case, the circumstantial evidence before this court was the unauthorised use of the factory premises that had large stock of combustible materials as workers' quarters and the fact that the defendant by its conduct compromised fire safety of the premises – the fire safety standards of Unit 141 were not adequate for use of the premises as workers' quarters and the defendant did nothing to reduce the risk of fire despite knowing so. The evidential presumption created

by the inference is not rebutted by the defendant who in the closing submissions, unconvincingly, says:[67]

> Even if the maxim *res ipsa loquitur* applies in this case, [the defendant] was not negligent. It had a valid Electrical Installation Licence. Its workers attempted to fight the fire as soon as they discovered the fire and they also called for the SCDF to fight the fire.

Presumably, references to the workers' fire fighting efforts and call to SCDF are to respond to the plaintiff's accusation that the defendant was negligent in failing to take sufficient steps to prevent the fire spreading. I do not understand the relevance of the defendant's valid licence to the discussion.

116 It further follows from the analysis above that the defendant's negligence more probably than not caused the fire and I so hold. The evidential burden that has shifted to the defendant to show that they were no way at fault has not been discharged. I also find that the damage to the plaintiff's property and its content, which occurred due to the fire, is the sort of damage expected to occur from the defendant's breach of its duty of care to the plaintiff.

117 The defendant has pleaded contributory negligence on the part of the plaintiff in its amended Defence. Although Mr Singh cross-examined OSG on the particulars averred to in pleadings, nothing useful emerged. It is not surprising that Mr Singh in his closing submissions (written and oral) did not deal with, and the defendant is taken to have dropped, the defendant's allegation of contribution negligence on the part of the plaintiff.

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[67] Defendant's Closing Submissions, para 54.

Section 63 of the Insurance Act

118 Having reached the conclusion that the defendant's negligence caused the fire, the alternative defence under s 63 of the Insurance Act does not arise for determination. Nonetheless, for completeness, I propose to comment on Mr Singh's contention that SCDF had reported the fire as "Accidental" in nature, a fact he relies on to support the defence in s 63 which confers immunity from action in circumstances in which fire was started accidentally (see *Sim Chiang Lee and another v Lee Hock Chuan and others* [2003] 1 SLR (R) 122 at [5]). Section 63 provides as follows:

> No action shall lie against a person in whose house or premises or on whose estate any fire accidentally began expect that no contract or agreement made between the landlord and tenant shall be hereby defeated or made void.

119 First, I have concluded that the fire was caused by the defendant's negligence and as such, the statutory defence in s 63 would fail (see *Filliter v Phippard* at 357; and *Allan William Goldman v Rupert William Edeson Hargrave and others* [1967] 1 AC 645 at 664). Second, it is not disputed that the reports of SCDF and Burgoyne do not opine on the actual cause of the fire, and it follows that without knowing the actual cause, it would be difficult to decide whether or not the fire began accidentally. Third, there is Ms Chin's point that Major Rashid explained that as there was no evidence that the fire was intentionally started and SCDF was content to conclude that the fire was accidental for that reason, which is not the same thing as what would constitute "accidentally" within the meaning of s 63 (see also [106] above). Further, the Court of Appeal clarified in *Seah Ting Soon (trading as Sing Meng Co Wooden Cases Factory) v Indonesian Tractors Co Pte Ltd* [2001] 1 SLR (R) 53 (at [29]) that to show that the origin of the fire was accidental and

not due to negligence, the party seeking to rely on 63 of the Insurance Act has to prove that the fire began without any negligence on his part or that of his employee; an unsubstantiated stance that the cause of the fire is unknown would not do.

Damages

120 I now turn to the plaintiff's claim for damages. Although the Statement of Claim prayed for damages to be assessed, the trial was on both liability and quantum. Earlier, the plaintiff applied for bifurcation of the trial, but no order was made on the application on 18 November 2015.

121 The plaintiff led evidence on quantum at the trial in respect of its losses quantified at $1,584,091.52. A breakdown of the figure is as follows:

S/No.	Head of Loss	Amount (S$)
(i)	Value of Plaintiff's goods destroyed by fire	935,132.00
(ii)	Value of Plaintiff's machinery destroyed by fire	27,373.33
(iii)	Costs of repair and restoration works to the Plaintiff's Property	226,769.90
(iv)	Rental of alternative premises	156,731.32
(v)	Costs of renovating and fitting out the alternative premises	238,084.97

	TOTAL:	**1,584,091.52**

122 Notably, the defendant's closing submissions (written and oral) do not deal with damages claimed by the plaintiff at all. The defendant did not wish to cross-examine Paul Njoo ("Mr Njoo"), the plaintiff's insurer's loss adjuster, and as such, his AEIC was admitted in evidence and Mr Njoo's attendance in court was dispensed with. Besides Mr Njoo, the plaintiff's Assistant General Manager, OSG, also testified on the quantum of the plaintiff's losses. Mr Singh cross-examined OSG on two points: (a) the period taken for the restoration works; and (b) the rental period of alternative premises.[68] It was suggested that the repairs could have been shorter and the period of repairs would have a knock-on effect on the claim for rental of alternative premises. Although Mr Singh questioned OSG on these two areas, everything frizzled out as the defendant has made no submissions on quantum at all. In the final analysis, the plaintiff's evidence on quantum is unchallenged and hence accepted. Accordingly, I award damages against the defendant in the total sum of $1,584,091.52.

Conclusion

123 For the various reasons stated, there be judgment for the plaintiff in the sum of $1,584,091.52 with interest thereon at the rate of 5.33% per annum from the date of the writ of summons to date of payment. The defendant's Counterclaim is dismissed (see [89] above). The defendant is to pay the

[68] Transcripts dated 13 July 2016, pp 37-43.

plaintiff the costs of the action and the Counterclaim which costs are to be taxed if not agreed.

124 The plaintiff has paid the hearing fees for the entire trial. However, one day of the trial was utilised for the submissions of the parties in S 565/2016. It is only right that the day's hearing fee is to borne by the losing party in S 565/2016, and I so direct.

Belinda Ang Saw Ean
Judge

Marina Chin, Alcina Chew and Leonard Loh (Tan Kok Quan Partnership) for the plaintiff;
Ranvir Kumar Singh and Cheah Saing Chong (Unilegal LLC) for the defendant.