IN THE DISTRICT COURT
AT NEW PLYMOUTH

I TE KŌTI-Ā-ROHE
KI NGĀMOTU

CRI-2017-043-001611
CRI-2017-043-001609
CRI-2017-043-001610
[2019] NZDC 2822

WORKSAFE NEW ZEALAND
Prosecutor

v

BEACH ENERGY RESOURCES NZ (KUPE) LIMITED
FIRST GAS LIMITED
GAS SERVICES LIMITED
Defendants

Hearing: 18 February 2019

Appearances: S Elliott for the Prosecutor
N Logan for the Defendant Beach Energy Resources NZ (Kupe) Limited
T Clarke for the Defendants First Gas Limited and Gas Services Limited

Judgment: 18 February 2019

NOTES OF JUDGE G P BARKLE ON SENTENCING

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[1] The defendants, Beach Energy Resources New Zealand (Kupe) Limited ("Beach Energy"), First Gas Limited ("First Gas"), and Gas Services New Zealand Limited ("Gas Services") appear for sentencing having pleaded guilty to the following charges under the Health and Safety at Work Act 2015:

(a) with respect to Beach Energy of being a person conducting a business or undertaking who manages or controls a workplace, namely the Kupe Production Station, failed to ensure so far as was reasonably practicable, that the workplace and anything arising from the workplace were without risks to the health and safety of the named persons, and that failure exposed those persons to a risk of death or serious injury.

(b) in respect of First Gas and Gas Services, those companies face the same two charges:

(i) that being a company conducting a business or undertaking, they failed to ensure so far as was reasonably practicable, the health and safety of named workers whose activities in carrying out work were influenced or directed by First Gas and Gas Services while they were carrying out work, and that failure exposed those workers to a risk of death or serious injury, and

(ii) that those companies failed to ensure so far as was reasonably practicable, the health and safety of other named persons was not put at risk from work carried out as part of the conduct of the business, and that failure exposed any individual to a risk of death or serious injury.

[2] The maximum penalty for each charge is a fine not exceeding $1.5 million.

[3] This sentencing hearing of the three defendants arises from an uncontrolled release of LPG on 2 November 2016 at the Kupe Production Station near Hawera in South Taranaki. The incident occurred during a proving activity whereby the volumetric flow meters on the production station pumps are calibrated to ensure the correct volume of product is delivered to road tankers, who then distribute the LPG through New Zealand. Beach Energy is the operator of the Kupe Production Station.

[4] First Gas owns New Zealand's gas transmission pipelines, being the Maui and Kapuni pipelines, and gas distribution network. Gas Services, through a joint venture, provides operational services for gas storage and transmission pipelines, including services to First Gas and its clients.

[5] The defendants provided notice of pleas of guilty in accordance with the Criminal Procedure Act 2011 in March and April 2018. Today, those pleas have been formally entered and I have convicted each company of the charge or charges that they face.

[6] For the purposes of determining sentence, I have been provided with written submissions from counsel for each party, supplemented by oral submissions during the sentencing hearing. I have also received an affidavit of Mr Mathew Quinn, General Manager for New Zealand operations of Beach Energy, and an affidavit of Mr Paul Goodeve who is the Chief Executive Officer for First Gas Limited and is also authorised by Gas Services New Zealand Limited, to include in his affidavit relevant information in respect of that company.

[7] I have considered both affidavits to the extent that they are of assistance for the purpose of sentencing and not where they provide contrary information to what is contained in the agreed summary of facts. I wish to underline that is the purpose for which both affidavits have been read and acknowledge that each affidavit has assisted me with the decision that I am required to make so far as the sentence of the defendants.

[8] Sentence is being given following submissions from counsel today. The incident took place on 2 November 2016, that is almost two and a half years ago. The proceedings need to be brought to a conclusion. Accordingly, this is an oral decision. Naturally, it will suffer from some matters being overlooked and there will be inevitable errors of grammar and otherwise. I reserve the ability to add such matters as I believe are necessary and should form part of the decision and, of course, to deal with grammatical and other errors; however, I will not change the fundamental reasons for my sentence, nor the decision and final outcome.

Preliminary Issues

[9] There are six persons identified in the charging documents as having been exposed to the risk of death or serious injury. There is no opposition from any party to an order being made for suppression of the names of those persons. I make that order.

[10] Next, Mr Elliott proposed that I watch a CCTV clip of the incident that was available from the Kupe Production Station. I would have had no objection to doing so, despite both defendants preferring that it not take place; however, the constraints of time meant that I did not view the CCTV footage.

[11] Finally, the most important issue that needed to be clarified at the commencement of the hearing was with respect to the risk of ignition and explosion as a result of the release of the LPG vapour cloud on 2 November 2016. It was the position of the informant that such risk did exist, albeit WorkSafe accepted there was only a low risk of that ignition taking place.

[12] Mr Logan's submissions and, indeed, the affidavit of Mr Quinn propounded that such risk did not exist on the day of the incident. That relied in some respects on an expert report from Worley Parsons, a specialist engineering firm that delivers consulting services to the resources and energy sectors, who had modelled the vapour cloud and provided technical information to support Beach Energy's position.

[13] The other two defendants' position, as I understood and as set out in the affidavit of Mr Goodeve, was that LPG, when released in the fashion that it was on the day of the incident, could have ignited, albeit again that the risk was minimal.

[14] Having heard from Mr Elliott and Mr Logan on behalf of their respective clients, the agreed position arrived at was that I would sentence on the basis that the potential risk existed but it was only a remote one on 2 November 2016 and, as Mr Logan underlined, that there was a lack of potential ignition causes present. I record that Mr Logan obtained express instructions from Mr Quinn, who was present throughout the hearing, to proceed on this basis.

Background

[15] The Kupe Production Station (including the tanker loading facility) is governed by a detailed Safety Case ("Safety Case") as required by regulation 28 New Zealand Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 2013. The Safety Case was reviewed and accepted by WorkSafe in 2015.

[16] The Kupe Production Station has been laid out to reduce risk and limit escalation. The tanker loading facility has been designed and built to eliminate, isolate and minimise the hazards arising from the loading operation. This includes the segregation of leak sources and sloped drainage which directs any spills away from the tankers. The tanker loading facility is open and uncongested to provide good natural ventilation.

[17] In addition to these passive protections, the tanker loading facility is equipped with gas, smoke and fire detection alarms, a firewater and foam deluge system and an automatic emergency shutdown system. It is monitored at all times by the central control room (which is located in the administration building in the northwest corner of the Kupe Production Station) through CCTV. Safeguards and stop points are included in the loading sequence to reduce the risk of human error during normal tanker loading. The tanker loading facility also incorporates several mitigation measures for loss of containment and source control. There was a standard operating procedure in place for tanker loading to further eliminate, isolate and minimise hazards. However, that did not cover the proving activity being undertaken at the time of the incident.

[18] The tankers owned by Pacific Fuel Haul Limited to distribute Beach Energy's fuel and condensate were required to meet Beach Energy's specifications and comply with the Hazardous Substances (Tank Wagons and Transportable Containers) Regulations 2004 along with the associated Code of Practice. The tankers have sealed engine units with specially designed alternators and starters to eliminate ignition sources.

[19] Under the Safety Case the system for planning, coordinating, executing and controlling work at the Kupe Production Facility is what is known as the Common Permit to Work System. This system requires that a Common Permit to Work ("CPTW") is obtained for work carried out at the Kupe Production Facility. A CPTW covers four main sections: applications, work description and controls; authorisation; and cancellation. A description of the overall work scope is required along with the hazard ID and control measures required for the tasks involved.

[20] This is documented through the use of a Job Safety Analysis ("JSA"), the purpose of which is to address/capture the risks and associated control measures. In some circumstances, safety checklists are also required to be completed and where they are specified on the CPTW they are mandatory.

The Incident

[21] An agreed summary of facts has been provided to the Court. I rely on that document in setting out what took place on 2 November 2016.

[22] As part of operating the tanker loading facility at the Kupe Production Station, Beach Energy is required to annually test the pump equipment and ensure the flow amounts measured are accurate in order to comply with its obligations under the Weights and Measures Act 1987. That activity utilises a Brooks mobile proving unit. This is a specialised piece of equipment and First Gas is the only provider of this service in New Zealand.

[23] The proving unit is connected in series between a tanker loading facility pump and a truck tanker. The proving unit is a trailer mounted device which was brought on site by First Gas. Power is provided by an accompanying portable petrol driven generator. Since the incident, a permanent proving unit has been installed at the Kupe Production Station and, as such, there is no longer any need for a unit mounted on a trailer.

[24] During the proving activity, the tanker loading facility LPG delivery arrangement is connected to the proving unit. The proving unit is then connected to the tanker using two hoses, each 4.7 metres in length, connected together. The hose is relatively heavy and requires manual handling by the operators. At the end of each length of hose is an isolation valve which can be turned using a handle to either open or close the valve.

[25] In April 2016, First Gas identified a failure in the valves at each end of the hose lengths on the proving unit. As a result, in May 2016, two new valves were supplied and fitted to each hose length. The replacement of the valves was carried out by a specialist engineering and hydraulics company located in New Plymouth.

[26] The replacement valves were identical in function and similar in appearance to the original valves; however, the valve handle operated in the opposite direction to open/close the valve. To close the original valve, the operator pushed the handle forward. To close the replacement valve, the operator pushes the handle back. If the operator pushes the handle forward, that fully opens the valve.

[27] Both the original and the replacement valves had two locking features designed to prevent the valve from being accidentally opened or closed. The first was a slide on the valve handle that slid down to prevent the handle from being turned; however, depending on the orientation of the handle, the slide could easily slide back due to gravity, unlocking the handle without the operator noticing. The second feature was a hole into which a pin or a padlock could be inserted. That prevented the slide from being able to move out of the lock position, regardless of the orientation of the handle.

[28] The annual proving activity was being undertaken on 2 November 2016 at the Kupe Production Station. On 1 November 2016, Beach Energy personnel compiled the common permit to work (CPTW), the Job Safety Analysis form (JSA) and associated checklists. On 2 November 2016, the proving activity was discussed with operation personnel at Beach at the morning toolbox meeting. The documentation was then reviewed and approved by the permit issuer and checked and signed.

[29] A further toolbox meeting was then held with the employees of First Gas, Mr Shaun Brophy and Mr Michael Gall who were longstanding and experienced measurement technicians. Ms Anna Montanaro was also present at the toolbox meeting and during the incident. She is a Trading Standards Officer employed by MBIE and was, on the day, observing the proving operation as part of the accreditation process pursuant to the Weights and Measures Act 1987.

[30] Three tankers and their drivers from Pacific Fuel Haul Limited ("Pacific Fuel") were present at the time of the incident. Pacific Fuel has a contract with Beach Energy to distribute its LPG and condensate. In accordance with Beach Energy's standard operating procedure, tankers are required to stop prior to entering the tanker loading facility. The driver of the particular tanker involved in the incident, Mr Rodney Turton, was stopped and asked if his truck could be used for the proving operation. The process was explained to him and he agreed. Mr Turton had observed the proving operation taking place on prior occasions but not been directly involved.

[31] The proving unit and associated equipment were accordingly relocated and the activity commenced, filling Mr Turton's tanker. On completion of the LPG loading, Mr Turton isolated the tanker, closing the valve on the tanker manifold and then closed the valve on the hose. He then disconnected the hose from the tanker and placed it on the ground. At that point, the proving unit and hose still contained approximately 140 litres of LPG liquid. Mr Brophy then picked up the hose and began walking it back to the rear of the tanker and towards the proving unit. Mr Brophy had moved the hose approximately 3.5 metres when he noticed LPG liquid coming out of the hose and he felt the blue sleeve that covered the valve handle starting to slip.

[32] His automatic response was to push the valve handle on the hose forward, as that would have previously closed the valve. This action, in fact, inadvertently opened the valve. The hose then dropped from Mr Brophy's grip. This occurred at approximately 10.20 am.

[33] Gas detectors present at the tanker loading facility detected the release and initiated an emergency shutdown and the site siren was also sounded; however, because the proving unit and the hose were not connected to the tanker loading facility,

that had no effect on the LPG release. That release continued for 24 seconds, until it had dissipated enough for a Beach Energy employee to return to the proving unit and close the discharge valve. When the unit was subsequently emptied and made gas free, it was confirmed that only three to four litres of LPG remained in the proving unit.

[34] Ms Montanaro was exposed to the LPG gas cloud. She stated that she heard a whoosh of the escaping gas expelled and was engulfed within the vapour cloud. She felt the cold pressure of the gas against her leg. Mr Turton also felt the gas release pass his face and the force knocked off his safety helmet. In total, six people were exposed to the LPG cloud release. Mr Brophy, and Ms Montanaro particularly, suffered harm as a result of the exposure to the LPG vapour cloud, including cold thermal burns, and Ms Montanaro a contusion to a lower limb.

[35] Victim impact statements have been received from four persons affected by the incident. I will refer to those more closely when giving consideration to the issue of reparation.

Approach to Sentencing

[36] Section 151(2) Health and Safety at Work Act 2015 ("the Act") sets out the specific sentencing criteria to be applied and states:

> (2) The court must apply the Sentencing Act 2002 and must have particular regard to—
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> (a) sections 7 to 10 of that Act; and
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> (b) the purpose of this Act; and
>
> (c) the risk of, and the potential for, illness, injury, or death that could have occurred; and
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> (d) whether death, serious injury, or serious illness occurred or could reasonably have been expected to have occurred; and
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> (e) the safety record of the person (including, without limitation, any warning, infringement notice, or improvement notice issued to the person or enforceable undertaking agreed to by the person) to the extent that it shows whether any aggravating factor is present; and

(f) the degree of departure from prevailing standards in the person's sector or industry as an aggravating factor; and

(g) the person's financial capacity or ability to pay any fine to the extent that it has the effect of increasing the amount of the fine.

[37] Any sentence imposed must reflect the intention of the act of securing the health and safety of workers and workplaces and must reflect the principle that workers and other persons should be given the highest level of protection against harm to their health, safety, and welfare, as is reasonably practicable.

[38] The leading case on health and safety sentencings under the current legislation is that of a full bench of the High Court in *Stumpmaster v WorkSafe New Zealand*.[1] The Court confirmed a four-step process to sentencing involving:

(a) Assessing the amount of reparation.

(b) Fixing the amount of the fine by reference to the guideline starting point bands and then having regard to aggravating and mitigating factors.

(c) Determining whether further orders under ss 152-158 of the Act are required.

(d) Making an overall assessment of the proportionality and appropriateness of the total sanctions imposed under the first three steps.

[39] Due to the increased penalties in the Health and Safety at Work Act 2015, the High Court set out four revised culpability bands for the starting point of a fine, being:

(a) Low culpability – up to $250,000.

(b) Medium culpability – $250,000 to $600,000.

(c) High culpability – $600,000 to $1,000,000.

[1] *Stumpmaster v WorkSafe New Zealand* [2018] NZHC 2020.

(d) Very high culpability – $1,000,000 plus.

[40] In terms of relevant considerations for assessing culpability, the *Stumpmaster* decision referred to the list of relevant factors from the guideline judgment under the earlier legislation, *Department of Labour v Hanham and Philp Contractors Ltd*[2] observing that those factors were well known and little was to be gained by rewording them.[3]

Reparation

[41] The first step, therefore, in terms of assessing the quantum of the financial penalty to be imposed in respect of each of the defendants is to consider the amount of reparation to be imposed. Four victim impact statements have been provided to the Court.

[42] It is acknowledged that the greatest harm was suffered by Ms Montanaro. She describes, on 2 November 2016, suffering a cold burn to her lower right leg as a result of the LPG release. After being initially treated at the site, she was conveyed to the Hawera hospital by ambulance. She was released several hours later and taken back to New Plymouth.

[43] Ms Montanaro describes, at the time of the incident, shaking and freezing, and having difficulty walking with the pain. She expresses disappointment that nobody attended to her straight after the incident, which she thought was concerning behaviour from the site staff. She had to receive ongoing medical assistance on return to Wellington. She advises that she took a couple of days off work. Initial medical expenses were covered by her employer but additional visits and prescriptions were paid out of her own pocket.

[44] In terms of emotional harm, Ms Montanaro describes that when reminded of the incident, it remains shocking and a huge scary moment. The impact, she describes as being huge and that she thought she could have died. She simply wants to forget

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[2] *Department of Labour v Hanham and Philp Contractors Ltd* (2008) 6 NZELR 79 (HC).
[3] *Stumpmaster v WorkSafe New Zealand* above n 1 at [37].

what took place. She describes headaches, anxiety, and difficulty sleeping, and was required to have antidepressants prescribed for her.

[45] Mr Brophy, who is employed by First Gas, set out in his victim statement that he received a mild cold burn to the right side of his face. That was assessed after the incident with no specific treatment given. In terms of emotional harm, he describes himself as being physically shocked immediately following the incident and wondering what had happened and gone wrong. He says he subsequently does not trust anybody because he needs to double check things to satisfy himself that it is correct.

[46] He did not feel it necessary to take up the counselling offered by First Gas. He says that he does not think he was emotionally harmed. Although, I do note in the affidavit of Mr Goodeve which sets out the support which was provided by First Gas to both Mr Brophy and Mr Gall, that for some period of time, Mr Brophy felt personally responsible for the event and it was not until exactly how the incident took place and reasons for what occurred were uncovered that his anxiety was overcome and Mr Goodeve describes Mr Brophy as only then being able to move forward.

[47] Victim impact statements were also provided by Mr Gall and the tanker driver, Mr Turton. No particular physical harm is referred to by either man and, indeed, emotional harm is not described in the victim impact statements as having been experienced.

[48] Mr Elliott's position, on behalf of the informant, by the time his oral submissions had been completed, was to seek an award of $15,000 for Ms Montanaro and $5000 for Mr Brophy as emotional harm reparation. There was not, on his behalf, a strong submission for what he had described in his written submissions as a token award for Mr Gall and Mr Turton to be made.

[49] Without wishing to appear mean spirited, Mr Clarke and Mr Logan, on behalf of the defendant companies, resisted the level of reparation sought by the informant. They submitted, as I understood, that there may be issues of jurisdiction, in terms of an award of emotional harm reparation for Mr Brophy and particularly Messrs Gall

and Turton. Having said that, both counsel advise that each of the defendant companies was willing to make whatever reparation payments the Court felt appropriate to impose.

[50] I note that Harrison J, in *Big Tuff Pallets Ltd v Department of Labour*, said that:[4]

> … fixing an award for emotional harm is an intuitive exercise, its quantification defies finite calculation. The judicial objective is to strike a figure which is just in all the circumstances and which, in this context compensates for actual harm arising from the offence in the form of anguish, distress, and mental suffering. The nature of the injury is or may be relevant to the extent that it causes physical or mental suffering or incapacity, whether short term or long term.

[51] In respect to Ms Montanaro, I note that she suffered shock and physical cold burns at the time, but accept that these were relatively minor; however, she has suffered ongoing emotional harm as a result of the incident. Ms Montanaro did use some of her annual leave while recovering, as well as meeting other incidental costs, and self-reports the effect the incident has had on her mental and emotional state. She suffers trauma, has difficulty breathing when she is reminded of the experience, has difficulty sleeping, and has been prescribed antidepressants.

[52] Mr Elliott brought to the Court's attention the case of *WorkSafe v Broadspectrum (New Zealand) Ltd* in which an award of $17,000 was made to the victim in that case.[5] In my assessment, and accepted by Mr Elliott, Ms Montanaro's position was somewhat less serious than what occurred in that case.

[53] In my determination, the appropriate award of emotional harm reparation payable to Ms Montanaro is a sum of $13,500.

[54] As for Mr Brophy, he suffered a mild cold burn to his face. He describes immediate physical shock after it happened. While there is no indication of long-lasting emotional effect, there was certainly a period, in my assessment, where he was impacted, particularly about what took place and the responsibility that he,

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[4] *Big Tuff Pallets Ltd v Department of Labour* HC Auckland CRI-2008-404-322 at [19].
[5] *WorkSafe v Broadspectrum (New Zealand) Ltd* [2017] NZDC 25499.

himself, felt for what had occurred at the production site. In my determination, an appropriate award for Mr Brophy of emotional harm reparation would be the sum of $3500.

Quantum of fines

[55] The next step in the sentencing process is to fix the amount of the fine for each defendant by reference, first to the guideline starting point bands, and then having regard to aggravating and mitigating factors.

Beach Energy

[56] I first deal with Beach Energy. That company manages and controls the Kupe Production Station including the tanker loading facility. Accordingly, it had a duty under s 37 of the Act to ensure so far as reasonably practicable that such workplace and anything arising in it were without risk to the health and safety of any person. In the agreed summary of facts, the following reasonably practicable steps are identified as not being taken by Beach Energy:

(a) A failure to conduct a joint hazard and risk assessment for the proving operation, together with the other defendants involved, prior to the work commencing.

(b) Did not develop, document, communicate and implement a safe system of work for the proving operation with all companies involved on the day of the incident.

(c) Failed to ensure that the application for a permit to work under the common permit to work system identified all of the specific hazards and risks associated with the work being carried out and the control measures to be used.

(d) Failed to ensure that the authorisation for the permit to work under the common permit to work system included the inspection of the

equipment being used by the nominated permit issuers and the person in charge of the work site.

(e) Did not monitor the other parties' compliance with the safe system of work and the permit to work.

(f) Failed to develop, implement, communicate and enforce an effective safe operating procedure for the tanker and vehicle movements in the tanker loading facility, so as to ensure that the tankers were not left idling.

[57] There is further refinement and particulars included in the summary of facts under each of those practicable steps. I will annex to my sentencing notes a copy of this part of the summary of facts for each defendant so that those particulars form part of the decision.

Nature and seriousness of the risk of harm and actual realised risk

[58] In the *Stumpmaster* decision, the full bench of the High Court said:[6]

> Although necessarily the risk under s 48 prosecutions will always at least be of causing serious harm or illness, it is still important to have regard to exactly what the risk was. How many people did it involve, for example, and might a worker have been killed? Also, the "realised risk" component of this inquiry (i.e. the actual harm caused), similarly remains an important aspect in setting the placement within the bands.

[59] The Court went on in the following paragraph to state that:[7]

> We remain of the view that what actual harm occurred is a relevant and important feature in fixing placement within the bands. That a defendant is "lucky" no-one was hurt does not absolve it of liability under s 48, but the actual harm caused is still a relevant sentencing factor in determining how serious the offence was.

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[6] *Stumpmaster v WorkSafe New Zealand* above n 1 at [39].
[7] At [40].

[60] The risk in this case was of workers being exposed to the uncontrolled release of LPG from the proving unit when it was not connected to the tanker loading facility. That risk occurred because when disconnected, the proving unit still contained 140 litres of liquid LPG. The risks associated with LPG vapour are serious and well known, including its toxicity, potential for cold burns, and even more significant, potential harm should it ignite.

[61] In this case, the actual harm suffered by the victims was relatively minor, being cold thermal burns to Ms Montanaro and Mr Brophy. As already discussed, there is a difference of position between the informant and defendants as to the risk of ignition of the LPG vapour cloud. Mr Quinn filed an affidavit setting out the controls that were in place to eliminate the ignition sources at the tanker loading facility. In addition, the defendants commissioned a report from Worley Parsons which was annexed to Mr Quinn's affidavit as to the likelihood of the LPG released on 2 November 2016 igniting.

[62] The Worley Parsons report shows that on 2 November 2016 the gas cloud created by the discharge was only in a flammable state for a very short period of time and disbursed quickly. That was fortunate. Nevertheless, as I have already determined and resolved with the parties at the commencement of the hearing, I proceed on the basis that, in the prevailing circumstances when the LPG vapour was released, that there remained a risk of ignition, albeit remote.

The degree of departure from industry specific standards.

[63] There are no specific industry standards or guidelines for the specialised proving activity. The common work permit system and job safety analysis forms were completed. Nevertheless, with no specific industry standard it fell to the defendants to take the identified and agreed practicable steps to ensure that the incident did not happen.

[64] I am somewhat surprised that since the proving operation is required to be undertaken annually and had occurred for a number of years prior to November 2016, that Beach Energy, along with its co-defendants, had not turned its mind to developing a particular guideline for the proving activity.

The obviousness of the hazard

[65] Both counsel for the informant and Beach Energy accept that the hazard of an uncontrolled release of LPG is obvious and had been identified by Beach Energy in its risk assessment under the common permit to work system.

Availability, cost, and effectiveness of the means necessary to avoid the hazard

[66] I accept the submissions of Mr Elliott for the informant that the burden of the additional steps on the part of Beach Energy required to make the proving activity safer would have been minimal. In my assessment, better hazard identification, the development of a safe operating procedure, inspection of the equipment being used by the other defendants, and particularly much better engagement with all other companies involved in the proving activity, would have led to a greater likelihood of the LPG release on 2 November 2016, not taking place.

Current state of knowledge

[67] The risks associated with LPG are well known. There was, in my view, a lack of direct engagement by Beach Energy with the hazards and risks associated with the actual proving activity. While there was no information of the change of valve on the proving unit having been completed by First Gas available to Beach Energy, better systems hazard identification and inspection thereafter of the equipment would have at least heightened the likelihood of the risk being detected.

Setting start point of the fine for Beach Energy

[68] Mr Logan submitted that in setting the starting point of the fine, the case of *WorkSafe v Kiwirail Holdings Ltd* is analogous and the finding of Judge Mill in

relation to culpability is persuasive.[8] At that time, Kiwirail, being a Crown entity, was fortunate that the provisions of the Crown Organisations (Criminal Liability) Act 2002 had application, meaning that no fine could be imposed. The outcome of a conviction and discharge was preordained and, with respect to the experienced District Court Judge, there is no significant analysis undertaken in his judgment. Accordingly, I do not find that case of great assistance.

[69] By contrast, the informant has referred me to recent cases from the electricity industry, *WorkSafe v Electrix Ltd*, *WorkSafe v BroadSpectrum (New Zealand) Ltd* and *WorkSafe v Northpower Ltd*.[9] Also, Mr Elliott referred to the High Court decision in *The Tasman Tanning Company v WorkSafe* that was considered at the same time and was determined as part of the *Stumpmaster* decision.[10] I accept that the electricity and petroleum industries are both highly regulated.

[70] The defendants in the cases referred to, as with Beach Energy in this case, had implemented a number of health and safety processes and mechanisms but failed to address the specific risks that gave rise to the particular incident. The risk of LPG release is well known and recognised. As I have already commented, the proving activity had been carried out for a number of years and, therefore, the opportunity to improve systems, procedures, and hazard identification, had been available for some time. I also acknowledge and factor into my assessment that Beach Energy had taken a number of steps to minimise the chances of an LPG release, turned its mind to the risk of ignition, and taken steps to ensure that if a LPG release occurred then the likelihood of ignition was minimised.

[71] The starting point falls, in my assessment, into the medium culpability band identified in the *Stumpmaster* decision. I determine that, in all of the circumstances of this case, that the starting point for the fine to be imposed on Beach Energy will be the amount of $390,000.

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[8] *WorkSafe v Kiwirail Holdings Ltd* [2015] NZDC 24979.

[9] *WorkSafe v Electrix Ltd* [2017] NZDC 20855; *WorkSafe v BroadSpectrum (New Zealand) Ltd* above n 4; *WorkSafe v Northpower Ltd* [2017] NZDC 17527.

[10] *The Tasman Tanning Company v WorkSafe* [2018] NZHC 2020.

Aggravating factors

[72] It is agreed that there are no aggravating factors.

Mitigating factors

[73] Mitigating factors to consider are:

(a) Cooperation with the WorkSafe investigation.

(b) Remedial steps undertaken.

(c) Previous good record.

[74] Mr Quinn, in his affidavit, set out the immediate steps taken at the Kupe Production Station following initiation of the emergency response plan. Thereafter, advice was provided to WorkSafe of the incident. Beach Energy initiated its own investigation. Beach Energy provided all documentation requested by WorkSafe, assisted during site inspections, provided video footage of the incident, and attended both informal and formal interviews. In addition, it issued an alert to the integrated gas business.

[75] Furthermore, a full investigation was undertaken by the General Manager Operating Authority Engineering and Health and Safety for the company based in Melbourne. The investigation report dated 15 December 2016 was provided to WorkSafe despite setting out a number of shortcomings in the procedures of Beach Energy.

[76] Mr Quinn also set out in his affidavit, a list of the improvements that were implemented following the incident. These included:

(a) Two new permit to work checklists being developed.

(b) Beach created a new role of Permit Issuer at the Kupe Production Facility.

(c) A new section has been included on the Permit Log to enter the risk scoring of the permit.

(d) There was a further revision of the Kupe PTW Coordination Meeting Agenda to include sign off/date entry, who attended the meeting and a tick box to verify that these agenda items have been discussed during the meeting.

(e) The production station weekly scheduling meeting agenda was updated to ensure the meeting attendees considered the risks of the upcoming tasks. Resource availability is also reviewed in this meeting. The higher risk tasks identified from this meeting are then highlighted in the weekly schedule.

(f) The daily Toolbox schedule was modified enabling work parties to complete worksite inspections, review permit controls and conduct work group meetings prior to the main facility Toolbox meeting.

(g) The Site Induction Process at Kupe has been revised.

(h) A project was commissioned to undertake changes to the site turnstiles where they can freewheel upon the activation of the site emergency response alarm.

(i) The company has undertaken a significant engineering project so that the loading bays now have a built in proving meter so the use of a mobile proving unit is no longer required.

[77] I also accept that Beach Energy and, as best I understand, any of its previous associated entities have not been before the Court on health and safety matters prior to today.

[78] In my assessment, for the identified matters of mitigation, a 25 percent reduction should be applied to the starting point of the fine for Beach.

[79] In terms of a further reduction for the payment of reparation and willingness to make amends in accordance with s 10 Sentencing Act 2002, Mr Logan, on behalf of the defendant, has formally apologised in Court today to Ms Montanaro and the other victims. As Mr Quinn explains and Mr Logan has underlined, the expectation was that a restorative justice process would be undertaken. That did not eventuate for reasons outside the control of Beach Energy and the other two defendant companies.

[80] In the *Stumpmaster* decision, as I understand, what was stated by the full Court having given consideration to the decision in *Hanham*, was to caution against a one for one credit for reparation payments, particularly considering that it would potentially be likely under the new bands that were being created to result in too much reduction in the fines imposed and an undermining of the statutory sentencing purposes.[11]

[81] Accordingly, what I will do once I have determined what proportion of reparation is going to be payable by each defendant is reduce the fine for a further amount having regard to the share of reparation payable by Beach Energy.

[82] Mr Logan has not suggested there is any inability on the part of Beach Energy to pay the overall monetary penalty that is to be imposed by the Court. I will deal with the issues of costs and final penalty for Beach Energy after discussion of the situation with respect to Gas Service and First Gas.

First Gas and Gas Services

[83] I now turn to the analysis required to set the start point for the fines of First Gas and Gas Services. Those companies have been charged with identical offences despite their different roles and capacities in respect of the incident.

[84] Mr Goodeve explains in his affidavit that First Gas is essentially an infrastructure owner and licenses assets to Gas Services, and also seconds workers to that company. As the principal under the operations and maintenance agreement,

[11] *Stumpmaster v WorkSafe New Zealand* above n 1 at [66].

First Gas owed a duty to engage and contract the safety management by ensuring that the joint venture carried out its health and safety duties.

[85] Gas Services, being one of the parties to the joint venture, carried out operational activities. The joint venture gave directions to those employees and was responsible for overseeing the performance of those maintenance services. Accordingly, I accept that Gas Services had a greater ability to influence and control the risks of an uncontrolled discharge of LPG and, therefore, has more responsibility than First Gas.

[86] In my mind, as Mr Clarke submitted, that goes some way to clarify what the Informant described as "the confused situation between the two defendants" and will justify a difference in treatment between the companies in respect of the fine to be imposed.

[87] As to the root cause of the incident, Mr Goodeve set out in his affidavit that this was due to the fact that the locking device on the ball valve handle at the end of the discharge hose was not fully engaged, allowing the valve handle to be pushed forward into the open position when being carried. As a result, the uncontrolled release of LPG took place. He goes on to explain how the valve change came to be undertaken and that First Gas had relied on a local engineering and hydraulic specialist firm to replace the two isolating valves.[12]

[88] Most relevantly, Mr Goodeve states in his affidavit that he accepts that First Gas should have recognised the change in the valve configuration before the proving activity was undertaken on 2 November 2016. First Gas also accepts that it should have inserted a pin or padlock into the locking mechanism to prevent the valve from being inadvertently turned to the open position while being handled manually and that the discharge hose should not have been handled manually.[13]

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[12] Affidavit of Paul Hayden Goodeve, paragraphs 24 and 25.
[13] At paragraph 29.

[89] While the hazard register of First Gas identified the use of pressurised hoses, lifting and moving equipment, and working with compressed fluids as hazards; the register did not adequately address the hazards and risks associated with the proving activity at the Kupe Production site.[14]

[90] The practicable steps set out in the agreed summary of facts are identical for both defendants, apart from, with respect to First Gas the inclusion of one further step (being step (c) below). Those practicable steps are as follows:

(a) To conduct a joint hazard and risk assessment for the proving operation, together with the other companies involved, prior to the work commencing.

(b) Developing, implementing, communicating, enforcing and monitoring compliance with the safe operating procedure for the proving operation.

(c) Fitting manual carrying facilities to the hose and valve arrangement to aid lifting and moving of the hose.

(d) Implementing an adequate management of change process in respect of the replacement of the hose valves.

(e) Effectively isolating the risk to prevent accidental operation, namely to have utilised the locking mechanism on the valves.

[91] In respect of the charge under s 36(2) of the Act, the particulars and practicable steps referred to for both defendants is a failure to effectively communicate in advance to all parties involved or in the vicinity of the proving operation, that the proving activity was being undertaken that day and what would be involved.

[92] A good number of the comments that I have made with respect to the overall incident on 2 November 2016 and in setting of the fine for Beach Energy are also relevant to First Gas and Gas Service. I will not repeat those comments.

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[14] At paragraph 30.

Nature and seriousness of risk of harm and actual harm caused

[93] Under s 151 of the Act, the risk of serious harm or death, and the actual harm that occurred is a relevant factor to fixing placement within the culpability bands. There was a risk of an uncontrolled LPG discharge in this case and that is what happened. The risk that the LPG vapour cloud could have ignited was only a small risk, as I have already explained.

Degree of departure from prevailing industry standards

[94] I have noted that there was no applicable industry standard or guidance for the proving activity. The configuration of the Beach site was unique. The Kupe Production Station was the only client of the defendants that did not have a return loop line system which required that the pressurised hoses be moved manually. I understand all other existing LPG client sites of the two defendants have systems that enable the hoses to be depressurised prior to being moved.

Obviousness of the hazard

[95] The risk of an uncontrolled discharge of LPG was well known to First Gas and Gas Services and, indeed, throughout the wider industry. While, as I have said, the hazard register identified the use of pressurised hoses, lifting and moving equipment, and working with compressed fluids as hazards, that register did not adequately address the hazards and risks associated with the proving activity at the Kupe Production site.

Availability, cost and effectiveness of the means of avoiding the hazard

[96] The measures necessary to avoid the event that took place were, in my assessment, straightforward. The incident would not have occurred had a pin or padlock been used in the locking mechanism to prevent the valve from being inadvertently turned to the open position. In addition, there was the lack of coordination between the two companies to ensure it was clear who was responsible for taking what steps. Furthermore, there was an acknowledged lack of

communication so far as the other companies involved with the proving activity on 2 November 2016.

Current state of knowledge

[97] I accept Mr Elliott's submission that there was nothing novel about the situation. Risks associated with LPG are well known and as I have already set out earlier, the proving unit had been used at the Kupe Production Station for a number of years. Despite that, First Gas and Gas Services had not adequately turned their minds to hazards associated with the specific proving activity.

Setting start point of the fine for First Gas and Gas Services

[98] Mr Clarke candidly advised that he is unaware of any comparable situation arising in any prior prosecutions by WorkSafe when considering an appropriate start point for this matter. He referred to a case under New South Wales legislation, the Work Health and Safety Act 2011 (NSW) without suggesting that it had any binding impact.

[99] I accept, as do the parties, that both defendants' culpability falls into the medium band as set out in the *Stumpmaster* decision. I have already indicated, for the reasons expressed, that a distinction between First Gas and Gas Services can be justified. Having regard to the matters discussed, in respect of the *Hanham* criteria, I determine that the start point for the fine for First Gas shall be $340,000 and for Gas Services $390,000.

Aggravating factors

[100] There are no aggravating factors to uplift either of the start points.

Mitigating factors

[101] Mr Clarke has referred to the High Court decision of *Ballard v Department of Labour* where I note that the total discounts provided resulted in the start point fine

being reduced by an amount of 45 percent prior to the guilty plea credit; [15] however, Mr Clarke in his submissions then went on to propose a discount of 25 percent. In his oral submissions, he referred to the *Electrix* decision where Judge Down appears to have provided more than a 25 percent discount.[16]

[102] As I have already said, in referring to the situation of Beach Energy, the *Stumpmaster* decision set out the particular three areas the Court needs to consider with respect to mitigation, being remedial steps taken, cooperation with the investigation, and prior record of the defendants.

[103] Mr Goodeve, in his affidavit, has set out a number of corrective actions that have been taken by First Gas including:

(a) All LPG liquid proving activities were voluntarily suspended before the prohibition notice was issued by WorkSafe on 9 January 2017.

(b) External process safety specialists from Worley Parsons were engaged to lead a full safety review and risk assessment of the liquid prover.

(c) A 'self-locking valve' was identified to replace the ball valves.

(d) The Standard Operating Procedure has been updated to require hoses to be depressurised through the return line and then purged with nitrogen.

(e) The existing Standard Operating Procedure for LPG liquid proving has been subjected to a robust review by internal and external operators and process safety engineers.

(f) The equipment operating document has been reviewed and updated to include specific details on the test method for liquid bulk meter testing.

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[15] *Ballard v Department of Labour* (2010) 7 NZELR 301 (HC).
[16] *WorkSafe v Electrix* above n 9.

[104] Mr Elliott concedes that, as he was unaware of those matters in preparing his submissions, that they are of sufficient extent to warrant a reduction in the start point fine.

[105] Mr Goodeve also describes, in his affidavit, the cooperation with the WorkSafe investigation. I understand that this is the first time that either First Gas or Gas Services have appeared before the Court in respect of health and safety matters.

[106] Accordingly, I determine that both defendants should receive a discount of 25 percent from the fines that I have indicated as the start point.

[107] As with Beach Energy, there is no suggestion that First Gas and Gas Services are unable to make payment of the financial penalties imposed by the Court.

Credit for payment of reparation

[108] As I have already set out, I understand the *Stumpmaster* decision to have indicated that a different position needs to be taken with respect to what reduction should be available to defendants in respect of payment of reparation and, more broadly, making amends in accordance with s 10 Sentencing Act. I acknowledge that First Gas and Gas Services have provided much support for their two employees. Understandably, as with Beach Energy, direct involvement with Ms Montanaro was not pushed, nor able to be achieved. First Gas and Gas Services were prepared to undertake a restorative justice process.

[109] The total reparation that I will be imposing is an amount of $17,000. I have determined that as between the defendants that there should be a difference in the level of the start point fine and that will also apply to the quantum of reparation to be paid. Therefore, in terms of the amount of credit that will be provided for the payment of the reparation of the $17,000, that reduction will be $5000 for Gas Services and Beach Energy, and $4000 for First Gas.

Guilty plea discount

[110] Each of the defendants are to receive a guilty plea discount of 25 percent.

Costs

[111] I turn to the question of costs. Mr Elliott, in his submissions, seeks that an award of costs be made against each of the three defendants. He sets out that half of the legal costs incurred by the informant amount to $21,504.40 and the total of expert costs is $5700. The total sought by WorkSafe is $27,204.40. Mr Elliott's submission is that each defendant should pay one third of that amount, being a figure of $9068.13.

[112] The defendants each resist payment of that quantum of costs. Their position is that awards in the health and safety jurisdiction, even under the new legislation, have been less and certainly not the level of what is sought by WorkSafe. They also draw attention to a lack of evidence provided by the informant to support the costs sought and particularly rely on the decision of Judge Maze in *WorkSafe New Zealand v Lindsay Whyte Painters and Decorators Ltd* where Her Honour declined to impose costs particularly because of a lack of evidence provided by WorkSafe.[17] I do note that there are other District Court decisions that have not followed Her Honour's decision and preferred to award costs despite no direct evidence being provided.

[113] Section 152(1) of the Act provides that the Court may order the offender to pay the regulator a sum that it thinks just and reasonable towards the cost of the prosecution, including the costs of investigating the offending and any associated costs. The costs sought by the informant in this case do not include the costs of investigating the offending.

[114] I note that in the commentary in Westlaw, it is suggested that the object of s 152 is to establish a mechanism that allows a regulator to recover a just and reasonable sum, and that an award in accordance with the Costs in Criminal Cases Act 1967 would be inadequate. Little guidance was provided in the *Stumpmaster* decision concerning this issue. The Court noted that the Act allows for costs orders and the manner in

[17] *WorkSafe New Zealand v Lindsay Whyte Painters and Decorators Ltd* [2017] NZDC 28091.

which WorkSafe is presently calculating costs, which is to focus only on lawyer litigation expenses, is modest. Having said that, the Court did not want to be seen to be encouraging, or otherwise, higher claims.[18]

[115] I agree with the submission of Mr Logan, that the decision of the Court of Appeal in *Balfour v R*, which dealt with costs under the Costs in Criminal Cases Act, can be of assistance because a list of factors was set out in that case that are helpful in deciding on an appropriate award in this area also.[19]

[116] Having regard to that list, in my assessment, there was a certain level of complexity involved with this matter. The timeframe that it has taken to get to this stage speaks to that being the case and particularly the effort and time that has been taken for the parties, as I understand, to settle the agreed summary of facts. No defendant can be criticised in respect of its conduct of the proceedings. The outcome, of course, has been guilty pleas and, therefore, the prosecution can be regarded as having been successful. A substantial penalty is to be imposed. All of the defendants are in a financial position where they are able to meet an award of costs.

[117] Having regard to my knowledge of the case, I am of a view that the costs sought by the informant are not extravagant; however, I am also cognisant of the prior approach of this Court to awards of costs. Standing back and doing the best I can in the circumstances and with the material that I have before me, what I intend to do is make an award of costs with respect of Gas Services and Beach Energy of $6000 each, made up of $5000 towards legal costs and $1000 towards the experts' costs and with respect of First Gas, an award of $5000, made up of $4000 towards legal costs and $1000 towards the experts' costs.

[118] Before I take the final step in the sentencing process, I must calculate the end point financial penalty to be imposed on each defendant.

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[18] *Stumpmaster v WorkSafe New Zealand* above n 1 at [106].
[19] *Balfour v R* [2013] NZCA 429.

Calculation of fines

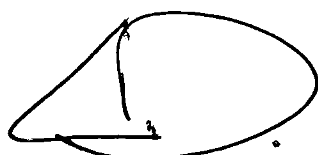
[119] For Gas Services and Beach Energy, who are being treated the same, the fine is one of $390,000. The adjustment of 25 percent for mitigating matters is $97,500. The credit for the amount of reparation each is paying is $5000, arriving at a figure of $287,500. From that figure, a 25 percent reduction for guilty pleas is allowed, being the amount of $71,875, ending at a figure of $215,625. On top of that, Gas Services and Beach Energy will each be required to make payment of reparation of $6000 and costs of $6000, resulting in end point fines for each of those two defendants of $227,625.

[120] In respect of First Gas, the fine starting point is $340,000. The reduction for mitigating factors at 25 percent is a sum of $85,000, less a credit for the reparation paid by that company of $4000, resulting at that point in a fine of $251,000. The 25 percent guilty plea discount is an amount of $62,750, resulting in an end point fine of $188,250. Added to that figure is a reparation payment of $5000 and costs of $5000, resulting in a total overall penalty for First Gas of $198,250.

Overall assessment

[121] Having done those calculations, the fourth and final step is for the Court to stand back and to make an overall assessment of the proportionality and appropriateness of the combined sanctions imposed in respect to each defendant. Having done that, I determine that no adjustment is required in respect of the amount of sanctions imposed, in respect of any of the three defendants, and accordingly, those will be the monetary penalties imposed.

[122] As I have said on each of the second charges faced by First Gas Limited and Gas Services Limited, convictions and discharges will be entered.



G P Barkle
District Court Judge

Annexures:

'A'	Beach Energy – particulars of reasonably practicable step not taken
'B'	First Gas – particulars of reasonably practicable step not taken
'C'	Gas Services - particulars of reasonably practicable step not taken

'A'

5.2. Beach failed to so ensure the health and safety of the workers present at the time of the incident – [illegible] – by failing to take the following reasonably practicable steps:

(a) **Conduct a joint hazard and risk assessment for the proving operation, together with the PCBUs involved, prior to the work commencing:**

(i) As noted above, Beach did have a number of risk assessment/management processes and policies in place for the Tanker Loader Facility. However, none of those specifically addressed the temporary connection of portable equipment (such as the Proving Unit) to the Facility.

(ii) As required under the CPTW a Toolbox Meeting was held on the morning of 2 November 2016. That was attended by Mr McCrory, Mr Brophy, Mr Gall and Ms Montanaro. It discussed vehicle entry into the hazardous areas, use of non-certified or non-intrinsically safe electrical equipment in the hazardous area, bleeding down of vessels, operation of the portable generator and the opening of live electrical junction boxes.

(iii) The toolbox meeting did not address the hazards of loss of containment/uncontrolled release of LPG gas, nor did it identify the associated risks of burns (hot/cold) and the associated controls to manage those hazards and risks. Prior to this, Mr Wilson had also taken part in an Operations Toolbox Meeting with the Kent Needham, Operations Area Technician, in which the proving operation was discussed.

(iv) There was no prior communication between Beach and Pacific Fuel in respect of the proving activity being carried out on the day. The Pacific Fuel truck drivers who arrived at site to load their trucks were not aware that the proving activity was to be undertaken until asked to participate by First Gas. After Mr Turton was advised that his truck would be involved, there was no further discussion or communication in respect of how the proving operation was to be carried out safely.

(v) No specific or tailored hazard and risk assessment was undertaken by Beach either jointly with the other three PCBUs involved, or separately on its own, in respect of the hazards/risks associated with the proving operation.

(vi) A CPTW was required for the proving operation carried out on the day of the incident. Mr McCrory from Wells prepared the application for the Permit to Work, which was then signed off by Mr Wilson from Beach, as the Permit Issuer.

(vii) The CPTW process involves assessing the risk of an activity on a scale of 1-15 based on the general criteria of where the activity is to be carried out (low to high hazardous) and the possible consequences of a failure (from minor equipment damage to multiple fatalities).

(viii) As explained further in paragraph 5.2(c) below, the CPTW process followed by Beach did not include an assessment of all of the specific risks associated with the specific proving activity to be carried out.

(ix) Since the incident, Beach has introduced a new CPTW checklist directed at the use of portable equipment on plant facilities.

(b) Develop, document, communicate and implement a safe system of work for the proving operation with all PCBU's involved in the proving operation:

(i) The JSA prepared by First Gas, and reviewed and approved by Beach, referred to First Gas' written operating procedure for the use of the Proving Unit. However, there was no discussion or communication with Pacific Fuels in relation to this written operating procedure regarding safe operating procedures to be followed to ensure the proving operation was carried out safely.

(ii) Beach had policies in place which governed how tanker loading should take place. These policies did not specifically address the proving operation.

(c) **Ensure that the application for a Permit to Work under the Common Permit to Work System specified all of the specific hazards and risks associated with the work being carried out and the control measures to be used:**

(i) As noted above, Beach had a documented CPTW process in place, and a CPTW was required for the proving operation carried out.

(ii) The CPTW risk assessment process identified a resultant risk score of 12 (out of 15) for the proving operation. The CPTW process specified that a score of "12 or higher" required the sign-off by the Responsible Operations Supervisor. That did not occur.

(iii) The CPTW also required a JSA to be completed. The JSA was prepared for the proving operation by Mr Brophy on behalf of First Gas. It was then submitted to Mr McCrory on 1 November 2016, who included it in the application for the CPTW. On 2 November 2016 Mr Wilson then reviewed the JSA as part of his role in issuing the CPTW. It was also checked and signed by Mr Needham, Operations Area Technician, following a discussion he had with Mr McCrory on 2 November 2016.

(iv) The JSA identified the physical hazard of "trapped pressure" and the risk of "burns (hot/cold)". It also identified the hazard of discharge to air. However, that was identified only as an environmental hazard. The JSA also identified hose failure as a hazard along with pressure burns. The JSA did not identify loss of containment of LPG/uncontrolled release of LPG as a specific hazard, nor did it identify any specific controls to effectively isolate or minimise that hazard.

(v) The JSA identified "manual handling" as a risk. The control was to "use good and correct techniques while lifting". However, that was in relation to muscular skeletal conditions rather than the process safety aspects of manual handling. Over time, a practice had developed among operators of manually moving the hose by holding the Valve handle. That had not been identified as a risk, nor had the practice been rectified to ensure that manual handling was safe.

(vi) The CPTW also required that a number of checklists were completed, these included checklists addressing: Vehicle Entry into Hazardous Areas; Use of Non Certified or Non IS Electrical Equipment in a Hazardous Area; and Operation of Portable Diesel and IC Engines.

(d) **Ensure that the authorisation for the Permit to Work under the Common Permit to Work System included the inspection of the equipment being used by the nominated Permit Issuers and the Person in Charge of the work site:**

(i) The CPTW process undertaken by Beach did not require or include any independent oversight or inspection by it of contractors equipment prior to a permit for work.

(ii) The JSA referred to above did not include an inspection of the equipment being used prior to the CPTW being issued. Specifically, there was no inspection of the Valves on the Hoses to ensure they were operating safely and as intended.

(e) **Monitor the other parties' compliance with the Safe System of Work and the Permit to Work:**

(i) Mr Wilson, as the shift supervisor employed by Beach, was responsible for ensuring that all facilities and activities (within its direct control and responsibility) were operated in a safe and environmentally responsible manner. Mr Wilson was not at the Tanker Loading Facility at the time of the accident. Nor was any delegate for him. However, the proving activity was monitored from the Central Control Room.

(ii) There was no further monitoring, auditing or review by Beach of the PCBUs involved (in particular First Gas and the O&M Joint Venture) or the work activity and performance at the workplace.

(f) **Develop, implement, communicate and enforce an effective Safe Operating Procedure for the tanker and vehicle movements in the Tanker Loading Facility so as to ensure that the tankers were not left idling:**

(i) As noted above, there was no communication between Beach and Pacific Fuel in respect of the proving activity being carried out on the day prior to the truck drivers' arrival on site.

(ii) Beach did have policies in place covering how tanker loading was to be carried out and providing steps to be followed by drivers. Those included eliminating all ignition sources on their trucks prior to entering the loading bay and undertaking loading by switching off the ignition and activating the isolation master switch (to deactivate all electrical equipment).

(iii) However, those policies related to the normal loading of tankers. They did not specifically cover the proving activity being undertaken at the time of the incident.

(iv) As a result, Mr Scallon was permitted to leave his truck idling at the porta-cabin approximately 70 metres away. It was left idling at the time of, or at least until shortly before, the LPG release occurred.

'B'

5.3. First Gas breached those duties by failing to take the following reasonably practicable steps:

Section 36(1)(b) charge

(a) **Conduct a joint hazard and risk assessment for the proving operation, together with the PCBUs involved, prior to the work commencing:**

(i) Initial communication was via a computer generated 'Simplified Maintenance Work Order', number 1567339, generated by Beach in respect of the yearly "meter calibration procedure". That was sent by Beach to Core Group which in turn advised Brian Baker, who advised Wells, who advised First Gas, who advised the O&M Joint Venture that the annual proving activity was due. This communication was predominately via email.

(ii) Attendance of the Trading Officer, Ms Montanaro was organised via email communication between First Gas and MBIE. First Gas asked Beach to arrange for a site induction for Ms Montanaro. However, there was no discussion or communication with Ms Montanaro in respect of safe operating procedures in respect of how the proving operation was to be carried out safely.

(iii) As required under the Common Permit To Work system, a toolbox meeting was held on the morning of 2 November 2016. That was attended by Mr McCrory, Mr Brophy, Mr Gall and Ms Montanaro. At the meeting the parties discussed vehicle entry into the hazardous areas, use of non-certified or non-intrinsically safe electrical equipment in the hazardous area, bleeding down of vessels, operation of the portable generator and the opening of live electrical junction boxes.

(iv) The toolbox meeting did not address the hazards of loss of containment/uncontrolled release of LPG gas, nor did it identify the associated risks of burns (hot/cold) and the associated controls to manage those hazards and risks.

(v) There was no prior communication between First Gas and Pacific Fuel in respect of the proving activity being carried out on the day. The Pacific Fuel truck drivers who arrived at site on the day of the incident to load their trucks were not aware that the proving activity was being undertaken until asked to participate by First Gas. After Mr Turton was advised that his truck would be involved, there was no further discussion or communication in respect of how the proving operation was to be carried out safely.

(vi) While First Gas had prepared a JSA for the proving activity, First Gas did not adequately undertake a specific or tailored hazard and risk assessment in relation to the use of the Proving Unit at the Beach site. That was notwithstanding that the Proving Unit had been in use by its employees for such activity for at least the 14 years Mr Brophy had been operating it. In particular, First Gas did not identify the risks of inadvertently opening the Valve when manually handling the Hose.

(b) **Develop, implement, communicate, enforce and monitor compliance with a safe operating procedure for the proving operation:**

(i) First Gas did not have an adequately documented safe operating procedure in place for the use of the Proving Unit and/or the proving activity.

(ii) The JSA referred to the operating procedures for use of the Proving Unit. The Equipment Operating Document (revision 3), "Brooks Instrument Compact Prover Testing Liquid Meters" refers in turn to the Laboratory Test Method Manual (TMM #9), "Testing LPG Bulk Loadout Meters by Brooks Prover In-situ", which contains the procedure for carrying out the proving activity.

(iii) Apart from Beach's Permit to Work and the JSA (referring to the Brooks operating procedures), there was no oral discussion between First Gas and the other PCBUs involved in the proving activity, prior to it being undertaken, regarding how to ensure it was performed safely.

(c) **Fit manual carrying facilities to the Hose and Valve arrangement to aid lifting and moving of the Hose:**

(i) As noted above, the Hoses fitted to the Proving Unit are long and heavy, and are required to be moved manually in and out of position by the operators during the proving operation. The Hoses are difficult to lift. Operators had developed a practice of lifting and pulling the Hose by the Valve handle, which is the only protrusion available to grab.

(ii) While First Gas had identified the use of pressured hoses as a hazard in the JSA and its hazard register, it failed to specifically identify the risk of inadvertently opening the Valve and releasing LPG by manually handling the Hose using the Valve handle. It further failed to address that risk, by using a two man lift or mechanical aids (eg hose trolleys) to aid lifting and moving the Hose, without holding onto the Valve handle.

(d) **Implement an adequate management of change process in respect of the replacement of the Hose Valves:**

(i) First Gas did not utilise a management of change process when engaging EHL to replace the Valves on the Hoses in May 2016. While First Gas has a management of change process, it did not use that process in this instance as it requested a like-for-like replacement.

(ii) First Gas did not advise EHL what specification of valve was required (or that it needed to be the same). In turn, EHL did not communicate to First Gas that a different type of Valve had been installed with the handle orientation on the replacement ball Valve differing from the initial installation. The only communication between the two parties was by way of informal emails.

(iii) Following the return of the Hoses, First Gas did not undertake any testing to check that the Valves were operating correctly/safely. The day of the incident was the first time that the new Valves had been used.

(iv) As a result, First Gas did not identify that the direction of operation of the Valve handle installed by EHL had been reversed (such that when the operator thought they were closing the Valve they were in fact opening it). It was only discovered following the incident.

(e) **Effectively isolate the risk to prevent accidental operation, namely to have utilised the locking mechanism on the Valves:**

(i) As noted at paragraph 1.35 above, the Valves had two locking features designed to prevent them from being inadvertently opened/closed. The first of those, the

slide lock, was inadequate to prevent accidental operation on its own, as the lock could slide out of the locked position due to gravity without the operator noticing.

(ii) The only way to ensure the Valve handle was not inadvertently opened/closed while being manually handled, was to insert a pin or padlock into a locking hole, which would have prevented the slide from being able to move. First Gas did not utilise that locking hole, to ensure that the Valves could not be inadvertently opened while being manually handled as occurred in this case.

Section 36(2) charge

(f) **Effectively communicate in advance to all parties involved or in the vicinity of the proving operation that the proving activity was being undertaken that day and what would be involved:**

(i) As noted at paragraph 5.3(a)(v) above, no advance communication was given to Pacific Fuel or its truck drivers that a proving activity was going to be carried out during the loading of LPG at the Tanker Loading Facility, or what tasks were going to be involved with that activity. The first that they were made aware of the activity was when Mr Turton was asked to participate upon his arrival.

(g) **Implement, communicate, enforce and monitor compliance of a safe operating procedure for the proving operation:**

(i) As per paragraphs 5.3(b)(i) to (iii) above.

'C'

5.6. Gas Services breached those duties by failing to take the following reasonably practicable steps:

Section 36(1)(b) charge

(a) **Conduct a joint hazard and risk assessment for the proving operation, together with the other PCBUs involved, prior to the work commencing:**

(i) Notwithstanding that it was ostensibly responsible for carrying out the proving activity under the O&M Service Agreement, Gas Services did not engage or

communicate in any way with the other PCBUs involved regarding the proving activity or how it was to be carried out. Nor did OSD Velocity Pty Ltd (as the other Service Provider under the O&M Service Agreement).

(ii) Other than being named as the Service Provider in the O&M Service Agreement, Gas Services did not have any contact or involvement with the workers involved in the proving activity, or with how the Proving Unit was operated.

(iii) Initial communication regarding the proving activity was via a computer generated 'Simplified Maintenance Work Order', number 1567339, generated by Beach in respect of the yearly "meter calibration procedure". That was sent by Beach through to Core Group which in turn advised Brian Baker, and subsequently Wells, and then First Gas, who advised the O&M Joint Venture that the annual proving activity was due. This communication was predominately via email. Gas Services was not involved in this correspondence.

(iv) Attendance of the Trading Officer, Ms Montanaro was organised via email communication between First Gas and MBIE. First Gas asked Beach to arrange for a site induction for Ms Montanaro. However, there was no discussion or communication with Ms Montanaro in respect of safe operating procedures in respect of how the proving operation was to be carried out safely. Gas Services had no involvement in this.

(v) As required under the Common Permit To Work system, a toolbox meeting was held on the morning of 2 November 2016. That was attended by Mr McCrory, Mr Brophy, Mr Gall and Ms Montanaro. At the meeting the parties discussed vehicle entry into the hazardous areas, use of non-certified or non-intrinsically safe electrical equipment in the hazardous area, bleeding down of vessels, operation of the portable generator and the opening of live electrical junction boxes. The toolbox meeting did not address the hazards of loss of containment/uncontrolled release of LPG gas, nor did it identify the associated risks of burns (hot/cold) and the associated controls to manage those hazards and risks. Gas Services involvement in this meeting was through the presence of the secondees to the O&M Joint Venture, Messrs Brophy and Gall.

(vi) There was no prior communication between Gas Services and Wells regarding the specific work to be conducted by Wells' workers in respect of day to day activities, in particular there was no communication in respect of the proving activity being carried out on the day.

(vii) There was no prior communication between Gas Services and Pacific Fuel in respect of the proving activity being carried out on the day. The Pacific Fuel truck drivers who arrived at site on the day of the accident to load their trucks were not aware that the proving activity was being undertaken until asked to participate by First Gas. After Mr Turton was advised that his truck would be involved, there was no further discussion or communication in respect of how the proving operation was to be carried out safely.

(viii) No hazard and risk assessment was ever undertaken by Gas Services in relation to the use of the Proving Unit and/or the proving activity for which it was used.

(b) **Develop, implement, communicate, enforce and monitor compliance with a safe operating procedure for the proving operation:**

(i) Gas Services did not have an adequately documented safe operating procedure in place for the use of the Proving Unit and/or the proving activity.

(ii) The JSA referred to the operating procedures for use of the Proving Unit. The Equipment Operating Document (revision 3), "Brooks Instrument Compact Prover Testing Liquid Meters" refers in turn to the Laboratory Test Method Manual (TMM #9), "Testing LPG Bulk Loadout Meters by Brooks Prover In-situ",.which contains the procedure for carrying out the proving activity.

(c) **Implement an adequate management of change process in respect of the replacement of the Hose Valves:**

(i) Under the O&M Services Agreement, the Proving Unit was licenced to Gas Services to operate. Notwithstanding that, when the Valves on the Proving Unit were replaced in May 2016, Gas Services did not apply any kind of management of change process to ensure the safety and integrity of the Valves was maintained. Instead it abdicated all responsibility for this process to First Gas.

(ii) Following the return of the Hoses, Gas Services likewise did not arrange for any testing to check that the Valves were satisfactory and operating correctly.

(iii) As a result, the fact that the direction of operation of the Valve handle was reversed (such that when the operator thought they were closing the Valve they were in fact opening it) was not discovered until after the incident.

(d) **Effectively isolate the risk to prevent accidental operation, namely to have utilised the locking mechanism on the Valves:**

(i) As noted at paragraph 1.35 above, the Valves had two locking features designed to prevent them from being inadvertently opened/closed. The first of those, the slide lock, was inadequate to prevent accidental operation on its own, as the lock could slide out of the locked position due to gravity without the operator noticing.

(ii) The only way to ensure the Valve handle was not inadvertently opened/closed while being manually handled, was to insert a pin or padlock into a locking hole, which would have prevented the slide from being able to move. Gas Services did not utilise that locking hole, or any other procedure, to ensure that the Valves could not be inadvertently opened while being manually handled as occurred in this case.

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(e) **Effectively communicate in advance to all parties involved or in the vicinity of the proving operation that the proving activity was being undertaken that day and what was to be involved in that:**

(i) As noted above, Gas Services did not communicate with any of the other PCBUs involved regarding the proving activity.

(ii) In particular, no advance communication was given to Pacific Fuel or its truck drivers that a proving activity was going to be carried out during the loading of LPG at the Tanker Loading Facility, or what tasks were going to be involved with that activity.

(f) **Implement, communicate, enforce and monitor compliance of a safe operating procedure for the proving operation:**

(i) As per paragraph 5.3(b) above.