Sheriffdom of South Strathclyde, Dumfries and Galloway at Hamilton

Under the Fatal Accidents and Sudden Deaths Inquiry (Scotland) Act 1976
(Hereinafter referred to as "The Act")

2010 FAI 48

Determination

by

David M Bicket Esq
Sheriff of South Strathclyde,
Dumfries and Galloway at Hamilton

in the

Fatal Accident Inquiry

regarding the death of

CRAIG LOCHRIE

Hamilton: 4th November 2010

The Sheriff determines:-

(1) In terms of Section 6(1)(a) of the Act that Craig Lochrie residing at 51 Millroad Street, Calton, Glasgow died at Monklands District General Hospital on 9th June 2008 at 1210 hours.

(2) In terms of Section 6(1)(b) of the Act that the cause of death was:

(a) crush injuries to chest and abdomen,

due to

(b) industrial accident.

(3) In terms of Section 6(1)(c) of the Act that a reasonable precaution whereby the death of the said Craig Lochrie might have been avoided would have been for the said Craig Lochrie not to place himself in the area inside the legs of the plate lift mechanism on which he had been then or earlier working, at the time of the accident.

(4) In terms of Section 6(1)(d) of the Act there were no defects in the system of working which contributed to the death and the accident resulting in the death.

(5) There are no other facts directly relevant to the circumstances of the death in terms of Section 6(1)(e) of the Act.

NOTE

Inquiry into the circumstances of the death of Craig Lochrie was commenced on 5th August 2010 with evidence also being heard on 6th, 16th, 17th, 18th and 19th August and submissions finally being heard on 12th October 2010. Evidence came from some fifteen witnesses with Affidavit evidence being lodged in respect of another five. There were a large number of documentary productions and also a scale model of the plate lift which caused Mr Lochrie's fatal injuries. Ms Beattie, Procurator Fiscal presented the evidence, Ms Rodger, Advocate appeared on behalf of Leeanne Forrester the partner of the deceased, Mr Murphy, solicitor appeared for Archibald Lochrie the father of the deceased, Mr Buchanan solicitor appeared for G & J Metals Limited, the deceased's employers, and Ms Duff, Advocate appeared for EMR

Limited, on whose premises the accident took place. Agents at the conclusion of the evidence helpfully prepared written submissions which assisted in reaching this Determination.

The duties and powers of the Sheriff in respect of his Determination are contained in Section 6 of the Act. This section provides as follows:-

> "(1) At the conclusion of the evidence and any submissions thereon, or as soon as possible thereafter, the Sheriff shall make a Determination setting out the following circumstances of the death so far as they have been established to his satisfaction –
>
> (a) where and when the death and any accident resulting in the death took place;
> (b) the cause or causes of such death and any accident resulting in the death;
> (c) the reasonable precautions, if any, whereby the death and any accident resulting in the death might have been avoided;
> (d) the defects, if any, in any system of working which contributed to the death or any accident resulting in the death; and
> (e) any other facts which are relevant to the circumstances of the death."

I will deal with each of these issues in turn although it is clear from the evidence that some can be dealt with much more briefly than others. There are two preliminary matters worth mentioning and these are firstly, an inquiry of this nature is not determining any question of civil fault or liability (**Black v Scott Lithgow Limited 1990 SLT 612**), and of course the Determination cannot be founded upon in any subsequent proceedings (Section 6(3)). Despite the wording of Section 6(1)(c) therefore, the Sheriff does not have the power to make findings of fault or to apportion blame.

Secondly, in terms of Section 4(7) the rules of evidence shall be as nearly as possible those applicable in an ordinary civil cause brought before the Sheriff. The standard of proof is the balance of probabilities and the facts and circumstances can be established without the necessity of corroboration.

Summary of Events

On 9th June 2008 Craig Lochrie was working for his employers G & J Metals Ltd. at Kirklee Road, Bellshill at a scrap yard premises operated by EMR Limited. Mr Lochrie was employed as a scrap metal burner and his job was to cut large pieces of scrap metal down to smaller sizes. This process is called burning. He was working on site in a designated area on *inter alia* a plate lift mechanism which had come from Dalziel Steel Works. Also employed by G & J Metals and working on the site that day was Mr Robert Edwards, an extremely experienced burner, who was working about ten to fifteen feet away from Mr Lochrie on a different piece of metal. The lifting beam of the plate lift on which Craig Lochrie had been then or earlier working, toppled forward and fell on Mr. Lochrie trapping him against a railway chassis causing crush injuries to his chest and abdomen. On hearing him shout Mr Edwards turned round and seeing what had happened ran for assistance. He found Gordon Hill, one of the managers of EMR Limited on that site and advised him what had happened. They attempted to remove the lifting beam from Craig Lochrie but were unable to do so. Mr Hill also radioed for an ambulance, and radioed a crane driver, Mr William Stewart, to assist in the removal of the lifting beam which they then did with the assistance of chains and the crane. Craig Lochrie was comforted by them and others who arrived on the scene, treated by paramedics and taken by ambulance to Monklands District General Hospital where he sadly died at 12.10 hours on that date. A post mortem examination was subsequently carried out by Julie McAdam, Forensic Pathologist of the University of Glasgow on 13th June 2008.

Section 6(1)(a) – Where and When the Death took place

Craig Lochrie died at 12.10 hours at Monklands District General Hospital on 9th June 2008.

Section 6(1)(b)

(a) The Cause or Causes of Death

There is no dispute that the cause of death was crush injuries to Mr Lochrie's chest and abdomen due to the industrial accident which occurred when the lifting beam section of the plate lift fell on him around 10.50 am on 9th June 2008 when he was working in the scrap yard at Kirklee Road, Bellshill owned and operated by EMR Limited. Crown Productions 18 and 19 were a Post Mortem Report and Toxicology Report prepared by Julie McAdam, Forensic Pathologist of the University of Glasgow, following upon a post mortem examination carried out on 13th June 2008, which confirmed this.

Section 6(1)(e) – Facts which are relevant to the circumstances of death

I consider it would be more appropriate now to move to Section 6(1)(e) and to explore the relevant circumstances as a means of determining whether there were any reasonable precautions whereby the death and the accident resulting in the death might have been avoided in terms of Section 6(1)(c) of the Act, or whether or not there were defects in the system of working which contributed to the death in terms of Section 6(1)(d). There is inevitably a degree of overlap between the reasonable precautions whereby an accident resulting in death might have been avoided, and the defects if any in the system of working which may have contributed to the death or any such accident.

What is not a matter of dispute in this case is that Craig Lochrie must have been standing between the legs of the plate lift at the time the lifting beam toppled forward, trapping him against an upturned chassis, as a result of which he suffered the crush injuries from which he later died. There were two competing versions as to why he might have been there.

A report had been prepared by a Mr Robert Marr of the Health and Safety Executive, following on four visits to the scrap yard. During those visits, he inspected the site of the accident, the plate lift and also spoke to Mr Stephen Grimes, the Health and Safety Manager of EMR Ltd., Mr Gordon Hill, a Manager of EMR Ltd., Mr William Stewart the Crane Driver who had on the day before the accident laid out the plate lift for Craig Lochrie to cut, and who had assisted in removing the lifting beam from him with the use of the crane and chains, and Mr Keith Nisbet a Commercial Manager with EMR Ltd.. Mr Marr had also had a meeting on 17th July 2008 with Nicholas (Joe) Broe and George Walker the Directors of G & J Metals Limited, Craig Lochrie's employers. He took photographs of the plate lift and surrounding area which are annexed to his report. A book of photographs being Production Number 2 was also produced by the Procurator Fiscal, these having been taken by Elaine Keyes, a Scenes of Crime Examiner with Strathclyde Police. The plate lift itself was taken into possession by Mr Marr and sent for a more detailed examination. A scale model of it was produced by Terry Gee a Workshop Technician at the Health and Safety Laboratory, Harper Hill, Buxton in Derbyshire. That model was in court and Mr Marr had had replicated on it the cuts that he found on the plate lift which it is safe to assume were made by Craig Lochrie .Mr Marr had, at paragraph 3.13 of his report ,prepared a schematic view of the cut orientation he had found on the plate lift.

From his inspection, and a series of reconstructions using the scale model, Mr Marr deduced that Craig Lochrie had cut or burned the two rear links or legs and the two rear vertical or central links on the plate lift first, before going on to the front of the unit to cut the front right hand link or leg. He considered that once the second of the two rear links were cut the plate lift opened and the lifting beam restricted by the two front links or legs and the locked vertical links (he took the view that the central linkage system was locked out and would prevent the

mechanism opening) rotated forward moving the centre of mass of the lifting beam towards the front link pivot point. This he showed on figure 4 on page 7 of his report. He also had opinions on the direction of the cuts. Mr Marr was of the opinion that when cutting the inner right hand links or leg at the front, Mr Lochrie was standing inside the unit between the clamp arms and underneath the overhanging lifting beam. Mr Marr was also of the opinion that Mr Lochrie, whilst standing between the clamp arms then cut the front left hand vertical or central link and then the front right hand vertical or central link, having already cut the rear vertical or central links. At that stage Mr Marr thought the beam would move over the centre line and the lifting beam would continue to fall forward crushing Mr Lochrie against the trailer axle. He based this on his expertise as a mechanical engineer and also on doing a series of experiments with the scale model. He accepted that the ground conditions at the incident site could not be replicated nor could the mass of the beam or the weight of the model itself. Under cross-examination, he confirmed that he had not been aware that the post accident position of the plate lift may have been different to that at the time of the accident, due to a crane having been used to lift the beam which crushed Craig Lochrie off him.

Mr Marr's hypothesis was disputed by all those who were experienced in burning who gave evidence. All of those were of the opinion that the safe way to cut or burn this piece of equipment was to do it standing outside the legs and not inside them. Robert Edwards gave evidence that not only was that the only safe way to do it, he had made a statement to the police very shortly after the incident, which confirmed that he had told Craig Lochrie to stay at the side of the plate lift to cut it. On the day of the accident Mr Lochrie had already commenced cutting the plate lift when Mr Edwards arrived and on resuming work Mr Edwards did not see the cuts that Craig Lochrie had at that stage made nor did he actually see the accident itself happen, turning round after he heard Craig Lochrie shout. Mr Edwards was of

the firm opinion that he would have cut the central linkage on the plate lift before cutting the outside legs.

That was echoed by Nicholas Broe and George Walker, Craig Lochrie's employers. George Walker was most emphatic that a burner of even one year's experience would have known not to cut the central linkage with a bar leaning over him that had to fall. There was a suggestion that a tag might have been left in the central linkage while it was being cut with a view to stabilising it, but there was no evidence from which I could make such a finding.

The alternative scenario advanced was based mainly on the evidence of Mr George Walker, one of the directors of G and J Metals, and Craig Lochrie's employer. There was evidence given by George Walker that Mr Lochrie had made a cut on the chassis behind him close to the site of where he was pinned when the beam collapsed. Mr Walker felt that gave credence to his theory that Craig Lochrie had stopped cutting or burning the plate lift at the time of the accident and started working on the trailer or chassis behind him. There was evidence in a photograph of the chassis Mr Walker was referring to in photograph L in Production 2, where it can be seen that there is a mark below what looks like a piece of tubing in the top right hand corner of that photograph which Mr Walker says is a cut. I have no reason to dispute that being the case. Mr Walker was most emphatic that Craig Lochrie was too experienced to stand in the middle of this plate lift whilst cutting the central linkage.

All the evidence I had of Craig Lochrie was that he was a skilled metal burner with around seven years experience. There was no evidence to suggest that he was careless of his own safety. No one saw this accident happen. Mr Walker pointed out that the burning area was only some fifteen or so feet away from the roadway along which heavy machinery passed and

wondered whether or not vibrations could have caused the plate lift to collapse. Mr Marr himself accepted that he would have been surprised if an experienced burner had cut this item in the sequence that he suggested, and he accepted also that he did not know, and had only surmised or deduced the sequence of cuts made. He did know that Craig Lochrie was a trained and highly experienced burner and he had to have been in the hazard zone between the legs when the beam collapsed. He accepted that it was possible that the beam had not moved even after the cuts were made and collapsed later. He did not accept it was probable. He accepted that there was a possibility that vibration could have caused the beam to collapse subsequently and it depended a lot on the friction in the joints and moving parts.

Given the two competing versions and the fact that no one saw this accident frankly we will never know precisely why Mr Lochrie was in the position he was when the beam did collapse. Even on the balance of probabilities weighing one against the other I am unable to make a finding in this regard. If Mr Lochrie was simply cutting the central linkage system last, and doing so from inside the legs of the plate lift, he was doing so despite several years of experience, despite being told to cut it from the side and despite evidence which I accepted that he was well and properly trained on the job by his employers. Although Mr Marr did not think that vibration could have caused the machine to collapse he conceded that it was a possibility. It is not one that I can rule out, and as stated cannot say why Craig Lochrie found himself to be in the danger zone when the beam collapsed, particularly given the evidence of the cut in the chassis beam behind where he was pinned.

It is worth mentioning in passing that the Toxicology Report mentions that blood analysis revealed inactive cocaine metabolites, which Dr McAdam stated would be due to recreational cocaine use in the recent past, probably in the last twenty four hours. Similarly, although no

alcohol was detected in the blood a low level was present in the bile indicating alcohol consumption in the relatively recent past. I am entirely satisfied that neither cocaine nor alcohol had any bearing whatsoever on the circumstances of Craig Lochrie's unfortunate death.

There were various criticisms made by Mr Marr in his report. It is appropriate to deal with these and his recommendations at this stage. Firstly, there was a suggestion that as G & J Metals Ltd. were working on a tonnage rate rather than a day rate there was a pressure on the burners to work rather than to wait and move items they were unhappy with. There was no evidence that I could accept that this was the case.

There were criticisms made of the state of repair of the burning equipment. Whether these are right or wrong it is clear that they have no bearing whatsoever on the accident.

Criticisms were also made of the Risk assessment and Method Statement (Productions 7 and 8) that G & J Metals Ltd. had prepared in respect of this job. Mr Marr thought they were defective in that the Risk Assessment in particular did not mention crushing hazards.

Much significance was placed on whether or not this plate lifter was a standard or non standard or unusual item. Mr Marr was of the opinion that it was unusual, particularly because of the central linkage system. In his opinion in that regard he relied on his experience and expertise as a mechanical engineer. He did however have no personal experience of burning. All of the burners who gave evidence considered this to be a normal item and had cut similar items in the past. Craig Lochrie himself had stated to Robert Edwards when asked that he was perfectly happy with it. No one other than Mr Marr thought that this was an unusual item, although it is fair to say that Gordon Hill thought it was borderline. That had a bearing on

whether or not an individual risk assessment ought to have been done for this item. On the balance of probabilities therefore, given the evidence I heard from those with most experience in the industry, I am unable to find that this was an unusual or non-standard item for a burner to deal with.

It is clear that the Risk Assessment and Method Statement were completed following a site inspection by G&J Metals Ltd. and that thereafter a safe working area was identified and created. The burners worked in pairs, as a team with the crane operator William Stewart on this site. The crane operator laid pieces out for the burners to cut leaving sufficient space around the pieces for the burners to work in. There was evidence which I accepted that this was the case and that the burners had sufficient experience and training only to cut those pieces they felt sufficiently experienced and able to deal with. Craig Lochrie could have taken advice from Robert Edwards and indeed was given some advice by Robert Edwards in relation to this item namely to stand to the side when cutting it, and there was also evidence which I accepted from George Walker that if Craig Lochrie was uncomfortable with an item he knew simply to leave it, and that George Walker himself would have cut it. He also had a telephone number to contact George Walker should he need to do so. He had earlier done so in relation to Robert Edwards not turning up where he knew he should only be working as one of a pair.

Dynamic risk assessment went on all the time with each individual item that a burner was presented with. There was evidence which I accepted that there might be many different types of scrap placed in front of the burners to cut to size and that when they had an item so placed in front of them they would then consider how best to deal with it. If they were not satisfied with the way it was placed out or where it was placed they would ask the crane driver to move it. There was evidence which I accepted that they had done so on many previous occasions and

there was no difficulty in having an item moved although occasionally there was a short time delay in having their requests complied with. A continual assessment of each item as they were cutting was part of their job and Craig Lochrie was experienced enough and able enough to do that.

There was evidence which I accepted that as the burners worked pieces of scrap would fall around them and that these would at their request be cleared to allow them a clear working space. There was evidence which I accepted from William Stewart that when he had, on the day prior to the accident, laid out the plate lift there had been sufficient working space around it for Craig Lochrie to work in. Mr Lochrie himself had made no request to have it removed or to have space cleared around it so he must have been satisfied that that was so. Mr Edwards saw nothing remarkable about it and made no comment on it. Both Craig Lochrie and in particular Robert Edwards were experienced burners. I therefore accept the evidence that when laid out there was sufficient working space around this item for burning. Given that evidence, and the evidence which I accepted of the number of items of differing types which would be placed in front of the burners for burning, it appears to me that dynamic risk assessment or ongoing risk assessment is the only practical way for this job to be done, unless an item is so unusual as to require an individual risk assessment. As stated, I do not on the basis of the evidence that I have heard consider that the plate lift was such an unusual item. Those with much more experience in this industry than Mr Marr did not consider it to be so.

As stated before everyone with burning experience considered that the appropriate way to cut this piece of equipment was to cut the central linkage first. It was that linkage that caused Mr Marr to consider it to be unusual. Had that been done and had the item been cut from the side there would have been no need for Craig Lochrie to be in the danger zone between the legs of

the plate lift. As stated above I am unable to make a finding as to why he was there. Considering all of the above therefore, and considering evidence I was given that Mr Lochrie was well and fully trained and experienced, a dynamic risk assessment on the evidence that I heard appears to me to be an acceptable way of dealing with the risks he was facing in burning this type of equipment.

With reference to the suggestion of usage of a crane, again by Mr Marr, to support such a mechanism when it was being burned, given the evidence of Mr Grimes and the concessions subsequently made by Mr Marr I am not satisfied that was an appropriate precaution as it may have caused more danger than it prevented. Burners had strict instructions not to be around moving equipment and they would cease work when the crane was operating in their area.

Additional criticisms were made by Mr Marr of EMR Ltd.'s monitoring and supervision of contractors on site. I do not accept that such criticisms are justified. In any event, such matters clearly had no bearing on this tragic accident. The evidence would not support such a finding.

Mr Marr conceded under cross-examination that if there was evidence that Craig Lochrie had cut these items of equipment before, had around seven years experience, was aware of the risk assessment and method statement, was working with Robert Edwards who was more experienced than he, and knew not to cut things that he was not happy with, knew that if he had a difficulty to speak to Robert Edwards, George Walker or Joe Broe, had a health and safety passport and assessed the item he was cutting correctly then that was a perfectly proper way of doing his job, if the assessment was properly done.

Mr Marr in his conclusions at paragraph 5.8 on page 11 of his report referred to increased risks for the burner working at the front of the unit, in this case the plate lift, because of scrap and other material in that area that restricted access and egress to the front of the unit. He accepted having based that conclusion on a misapprehension as to the factual position, and given the findings I have earlier made about the way the plate lift was laid out by William Stewart on page 12 of this Determination, I can find no validity in that criticism.

I have earlier in this Determination dealt also with his criticisms from paragraphs 5.9 to 5.13 of his report.

Mr Marr suggested that G & J Metals Limited should review their safe system of work. So far as relating to the accident itself was concerned considering all of the foregoing and also the evidence of Mr Stephen Grimes who was well qualified in health and safety matters I am prepared to find that:

In terms of Section 6(1)(d) – There were no defects in any system of working which contributed to the death and the accident resulting in the death.

Because of the tragic and unexplained nature of this accident it seems to me that:

In terms of Section 6(1)(c) – The only reasonable precaution whereby the death and the accident resulting in the death might have been avoided that was apparent as a result of the evidence, was for Craig Lochrie to take the precaution of not placing himself in the danger zone between the legs of the plate lift while he was working, whether he was working on the plate lift itself or as may have been the case, on the chassis immediately in front of it.

Finally, Mr Marr had also suggested that Henderson Kerr (the previous occupiers of the yard before they were taken over by EMR Limited) should review site processes and procedures and systems for controlling contractors. I am satisfied by the evidence given by Mr Stephen Grimes and others that EMR Limited are a particularly safety conscious organisation, that they have imported their more robust recording of heath and safety measures into those used for these premises and there are no useful recommendations that I can make in light of that evidence concerning their processes and procedures.