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Professional analysis of workplace risk

Welcome to September! This issue looks at investors & OHS, (pg 1), construction risks & risk assessments (pg 2), designers, SWMS & deadlines (pg 3), fishing, forgery & heart attacks (pg 4) workplace suicides & nanoparticles (pg 5).....Enjoy!

Do investors really prefer good OHS!

How much does your OHS performance affect your shareholders or potential investors? According to senior research analyst for AMP Capital Investors Dr Ian Woods, employers with a solid OHS performance attract investors & win contracts. He also warns that a company must earn about \$100 000 in additional revenue to recoup the losses of a workplace injury with only \$1 000 in direct claims costs. An injury with \$1000 in direct claims costs will also bring about \$5 000 of indirect costs. Assuming the employer has a 5% profit margin; it must generate an extra \$100 000 in turnover to get that money back. Dr Woods claims that this simple return on investment illustrates how valuable preventative measures are to financial bottom lines & from an investors' perspective, there is a need to actively consider OHS performance in investment decisions, as it is believed to be a good measure of management quality. The problem is what are investors actually questioning in relation to OHS?

According to Woods, workplace injuries cost Australian employers an average 6% of profit every year. Indirect costs, he claims far outweigh direct health & safety costs & are incurred through:

- halting or limiting production to allow for incident investigations;
- managing the workforce after the loss of a key employee (whether for a certain period of time or, in the event of a fatality, indefinitely);
- overtime payments and a decline in efficiency (if an inexperienced employee is required to cover a key role); and
- "management time" that must be invested in injury prevention, training & other issues.

Dr Wood claims recent events in WA are a perfect example of how poor OHS performance can hamper productivity. In April this year WA mines minister announced that BHP Billiton (BHPB) would be issued with prohibition notices for *any* safety breaches at its WA mines after a string of fatalities at its Pilbara sites. Within a 14 day period, 12 prohibition notices were issued for breaches that would otherwise only attract improvement notices. This may have in fact been a god send for BHPB as

it allowed them to rectify issues that were likely to impact just as much on production as OHS. Woods says that in mining & other traditionally hazardous industries, employers with a strong OHS track record have a distinct competitive advantage when it comes to seeking investment or applying for contracts. This is perhaps a valid comment but one would ask the question did BHP Billiton shares drop as a result of the WA mines ministers decision? Did investors make alternative decisions about their investments during that period? Or are investors aware that the return on investment for companies such as BHPB are far less likely to be affected by a OHS issues than the Chinese reducing the price they are prepared to pay for iron ore.

There perhaps are some other confounding factors that also need to be considered. Some industries promote OHS on an equal level to productivity. In heavy industries like mining, oil & gas and construction much is made of ensuring OHS is considered equal. However you would rarely find an OHS bonus in these industries that is of equal magnitude to production bonuses achieved for bringing in projects before time & under budget. In some cases in mining & construction this becomes an expensive exercise where personnel are rewarded for achieving specific productivity gains which may or may not increase the OHS risk but companies often then end up wearing the costs associated with driving productivity to this level.

This is often the case in major construction projects where the bonuses company's & individual receive for delivering before time & under budget are significant. These are often wiped out by warranty & defect claims by the client over the ensuing 12 month period. So how much of a driver are OHS bonuses in relation to production bonuses. Having been involved in a number of studies in the mining industry it is amazing to look at the cold hard figures involved. The costs of time associated with incident investigation, loss of a key employee, overtime payments & management time pale into insignificance when considering the actual production bonuses that can be achieved on operations that can generate \$1 million/day in revenue by pushing production to the limit. In some cases the injury costs are minor in comparison to the maintenance costs associated with reactive planning to ensure production is always maintained. What happens at your workplace- how is health and safety managed to ensure that production is not reduced? Are your investors considering the effectiveness of your OHS risk management?

Not managing construction risks with auditing?

The Office of the Federal Safety Commissioner (OFSC) has released a report on the Analysis of Biannual data from Accredited Contractors July-Dec 2008 reporting period as part of the Australian Governments Building & Construction OHS Accreditation Scheme. Almost 30% of all incidents reported related to body stressing & almost 24% to falls, slips & trips. Almost 32% of high risk notifiable incidents to the OFSC related to work where there was a risk of falling from above 2 m. The next greatest percentage of high risk notifiable work was from powered mobile plant movement at 27%. This is interesting to note as in Europe there has been significant improvements in construction industry incidents (fatalities & injuries) where all falls are required to be prevented as opposed to those just above 2 m -perhaps this is a path Australian OHS regulators need to consider. It should also be noted that around 50% of all Australian fall fatalities occur at heights of less than 3 m, again perhaps we should focus on the fall risk rather than the height.

Positive performance indicators reported would suggest that 40% of contractors have been conducting their own audit programs. It would seem that these would need to be more frequent & targeted to high risk areas with 96% of all incidents relating to only 5 mechanism categories (Body stressing, falls, hitting objects with body, hit by moving objects & other unspecified). How does your audit program relate to your risks?

How are your risk assessments for high risk work?

A SA judge has fined two employers a total of \$66,000 & criticised them for failing to conduct a risk assessment (RA) after a young worker suffered serious head injuries in a trench collapse. Conducting a RA was an "easy" obligation to comply with, Industrial Magistrate Lieschke said. He claimed that preparing RA's was not a specialised or technical OHS function. It should not be seen as pointless paperwork or some administrative practice designed to satisfy the needs of the regulatory authorities. The RA process is a simple process whereby an employer asks the question of what could possibly go wrong & with what consequences to the safety of an employee, from a particular work process, the magistrate concluded.

In December 2006 Goodman Plumbing & Property Maintenance (GPPM) contracted Aberfoyle Excavations (AE) to dig a trench in "clean sand" on a job site. A GPPM worker was directed to assist the excavator operator (AE's director). The trench was dug in a driveway beside a masonry fence & a 1 m high brick pillar. When a depth of about 1.6 m was reached the operator noticed that the sides of the trench were unstable. The worker then entered the trench & attempted to shore up its sides with pieces of gyprock plasterboard he found on the site. At this point the trench started to collapse, & the brick pillar fell, striking the worker on the head. He was knocked unconscious & remained in a coma for 7 days.

He underwent brain surgery & continues to suffer severe post-traumatic epilepsy, severe left-sided deafness & visual impairment to his left eye. He can no longer drive or work as a plumber.

GPPM & AE were subsequently charged with both pleading guilty. Both GPPM & AE failed to carry out a RA of the trenching work or the tasks to be undertaken by the worker. If any form of RA had been carried out on the site before the job commenced it is probable that the risk of nearby heavy objects falling into the trench was likely to have been identified. The magistrate also found that GPPM failed to enquire about AE's work methods, & that it was aware that its employee was inexperienced in trench work. Goodman "had assumed, without checking" that the worker had been instructed to "a relevant level of detail" as to the hazards posed by trenches during his apprenticeship but this was "a significant abdication of its responsibility. In fining GPPM & AE \$32,000 & \$34,000 respectively, Industrial Magistrate Lieschke noted that AE warranted "a slightly higher penalty" because it was aware of the dangers immediately before the worker entered the trench.

Hillman v Goodman I/as Goodman Plumbing & Property Maintenance and Watson I/as Aberfoyle Excavations [2009] SAIRC 58

How are your plant risk assessments?

The NSW Industrial Court has fined Sara Lee \$260,000 after it failed to remedy an OHS risk that has caused several incidents since 1997. Incidents involved a packing machine's "kicker arm", which was a steel rod operated by pneumatic pressure which closed box flaps. In one incident a worker suffered grazes after being struck on the forehead. Six weeks later, another was struck in the face, suffering a fracture to her right cheek bone, which required reconstructive surgery & optic nerve reconnections. In 1998, a year after the machine was installed, a labour hire worker sustained a jaw fracture while attempting to release a jam in the machine, & in a subsequent incident in 2006 a production worker was also trying to clear a jam when she was hit.

The Australian Standard for Safeguarding Machinery (AS4024.1-1996) had existed since 1996 warning of the very danger constituted by the kicker arm. On machine installation no protective measures from pneumatic power were taken. The employer's failure to undertake an adequate risk assessment (RA) prior to/on installation or at the time of the first incident demonstrated its "lax approach to safety" & increased the seriousness of the offence relating to the latest incident. After the 4th incident, the employer finally conducted a written RA of the machine, installed a new valve system with signage & warning lights. If these simple steps could have been taken prior to/on installation back in 1997 the following 4 incidents would have been prevented.

Inspector Duadale v Sara Lee Australia & NZ Ptv Ltd [2009] NSWIRComm 133 (2009)

Designer oversight led to significant fines!

A structural drawing oversight has caused the collapse of 80 tonnes of steel framing & almost \$100,000 in fines to the designer (\$28K), a builder (\$35K) and a subcontractor (\$35K) in the Victorian Magistrates Court. In 2006, the steel framing for a warehouse collapsed across the work site & on an adjacent road because of high winds and the lack of temporary bracing on the structure. The frame began to fall when a bolt connecting the base of a column to its concrete footing failed, triggering a chain reaction which led to the entire structure collapsing. At this work site BMF Pty Ltd was engaged to construct the warehouse & administration building, and it in turn commissioned Dimon Consultants Pty Ltd (DCPL) to prepare and supply structural design drawings for the steel structure. SES Structural Erectors International Pty Ltd was subcontracted to erect the steel. All three companies pleaded guilty to charges under the Victorian *OHS Act 2004* in the Magistrates Court.

Magistrate Dawes found that DCPL had not included temporary bracing plans in its structural design drawings, & that none of the other companies noticed the omission. DCPL did, however, include a note which instructed the contractor to supply temporary bracing to stabilise the structure should it be necessary. An expert for WorkSafe reported that DCPL was obliged to make the requirement for temporary bracing explicit in its drawings, & SES, as an experienced rigging firm, should have been aware of the need to brace against wind loads. BMF was charged for failing to co-ordinate the construction and direct SES to provide temporary bracing.

Specialist contractors are required to do their own SWMS!

Employers that engage expert contractors have no common law duty to provide safe work method (SWM) training for tasks within their specialty, the High Court ruled, ending a long-running case. Chief Justice French & Justices Gummow, Hayne, Heydon, & Bell set aside damages orders made by the NSW Court of Appeal awarding a worker \$472,561.95.

The worker was engaged as an independent contractor to pump concrete on the building works at the Hilton Hotel in Sydney in 2003. He suffered serious injuries when he was struck on the head by a pipe that was not properly secured. He filed negligence claims in the NSW District Court against the principal contractor, Leighton Contractors Pty Limited (LCPL), its subcontractor, Downview Pty Ltd (DPL), and Warren Stewart Pty Ltd (WSPL), the company that supplied the services of a concrete truck driver. WSPL was ordered to pay the full damages award to the contractor but claims against LCPL & DPL were dismissed. A full bench of the Court of Appeal overturned the District Court's decision, finding LCPL & DPL had breached their duty of care in failing to properly induct the contractor. On further appeal the High Court held that

as principal contractor, LCPL, was not subject to a duty of care requiring it to provide training to specialist subcontractors on SWM in tasks within their expertise. It found DPL had engaged the worker as a "competent independent contractor" & was also not required to provide safety training. The bench suggested that the Court of Appeal assumed that the site induction to be provided by LCPL to a person engaged to carry out concrete pumping was required to include instruction in the OHS topics contained in the Pumping Code. It pointed out that LCPL's obligation under the NSW OHS regulation 2001 & reflected in its Works Contract with DPL, was to be satisfied that a person carrying out construction work on the site had undergone OHS induction training, rather than providing that training itself. LCPL's only obligation, it said, was to be satisfied that the contractor had completed OHS induction training in general health & safety topics and work activity based health & safety topics, or that they had carried out relevant construction work within the period of two years immediately preceding 1 April 1999, and had completed site-specific OHS induction training.

Leighton Contractors Pty Ltd v Fox; Calliden Insurance Limited v Fox [2009] HCA 35 (2/9/09)

Fined to meet deadlines

Is the safety of your workforce sometime put at risk to meet deadlines? A recent NSW case reinforced why safety must take priority over commercial deadlines, with an employer being fined \$82,500 after commissioning an unguarded machine to meet a production order. In 2006 a production line worker, employed by Lloyd A Cooper Pty Ltd, was working on a can seamer machine when her right hand became caught in it, partially amputating all 5 fingers. Two months prior to the incident the machine was refurbished by a third party but the employer experienced more problems after it was recommissioned. The machine did not run efficiently without intervention & continual maintenance but despite this the machine was brought into full production to meet a production order.

The machine was supplied to the employer fitted with guards but on the incident day a specific guard was in the workshop for alteration. It was also found that the machine's drive mechanism was also unguarded & the emergency stop button was covered by a can. The guards were apparently missing because the machine was under maintenance but there were no danger tags, electrical isolation or any other control measures in place. The employer was aware the machine was not operating efficiently & had been experiencing technical problems so their conduct, in allowing the machine to continue operation, exposed the worker to a very serious, obvious and foreseeable risk to her safety.

Inspector Craig Hall v Lloyd A Cooper Pty Ltd [2009] NSWIRComm 142 (20 August 2009)

Expensive fishing injury!

A Queensland prawn trawler skipper who sustained career ending injuries at work has been awarded more than \$750K in damages. The skipper, employed by New Fishing Australia Pty Ltd, sustained severe hand injuries in 2001 when he became entangled in a rope and crushed by a winch. The winch had stopped but began to move, rotating the worker's left hand, resulting in the amputation of his index finger. He returned to work in 2002 but found it considerably difficult to perform necessary tasks because of constant pain & inadequate grip and subsequently resigned later. He sold his fishing licence acquiring a boat hire business, which has not been profitable. The worker sought damages against New Fishing, based on his loss of earning capacity

Justice Cullinane of the Queensland Supreme Court heard that the worker had a 30% impairment of the upper body, amounting to 18% whole person impairment. The worker also suffered an adjustment disorder with depressed mood. The worker did not have the capacity to perform & would never return to the prawn fishing industry or any active fishing activities where he had been able to earn \$160 K/year. New Fishing admitted liability for the injury but contended that the worker suffered no ongoing economic loss as a result of his injury after he commenced to operate his current business because he might have been in the same position given his plans to leave active fishing.

Justice Cullinane said the issue of economic loss could not be approached that way. Overall he has lost the capacity to engage in the only work that he has for all intents and purposes ever engaged in & to earn, he said, pointing out that the worker had no qualifications outside of the fishing industry. Except for his injury, the worker could have continued to work in these fields or returned to them if it became necessary to do so. In awarding the worker \$751,668, Justice Cullinane took into account past and future economic loss and future care and assistance expenses.

Hunter & Anor v New Fishing Australia P/L [2009] QSC 229 (24 August 2009)

Fine for signature forgery of dead employee

Don't try & forge documents to be used in evidence as SA based trolley collection company, Honest & Frank Pty Ltd, found when they were fined \$12 000 for forging a dead worker's signature on training documents provided to WorkSafe WA. In 2007 the worker was riding on a trolley trailer when he fell & was run over & killed. As part of the incident investigation, WorkSafe requested the employer provide training & induction records for the trolley collector. It submitted a document it claimed bore the signature of the worker. The document was a copy, & when the inspector asked to see the original, the employer claimed that it could not be located. The Police Handwriting Analysis Division examined the signature comparing it with the worker's signature on his passport. The police found the signature on the induction document was a photocopy of the one on the passport- not so honest & frank!

Workplace stressors causing heart attacks!

Researchers have found that employers can significantly reduce the chances of compensable heart attacks occurring in the workplace by limiting exposure to "unusual" physical exertion & modifying time-urgent activities to, researchers say.

According to the Israeli researchers unexpected or unusual events, such as excessive physical exertion, a sudden change in daily routine or personal conflict, can all trigger a heart attack. When a heart attack is triggered by an unusual strain or stress at work," they suggest, "it should be recognised as a work accident."

While a person must have a pre-existing heart disease for a heart attack to occur, most workers' compensation schemes require employers to "accept a worker as he is". The researchers outlined a number of Israeli cases where heart attacks were found to be compensable, including:

- a worker who had a heart attack after the first day of a new schedule in which his workload was increased;
- a worker who had an attack after carrying the workload of two absent employees for the duration of a 12 hour shift;
- an airline manager whose attack was triggered by a verbal & physical altercation with disgruntled patrons after flights were over-booked; &
- a worker whose attack was triggered by an argument with a senior member of staff.

In South Australia, a widow was awarded compensation after it was accepted that her husband's heart attack was linked to his transfer to a stressful managerial role, & another widow was awarded compensation after WorkCover failed to prove her husband's attack *wasn't* caused by exposure to forklift gas. In Victoria, a worker was granted leave to apply for damages for impaired heart function after a judge found his condition was linked to three hours of strenuous work.

The Israeli researchers suggest that employers can reduce the occurrence of heart attacks. Business and industry can modulate the environmental stressors to decrease the incidence of work-related events. While it is generally not possible to prevent sudden emotional conflicts, work which has inbuilt mental stress should be studied and modified. Of particular concern, they say, are "time-urgent mental activities". Also, workers should be protected from unusual physical activity, such as sudden lifting of unusual heavy weights. How often are your employees exposed to circumstances that may place them at increased risk of heart attacks- do you know which of your employees may be at risk and what can be done to minimise this?

Gotsman, M et al: Under What Circumstances Can an Acute Myocardial Infarction Be Regarded as a Work-Related Accident?. *Int J Soc Sec & Workers Comp*, 1(1), 2009.

Global Financial Crisis increases suicides

This month saw World Suicide Prevention Day on September 10 but it would appear that there has been little reduction in suicides recently. The recession may be driving more people to take their lives at work, new statistics from the US suggest. The number of people who killed themselves at work in the US rose 28% to an all time high last year. Annual figures from the US Bureau of Labor Statistics (BLS) revealed that 'self-inflicted' deaths in the workplace rose 28%. A BLS spokesperson said anecdotal evidence has pointed to the financial crisis and job insecurity.

Lanny Berman, Director of the American Association of Suicidology (*yes, there is such an association*), said that although the statistical jump required a case by case investigation, it clearly has potential implications related to the threat of unemployment & it has implications related to dissatisfaction & rage about the quality of the work experience. Researchers at the London School of Hygiene & Tropical Medicine and the University of Oxford reported this year that soaring stress brought on by job losses could prompt a 2.4 % rise in suicide rates in the under 64 age group, a 2.7 % rise in heart attack deaths in men between 30-44 years, & a 2.4% rise in homicides rates, corresponding to thousands of deaths in European Union countries, such as the UK. How much of a risk is your workplace for potential suicides?

What is the risk of work related suicide?

In the US over the period from 1992-2001, a total of 2,170 workers died from suicide or fatal self-inflicted injuries that occurred while the decedent was at work. These suicides accounted for 3.5% of the 61,824 total workplace fatalities that occurred over the period. An average of 217 workplace suicides occurred each year, & in no year did the actual number deviate from the mean by more than 6%. The data is contained in the BLS Census of Fatal Occupational Injuries (CFOI). This data also indicates that the risk of on the job (OTJ) suicide was highest for men, older workers, the self employed & agricultural workers. In addition, among the individual occupations, managers & administrators incurred the highest number of workplace suicides. However, police and detectives in public service faced the greatest "relative risk" of becoming a victim of workplace suicide.

According to the Centre for Disease Control & Prevention (CDC), 29,350 Americans committed suicide in 2000, making it the 11th leading overall cause of death that year (homicide was 14th). Four times as many men committed suicide in 2000 than did women, & nearly 84% of all suicide victims were non-Hispanic whites. Trends for workplace suicides are similar to those for the general population. However, there were 3 times as many workplace homicides in 2000 than there were workplace suicides. This ratio has been decreasing over time as workplace homicides have decreased & workplace suicides have remained

relatively constant. Still, a person at work has a greater likelihood of being killed from homicide than from suicide, whereas in the general population the opposite is true. Are those in your workplace at risk from homicides or suicides? How do you know? How do or would you manage it?

Liability associated with job insecurity & suicide

A Korean court has ruled that an employer is liable for the death of a female worker who died of stress caused by job insecurity. The ruling in favour of the family of the worker came after evidence from doctors. The lawsuit was filed by the victim's mother. Judge Seo Tae-hwan of the Seoul Administrative Court found that the deceased was under extreme stress over her job insecurity for 5 years (2001-2007) during which she was a non-permanent contract worker at Korea Electric Power Corp (KEPCO), the state-run power monopoly. Her job was to obtain readings on power supply systems. She was cited as a model employee & came close to getting on the regular payroll but she failed an interview and her request for a regular job was turned down. The case went to court after the Korea Workers' Compensation & Welfare Service refused to compensate the family.

Risks of long term exposure to nanoparticles

Seven cases of workplace disease, two of them fatal, have been linked to nanomaterial exposures at work. A study recently published in the European Respiratory Journal reports the 7 women employees at a Chinese factory suffered shortness of breath, fluid in the lungs & around the heart, non-specific inflammation of lung tissue, & fibrosis in the lungs. Nanoparticles about 30 nanometres in size were found in the diseased areas of the lungs.

The workers were also completely unaware of OHS regulations & of the potential toxicity of the materials they were handling,' said the lead author from the Occupational Disease & Clinical Toxicology Department at Chaoyang Hospital in Beijing. Their only protection, used sporadically, was cotton gauze masks. When interviewed, the women mentioned that flecks were often present in the air & this seemed to cause itching on their face and arms. The authors suggest the illness was caused by the inherent toxicity of the nanoparticles, which entered the body either through the airways or through the skin, or perhaps through both.

It was clear that the symptoms, the examination results & the progress of the disease in the patients differed markedly from respiratory pathologies induced by factors such as paint inhalation. Within two years, 2 of the women died & the other patients' pulmonary fibrosis continued to develop slowly even once the exposure had stopped. What nanoparticles are your workers exposed to?