

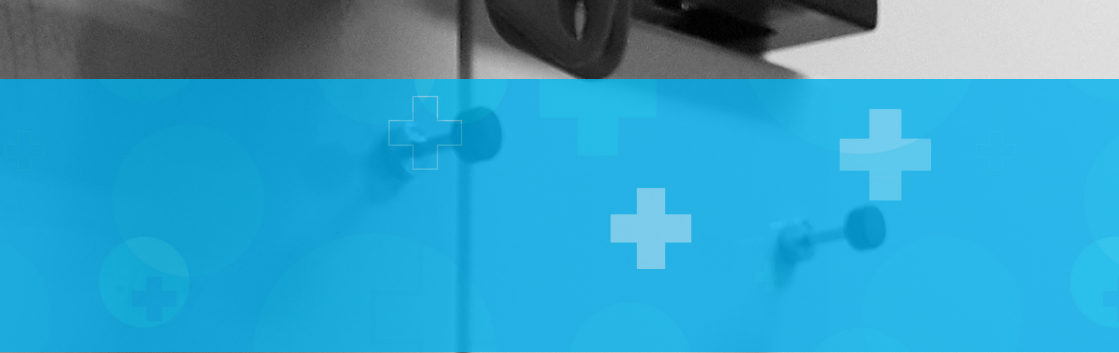
A close-up photograph of a worker wearing white safety gloves and a green safety vest. The worker is using a red padlock to secure a control panel. The panel has several rows of buttons or indicators, some of which are labeled with text like 'stop', 'start', and 'emergency'. The background is slightly blurred, showing more of the control panel and the worker's safety gear.

**+IMPAC**

Less risk, safe people, better business

# ENERGY ISOLATION

+ UNIT STANDARD 25043



**DANGER**

**DO NOT  
OPERATE**

This locktag may  
only be removed by:

Name: \_\_\_\_\_

Dept.: \_\_\_\_\_

Expected Completion: \_\_\_\_\_

**DANGER**

**DO NOT  
OPERATE**

This locktag may  
only be removed by:

Name: \_\_\_\_\_

Dept.: \_\_\_\_\_

Expected Completion: \_\_\_\_\_

# CONTENTS

What is Hazardous Energy .....	4
Isolating Hazardous Energy through Lock-Out.....	6
Lock-out Responsibilities.....	10
Isolation and Lock-out Equipment .....	12
Isolation and Lock-out Procedures.....	16
Case Law .....	26



## TIPS

This handout is designed to go with an IMPAC training experience. You will need to refer to it during the training. It is yours to take away and also makes a great reference guide back in the workplace.

Please feel free to add your own notes to this handout.

As you go through this handout with your trainer use a **highlighter** or underline important words as you are reading. This will make it easier to find key information later.

Use a different colour to highlight or underline words you do not understand or are unsure about, this will make it easier to find them later so that you can ask someone, or look them up.



## IMPAC POLICIES

The following IMPAC's policies and process are available in IMPAC's Learner Handbook

- + Complaints process
- + NZQA Assessment process
- + Appeals process

The IMPAC Learner Handbook is available to download on IMPAC's website, Learning Management System and can be emailed on request.



## THE IMPAC ENERGY ISOLATION COURSE

This course is designed to provide you with information on how to safely isolate and reinstate machinery.

*It also provides the training required towards the achievement of:*

- + **NZQA Unit Standard 25043** — Lock-out and reinstate machinery in the workplace

As an NZQA candidate, you are expected to:

- + Participate fully in the training session, discussions and activities
- + Share your knowledge and experience
- + Complete all assessment activities as notified by your trainer
- + Take responsibility for your own learning needs
- + Discuss with your trainer any assistance you may need.







If you are being disruptive, your trainer will advise you that your behaviour is disrupting learning for other trainees.

If the behaviour continues to disrupt or disturb others, your trainer will ask you to leave the course, and your employer will be notified immediately.

# WHAT IS HAZARDOUS ENERGY

Hazardous energy is any form of energy, in an uncontrolled state, including any source of energy (e.g. electrical, mechanical, pneumatic, hydraulic, chemical, radioactive or thermal) in either kinetic (motion) or potential (stored) form. If not properly isolated, secured or relieved before service, maintenance or installation, hazardous energy may result in injury or property damage.

## TYPES OF HAZARDOUS ENERGY

	<b>Mechanical</b> – Shearing, rolling, crushing, pinching.
	<b>Chemical</b> – Chemical reaction, fire, explosion.
	<b>Thermal</b> – Hotter than 60°C, colder than 0°C.
	<b>Electrical</b> – Voltage, current, static electrical potentials.
	<b>Potential or stored energy</b> – Batteries, springs capacitors.
	<b>Other</b> – Laser, ionising & non-ionising radiation, pneumatic, hydraulic, gravitational, pressure.



# NOTES

Write down some examples from your workplace of hazardous energy where isolation applies or should apply

A series of horizontal dotted lines for writing notes.

# ISOLATING HAZARDOUS ENERGY THROUGH LOCK-OUT

## WHAT IS LOCK-OUT?

Lock-out is the use of a lock to make machinery or equipment inoperable or to isolate an energy source. The purpose is to establish “zero energy”.

This is where all sources of energy including electrical, pneumatic, hydraulic, mechanical and stored energy are isolated so that they pose no danger.

The purpose of energy isolation and lock-out is to prevent the release of an energy source that could activate moving parts on equipment or machinery.

Lock-out devices hold energy isolation devices in a safe or “off” position. They provide protection by preventing machines or equipment from becoming energised because they are positive restraints that no one can remove without a key or other unlocking mechanism, or through extraordinary means, such as bolt cutters.

Tag-out devices, by contrast, are prominent warning devices that an authorised employee fastens to energy isolating devices to warn employees not to re-energise the machine while he or she services or maintains it. Tag-out devices are easier to remove and, by themselves, provide employees with less protection than do lock-out devices.



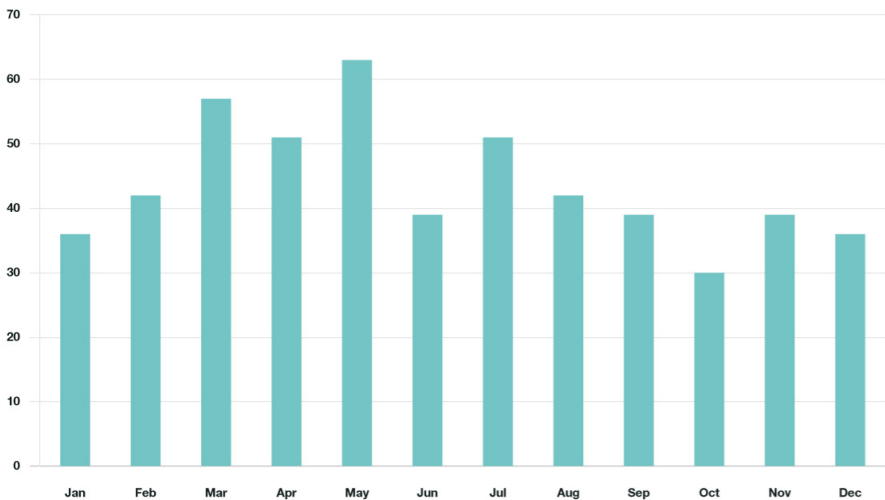
## THE IMPORTANCE OF LOCK-OUT

Lock-out is important for operators, maintenance staff, contractors, cleaners and any other person required to work near moving parts of machinery.

Every year, workers in New Zealand are killed or seriously injured because machinery or equipment was not properly locked out. For example, accidents where workers are caught in machinery can result in severed fingers, crushed limbs, or death.

These accidents can be prevented if machinery and other energy sources are locked out properly.

### INJURIES FROM BEING TRAPPED IN MOVING MACHINERY OR EQUIPMENT\* (JAN - DEC 2022)



\*Injuries resulting in more than a week away from work

SOURCE: WORKSAFE NEW ZEALAND

## WHY BOTHER WITH LOCK-OUT AND ENERGY ISOLATION PROCEDURES?

Below is an example of when lock-out and energy isolation could have prevented a fatality:

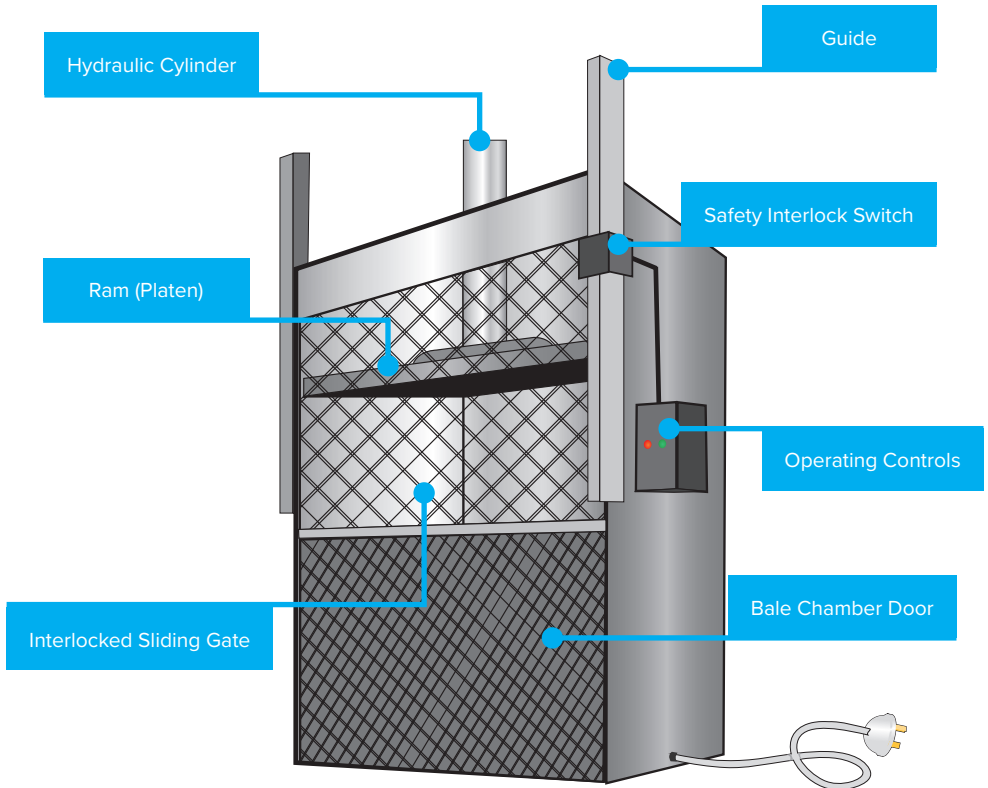
A 36-year-old male paper factory worker died from crushing injuries after being caught by the ram inside a two-stage horizontal baling machine. The victim, working alone in the warehouse area of a paper plant, was compacting waste paper when he entered the compression chamber (either through the access door or from the top of the feed chute) to clear a jam and was caught by the machine's hydraulic ram.

The investigation revealed that the baler was not shut off and locked out before the victim entered it and that the safety interlock on the compression chamber door may have malfunctioned, allowing the machine to operate with the door in the open position.

## ACTIVITY



Identify all lock-out locations on the diagram below:



VERTICAL DOWNSTROKE BALER

# LOCK-OUT RESPONSIBILITIES



## GENERAL WORKERS

The worker whose job requires the operation or use of a machine or equipment on which servicing or maintenance is being performed under isolation.



## AUTHORISED WORKERS E.G. ELECTRICIAN / ENGINEERS

A worker who has received the proper training and has been “authorised” by their department to apply lock-out and tag-out devices when necessary to isolate hazardous energy sources to perform service or maintenance.



## OTHER WORKERS E.G. CLEANERS

A worker whose job requires them to work in an area where service or maintenance is being performed in conjunction with a hazardous energy source.



## SUPERVISORS

Responsible person for the safe operation, shut-down, and start-up of the item/s of plant or machinery to be isolated.



## OFFICERS

Person in charge of the workplace.

## ACTIVITY



Explain the responsibilities involving lock-out procedures for each of the roles below

### ROLE

### RESPONSIBILITIES (in your own words)



General workers



Authorised worker eg.  
Engineer/electrician



Other workers eg.  
cleaners



Supervisor



Officers

# ISOLATION AND LOCK-OUT EQUIPMENT



## LOCK-OUT HASPS

Allow multiple locks to be used when isolating one energy source. The hasp is placed through the isolation point and each person working on the equipment places their own individual lock through the lock-out hasp. This ensures each workers safety as the energy can't be restored until all locks are removed.



## SAFETY PADLOCKS

Safety padlocks come in a range of different sizes and colours for identification purposes. Locks can be non-conductive, non-sparking and non-magnetic depending on the task they are required for. Generally locks will come with two keys, best practice outlines that one lock should only have one key and that key must be kept on the person at all times when performing Lock-out TAG-OUT. Spare keys should be destroyed or at minimum kept in a safe area locked away and require approval for release.



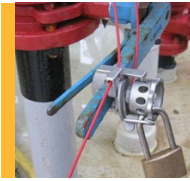
## WEDGES

Wedges prevent hazardous movement of equipment. For example to stop a press from closing during maintenance work.



## KEY BLOCKS

Prevent lock being opened by unauthorised person, used where more than one operator has a key to the equipment.



### ADAPTOR PINS

Used to facilitate lock-out in the on, off or throttled for a range of lock-out equipment. Used to adapt equipment to a position where lock-out can be achieved.



### SELF-LOCKING FASTENERS

Used to ensure tag does not come loose or is not accidentally removed.



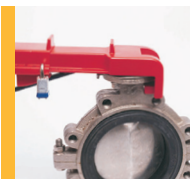
### CHAIN CABLE LOCK-OUTS

Cable lock-outs have many advantages; they can be used in a wide variety of ways and can secure unusual energy isolating devices that are difficult to lock-out using conventional means. The cable lock-out can also be used for security to lock equipment and tools.



### CYLINDER CLAMP

Most gas cylinder lock-out devices will be adjustable and should completely cover the connection on the cylinder. Specially designed lock-out can be used for hard to reach areas such as propane tanks on forklifts.



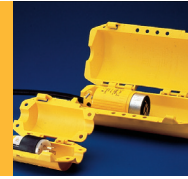
### VALVE CLAMP

Come in a range of different sizes and can be combined with a hasp to allow multiple locks be attached. Some examples below are gate valve, ball valve and butterfly valve lock-out.



### CIRCUIT BREAKER CLAMP

Allows operator to lock circuit breaker in the off position. Can come in a range of different sizes to fit all types.



### PLUG CLAMP

Used to lock-out a plug when it is not exclusively under the control of the individual working it.



### LOCK-OUT LOCKBOX

Used in lock-out situations involving a number of employees and energy sources. All keys are stored in the lockbox before work commences and all employees place an individual lock along with the supervisor's master lock on the box. When the work is complete the supervisor verifies it is safe to release the keys to reinstate the process.



### TAG-OUT DEVICES

Used in conjunction with a lock-out system to identify key information, for example: date and time job commenced, estimated completion time, responsible persons, contact details and reason for lock-out. When tag-out procedures are utilised, additional practices will be required such as removing fuses, etc. A tag is only a warning device and is not considered best *practice for lock-out*.

**Hold Card** – A tag used before cleaning or maintenance is carried out on machinery.

**Defect Card** – a tag used to warn employees of existing or potential hazard.



## STANDARDISED DEVICES

Lock-out and tag-out devices shall be standardised, identified as such, and used only for isolation purposes. All other uses are prohibited.

## DURABILITY

Lock-out devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other meat cutting tools.

Tag-out devices shall be substantial enough to prevent inadvertent or accidental removal and shall be non-reuseable, attached by hand and self-locking eg. cable ties.

# ISOLATION AND LOCK-OUT PROCEDURES

## ISOLATION PROCEDURE FOR AN INDIVIDUAL LOCK-OUT



### **Review your organisational lock-out procedures.**

If there are specific lock-out procedures for the item of equipment, get a copy and check them. If no equipment specific procedures exist, develop a plan for the equipment to be locked out.



### **Identify energy sources and isolating devices.**

Determine which switches, breakers, valves, or devices that isolate the equipment need to be locked out.



**Notify all affected employees.** The authorised employee(s) performing lock-out must notify all affected personnel that the equipment is being de-energised and locked out.



**Shut down the machine / equipment.** The equipment should be shut down as per normal operating procedures.



**Position the energy-isolating devices** (turn off switch, close of valve etc). The equipment shall be de-energised so that the machine or equipment is isolated from the energy source(s). This is accomplished by operating the appropriate switch, breaker, valve, or other device.



**Apply lock-out.** All energy-isolating devices (valves, breakers, switches, etc.) shall be locked out and tagged. A “Danger, Do Not Operate” tag should be securely attached with the lock and should possess the name and contact details of the person that applied the lock-out, the date and time that it was applied and the estimated completion date and time.



**Focus on residual or stored energy.** Following isolation and lock-out, and before any work begins, all stored or residual energy (such as that stored in capacitors, spring elevated machine members, rotating flywheels, hydraulic systems, air, gas, steam, water pressure, thermal energies, etc.) should be dissipated and the equipment should be reduced to a zero energy state. This may involve but is not limited to:

- 1 Discharging capacitors on electrical equipment.
- 2 Venting and drawing pressurised fluids and gases.
- 3 Cooling off hot equipment.
- 4 Blocking of all machinery components, which could move, rotate, or fall.
- 5 Attaching electrical grounding devices.
- 6 Beware of Uninterrupted Power Systems, UPS’s that may power up the equipment when disconnected from mains power source.



**Verify isolation.** Prior to verification, ensure that all personnel are clear from the area. Proceed in checking that the system or piece of equipment has been de-energised. This may be done by utilising electrical testing instruments, visual inspection of vents and drains, or by attempting to operate the system or equipment from the normal control station.



**Perform the task**



**Restore equipment to service.** When task has been completed and the machine or equipment is ready to return to normal operating condition, the following steps shall be taken:

- 1 Inspect the work area to be sure the equipment is fully assembled and operational.
- 2 Check that all remote controls are in the off or neutral position.
- 3 Devices positioned to dissipate stored energy are re-positioned as necessary for normal start-up.
- 4 Ensure the job site is secure & equipment is ready to be energised.
- 5 Ensure that all affected personnel are informed that the equipment is to be energised and are in a safe location.
- 6 Remove the lock-out devices(s) and tags and energise the equipment using normal operating procedures, after ensuring the equipment can be safely energised and that all personnel are clear.



**Shift or personnel changes.** Whenever an individual lock-out procedure is extended beyond one work shift, the individual lock-out procedure needs to be switched over to a group lock-out procedure

# ISOLATION PROCEDURE

## GROUP LOCK-OUT PROCEDURES

- 1 Group lock-out is used whenever multiple repair workers and/or work shifts are involved.
- 2 When maintenance work is performed by contractors or by work groups different than the group that operates the equipment, information exchange must occur to ensure that all parties are aware of the lock-out status of equipment/machines.
- 3 Group lock-out follows all the requirements of individual lock-out procedures listed above in addition to:
  - a A primary owner/operator will be designated. This employee will exercise primary responsibility for implementation of the lock-out procedure for the equipment and machinery to be serviced. The primary owner/operator will coordinate operations with equipment operators before and after lock-out.
  - b A verification system must be implemented to ensure the continued isolation and de-energising of hazardous energy sources during maintenance and service operations. Typically this will involve the use of a Lock-out Permit to Work and a lock box to store the keys to locks on all energy-isolating devices. Once isolated all keys will be placed in the lock box and the primary owner/operator will place a lock on the lock box containing the lock-out keys.
  - c Each authorised employee working on the equipment should individually verify that hazardous energy has been isolated and de-energised and place an individual lock on the lock box.

- d When more than one crew is involved, a principal authorised employee who is responsible for the service repair group is designated. The service group supervisor will place a service supervisor lock on the group lock box and store the key in a mutually agreeable location.
- e Should there be a need to reinstate energy sources for testing purposes during the servicing, then a procedure that clearly outlines the way this will be managed needs to be in place. This may include clearing all workers from the equipment and having worker remove their individual locks off the lock box to allow re-instatement.
- f Once servicing work is complete, all workers will remove their individual locks and tags. The servicing supervisor will inspect the work site and equipment and then remove their lock from the lock box and sign off on the lock-out form.
- g Specific written procedures must be developed and implemented for complex isolation systems or repair operations involving many workers over more than one work shift.

## ACTIVITY



What have we learned about the way we carry out individual and group lock-outs?

A series of horizontal dotted lines provided for writing the answer to the activity question.



## TAG-OUT PROCEDURES

- 1 Because of design characteristics of certain equipment, a lock-out device is not always feasible. Whenever a tag-out is independently used for the control of hazardous energy, the following steps shall be taken:
  - a The tag-out must be carried out in-line with a work plan, which states that a tag-out will be used.
  - b Tag-out must comply with basic procedures.
  - c Tags shall be affixed at the same location that a lock would have been attached.
  - d Affected employees will be trained and made aware of the use of tags.
  - e It must be emphasised that tags are only warning devices.
- 2 Whenever tag-out is used, additional safety precautions should be taken to isolate equipment and to prevent energising the equipment.
- 3 A tag-out should only be used when the design of equipment or machinery makes it impossible to utilise a lock-out device.



### DISCUSSION QUESTION

Where are your company's isolation equipment and procedures located? Is this location suitable? Why or why not?

## STORAGE OF LOCK-OUT AND TAG-OUT EQUIPMENT

All lock-out and tag-out equipment should be stored in a safe location as per organisation requirements. Ensure all equipment is signed for by the person using it and returned by the same person. Regular checks to ensure equipment is fit for use and stores to be monitored by a responsible person.



## REMOVING A LOCK-OUT DEVICE IN WORKER'S ABSENCE

- 1 Before any lock-out is removed the employer must:
  - a Verify the employee is not on the premises
  - b Attempt to contact the employee to verify job/equipment status
  - c Verify that the equipment can be safely energised
  - d Record on the lock-out form that the person's lock-out device was removed
  - e Inform the employee upon return that their lock-out device was removed
- 2 Each department/area will be responsible for developing and implementing specific procedures for all special situations.

## RECORD KEEPING

All applicable records shall be maintained on file for five (5) years.

Records shall include:

- + Training session outlines
- + Training attendance sheets
- + Completed lock-out forms
- + List of authorised employees
- + Annual administrative reviews
- + Action plans and follow-up from evaluations and reviews.

# CASE LAW

## OAK LANE CHAFF LTD

AUGUST 2018

### OVERVIEW OF INCIDENT

Two victims were inside a forage wagon used as piece of production plant for mixing and bagging horse feed to complete maintenance and repairs on the mixing elements.

Director of the company intended to start the conveyor belts to remove a backlog of product, and believe that this would not start the mechanisms inside the forage wagon. However they did, as no isolation had been done.

One worker was drawn into the mixing elements and revolved around them 1.5 times before the forage wagon was stopped. A second worker was expelled from the forage wagon on a conveyor belt.

One worker suffered fractured vertebrae, acromium and ribs, puncture wounds, mental anguish consistent with depression/anxiety/PTSD but not diagnosed.

The second worker suffered bruised knees and was diagnosed with PTSD after the event (note previously diagnosed with PTSD earlier in life after a car accident).

### OFFENCE SECTION

Sections 48(1) and 2(c), and 36(1)(a) of the Health and Safety at Work Act 2015

### FINE IMPOSED

\$260,000

### REPARATION

- + \$35,000 Victim 1 for emotional harm
- + \$20,000 Victim 2 for emotional harm
- + \$4,663.21 Victim 1 for consequential loss
- + \$1,732.62 Victim 2 for consequential loss
- + \$1,654.42 cost

## SAFETY LESSONS LEARNED

- + Engage a competent person to conduct an effective risk assessment for cleaning, maintaining and repairing the forage wagon;
- + Ensure that the forage wagon is appropriately guarded to prevent access while the forage wagon is operating;
- + Develop, implement and monitor a safe system of work for the forage wagon when cleaning, maintaining and repairing the forage wagon, including:
  - + Procedures for isolation and lock-out of the forage wagon.
- + Ensure the provision of information, training, instruction and supervision to protect workers from risks to their safety while cleaning, maintaining and repairing the forage wagon, including:
  - + Procedures for isolation and lock-out of the forage wagon.

## KIWI LUMBER (MASTERTON) LIMITED

NOVEMBER 2018

### OVERVIEW OF INCIDENT

The victim was required to go up onto a timber carrying conveyor to fix a fault that had occurred. The conveyor had already been automatically stopped through an alarm system, but it had not been locked out to prevent reactivation while the victim was up there. Not knowing the victim was there, a fellow worker cleared the fault, causing the conveyor to start. The victim was knocked off her feet and died of the injuries she sustained.

### OFFENCE SECTION

Sections 36(1)(a), 48(1) and 2(c) of the Health and Safety at Work Act 2015

### FINE IMPOSED

\$350,000

### REPARATION

- + \$118,000 apportioned between the victim's family in emotional harm
- + \$145,762 apportioned between the victim's family in consequential loss
- + \$2,391 in costs

## SAFETY LESSONS LEARNED

- + It was reasonably practicable for Kiwi Lumber (Masterton) to:
- + Ensure an effective risk assessment of the bin sorter area was carried out to identify the risks associated with its operation and appropriate controls, in accordance with relevant industry standards;
- + Ensure appropriate guarding was installed to prevent access to the machinery accessible from the top deck of the bin sorter area;
- + Ensure that a pre-start warning alarm would sound prior to the machinery in the bin sorter area restarting, following the clearance of a fault;
- + Develop, implement, monitor and review a safe system of work including effective safe operating procedures for operating the machinery in the bin sorter area;
- + Provide workers with effective and consistent information, training and supervision for operating the machinery in the bin sorter area;
- + Develop, implement, record and maintain an effective maintenance program for the machinery in the bin sorter area.

## ADDICTION FOODS NZ LIMITED

JUNE 2018

### OVERVIEW OF INCIDENT

The worker was being trained on an automatic granule packing machine, which creates small sachets of a food product. The worker attempted to change the film, by pulling some of the film down and it became stuck in the rollers. She used one hand to pull the film, and reached across to activate the film feed stop button. She accidentally pressed the wrong button, causing some high temperature sealing bars to close on the hand holding the film. Her fingers were trapped for about 90 seconds, and she suffered third degree burns to two fingers and a thumb.

### OFFENCE SECTION

Sections 36(1)(a), 48(1) and 2(c) of the Health and Safety at Work Act 2015

### FINE IMPOSED

\$132,000

### REPARATION

\$36,000 for emotional harm



## SAFETY LESSONS LEARNED

- + Ensure a systematic risk assessment of the machine is undertaken by a competent person;
- + Ensure the machine is adequately guarded in accordance with AS/NZS 4024 or a same or similar standard;
- + Provide appropriate controls to ensure the machine is prevented from start-up while changing rolls of film, or while maintenance or cleaning work is being carried out, such as an interlocked guard and lock-out/tag-out procedures;
- + Implement an effective system to ensure workers are adequately trained, supervised, and competent to use the machine prior to operating it;
- + Develop and implement a safe operating procedure for the machine covering routine and non-routine operations including a system to ensure safety controls are present and functional;
- + Ensure health and safety procedures and documentation are adequate, communicated to, and understood by workers.

## NUTRIMETICS INTERNATIONAL (NEW ZEALAND) LIMITED

APRIL 2016

### OVERVIEW OF INCIDENT

The Defendant manufactures cosmetic products.

The victim had been employed by the defendant for 26 years as a packer and process worker.

On 13 April 2016 the victim was working as the second operator on a machine used to fill tubes with cosmetic product. The machine had a large hopper on the top of it with a long metal stirrer inside. There was no guard covering the top of the hopper.

The victim noticed the product in the hopper was low. With the machine still running she inserted a spatula into the hopper to scrape the product downward. The right sleeve of her jacket became entangled in the clamp of the moving stirrer.

The victim suffered mid-shaft radius and ulna fractures to her right forearm. She required four surgeries including the insertion of plates and screws.

### OFFENCE SECTION

Sections 36(1)(a), 48(1) and 2(c) of the Health and Safety at Work Act 2015

#### FINE IMPOSED

\$183,750

#### REPARATION

\$15,880

## SAFETY LESSONS LEARNED

- ✚ Have a competent person carry out a risk assessment of the machine;
  - The Defendant should have ensured that a person competent in machine safety carried out a risk assessment of the machine to ensure that all dangerous aspects were adequately identified and managed.
- ✚ Identify the entanglement hazard that the rotating mechanical stirrer on the machine presented;
- ✚ Adequately guard the machine to isolate workers from the rotating mechanical stirrer;
  - The Defendant should have had either a fixed or interlocked guard over the top of the hopper to ensure that they could not access the moving parts
- ✚ Develop a safe system of work for the operation of the machine including a procedure for scraping the sides of the hopper;
  - Operating procedures and training documentation should have clearly set out how the hopper was to be scraped safely, including the need to lock-out energy sources.
  - If the Defendant's intention was that the hopper wasn't to be scraped down by workers, workers should have been clearly informed of this and also of the process to follow when product was running low.

## FRESH MEATS NZ LIMITED

NOVEMBER 2018

### OVERVIEW OF INCIDENT

Fresh Meats NZ Limited is a slaughter and processing company.

The victim was employed as a slaughter floor labourer. On 22 November 2018 the victim started work at approximately 6.00 am. She was part of the preoperative crew and was cleaning equipment prior to the day's production. The victim was cleaning the second chain and focused on removing fat that was stuck in the chain. At the time she was cleaning it, the chain was operational and moving. Whilst she was doing so, her arm was pushed by one of the pushers and her arm got trapped in the pinch point between the two chains.

### OFFENCE SECTION

Sections 36(1)(a), 48(1) and 2(c) of the Health and Safety at Work Act 2015

### FINE IMPOSED

\$253,125

### REPARATION

\$35,000 for emotional harm

### SAFETY LESSONS LEARNED

It was reasonably practicable for Fresh Meats to have:

- a Conducted an adequate risk assessment of the slaughter floor pre-operation set-up task, including for the inspection and cleaning of chain 2;
- b Ensured dangerous parts on chain 2 were adequately guarded;
- c Developed, implemented, communicated and monitored compliance with an adequate safe system of work for workers to use during the slaughter floor pre-operation set-up tasks, including procedures for locking out and isolating equipment to be cleaned; and
- d Adequately monitored and reviewed the effectiveness of controls chosen to manage risks to workers using and cleaning machinery and equipment on the slaughter floor, including chain

## BAG BOYS LIMITED

OCTOBER 2019

### OVERVIEW OF INCIDENT

WorkSafe inspectors conducted two assessments of Bag Boys' site on 20 September and 9 October 2019. Bag Boys had recently relocated their factory from Auckland to Hamilton.

On the first visit to the site, the inspection largely involved speaking with the workers at the site who were cooperative. The second assessment noted multiple failings which placed the workers at undue risk.

Those failings were each identified on different lines at the site.

In relation to Line One, the inspectors noted:

- + There was an interlocking system, but no lock-out, tag-out system on the machine;
- + Guarding had been removed exposing the end roller and small feeding hopper;
- + There was no safe access to the hopper
- + Workers were climbing into the hopper to clear blockages on a daily basis
- + There was no guarding to prevent workers from accessing the area around the hopper, potentially during operating.

In Line Two, inspectors noted:

- + There was inadequate and missing guarding;
- + There were exposed drive chains, cogs and rollers;
- + Workers were clearing blockages manually while the machine was still on.

On 9 October 2019, two Prohibition Notices were issued in relation to both bagging lines being inadequately guarded. The Notice for Line One was lifted on 11 October 2019 when adequate guarding had been installed. The Notice for Line Two was lifted on 14 October following new guarding being installed.

A further Prohibition Notice regarding Line One noted the practice of workers entering the hopper to clear blockages. This Notice was lifted on 25 October 2019 when it was confirmed that a new access platform had been installed within the hopper.

On 10 October 2019, a Prohibition Notice was issued in relation to the Bulk Bag Shaker on the grounds it also was inadequately guarded. This was also lifted on 14 October when new guarding had been correctly installed.

On 14 October 2019, an improvement Notice was issued in relation to the lock out, tag out systems on all machinery on site. After an extension was granted, this Notice was complied with on 14 November after appropriate controls were implemented.

As a result of these failures the defendant was charged with exposing these workers to risk of serious injury.

## OFFENCE SECTION

Sections 36(1)(a), 48(1) and 2(c) of the Health and Safety at Work Act 2015

### FINE IMPOSED

Nil - on account financial capacity

### REPARATION

\$2822.70

## SAFETY LESSONS LEARNED

It was reasonably practicable for Bag Boys Limited to have:

- + Ensured the plant was safe for workers by installing barriers, adequate guarding and interlock systems on Bagging Line One and Two.
- + Developed, implemented, monitored, and reviewed an effective safe system of work, in particular a lock out tag system, to ensure maintenance on Bagging Line One and Two did not present a risk of entanglement or engulfment to workers.
- + Ensured the provision of effective information, training, instruction and supervision that was necessary to protect workers from risks to their health and safety when working on Bagging Line One and Two.



# NOTES

A series of horizontal dotted lines for writing notes, spanning the width of the page.





# NOTES

A series of horizontal blue dotted lines for writing notes.



## USEFUL WEBSITES

### NEW ZEALAND GOVERNMENT

<a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a>	WorkSafe NZ
<a href="http://www.standards.co.nz">www.standards.co.nz</a>	Standards New Zealand
<a href="http://www.acc.co.nz">www.acc.co.nz</a>	Accident Compensation Corporation
<a href="http://www.fireandemergency.nz">www.fireandemergency.nz</a>	Fire and Emergency New Zealand
<a href="http://www.police.govt.nz">www.police.govt.nz</a>	New Zealand Police
<a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>	New Zealand Legislation
<a href="http://www.getthru.govt.nz">www.getthru.govt.nz</a>	Get Thru Emergency Management
<a href="http://www.civildefence.govt.nz">www.civildefence.govt.nz</a>	Ministry of Civil Defence
<a href="http://www.eqc.govt.nz">www.eqc.govt.nz</a>	Earthquake Commission

### PRIVATE ORGANISATIONS

<a href="http://www.impac.co.nz">www.impac.co.nz</a>	IMPAC Services Ltd
<a href="http://www.safeguard.co.nz">www.safeguard.co.nz</a>	Safeguard Magazine

### TRADE UNIONS

<a href="http://www.union.org.nz">www.union.org.nz</a>	New Zealand Council of Trade Unions
--	-------------------------------------



KEY POINT

For more useful websites and resources we recommend you login to IMPAC's student portal.

## OTHER IMPAC COURSES YOU MAY BE INTERESTED IN ARE:

### HSR STAGE 2: RISK ASSESSMENT & INCIDENT INVESTIGATION

This course has been designed for students to understand how to conduct both a risk assessment and a basic incident investigation.

### HSR STAGE 3: WORKPLACE H&S CULTURE AND COMMUNICATION

This course is designed for students to understand workplace health and safety culture and practices, and how to communicate effectively about workplace health and safety.

FOR MORE INFORMATION CONTACT US TODAY

[contactus@impac.co.nz](mailto:contactus@impac.co.nz)

0800 246 722

[www.impac.co.nz](http://www.impac.co.nz)

**+IMPAC**

**+IMPAC**  
Less risk, safe people, better business