

# Petroleum, Geothermal and Major Hazard Facilities

ANNUAL REPORT 2023/24

December 2024



Te Kāwanatanga o Aotearoa  
New Zealand Government

**WORKSAFE**  
Mahi Haumarū Aotearoa

# CONTENTS

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<b>1.0</b>	<b>Review of the past year</b>	<b>3</b>
1.1	Safety cases	4
1.2	Site inspections	5
1.3	Enforcement measures	5
1.4	Regulatory insight	8
1.5	Notifiable incidents	15
1.6	Petroleum and geothermal regulatory notifications	18
1.7	High potential incidents	20
1.8	Industry working groups	28
1.9	Investigation and analysis of notifiable incidents	30

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<b>2.0</b>	<b>Our focus for the year ahead</b>	<b>31</b>
2.1	High hazards strategy	32
2.2	Unannounced inspections	32
2.3	Hazardous substances workforce development programme	32

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<b>3.0</b>	<b>Fees and levies</b>	<b>33</b>
3.1	Breakdown of income and expenditure	34
3.2	Feedback	34

## tables

1	Examples of major accidents in the chemical and petrochemical industry	12
2	A summary of incidents along with learning that operators may wish to consider where relevant to their organisation/s	21

## figures

1	Safety cases accepted each year for Petroleum, MHF and Geothermal MHF sites	4
2	Site inspections completed by high hazard site type and financial year	5
3	Enforcement measures taken each financial year	6
4	Enforcement measures taken in 2023/24 by industry sector	6
5	Enforcement measures taken in 2023/24 by category	7
6	Flooding from Cyclone Gabrielle	10
7	Notifiable incidents reported by high hazard site type between July 2017 and June 2024	15
8	Legislative categories for notifiable incidents reported by high hazard sites between July 2017 and June 2024 (excludes damage to, or failure of, a safety-critical element that requires intervention)	17
9	Legislative category for notifiable incidents, reported by high hazard sites between July 2017 and June 2024 of damage to, or failure of, a safety-critical element that requires intervention to ensure it will operate as designed	18
10	Petroleum and geothermal regulatory notifications between July 2017 and June 2024	19
11	Income versus expenditure	34
12	Income from safety cases and levy	34
13	Expenditure	34

## Sector profile

46

MHF upper tier  
21 type 1  
11 type 2  
14 type 3

74

MHF lower tier  
37 type 1  
27 type 2  
10 type 3

9

MHF geothermal power stations  
8 upper tier  
1 lower tier

17

Onshore petroleum  
15 upper tier  
2 lower tier

6

Offshore petroleum  
6 upper tier

7

Non-MHF geothermal power stations

3

Non-MHF geothermal and onshore petroleum

6

Non-production installations



Northland



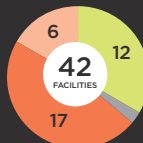
Auckland



Waikato



Bay of Plenty



Taranaki



Hawke's Bay



Manawatu-Wanganui



Wellington



Nelson-Tasman



Marlborough



West Coast



Canterbury



Southland



Otago

● Upper tier MHF  
● Lower tier MHF  
● MHF geothermal power station

● Onshore petroleum  
● Offshore petroleum  
● Non-production

● Non-MHF geothermal power station

● Non-MHF geothermal and onshore petroleum

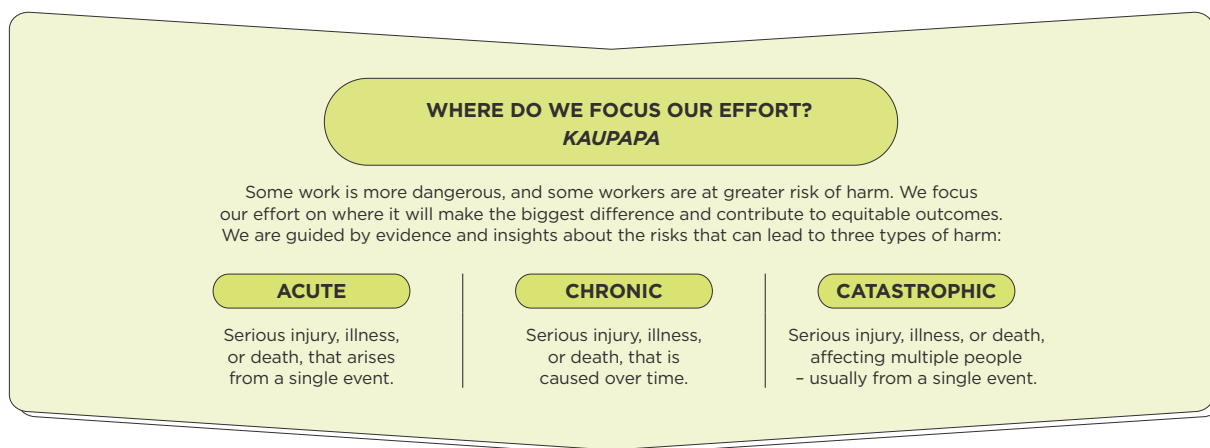
# FOREWORD

Our mission is to transform New Zealand’s health and safety performance towards world-class.

## Overview of this report

Tēnā koutou, greetings to all.

This annual report introduces the new WorkSafe New Zealand strategy. One of the three columns of the strategy is a focus on catastrophic harm.



Catastrophic harm is serious injury, illness, or death, affecting multiple people - usually from a single event. Events like this do not happen often in New Zealand however occur frequently across the world. While catastrophic harm makes up a small proportion of overall work-related harm in New Zealand, the impacts can be severe and significant.

As part of WorkSafe’s efforts to work within our strategic priorities, a strong focus for WorkSafe’s High Hazard team is ensuring PCBUs are applying the same risk controls for the same risk and meeting the ‘so far as is reasonably practicable’ test. In other words, we are looking for a level playing field.

When thinking about the requirement to control risk so far as is reasonably practicable, a common question is whether the business has gone far enough, particularly when they see a competitor with better risk controls. Has your competitor gone over the top with these new controls or are they just keeping up to date with industry best practice?

When does best practice become industry normal? How does your business know if it is doing enough to manage a particular risk, or if you are choosing the correct risk management controls? When does a good idea to manage risk move from just being a good idea, to a standard practice which WorkSafe may use as an example to prove whether a business has managed risk so far as is reasonably practicable?

The Health and Safety at Work Act 2015 defines reasonably practicable and legal advice is useful when applying the term to your situation. There are a few things to consider when deciding on risk controls. All relevant factors should be considered as well as the obvious, that is, can it be done and what do you or others in the industry know about the risk and how to manage it.

The cost of the controls is the **last** factor to consider, you need to weigh up whether the cost is grossly disproportionate to the risk. A good rule of thumb for managing risk, is the greater the consequence, the more you should invest in managing the risk. A factor many businesses struggle with is deciding if the cost of a particular risk control is grossly disproportionate to the risk, particularly when the likelihood of harm is low. What if you decide not to adopt a particular control due to the high cost? It is important to remember that the cost you should be prepared to incur should not be considered against your ability to pay, but rather against the potential consequence of the risk. If there is a risk someone may be killed then accepting a larger cost to avoid the death is reasonable, especially if other businesses are using the control. The argument that you have set aside a good risk control option due to cost, because you can't afford it, when others have, would not be a strong defence.

So, when does good practice become normal practice? The answer is not straight forward however the size of your business should not matter if a risk control has been proven to prevent a serious accident or fatality. If a practice that once was considered best practice, for example, installing gas detectors that perform a function, for example, shut off supply, but now you see the control widely applied and even retrofitted, that practice has now become normal and considered reasonably practicable in most circumstances.

A key message to take away from this article is that risk management needs regular reassessment to check whether new solutions to prevent harm are available, reasonable, and mainstream.

I extend my warm wishes for a safe and productive year ahead and encourage you to engage with WorkSafe. Positive health and safety outcomes benefit not only your business and reputation but also the industry and the community. Collaboration between the industry and the regulator is crucial in achieving our shared objective.

Nāku noa, nā, yours sincerely



**Dave Bellett**  
Acting Chief Inspector High Hazards

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# 1.0 Review of the past year

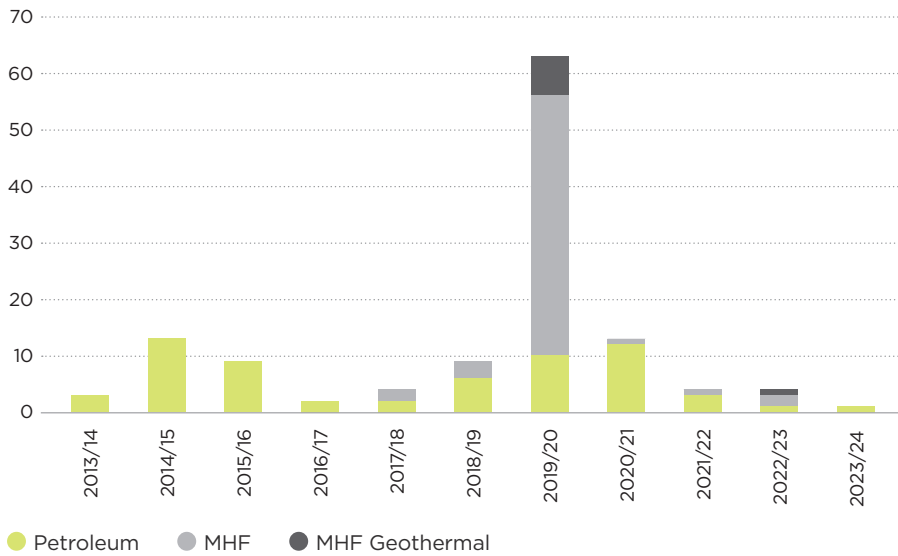
- 1.1 Safety cases
- 1.2 Site inspections
- 1.3 Enforcement measures
- 1.4 Regulatory insight
- 1.5 Notifiable incidents
- 1.6 Petroleum and geothermal regulatory notifications
- 1.7 High potential incidents
- 1.8 Industry working groups
- 1.9 Investigation and analysis of notifiable incidents



### 1.1 Safety cases

In the past year, the High Hazards Energy and Public Safety team at WorkSafe reviewed one revised Petroleum safety case.

The numbers of safety cases accepted annually for Petroleum, MHF and Geothermal MHF sites since the beginning of the petroleum regime are shown in Figure 1.



**FIGURE 1:** Safety cases accepted each year for Petroleum, MHF and Geothermal MHF sites

With all upper tier MHF sites now having an accepted safety case, the focus for inspectors this year remained with on-site verification to ensure that all elements of the safety case are in place on site and working effectively. We continued to follow up on future inspection topics identified in safety case assessments.

The focus this year for inspectors will be the review of revised safety cases submitted throughout the period, and on-site verification to ensure all elements of the safety case are in place and working effectively. In addition, we continue to follow up on future inspection topics identified in safety case assessments, site inspections and incident follow-up.

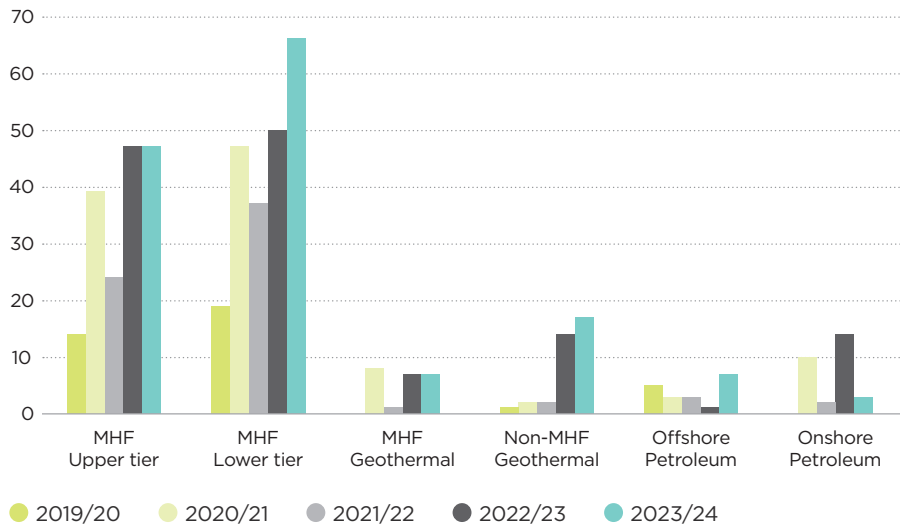




## 1.2 Site inspections

Sites are prioritised for inspection based on our assessment of the quality of the safety case, the number of future inspection topics, a qualitative assessment of the SMS, the time since the last inspection, and reported incidents or complaints.

Last year, 147 high hazard site inspections were undertaken across a range of industries (Figure 2).



**FIGURE 2:**  
Site inspections completed by high hazard site type and financial year

## 1.3 Enforcement measures

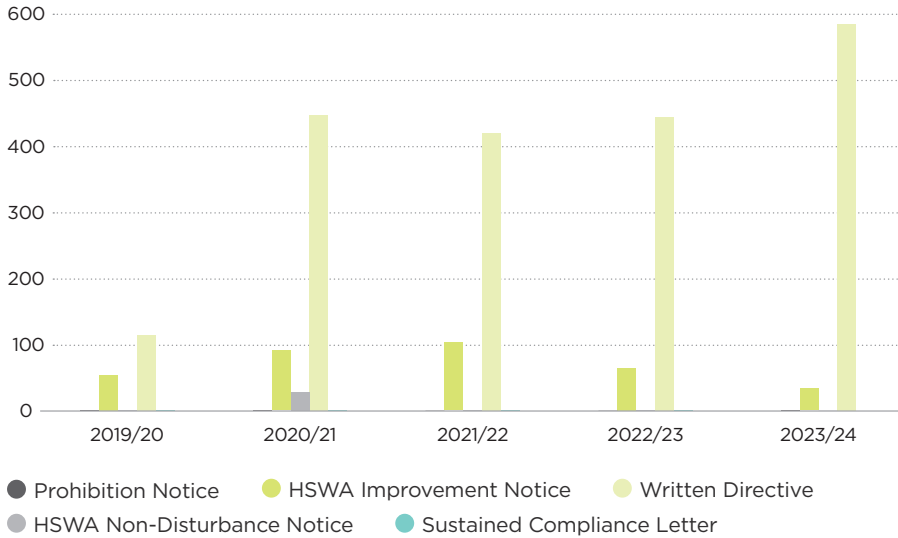
Where inspectors identify health and safety issues, a range of enforcement measures are available for use. Enforcement measures include prohibition, improvement and non-disturbance notices, sustained compliance notices and directive letters. Within P&G only, sometimes recommendations may also be made but these are not legally enforceable.

Inspectors are guided as to the appropriate level of enforcement by our Enforcement Decision-making Model (EDM).

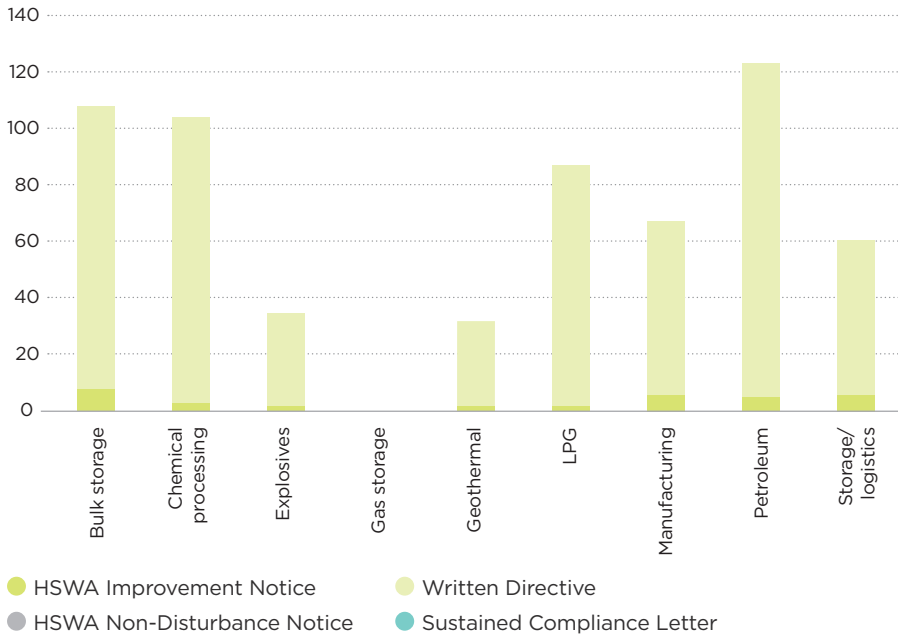


Figure 3 shows enforcement measures taken each financial year. Last year, 617 enforcement measures were taken at high hazard sites across a range of industries (Figure 4). Most of the enforcement measures were taken at lower tier MHF (50%) and upper tier MHF (29%) sites.

We will continue to focus on following up outstanding enforcement measures in 2024/25 to ensure they are complied with in a timely manner.

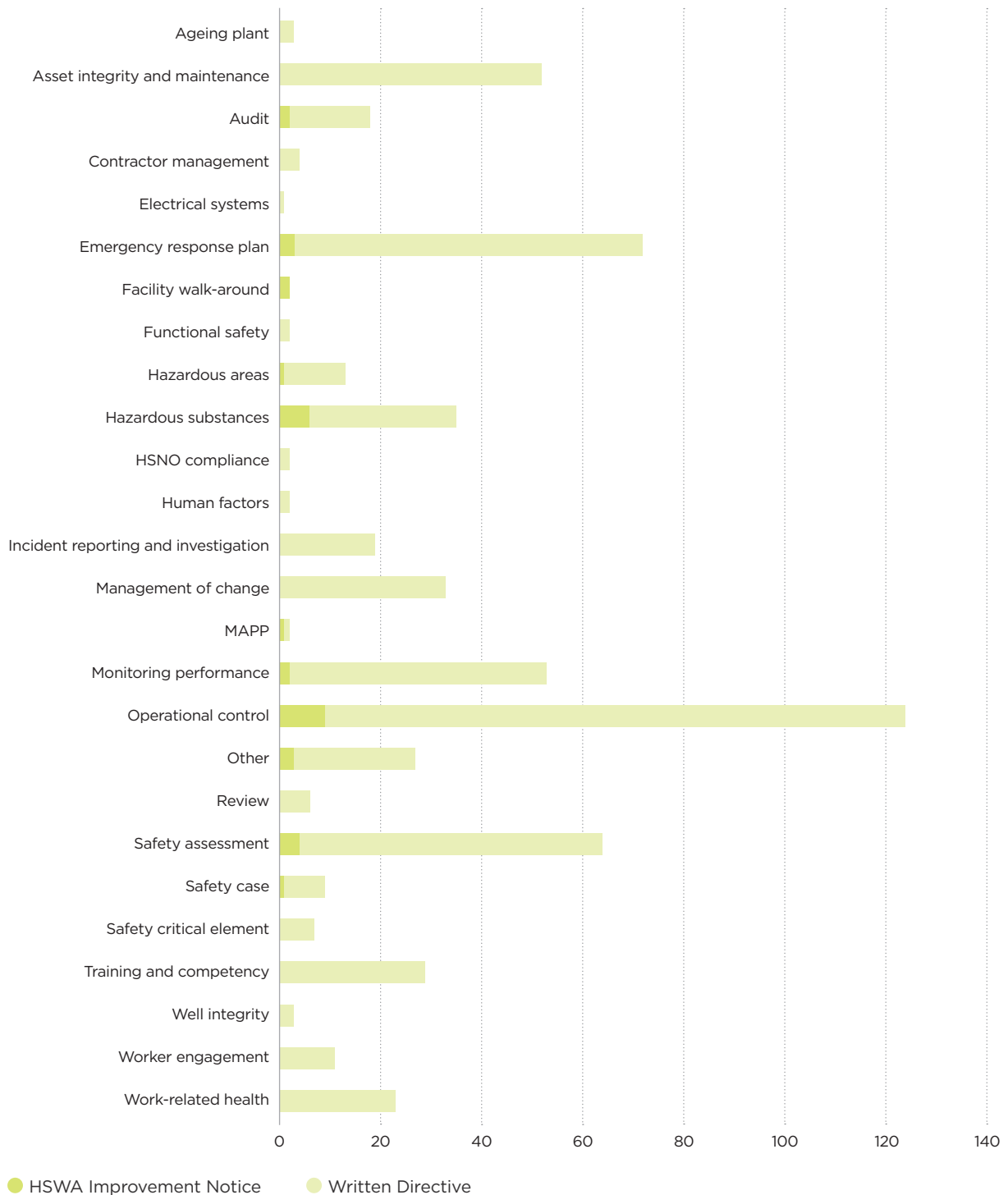


**FIGURE 3:** Enforcement measures taken each financial year



**FIGURE 4:** Enforcement measures taken in 2023/24 by industry sector

Figure 5 shows the number of enforcement measures issued in 2023/24 by category and provides an indication of the key areas of concern to our inspectors. Last year, most enforcement measures were issued for health and safety issues relating to operational controls (20%), emergency response plans (12%), safety assessments (10%), monitoring performance (9%), and asset integrity and maintenance (8%).



**FIGURE 5:** Enforcement measures taken in 2023/24 by category

## 1.4 Regulatory insight

Tēnā koutou katoa

I would like to start by providing an update relating to changes within High Hazards that have been effective from 1 February 2024.

### WorkSafe organisational structure update

All of the high hazard and energy related sectors are regulated by the High Hazards Energy and Public Safety group (HHEPS). This group has responsibility for work activities related to Mining, Construction Tunnels, Petroleum, Geothermal, Major Hazard facilities and the Electrical and Gas equipment and systems in New Zealand. **Note:** Energy Safety team has responsibility to Public Safety as well as workers.

During the internal organisational change, the 'Petroleum and Geothermal' team within HHEPS was incorporated into the existing 'Extractives' team. This realignment was made to align more with international regulators who have combined 'natural resource' based groups.

For everyday operations duty holders should see little or no change.

I now report to the Chief Inspector Extractives. Therefore, I would like to introduce Paul Hunt, Chief Inspector of Extractives.

Paul was appointed as Chief Inspector Extractives at WorkSafe in 2018. Prior to that, he worked in senior operational roles, including being the North Island General Manager for a large coal mining operator. He previously had held operational roles including Mine Manager and Site Senior Executive of a large underground coal mine.

He has a 30-year history in the mining sector and holds operational Certificate of Competence such as first-class coal mine manager and site senior executive, along with qualifications in incident management, incident analysis, mineral industry risk management and occupational health management.

Paul is based in Hamilton.

### OPERATIONAL OVERSIGHT

When an inspector asks 'what operational oversight do the senior leaders have on the business? How would you respond?'

This is a question often asked by our inspectors to understand the commitment and involvement of an organisations senior management to ensure successful health and safety performance with continuous improvement.

It is important to recognise that a positive health and safety culture is fundamental to managing health and safety effectively. To achieve this senior managers should be leading by example and demonstrate that health and safety is an important issue.

To manage health and safety effectively senior management must understand the hazard profile of their organisation and understand where major accidents and incidents can occur and that adequate systems are in place to ensure the risks are adequately controlled. In addition, ensure that sufficient resources are available to complete actions on time.



**Paul Hunt**  
Chief Inspector  
Extractives

Some observed indicators specifically identified during inspections that demonstrate deficiencies in senior management oversight:

- systems not in place to ensure that workers receive the appropriate training in changes made to the facility **before** they are commissioned
- not ensuring that critical technical documentation (for example, piping and instrumentation diagram) is kept up to date (deficient management of change processes)
- significant differences in Safety Critical Elements (SCE) identified for sites essentially similar in scope and risk within the same business
- minimal due diligence undertaken in reviewing SCE verification outputs (not checking the validity of assumptions made, not vetting the suitability of standards used etc)
- lack of active oversight of permitted work - majority of permits issued by contractors:
  - low level of permit awareness by onsite staff
  - insufficient independent monitoring of the permit to work system
  - permits not always complete i.e. work that falls outside of maintenance contractor, or engineering team control
- competency of contractors checks not conducted or deficient
  - little active monitoring, QA/QC of contractor permitted work by on site personnel (for example, depot managers/supervisors), such as no inspection or review of work completed.

To summarise, senior managers should feel confident to respond to questions regarding operational oversight and have confidence that they have effective systems and reporting in place to ensure visibility of your operations to indicate the health of your operations, both the positives and the negatives from a health and safety perspective.



A handwritten signature in black ink, appearing to read 'N. Dawtry'.

**Nick Dawtry**  
Deputy Chief Inspector, Petroleum and Geothermal

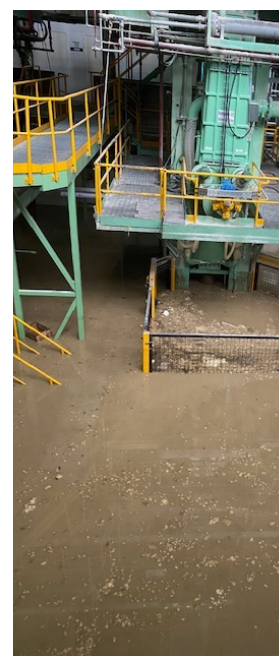


## Natural hazards can have unnatural consequences at your facility

Natural hazards can trigger the release of toxic substances, fires and explosions at facilities that store or process significant quantities of hazardous substances, such as major hazard facilities (MHFs). Hazards can include earthquakes, storms, floods, volcanic eruptions, and tsunamis. Examples of impacts at facilities can include packaged substance racking and storage tank failure, concurrent primary and secondary containment failure, facility inundation leading to safety systems failure, and hazardous chemical reactions, but of course there are so many more impacts and consequences that may be unique to the facilities concerned.

We know that climate change is affecting the intensity and frequency of some natural events such as storms. Due to Cyclone Gabrielle in February 2023, at least one MHF operator found themselves needing to perform pre-emptive actions, ongoing situation monitoring, and carefully controlled re-start and rebuild operations. All of these actions help to play a part in preventing or mitigating potential major incidents.

Figure 6 shows to some extent the flooding at one MHF from this cyclone.



**FIGURE 6:** Flooding from Cyclone Gabrielle

There are numerous overseas examples where incidents were unfortunately not prevented. In 2017 when Hurricane Harvey made landfall in Houston, workers at a chemical facility worked diligently to keep volatile organic peroxides refrigerated in the face of failing power systems and rising flood waters. They eventually lost their battle, resulting in a massive toxic release, the evacuation of 200 residents in a 2.4km radius, and 21 hospitalisations. The facility was located within a designated flood zone. However, the operator did not consider the flooding of power and cooling safety systems a credible risk.

In New Zealand, MHF operators have duties to identify major incident hazards, analyse their risk, and implement controls to prevent or mitigate a major incident.

Operators of MHFs must consider natural hazards that can impact their facility, including their likelihood and intensity. The Natural Hazards Portal can be a good starting point to access existing information related to natural hazards in New Zealand. Information sources can include hazard maps showing zones for coastal, river, tsunami, and land hazards from regional councils as well as climate information from NIWA. Historical data may not necessarily represent future risk, so it is important to take this into account. Using this type of information can help to make the connection as to how these hazards can interact with facilities and their hazardous substances, and what the consequences could be. These scenarios can then be used to inform major incident control measures which may include engineering controls, emergency plans, and other preparedness procedures. This is a good opportunity to challenge assumptions in emergency planning, which may mean that in some cases certain control measures are ineffective and emergency services may be unavailable to assist. This may mean that additional measures need to be considered and implemented.

By being properly prepared for natural hazards, operators can ensure that when things do go wrong, the risk of harm to workers, the public, the environment, operating plant and infrastructure can be significantly reduced.



**Ben Huggins**  
Specialist Inspector MHF

### Robust emergency preparedness – the key to success!

Finding notable, famous or infamous safety quotes from the past can be a lot of fun, but the importance of what is being said cannot be overstated. This safety quote from Sir Brian Appleton exemplifies that position quite well. Appleton was one of the safety assessors at the Piper Alpha disaster and he made this statement during that inquiry in 1988. (Piper Alpha, the worst offshore disaster in UK history.)

“Safety is not an intellectual exercise to keep us in work. It is a matter of life and death. It is the sum of our contributions to safety management that determines whether the people we work with live or die.”

Sir Brian Appleton

“There’s no harm in hoping for the best as long as you’re prepared for the worst.”

Stephen King

## INTRODUCTION

Effective process safety requires robust emergency preparedness. However, poor or inadequate emergency planning or response has been a recurring finding of many WorkSafe inspections. Establishment of a sound emergency response plan is vital in safeguarding not only workers, and the community, but also in minimising facility damage.

An emergency response plan should facilitate coordination between different emergency services organisations and define what equipment/resources are needed to control an emergency. Likewise, it should also have a plan for the public on what appropriate action (or actions) should be taken to minimize exposure to harm. It should also consider a range of credible scenarios related to the hazards present on or about the location. The plan should also consider coordination with local authorities and/or nearby major hazard facilities (MHF), if applicable.

## WHY PREPARE

Many major accidents have taken place in the chemical and petrochemical industry over the past 40 years (Table 1). These incidents have been key driving forces for issuing new regulations, standards and ultimately for improving loss prevention strategies and process safety management. The tragedy at Pike River for example led to a Royal Commission of Inquiry and the formation of WorkSafe.

LOCATION	YEAR	COMPANY	PROCESS	MAJOR INCIDENT	FATALITIES (F)/ INJURIES (I)
Flixborough (UK)	1974	Nypro (UK) Ltd	Production of caprolactam	Cyclohexane vapour cloud explosion	F: 28 workers I: 36 on-site, 53 off-site
Seveso (Italy)	1976	Industries Chimiche Meda Societa Azionara (ICMESA)	Batch production	Toxic release	F: 0 I: 477 people reported skin injuries
Bhopal (India)	1984	Union Carbide India Ltd	Production of Sevin	Toxic release	F: 3,787+ workers and near-by residents
Chernobyl	1986	Ukraine	Nuclear Power Plant	Nuclear disaster, as a result of reactor design and operator error	F: 56+ I: unknown
Piper Alpha (UK)	1988	Occidental Petroleum (Caledonia) Ltd	Offshore oil and gas processing	Oil platform explosion and fire	F: 167 workers
Pasadena (USA)	1989	Phillips 66	Polyethylene production	Polyethylene plant explosion and fire	F: 23 workers I: 130 to 300
Longford (Australia)	1998	Esso Australia Resources Ltd	Gas and crude oil processing	Gas plant explosion and fire	F: 2 workers I: 8
Texas City (USA)	2005	BP	Oil refinery	Vapour cloud explosion	F: 15 workers I: 180
Pike River	2010	Pike River Coal	Coal mining	Methane explosion	F: 29 workers I: 2
Beirut, Lebanon	2020	Port of Beirut, Lebanon	Ammonium nitrate storage	Warehouse explosion	F: >200 workers I: 6,500

**TABLE 1:** Examples of major accidents in the chemical and petrochemical industry



## EMERGENCY PLANNING AND RESPONSE

Some common findings identified during WorkSafe inspections include:

- the emergency plans don't include or refer to the corresponding procedures
- there is inadequate training of on-site emergency response personnel
- the responsibilities of emergency response personnel (both onsite and external) are not known or poorly defined
- there is no formal written procedure for workers to review their roles in the emergency planning when their responsibilities change
- emergency exercises are often limited to evacuations only. Many operators are not executing scenario based exercises based on their identified major incidents. The frequency of exercises is often inadequate too - remember exercise 'calendars' can consist of a mix of desktop based exercises, discrete practice scenarios (for example, a confined space rescue) up to and including annual large scale multi-party exercises
- inadequate/absence of emergency exercise debriefs and poor subsequent action management through to closure
- for multi-facility operators - inadequate KPIs/senior management oversight to ensure that emergency exercises and general emergency preparedness is maintained to a high standard across all the operator's sites
- there is no emergency power backup system for the plant wide alarm system
- emergency evacuation points are not clearly defined and known to all workers.

An emergency response plan should address, at a minimum, the following items:

- pre-emergency planning and coordination with outside parties, including especially but not limited to Fire and Emergency New Zealand
- resources - roles and responsibilities clearly defined (and understood) by all relevant parties
- chain of command and control in an emergency
- training and refresher training/exercises - testing the plan
- communication and information handling - on site/off site coordination and warning systems - public notification
- emergency alerting and response procedures
- notification, warning, and communications procedures - communication redundancies
- safe distances and places of refuge
- site security and control
- emergency response procedures, for example, evacuation routes and procedures
- location and use of common emergency equipment - access to sufficient response equipment and materials, for example, PPE and emergency equipment
- emergency medical treatment and what first aid can be achieved
- clear linkage to major incident/major incident hazards
- predicted (and tested achievable) response times - the basis of the assumptions in the emergency plans
- ability to respond to unforeseen circumstances, compromised resources, for example, at night, while key staff are away on leave, over holiday periods
- periodic review of the plan, at defined/agreed intervals
- emergency shutdown procedures

- control room/command post location suitability
- domino effect and escalation to adjacent facilities – communications and coordination of response
- management of ‘spectators’ (for example, liaising with the local police force – establishing appropriate cordons and managing access through cordons for key personnel who may be required to aid in making a plant safe).

The following items should also be part of emergency response planning:

- a description of the facility, layout and chemical inventory
- training and drills to simulate realistic emergency situations
- suitably trained and competent alternates for key emergency roles (should absences coincide with an event), and a process to ensure alternates are informed and prepared to step in as required
- alarms including directional sirens, strobes or public announcement systems, and local annunciation systems
- suitable back-up power for emergency response systems
- written plans considering past incidents, near misses and credible emergency situations that could arise.

#### **KEY POINTS FOR DESIGNATED MAJOR HAZARD FACILITIES**

- An important element of any system for preventing and responding to major incidents is to establish a MHF-specific emergency plan.
- Emergency planning seeks to minimise the effect of an incident both inside and outside a MHF and requires the timely application of defined procedures by people with adequate training and resources.
- Operators of designated major hazard facilities must prepare and test the emergency plan.
- An emergency plan for a designated upper tier major hazard facility must include specific information detailed in Schedule 3 of the MHF Regulations 2016. There are also requirements in other legislation, for example, Health and Safety at Work General Risk and Workplace Management Regulations 2016, and Health and Safety at Work Hazardous Substances Regulations 2017.
- When developing and revising the emergency plan, operators must engage with workers and consult emergency services organisations, local authorities, and operators of nearby major hazard facilities.



A handwritten signature in black ink, appearing to read 'Liam Gannon', with a long horizontal flourish extending to the right.

**Liam Gannon**  
Deputy Chief Inspector, Major Hazard Facilities

## 1.5 Notifiable incidents

Notifiable incidents, known to high hazard industries as ‘near-misses’ or ‘precursor events’ must be reported to WorkSafe under section 24(1) of the Act, regulation 70 of the Petroleum Exploration and Extraction regulations, regulation 33 of the MHF regulations, and regulation 35A of the Geothermal Energy regulations.

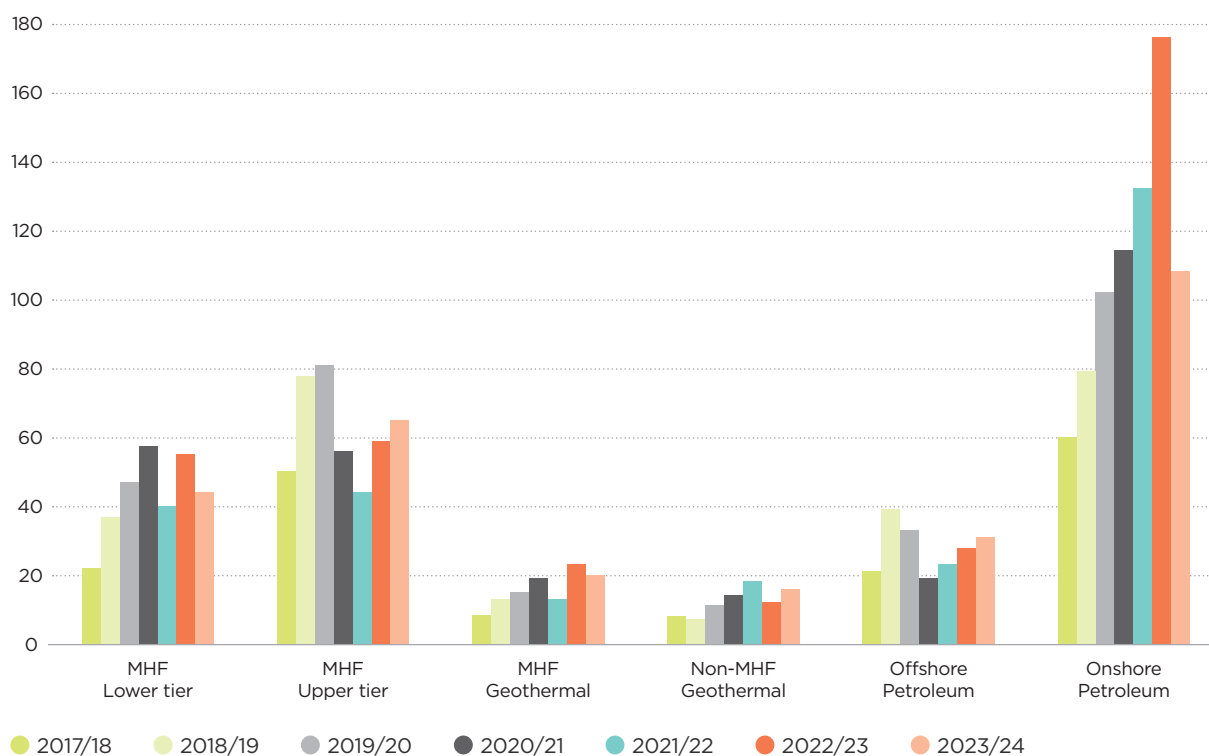
Figure 7 shows the number of notifiable incidents at high hazard sites between July 2017 and June 2024. The number of notifiable incidents reported indicates an improved understanding by operators to notify as per their legislative requirements. Increased notifications from operators indicates better awareness of their health and safety responsibilities under the Act and regulations.

In the past 12 months (July 2023 – June 2024 inclusive), 284 notifiable incidents were reported, somewhat less than the year before (353) and similar to the 4 years before that (average of 273).

Inspectors will continue to review reporting arrangements as part of our inspection approach. It is essential that operators monitor their processes for notifiable incidents as these are important indicators of failures in risk management. Having identified and reported incidents, operators should also rigorously investigate the causes of the incident and take appropriate action to rectify failures and prevent their reoccurrence.

Emphasis on quality investigations and insights from notified incidents will continue in 2024/25 as we are finding the regulator is often reviewing these with the duty holder to ensure correct root causes are identified.

Further, we will also be taking an increased interest in MHF-related HSWA incidents where there is actual or potential serious harm along with those with scope for significant process safety learning.



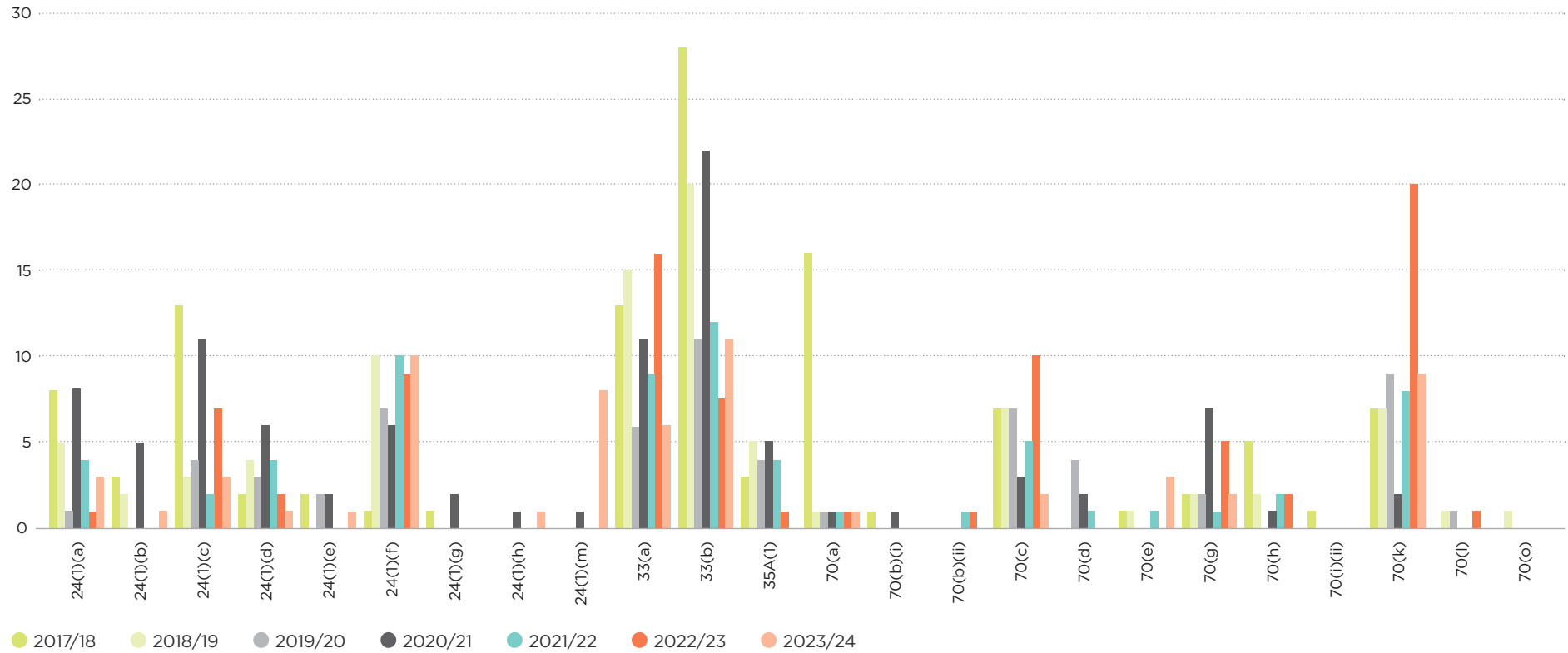
**FIGURE 7:** Notifiable incidents reported by high hazard site type between July 2017 and June 2024

Figures 8 and 9 show the legislative categories for notifiable incidents reported to WorkSafe over the last seven years to June 2024. The data shows that in the 2023/24 year, 75% of notifiable incidents involved damage to, or failure of, a safety-critical element that required intervention to ensure it will operate as designed, very similar to the previous year 2022/23.

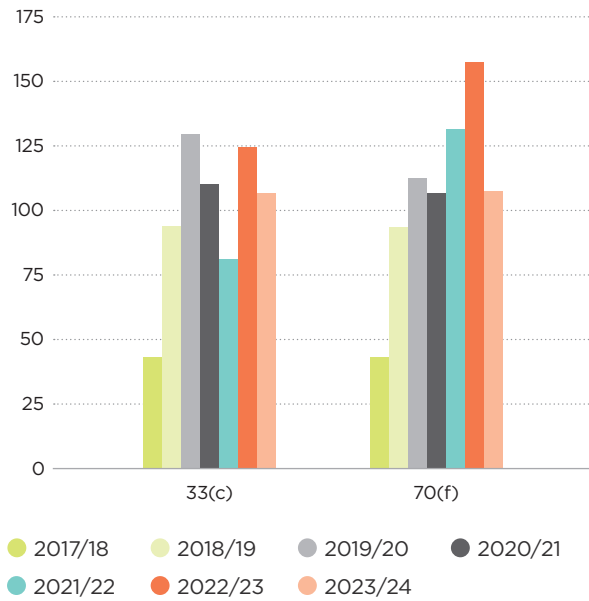
A total of 15 unplanned incidents (other than false alarms) requiring emergency plans to be implemented occurred and 12 incidents that did not cause but had the potential to cause a major incident occurred.

There were ten incidents involving the fall or release from a height of any plant, substance, or thing, all occurring within the petroleum and geothermal regime. While such incidents may not necessarily lead to a major incident, they are of concern due to most being assessed by us as General HPIs (credible potential to cause significant adverse effect on the safety or health of up to five people).





**FIGURE 8:** Legislative categories for notifiable incidents reported by high hazard sites between July 2017 and June 2023 (excludes damage to, or failure of, a safety-critical element that requires intervention)



**FIGURE 9:** Legislative category for notifiable incidents, reported by high hazard sites between July 2017 and June 2024 of damage to, or failure of, a safety-critical element that requires intervention to ensure it will operate as designed

### 1.6 Petroleum and geothermal regulatory notifications

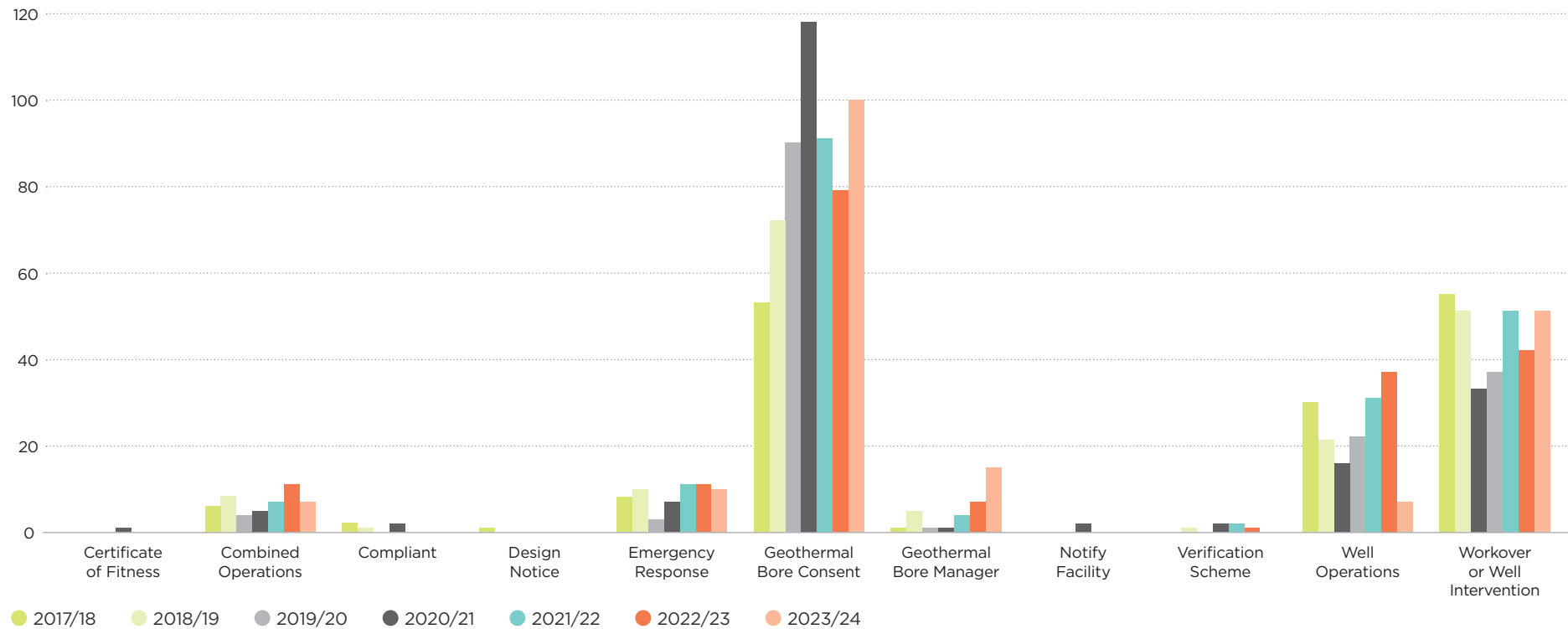
Operators have regulatory requirements to notify WorkSafe prior to conducting certain operational petroleum and geothermal activities.

The PEE regulations require that notifications are submitted within specified timeframes before starting the notifiable operations. The notifications are received by WorkSafe and reviewed by petroleum and geothermal inspectors. Inspectors may follow up with operators as required.

The Geothermal regulations require that notifications of operational activity and bore manager applications are made to WorkSafe.

Figure 9 shows the legislative notification categories made to WorkSafe for the five years between July 2017 and June 2024. The data shows that most notifications received are well operation and well workover/interventions in the petroleum sector, and geothermal bore consents within the geothermal sector.

From the period July 2019 to June 2024 a steady increase in well operation can be observed because of several drilling/workover campaigns being conducted in the shallow geothermal and petroleum sectors.



**FIGURE 10:** Petroleum and geothermal regulatory notifications between July 2017 and June 2024

## 1.7 High potential incidents

### High potential incidents – what are they?

The incident must have occurred at a major hazard facility, petroleum, or geothermal installation to be counted in this measure.

The High Hazards team has a four-step process to assess HPIs:

- 1 Incoming notifiable incidents are compared against a list of incident examples and definitions in a prescriptive assessment
- 2 If the notifiable incidents relate to one or more of the prescriptive events in step 1, and could meet the definition of HPI, these are then evaluated on the risk of harm by considering the potential consequences and likelihood based on the potential outcomes of a credible escalation scenario.
- 3 The outcome of the HPI assessment is then recorded in the database.
- 4 HPI assessments are reviewed by management with the outcome recorded in the database.

HPIs are a metric included in the *WorkSafe Statement of Intent* and are reported accordingly.

### Learning from incidents

A selection of notifiable incident cases received by WorkSafe over the past year is included in this report. Below is a summary of these incidents along with lessons operators may wish to consider where relevant to their organisation(s).

The High Hazards team has adopted the following definition of a high potential incident (HPI):

**‘An event, or a series of events, that causes or has the potential to cause a significant adverse effect on the safety or health of a person.**

**A general HPI is defined as: An event, or a series of events, that has the credible potential to cause significant adverse effect on the safety or health of up to 5 people.**

**A significant HPI is defined as above, however for more than five people.’**





INCIDENT DATE	INDUSTRY SECTOR	ACTIVITY/ OPERATION	SUMMARY	CONSIDERATIONS
Sep 23	Non-MHF Geothermal	Commissioning	An unanticipated hydraulic event during commissioning of a new facility led to a high-momentum impact between rapidly moving fluid mass in the modulating dump valve (MDV) header and the nearest downstream header expansion loop. There was no injury to workers and no loss of containment however nearby workers needed to evacuate the plant as the header sustained significant damage. The PCBU is not the plant designer, but exercises control over the design and the plant.	<p>Inadequate plant design:</p> <ul style="list-style-type: none"> <li>- contact between steam and liquid water in the discharge line created a liquid slug which transferred its momentum to the pipework causing significant pipe support damage</li> <li>- the common modulating dump collector was unable to transport fluids from the three separators to the silencer (AFT) safely following a level trip</li> <li>- an inventory of liquid water formed between the high-pressure MDV and intermediate pressure MDV in the discharge line.</li> </ul>
Oct 23	Upper Tier MHF	Normal operations	A technician arrived at work to find the gas detector panel was in fault and an alarm list on SCADA indicated 100% gas detector failure. The security monitoring service was contacted to enquire if they had recorded any alarms and they had not. Hence no call out was generated.	<ul style="list-style-type: none"> <li>- Design was not to specs: The detailed design phase did not cover details specified with the FEED report: Specifically: <ul style="list-style-type: none"> <li>- the gas panel power supply electrical fusing requirements</li> <li>- the requirement to alarm in event of all faults, including gas panel module faults.</li> </ul> </li> <li>- The work-pack provided to the installer did not contain sufficient information to allow the correct size fuse to be installed.</li> <li>- The onsite installer was not equipped to accurately derive an appropriate fuse rating during the install.</li> <li>- Key elements of the FEED report were not effectively carried through into detailed design, construction or testing/commissioning.</li> <li>- The work-pack provided to the installer did not include fuse rating specifications.</li> <li>- The installer required immediate and direct access to the designer to derive an appropriate fuse rating.</li> </ul>
Nov 23	Non-MHF Geothermal	Forklift use	A routine task of loading casing onto a truck for removal from site was being conducted. A rig worker operating a Manitou forklift began lifting two short (4.4m) casing lengths onto a contractor's truck. The truck driver was the 'spotter', assisting the rig worker to load the casing. The truck deck had bollards installed at the front and rear to secure 12m casing. One 12m casing length had already been loaded and positioned on the passenger side of the deck. When approaching the truck, the forklift tines were elevated to above the deck bollards to place the load beside the 12m casing. At this point the tines were tilted forward causing the two casing lengths to roll off the tines and fall to the ground. They both fell on the driver side of the truck deck.	<ul style="list-style-type: none"> <li>- Tubular handling equipment for the forklift was not available. This equipment would allow better control over the load.</li> <li>- The competence of the forklift driver was not assured.</li> <li>- There was a failure to establish clear managed exclusion zones during lifting operations.</li> <li>- There was a failure to require a documented hazard identification for the task.</li> <li>- There was a failure to ensure that all control measures were in place to adequately control the work.</li> <li>- There was no formal process to identify who is in control of loading/unloading trucks.</li> <li>- There was no process in place to identify who should be a spotter on the wellsite.</li> </ul>

INCIDENT DATE	INDUSTRY SECTOR	ACTIVITY/ OPERATION	SUMMARY	CONSIDERATIONS
Nov 23	Non-MHF Geothermal	Rigging down	The rig crew was rigging down equipment after completing the running of 20" casing. During this activity, crew members were rigging down two belt tongs used to make up the casing. The tongs were being lowered down the V-door chute using the jib crane winch. One tong became caught up on a pad eye approximately 1.6m from the bottom of the v-door chute. One of two bolts that attach the hanging arm to the tongs sheared and one of the tongs slid from approximately 1.6m down to the bottom of the V-door chute coming to rest on the ground. The operation immediately stopped, the area was barriered off and the scene was frozen.	<ul style="list-style-type: none"> <li>- The rig crew felt under pressure to complete their tasks quickly.</li> <li>- There was no documented procedure for the removal of equipment from the drill floor using the pipe handler crane.</li> <li>- There was a lack of competence relating to safely managing this task. Several factors were identified including:               <ul style="list-style-type: none"> <li>- pipe handler crane operated in the incorrect mode (casing versus drilling)</li> <li>- decision to lower tongs through the v-door was made without appropriate consideration of risks</li> <li>- no pre-job start meeting was held to review the task</li> <li>- failure to consider the restricted space of the v-door and chute for such a large and awkwardly shaped item</li> <li>- the 'trigger' to stop the operation and assess the situation was not identified.</li> </ul> </li> <li>- An instruction by the assistant driller to discontinue the activity was not fully understood or clarified by either party.</li> <li>- There was a failure to clarify the instruction relating to the lowering of equipment through the V-door.</li> <li>- there was a lack of communication between driller, lead floorman and floorman regarding the task of lowering equipment from the rig floor.</li> <li>- Communication between all work parties conducting simultaneous operations on the rig floor was poorly managed.</li> <li>- Inadequate task planning process:               <ul style="list-style-type: none"> <li>- methods and risks not documented</li> <li>- PTW used did not cover the specific activity.</li> </ul> </li> </ul>
Dec 23	Non-MHF Geothermal	Well drilling	A missing circlip was identified by a member of the rig crew which led to stopping the job to inspect 30" elevators which had arrived on site from a third party rental company. It was found that the hinge pin was missing the circlip. The elevators were fully inspected with a number of other issues found and rectified and then put back in service.	<ul style="list-style-type: none"> <li>- The design of the elevator allowed for the equipment to be assembled incorrectly.</li> <li>- There was no formal inspection process in place to inspect equipment arriving on site.</li> <li>- There was no or inadequate QA/QC process at the hire company for checking that equipment is safe for dispatch and use.</li> <li>- Competence assurance at both the hire company and at the drilling rig was inadequate.</li> <li>- There was no proper process for checking the serviceability of third party equipment arriving on site.</li> </ul>

INCIDENT DATE	INDUSTRY SECTOR	ACTIVITY/ OPERATION	SUMMARY	CONSIDERATIONS
Dec 23	Upper Tier MHF	Chemical storage	<p>Empty chlorine drum loss of containment at the chlorine refurbishment test station staging area. Chlorine release has occurred for approximately 30–45 seconds from an empty chlorine drum. Note the drum was empty but not degassed. Depressurisation of the empty chlorine drum was completed as per the standard operating procedure via the valve, with a small wispy white cloud noted when performing the ammonia puffing process but not an indication of the drum not being a degassed drum. The chlorine drum valve was immediately closed to stop any further chlorine gas release. Ballance administration staff evacuated their building due to the chlorine odour. Wind conditions were of a nature that the odour dispersed quickly.</p>	<ul style="list-style-type: none"> <li>- The effectiveness of the ammonia puffer test had not been assessed for all foreseeable environmental conditions, particularly high wind conditions outdoors.</li> <li>- No requirement to check drums are degassed at the site before proceeding with the de-pressurisation step.</li> <li>- During testing for the presence of chlorine using the ammonia puffer test, procedure allowed for some chlorine to be present ('wispy white tail'), however this is subjective.</li> <li>- Inadequate signage to clearly indicate storage area demarcations within the yard, and drum status, for example, degassed versus empty etc.</li> <li>- Management of change process was weak in relation to: <ul style="list-style-type: none"> <li>- procedural controls</li> <li>- physical controls</li> <li>- track and trace system updates.</li> </ul> </li> <li>- Inadequate obvious demarcation of drums storage within the yard, for example, areas for drums of different status stored closely due to site's available area.</li> </ul>
Jan 24	Upper Tier MHF	Plant start up	<p>Following a day-shut at a chlor-alkali plant, a manual nitrogen valve was left open to the catholyte tank which supplies hydrogen to the HCl furnaces. Nitrogen flow remained on at the catholyte tank following the chlor-alkali electrolyser start up. The HCl furnace was started and ramped up to 260kg/hour chlorine flow. The nitrogen flow into the catholyte tank resulted in a mixture of hydrogen and nitrogen supply to the HCl furnace. As a result, the control system calculations for excess hydrogen were inaccurate and the HCl furnace was run with an excess of chlorine. This resulted in a release of unburned chlorine gas from the HCl furnace stack. Over a period of five hours chlorine gas detectors in the plant spiked intermittently and briefly to levels ranging between 0.1ppm and 4ppm.</p>	<ul style="list-style-type: none"> <li>- The nitrogen flow display on the DCS was not clearly related to nitrogen supply.</li> <li>- The shutdown procedure was unclear on how the nitrogen flow target should be achieved in the new nitrogen set-up.</li> <li>- The electrolyser and furnace start-up procedure did not contain checks to ensure the Nitrogen flow stopped during start-up.</li> <li>- The chlorine gas response procedure is targeted to plant leaks, rather than stack or vent releases.</li> <li>- Failure to properly identify and assess the hazard associated with the nitrogen system and the potential effects of continued nitrogen delivery to the HCl furnace during start-up and operation.</li> <li>- No high flow alarms exist for the nitrogen flow transmitter.</li> <li>- No direct measurement of chlorine release at the HCl vent.</li> </ul>

INCIDENT DATE	INDUSTRY SECTOR	ACTIVITY/ OPERATION	SUMMARY	CONSIDERATIONS
Jan 24	Upper Tier MHF	Maintenance – equipment testing	This relates to five similar incidents which each involved the failure of a safety relief valve to operate as design during routine bench testing. These valves failed to lift or lifted at a pressure significantly above the set points. Relief valves are utilised on several systems involved in the manufacturing process.	<ul style="list-style-type: none"> <li>- The specification of the relief valves is close to the operational set-points thereby introducing simmering and feathering effects eventually leading to failure.</li> <li>- Some components not suitable for the service required, for example, loss of ductility of O-ring in main valve body, grease and soft parts within the valve not suitable for the pre-heating during start-up.</li> <li>- Some out of tolerance machining issues.</li> <li>- Lack of verification by an independent and competent person of the suitability and the lifecycle condition of these SCE.</li> <li>- No limit to machining frequency set.</li> <li>- Contamination on the valve and nozzle sealing faces caused by cooling carbamate.</li> </ul>
Feb 24	Lower Tier MHF	Product load out	An ammonia leak from an isotainer which contained approximately 10T of ammonia occurred, with a loss experienced of approximately 40kg of ammonia vapor to atmosphere.	<ul style="list-style-type: none"> <li>- There was a profile discrepancy between the actual JC Figure 540 ball valve and its corresponding data sheet. The form of this joint was unexplained and may be the result of a past modification of the valve.</li> <li>- The service provider performing the overhaul and survey of the isotainers lacked familiarity with the type of valve used. This unfamiliarity led to the use of a flange seal that was mis-matched dimensionally with the flange faces that were meant to receive it.</li> </ul>
Feb 24	Lower Tier MHF	Normal operations	During normal operation, a small electrical fire occurred in an exhaust fan of a new rendering building. The fire alarm activated as intended which resulted in evacuation of manned plant. The site ERT team was not activated as the event occurred after normal operating hours and no team members were on site at the time. FENZ was alerted and attended site. The fire was extinguished and the all clear given. There was no significant damage to plant and no hazardous substances were involved in the event	<ul style="list-style-type: none"> <li>- The fact that the maintenance worker(s) left the motor cover off after changing the motor strongly indicates that they had insufficient information to emphasise that the motor cover needed to be reinstalled at the conclusion of the motor change-out.</li> <li>- This event would likely have been identified and stopped should a management of change (MOC) process been triggered because of the cover plate not being put back in place as part of the maintenance plan. The organisation has opportunities to inform workers and embed the knowledge in them that any changes to processes, plant, and equipment need to be considered for a change management process. Had this been implemented the maintenance workers may have installed the cover plate as part of their work or raised it with line supervision to consider the change to leave it removed.</li> <li>- The maintenance worker(s) left the motor cover off after changing the motor strongly indicates that they had no knowledge of the importance of the motor cover for the overall safe operation of the extraction unit.</li> </ul>

INCIDENT DATE	INDUSTRY SECTOR	ACTIVITY/ OPERATION	SUMMARY	CONSIDERATIONS
				<ul style="list-style-type: none"> <li>- Due to the motor cover being left off following the motor change-out indicates that there was a failure in the control of work. An independent check of the work location and the equipment status following the maintenance work would likely have identified that the cover had not been reinstalled as it should be.</li> <li>- The inability to extinguish the fire with handheld equipment raises the question as to whether the control measures employed locally are adequate for the hazards present in the plant. The PCBU should consider this point and review the provision of equipment and any other reasonably practicable actions that could be undertaken to improve the local response thereby saving time and reducing the negative consequences of a fire event eg snuffing system.</li> </ul>
Feb 24	Lower Tier MHF	Normal operations	At approximately 5:30pm on Friday evening, a group of youths broke into site, removed and stole all the external fire alarm sirens (9 sirens). Terminal personnel noted the missing alarms on the following Monday morning around 9:00am. Site electricians then purchased replacements and installed them Monday afternoon	<ul style="list-style-type: none"> <li>- Failure to include in the design of the site any and all security related scenarios and associated mitigations.</li> <li>- Location of site in close proximity to roadways.</li> <li>- Layout of site and perimeter allows 'hidden' areas.</li> <li>- Failure to consider and assess the potential outcomes of uncontrolled intruders on the site.</li> <li>- Lack of the provision of CCTV.</li> <li>- No provision for critical plant and equipment security to prevent inadvertent or malicious operation eg wire car seals on critical equipment.</li> <li>- inadequate security patrols.</li> </ul>
Feb 24	Offshore Petroleum	Maintenance - mechanical	The tool pushers hut was found not pressurized to prevent ingress of potential combustible or toxic gases. The reason for non-pressurisation was that the fan was not running. Fan duct gas detectors had failed which prevented the fan from running. The toolpusher's hut should be pressurized to 50pa as per the performance standard.	<ul style="list-style-type: none"> <li>- System was not identified in the computerised maintenance management system resulting in a lack of inspection and maintenance.</li> <li>- There was inadequate management of change - toolpusher's hut positive pressure protection system not considered for entry to maintenance system.</li> </ul>

INCIDENT DATE	INDUSTRY SECTOR	ACTIVITY/ OPERATION	SUMMARY	CONSIDERATIONS
Mar 24	Offshore Petroleum	Maintenance – mechanical	During lifeboat weekly inspections, it was noted that one of the aft hook foundation bolts on the bottom of the port-side lifeboat was missing and another bolt had sheared in half.	<ul style="list-style-type: none"> <li>- Chloride-induced stress corrosion cracking due to saltwater exposure led to bolt failure.</li> <li>- Failure to consider material type lifecycle in a marine environment for these critical fasteners.</li> </ul>
Apr 24	Lower Tier MHF	Tank or vessel draining	An aviation kerosine flush tank overflowed, releasing fuel from primary containment into secondary containment. Once identified, fuel flow into the flush tank was stopped immediately. All fuel was contained within the site with none released to the environment or off site. No person was injured, and no person came into contact with the fuel. A preliminary assessment of the quantity of fuel lost is between 1000L to 2100L. Fuel was being settled in the flush tank to remove any water. This is a routine activity.	<ul style="list-style-type: none"> <li>- Failure to ensure the maintenance system checked and verified the installation of sampling system equipment ie flush tank inlet valve <i>et al.</i></li> <li>- Failure to ensure the maintenance system initiates regular checks of the integrity of key shut off valves in the sampling system.</li> <li>- Lack of competence in installing an actuator incorrectly sized to operate the associated valve.</li> <li>- Failure to embed the requirement to ESD when emergency events occur.</li> <li>- Failure to include the fuel sampling system in the facility safety assessment, and identify and implement adequate control measures to prevent LOPC.</li> <li>- Failure to adequately implement the major accident prevention policy, such as SMS, to ensure changes to plant and equipment are properly analysed.</li> <li>- Failure to adequately monitor the performance of control measures to prevent LOPC.</li> <li>- Failure to ensure the implementation of the emergency plan on discovery of the LOPC.</li> </ul>
Apr 24	Offshore Petroleum	Production operations – hydrocarbon	A small gas leak was audibly detected on one of the mac unions of the produced water vessel level gauge. (sight glass for produced water separator condensate bucket). The vessel was at blanket gas pressure of 2.4 bar.	<ul style="list-style-type: none"> <li>- No purging and pressure test was conducted prior to reinstatement of the vessel as per procedure (such as isolation/deisolation procedure).</li> <li>- A revised PTW checklist detailing the requirements for mac unions, including torque settings and flange tags, had not been implemented at the time of the reinstatement of the vessel following inspection.</li> <li>- Inadequate management of change - the vessel was not planned to be brought back online immediately after the statutory internal inspection yet was.</li> <li>- There was a failure of operational checks to identify the leak, such as prior to vessel use and during routine daily rounds.</li> <li>- The leak was small and not picked up by dedicated module gas detection or personnel gas detectors.</li> </ul>

INCIDENT DATE	INDUSTRY SECTOR	ACTIVITY/ OPERATION	SUMMARY	CONSIDERATIONS
May 24	Upper Tier MHF	Normal operations	A hydrogen peroxide break tank emergency vent was found to be restrained closed by a chain.	<ul style="list-style-type: none"> <li>- Modified inspection hatch reconfigured to act as emergency vent. The chain was included in the design to prevent the hatch from being left fully open. The design error inherent in the change allowed for misguided maintenance action ie chain held tight rather than loose.</li> <li>- Inadequate post-maintenance checks of equipment returned to service status.</li> <li>- Inadequate maintenance procedures to ensure the hatch chain was left loose following tank maintenance.</li> <li>- Inadequate competence (knowledge) to ensure that the securing chain remains loose on the hatch while in service.</li> <li>- Inadequate signage to state that the securing chain needs to remain loose on the hatch.</li> </ul>
May 24	Non-MHF Geothermal	Well servicing	Wireline operators were retrieving a dummy/drift tool from the well in preparation to carry out a pressure temperature survey. When retrieving the dummy/drift tool from the well the gland packer was unscrewed from the pressure control equipment (PCE). The driller started to raise the top drive that was holding a sheave for the wireline that goes to the unit, at the same time the winch operator was feeding line out to have enough height to retrieve the drift tool from the PCE when the wireline parted from the cable head and the gland packer and wireline cable fell to the sub base from the rig floor.	<ul style="list-style-type: none"> <li>- A small internal lip was present inside the recovery tube - this meant there was a possibility for downhole tools and equipment to catch when being recovered into the recovery tube.</li> <li>- There was a failure to identify that the recovery tube could itself lead to a hung up tool ie lip inside recovery tube, and ultimately leading to a failed wireline when recovering the drift from the well.</li> <li>- There was not enough contingency in the procedure for recovery of the downhole tools in that any reasonable overpull as a result of a hung up tool could not be absorbed by the wireline.</li> <li>- There was a failure of communication between the wireline crew and the driller to ensure stops can be actioned immediately.</li> <li>- There was a failure to adequately assess the risks associated with the method of running the downhole tools and the for the recovery of these in the rig situation.</li> </ul>

**TABLE 2:** A summary of incidents along with learning that operators may wish to consider where relevant to their organisation/s

## 1.8 Industry working groups

### Liquefied Petroleum Gas (LPG)

The LPG working group was established to share knowledge between High Hazard inspectors and to coordinate a consistent approach with our LPG operators.

All High Hazard inspectors with responsibility for operators and facilities holding LPG are members of the group, alongside the Chief Inspector, Deputy Chief Inspectors and representatives from WorkSafe's Hazardous Industries Teams and Technical Specialist Teams.

Compliance with *AS/NZS 1596:2014* will continue to be a focus on our planned inspections.

This year team members attended the inaugural GasNZ conference and a brief presentation was given introducing our industry group and a focused discussion on operational oversight and contractor management.

Observations from inspections has highlighted the need for contractor oversight and monitoring arrangements by MHF PCBUs, to address the risk of over-reliance on third party maintenance contractors and their permit to work systems.

All businesses should monitor and check how things are going on an ongoing basis. Operators are reminded of their overlapping duties and that they cannot contract out of their health and safety duties.

Of all the notifiable incidents received over FY 23-24, LPG facilities made up just over 11% of notifications received. The number of loss of containment events involving LPG continues to be low but has increased over previous years. Sixty percent of notifications received occurred during maintenance activities, with many of these consisting of SCE failures on test. This is a positive reflection that testing regimes are identifying these SCE failures, but PCBUs should continue to monitor the suitability of their maintenance schedules to minimise the risk of any prolonged unrevealed equipment failures.

Engagement with regulatory agencies in New Zealand, MHF counterpart regulators in Australia and GasNZ will continue as opportunities arise.

The group will continue to work together on setting expectations for operators of high hazard facilities with LPG. This will include ageing plant management, operational oversight and permit to work system.

### Asset integrity

As a broad continuation of last year's objectives, the focus of the asset integrity working group has been ongoing assessments to understand the organisational structures and risk management systems of operators supporting asset integrity management. Operators need to be able to talk to damage mechanisms identified and the systems to manage the risks associated with these damage risks.

Considerable asset integrity resources were consumed this year by asset integrity-related incident investigations, specifically learnings arising from two-phase flow incidents occurring in the Geothermal sector. Broad industry learnings related to these incidents have been discussed with regulators and geothermal operators across New Zealand and Australia.

A draft technical bulletin is being developed by WorkSafe, aiming to share expectations and learnings of WorkSafe related to asset integrity management systems of operators. The input of industry representatives will be sought prior to the publication of the bulletin.



## Storage/logistics

The storage and logistics working group (originally called the warehouse industry group) consists of MHF, P&G and hazardous substances inspectors.

The aim of the group is to improve knowledge and consistency across inspectors and identify common issues and good practice across the storage and logistics industry.

The group meets periodically to share learnings and experiences from inspections and discuss areas of concern or that require more clarity or consistency.

The current focus is still on racking standards, separation distance requirements, fire suppression and gas detection.

Future topics are likely to include the building code requirements and performance monitoring specific to storage and logistics.

### **HYDROGEN WORKING GROUP**

The Hazardous Substances team established the Hydrogen Working Group in April 2024.

This group has been newly established due to the introduction of hydrogen re-fuelling and alternative energy installation across the country.

The group is representative of various teams within WorkSafe and are sharing their knowledge, experience and interactions with hydrogen, including legislative updates, exemption applications, regulatory operations, engaging with key stakeholders and guidance and standards.

The aim of the group is to create an awareness of the activities WorkSafe does in relation to hydrogen, by sharing information, working collaboratively, understanding WorkSafe's regulatory role related to emerging hydrogen technologies, and identify any gaps we may need to address.

### **CONSEQUENCE MODELLING**

A consequence modelling group has been established that provides internal support for the High Hazard and Petroleum and Geothermal inspectors. Our inspectors may examine the extent of effects, both on and off site, following a major incident. The group also supports knowledge sharing and provides specific assistance to the other working groups. The group meets periodically to share learnings and observations from inspections and discuss areas of concern.

Recently representatives from the working group met and engaged with Australian regulators to discuss, share, and exchange observations, learnings on the modelling and plans in addressing the identified matter. These Trans-Tasman engagements allow the group to understand the approach on identifying possible events, consideration to address the risk of exposure and controls, and how it affects the emergency response plan and safety assessment from both regulators and duty holder's aspects.

This group will continue to work together with the inspectors, other working groups, and overseas regulators to analyse and understand the shortfalls or issues in this space.

## 1.9 International regulatory engagement

### International Offshore Regulators Forum (IRF)

WorkSafe is an active contributing member of the IRF for global offshore safety. This group of international regulators is made up of representatives from New Zealand, Ireland, Australia, UK, USA, Mexico, Canada, Brazil, Norway and Denmark. The forum meets twice annually, and we encourage you to check out the IRF website [irfoffshoresafety.com](http://irfoffshoresafety.com) to view the range of information relevant to high hazard industries.

The IRF and industry identified three opportunity statements to be addressed collaboratively with the internationally recognised industry associations of International Association of Drilling Contractors (IADC) and International Association of Oil and Gas Producers (IOGP). More information on these problem statements can be found on the IRF website, with regular updates published. You are welcome to contact us to discuss these further.

Australia, currently the IRF Chair through to December 2024, hosted the IRF Safety Conference and AGM in Perth, Australia on 2–6 October 2023. The conference was an opportunity for the global industry and its regulators to discuss matters with a view to encouraging further safety risk reduction.

The October 2024 AGM will be held in Dublin, Ireland and attended by all participating countries.

WorkSafe also attended one OECD regulator meeting in October 2023 (via Zoom). The meeting, held in Paris, was about sharing what has been learnt from chemical accidents around the world.

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## 2.0

# Our focus for the year ahead

### IN THIS SECTION:

- 2.1 High hazards strategy
- 2.2 Unannounced inspections
- 2.3 Hazardous substances workforce development programme



## 2.1 High Hazards strategy

For the 2024/25 year, the High Hazards team will prioritise inspections based on the highest inherent risk to workers and communities coupled with visiting operators who are still developing their health and safety systems or are slow to adopt good industry practices.

## 2.2 Unannounced inspections

Last year WorkSafe announced that MHF sites would experience some unannounced inspections. In the 2023/24 year unannounced inspections took place at multiple sites and some were as a result of concerns from MHF sites that other businesses were holding quantities of substances over MHF thresholds. The unannounced inspections did not find evidence of this however the visits did establish considerable knowledge gaps in what constitutes an MHF.

## 2.3 Hazardous substances workforce development programme

The development of hazardous substance technical e-learning modules has been successfully completed. The modules are designed to support people who wish to develop their hazardous substances knowledge for their workplace or professional development.

They are also suitable for people who wish to progress their career to become a compliance certifier or expand their certifier scope.

They were developed to ensure there is a sustainable workforce of compliance certifiers now and into the future.

Modules are on the following classes:

- classes 2 and 3: Flammable gases and liquids
- class 5: Oxidising substances
- classes 6 and 8: Toxic and corrosive substances
- stationary containers.

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# 3.0

## Fees and levies

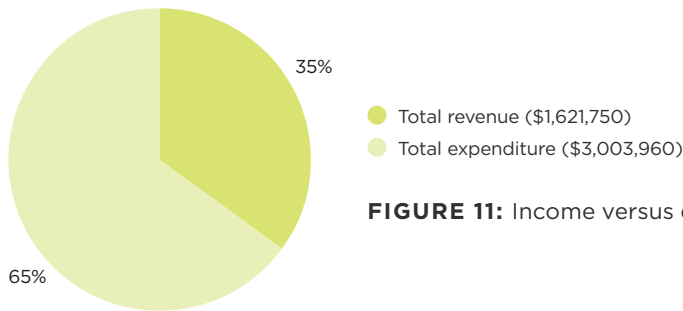
### IN THIS SECTION:

- 3.1 Breakdown of income and expenditure
- 3.2 Feedback



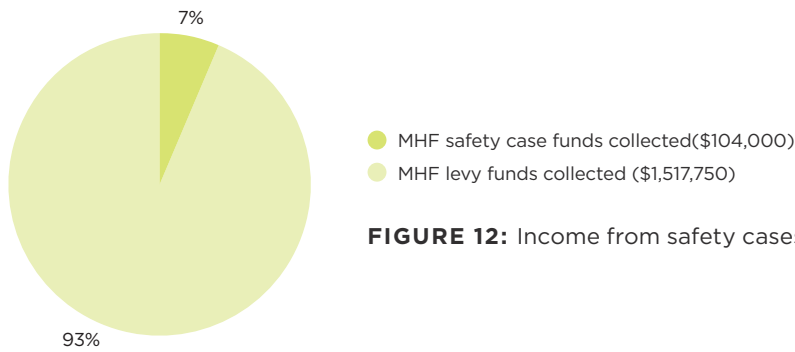
### 3.1 Breakdown of income and expenditure

During the 2023/24 MHF financial year expenditure exceeded income with the effect of reducing overall surplus in the memorandum account.



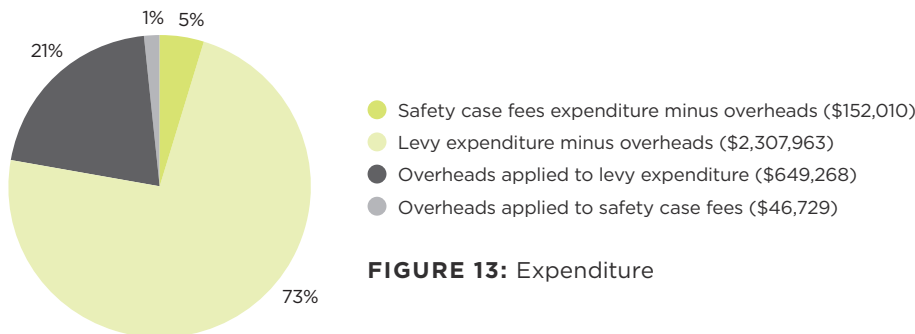
**FIGURE 11:** Income versus expenditure

Total income is made up of safety case fees and MHF levies as follows:



**FIGURE 12:** Income from safety cases and levy

WorkSafe use some of the funding collected to support the MHF team operate and apportion that cost as an overhead. The breakdown of overheads and direct expenditure is shown here:



**FIGURE 13:** Expenditure

There are also surplus funds held by WorkSafe as follows:

Memorandum MHF Levy surplus held by WorkSafe	\$2,443,000
Memorandum MHF Safety Case surplus held by WorkSafe	\$847,000

### 3.2 Feedback

We are keen to know what you think and how we can provide better or more useful data next time. Please send any feedback to [hhu.mhf@worksafe.govt.nz](mailto:hhu.mhf@worksafe.govt.nz)

### **Disclaimer**

WorkSafe New Zealand has made every effort to ensure the information contained in this publication is reliable, but makes no guarantee of its completeness.

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