

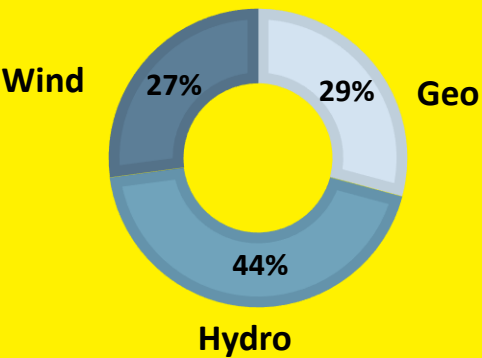
ROKAWA ENFORCEABLE UNDERTAKING

EEA SAFETY WORKSHOP
LEIGH MCLELLAN
August 2026



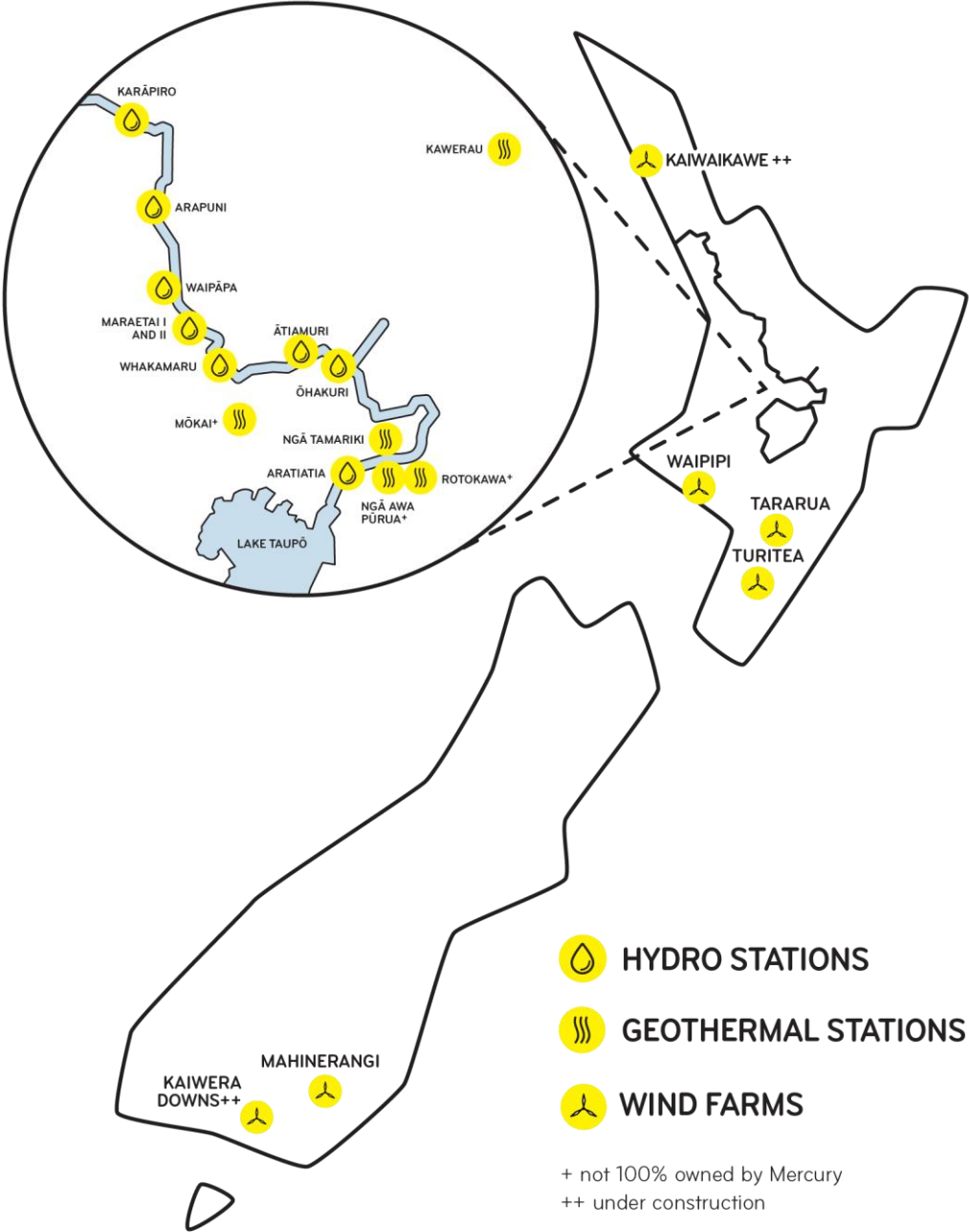
ABOUT MERCURY...

100% Renewable generation mix.



Baseload geo, intermittent wind, flexible hydro.

Retail provider of electricity, gas, broadband, and mobile.



GEOTHERMAL AT MERCURY...

Operate and
maintain five
geothermal power
stations with our JV
Partners.



525 MW of installed
capacity.



ROTOKAWA GEOTHERMAL FIELD



**NGĀ AWA PURUA - 139MW
triple flash plant with a single
shaft steam turbine
Commissioned: 2010**

**ROTOKAWA - 34 MW back-
pressure steam turbine and
four binary units.
Commissioned: 1997**

WHAT DOES STEAM HAMMER HAVE TO DO WITH YOUR SAFETY CULTURE?

Hold that thought — we'll come back to it.

ENFORCEABLE UNDERTAKING

TIMELINE 2021-2026



SCE
VERIFICATION
IMPROVEMENT
NOTICES (3)



ROKOKAWA
INCIDENT
IMPROVEMENT
NOTICES (4)



KAWERAU HP
VENT FAILURE



ALL
IMPROVEMENT
NOTICES CLOSED



DRILLING
IMPROVEMENT
NOTICE (1) -
CLOSED



ENFORCEABLE
UNDERTAKING
DISCHARGED



JUN
2021

JUL
2021

DEC
2021

JUL
2022

APR
2023

JUL
2023

DEC
2023

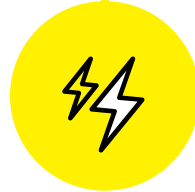
JAN/FEB
2023

MAR
2024

APR
2026



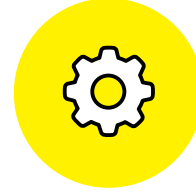
ROKOKAWA
STEAM
HAMMER
INCIDENT



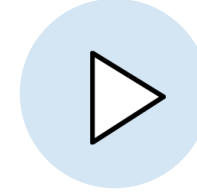
WORKSAFE LAY
CHARGES
AGAINST
MERCURY



DRILLING
CAMPAIGN
STARTS



DRILLING
PROGRAM
RESET



ENFORCEABLE
UNDERTAKING
PROGRAMME
KICK-OFF

WHAT IS AN ENFORCEABLE UNDERTAKING?

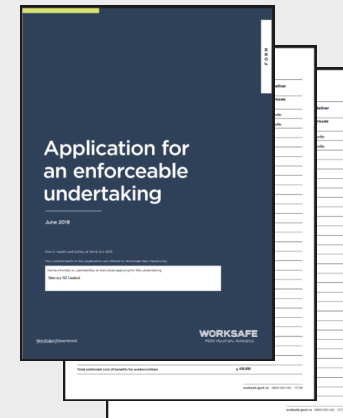
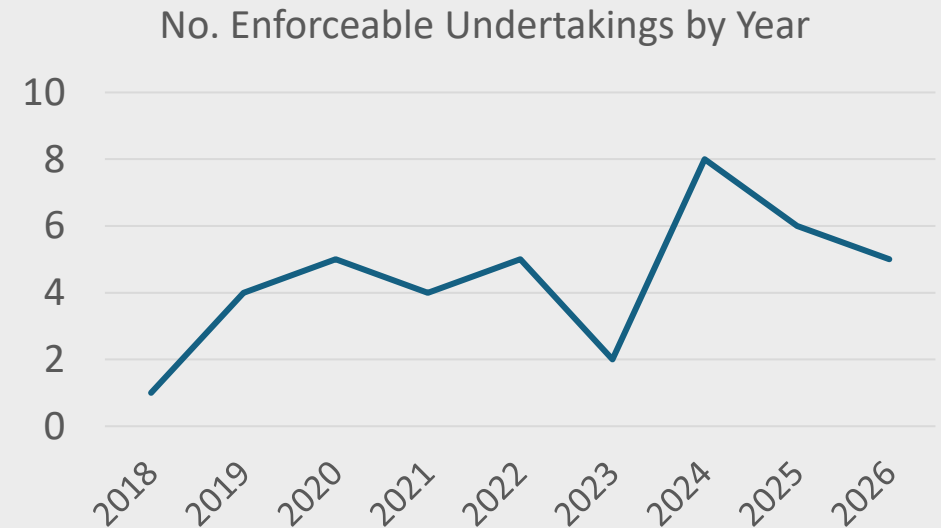
A voluntary legally binding agreement between WorkSafe and a duty holder following a breach of the Health and Safety at Work Act 2015.

Think: “turn a breach into a bigger safety improvement”.

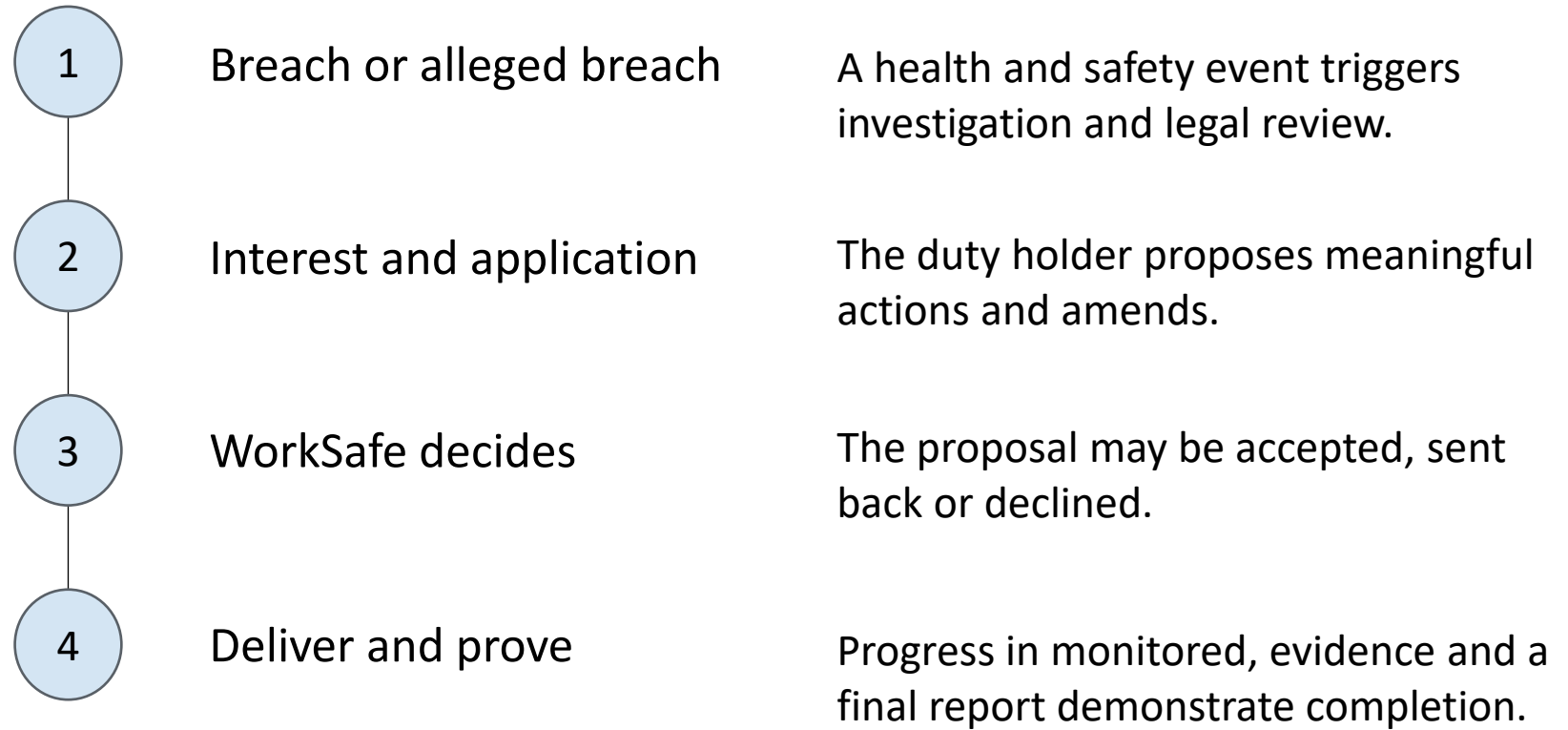
Voluntary, because the duty holder chooses to apply.

Binding, because the commitments must be delivered once accepted.

Alternative, because an EU is generally used instead of prosecution.



How it works...



The value should travel beyond the original event....

Benefits to Workers

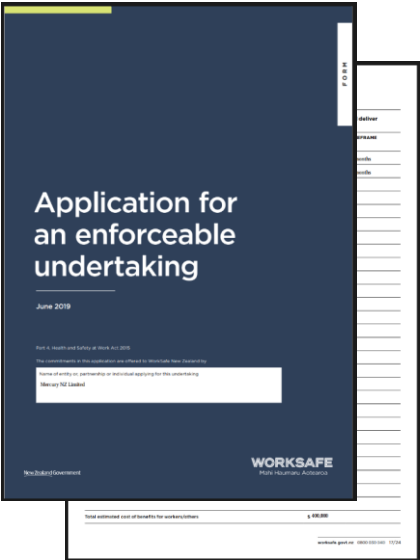
Fix systemic issues, strengthen controls and prevent recurrence.

Benefits to Industry

Share learning and deliver benefit to wider industry.

Benefits to Community

Support HSW goals for the benefit of the community.



ENFORCEABLE UNDERTAKING

ROKOKAWA STEAM HAMMER INCIDENT



**COMMITMENT TO A \$1.7M, 2 YEAR WORK PROGRAM TO UPLIFT OUR SAFETY CULTURE.
WE ALL HAVE A PART TO PLAY.**



BENEFITS TO WORKERS

Leader Routines for Safer
Outcomes: Coaching Program
and Tools

Process Safety Fundamentals
Education Program



BENEFITS TO INDUSTRY

Hazards Awareness Training
Program

Autonomous Inspection for
Power Plants

Lessons Learned – Rotokawa
Steam Hammer

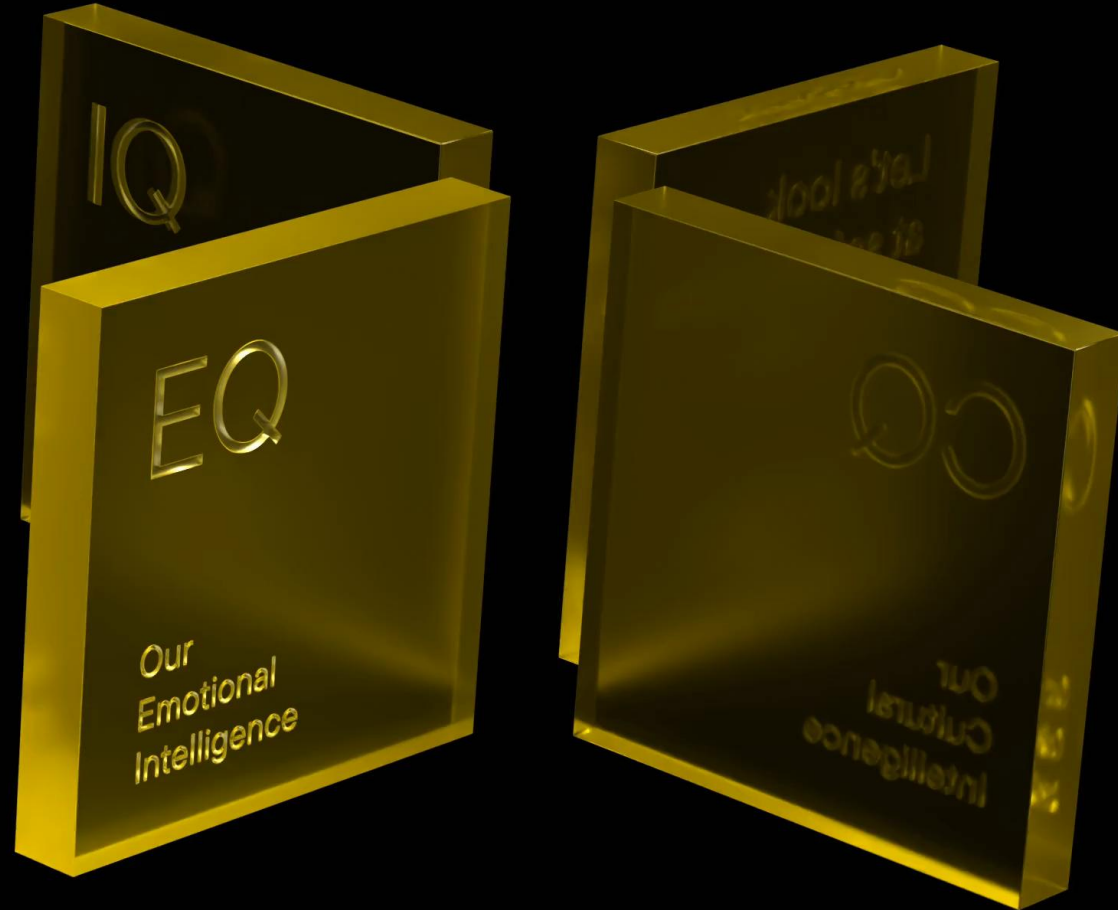


BENEFITS TO COMMUNITY

Donation to Emergency
Service Organisations

Health & Safety Professional
Scholarship

Safety Intelligence Programme^{SQ}



BENEFITS TO WORKERS

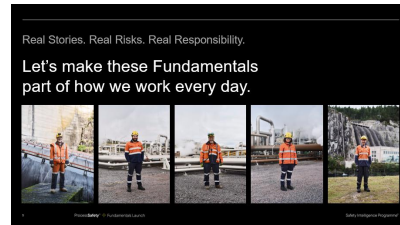
Rotokawa Enforceable Undertaking



BENEFITS TO WORKERS

Leader Routines for Safer
Outcomes: Coaching Program
and Tools

Process Safety Fundamentals
Education Program

A screenshot of a safety form titled 'KAWERAU' with a date field. The form is divided into several sections: '1. LAST 24 HOURS', '2. SAFETY OBSERVATIONS / EVENTS', '3. WORK COMPLAINTS', '4. IMPROVEMENTS - OPEN ITEMS', '5. NO INCIDENTS', '6. THE PLAN FOR TODAY', '7. PROTECT YOURSELF', and '8. PROTECT OTHERS'. Each section contains various checkboxes and text boxes for recording safety data.

LEADER ROUTINES

PROCESS SAFETY FUNDAMENTALS

BENEFITS TO INDUSTRY

Rotokawa Enforceable Undertaking



BENEFITS TO INDUSTRY

Hazards Awareness Training
Program

Autonomous Inspection for
Power Plants

Lessons Learned – Rotokawa
Steam Hammer



HAZARD ID TRAINING

AUTONOMOUS INSPECTION VEHICLE

LESSONS LEARNED ROADSHOW

BENEFITS TO COMMUNITY

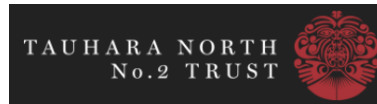
Rotokawa Enforceable Undertaking



BENEFITS TO COMMUNITY

Donation to Emergency
Service Organisations

Health & Safety Professional
Scholarship



DONATIONS TO EMERGENCY SERVICES

GEOHERMAL SAFETY CULTURAL RESOURCE

LEADER ROUTINES

TOOLBOX

Mercury **KAWERAU** DATE: 03/02/2026

LAST 24 HOURS

1. TEAM CHECK-IN
How are we feeling today? 7

2. SAFETY OBSERVATIONS / EVENTS
SIC's achieved yesterday: 3
Synerg observations/incidents/near-misses: 2

3. WORK COMPLETED
Work completed based on yesterday: 90%

4. IMPROVEMENTS – EVEN BETTER

- Win: Both actions from yesterday completed.
- Successful changeover to 60/40% Vac train.
- Opp:

5. KEY METRICS
Yesterday's performance

	Forecast	Actual
MW's	100	
GW's	2.4	

7. THE PLAN FOR TODAY

Lead (Mercury)	Work schedules / tasks (Maximo)	Recipient and WCs
Gav	Steam purity - Refarp	Hutee C&I
Leighton	Scaff air receiver B PRV	Sterling

[View KAWERAU Final Weekly Schedule 02.02.2026 - 08.02.2026.xls](#)

8. WHAT CAN HURT/KILL ME
Select the KEY critical risks and hazards for today's work

	Driving hazard	
Mental health	Y	Electric Shock
Dropped Objects	Y	Confined Spaces
Hazardous Substances	Y	Stored energy
Mobile plant	Y	Working around water
Working alone	Y	Other
Working at height		

9. WHAT'S GOING TO PROTECT ME
What effective controls will I put in place to keep me safe?

SE – correct isolations, keep clear of blow down line. WH – Certified WH personnel.

E/S - Rasm, PTP, Stay away from live parts
W/A - Comms with Opps, Get a Mate to check in with you.
H/S - Monitor wind direction, wear a gas monitor.
E/S - MADS for 3.3kV Rasm

6. NEED TO KNOW
Alarms, Events, General business

Wed 2pm Isolation standard Information session

TO CONTRACTORS/VISITORS
Who and how many onsite

Hutee C&I	
Sterling	

TODAY'S SIC TARGET

LC 1 DB 1 GE 2 O's 1

Commitment: Reiterate safe working practices in toolbox

- Consistent & high quality toolboxes across all sites.
- Active participation

SHORT INTERVAL CONTROLS

1:57 4G

This form is to be used to complete a Short Interval Control. For help contact Candice 021318010.

SHORT INTERVAL CONTROLS

- Administration
- Work Details
- Safety Documentation
- Controls in Place
- Work Area Assessment
- Execution & Deviation
- Final Check & Closure

End on a positive note before leaving.

2:01 4G

This form is to be used to complete a Short Interval Control. For help contact Candice 021318010.

Work Area Assessment

Does the work area intersect with other work parties? *

Are the work areas clearly demarcated? *

Work area clean and well maintained? *

Execution & Deviation

Has the work plan deviated? *

How is the work tracking? *

Are personnel competent? *

How are the work party feeling today? *

End on a positive note before leaving.

1:57 4G

This form is to be used to complete a Short Interval Control. For help contact Candice 021318010.

SHORT INTERVAL CONTROLS

- Administration
- Work Details
- Safety Documentation
- Controls in Place
- Work Area Assessment
- Execution & Deviation
- Final Check & Closure

End on a positive note before leaving.

- Proactive interventions with contractors
- 12,000 SIC recorded since mid-2024 (5% resulted in stop work)
- Meaningful leading safety indicators

LEADERSHIP COACHING



- Leadership development & coaching



SAFETY CITIZENSHIP.





The Big Idea – Our Hypothesis

- Can an autonomous inspection vehicle safely and reliably complete plant inspections?
- Can the AIV be equipped with HD cameras, thermal sensors, and pentane detection?
- Can we use the AIV to reduce our daily exposure to hazardous environment's



What's Next? – The Strategic Roadmap

- Integrate data into Mercury's CMMS for automated defect detection.
- Add pentane cameras for real-time gas monitoring.
- Expand to other outdoor geothermal sites.
- Expand to indoor environments at Mercury's hydro stations.
- Enable remote manual driving and data analytics integration.



PHASED IMPLEMENTATION OF AUTONOMOUS INSPECTION VEHICLE PROGRAM

**Proof of
Concept**



M1
trials

**Enhanced
Capability**



M2
deployment

**Expanded
Application**



indoor/
outdoor

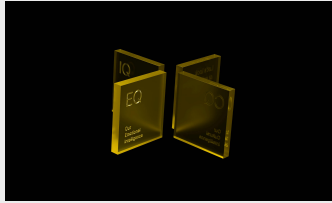
**Full
Integration**



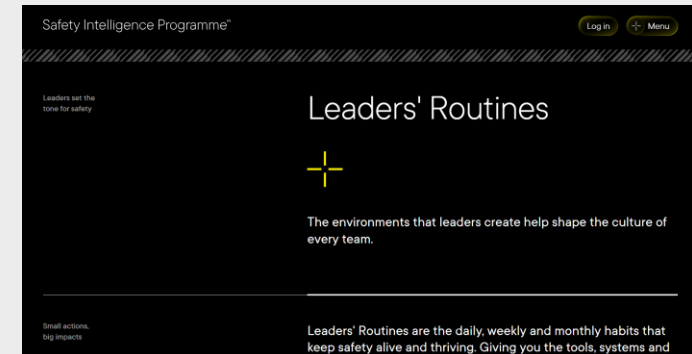
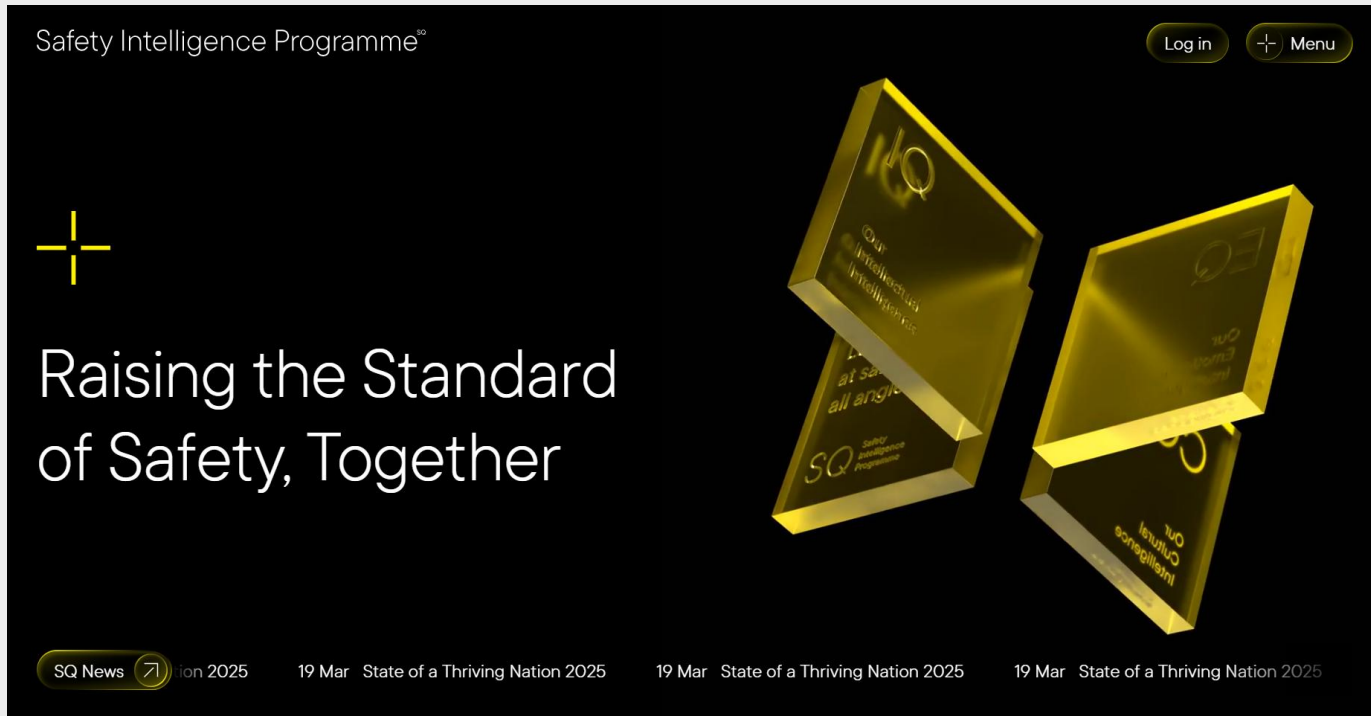
AI
and CMMS

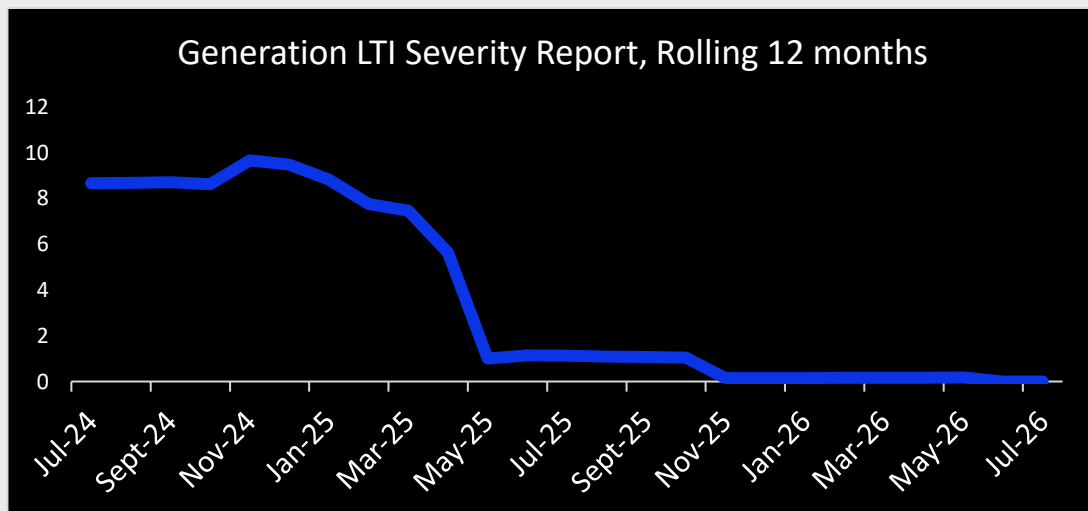
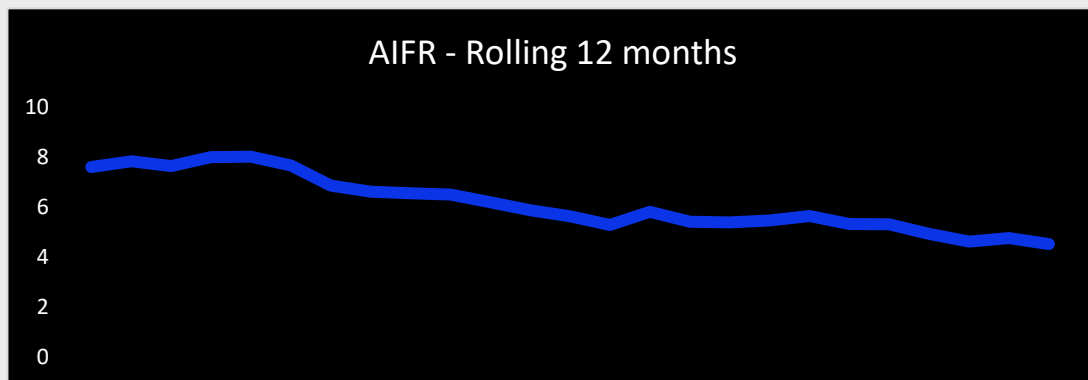
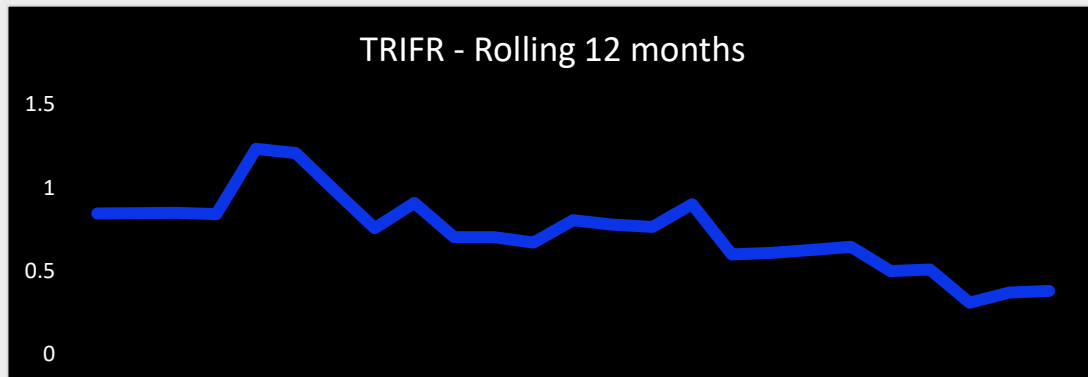


RESULTS.



- > We strove to over deliver – seven workstreams gave us flexibility to adapt through out the two years.
- > In February we launched SQ Safety Intelligence:
<https://safetyintelligence.mercury.co.nz/>





Generation metrics for the period July 2024 to February 2026:

- Total Recordable Injury Frequency Rate (TRIFR) reduced by 29%, from 0.91 to 0.64.
- All Injury Frequency Rate (AIFR)¹ reduced by 18%, from 6.54 to 5.31.
- Lost Time Injury (LTI) severity, measured as a rolling average, decreased from 1.0 to 0.16.
- A step change in proactive interventions that otherwise would result in incidents – primarily captured through SIC, with more 12,000 SIC recorded since mid-2024 (5% of these resulted in stop work)
- A geothermal drilling campaign was delivered achieving more than 400 days without a serious injury.
- The Ngā Tamariki OEC05 major capital project reached 550 days without a serious injury.



SQ + US

Welcome
to the
Safety
Intelligence
Programme^{SQ}

PROCESS SAFETY FUNDAMENTALS

Real Stories. Real Risks. Real Responsibility.

Let's make these Fundamentals
part of how we work every day.



5

ProcessSafety™ + Fundamentals Launch

Safety Intelligence Programme™

+ Positive Isolation

+ Procedures

+ No Leaks

+ Return to Service Checks

+ Safety Critical Barriers

Safety Intelligence Programme™



HAZARD ID TRAINING

Block 1
Module 01

Foundations of Safety Thinking

Attentional Awareness for Safety



Topic: Human attention and its role in hazard identification.

Learning Outcomes

- Understand attentional drift, narrowing, and how they degrade safety.
- Learn the three attention modes: Flashlight, Floodlight, Executive Control.
- Apply techniques like STOP, Tactical Breathing, and Driving Mode to maintain focus and hazard awareness.
- Reflect on personal attention management during tasks.

01

HazardID

Block 2
Module 04

Hazard Knowledge and Risk Judgement

Core Skills in Hazard and Risk ID



Topic: Defining hazards, recognising and classifying them in the workplace.

Learning Outcomes

- Define hazards and understand different hazard types.
- Identify hazards specific to Mercury's operational sites.
- Build awareness of how hazards present differently depending on context.
- Understand how to prioritise hazards based on severity and frequency.

02

HazardID

Block 3
Module 07

Tools, Controls, and Application

Structured Tools and Decision-Making



Topic: Understanding how to implement effective controls, human attention and its role in hazard identification.

Learning Outcomes

- Learn the types of controls in the hierarchy of control.
- Understand how controls reduce exposure or likelihood of harm.
- Evaluate existing vs additional controls.

03

HazardID

Block 4
Module 09

Conclusion - Assessment and Commitment

Commitment and Reflection

Personal Commitment, Accountability, and Next Steps



Topic: Embedding learning through commitment and workplace goals.

Learning Outcomes

- Apply training knowledge to a realistic critical incident.
- Collaboratively analyse the influence of human and environmental factors on hazard identification.
- Practice using structured tools (STOP) in a simulated investigation.
- Commit to practical goals for embedding hazard identification into daily routines.
- Reflect on leadership, attention, and safety citizenship.

04

HazardID

- Eighteen in-company instructor-led Hazard ID sessions across Rotorua, Taupō, Hamilton and Auckland
- A total of 308 learner attendances. Of these, 304 were Mercury employees and 4 were external contractors.
- While external contractor participation was limited in the initial delivery cycle, structured engagement with industry partners and StayLive has established a platform for broader uptake in 2026.
- Safety Training Evaluation Research Project will provide independent insight into programme effectiveness and inform future refinements.



LESSONS LEARNED ROADSHOW



https://youtu.be/6vuV_eutdxs?si=FB04ZXKQm1CdGdNK

**“IMAGINE IF AS AN INDUSTRY
WE PUT JUST ONE OF THESE
OUT A YEAR”**

Presenter comment at the NZ Major Hazard Facility Forum

- The reach and impact of this engagement exceeded expectations
- More than 400 people were reached across 15 events, including conferences, industry forums, and targeted engagement sessions with peer companies
- The animation published on YouTube has received more than 1,500 views



GEOTHERMAL SAFETY CULTURAL RESOURCE

- The original workstream sought to provide a tertiary-level scholarship in the Health, Safety and Wellbeing (HSW) space. However, challenges were encountered in identifying a suitable education partner and candidate within the required timeframe.
- Mercury has partnered with Tauhara North No.2 Trust to create and publish a world-first geothermal safety resource.
- Interns onboard March 2026 and workstream is expected to last 6 months.

TAUHARA NORTH
No.2 TRUST



DONATIONS TO EMERGENCY SERVICES

Two \$25,000 donations have been made to:

- Hatu Hone Taupō – contribution to a new ambulance for the region
- The Life Flight Trust (including the Westpac Rescue Helicopter)



MERCURY DONATE TO TAUPŌ HATO HONE ST JOHN

As part of our [Enforceable Undertaking commitment](#), Mercury donated \$25k towards a new ambulance in Taupō. It was a cracking day in Taupō for the dedication ceremony, carried out by key sponsors, council representatives, Taupō District mayor, and about 30 uniformed staff and supporters for Hatu Hone St John. Two pastors blessed the ambulance and all who will travel in it.

Our representative Katy Scoullar, Community Engagement Manager, said "It was fantastic to have another opportunity to show our presence and support in this community. The crew were a delight and asked me to send best wishes."

Ngā mihi nui to Leigh McLellan for the hard mahi around this donation.

For any questions about our enforceable undertaking, head to [#ask-enforcable-undertaking](#)

