



MOM-Shipping Industry Dialogue Addressing Commercial Diving WSH Risks



MINISTRY OF
MANPOWER

Darren Loh
Senior Assistant Director (Ops GW)
OSH Inspectorate
31 March 2023



A Great Workforce A Great Workplace

Brief Intro to Workplace Safety and Health Framework

The Workplace Safety and Health Act (WSHA) came into effect on 1 March 2006, replacing the former Factories Act

Major accidents in 2004

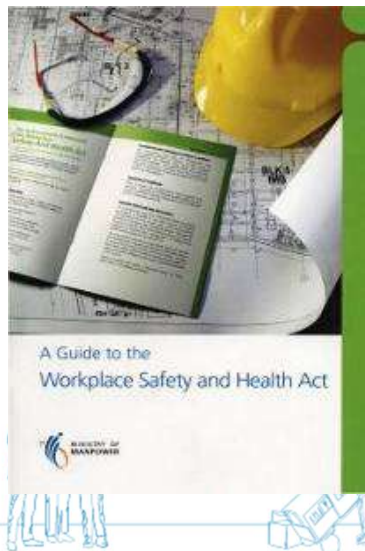


Key Principles

Reduce Risks at Source

Impart Greater Industry Ownership of WSH Outcomes

Prevent Accidents through Higher Penalties for Poor WSH Management



Employees
e.g. Divers

Principals
e.g. Ship Agents

Occupiers
e.g. Ship Owners

Employers
e.g. Dive Contractors

Self-employed

Manufacturers & Suppliers

Erectors & Installers

Duty Holders
Persons who have duties and responsibilities

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Brief Intro to Workplace Safety and Health Framework

Coverage of WSHA

Phase 1

1st March 2006

- Factories
- Construction
- Shipyards
- Ship in Harbour
- Airport
- Docks, Wharf, etc
- Laboratories



Phase 3

1st September 2011

- Education
- Public Admin
- Business Services
- Agriculture & Fishing
- Wholesale & Retail Trade
- Finance & Insurance Activities
- Information & Communications
- Arts, Entertainment & Recreation



More than 1.6 mil
workers
protected under
WSHA*

Phase 2

1st March 2008

- Healthcare Activities
- Veterinary Activities
- Hotels
- Restaurants, bars, canteens (F&B)
- Water Supply, Sewerage and Waste Management
- Landscape care & Maintenance Services
- Services allied to Transportation of goods

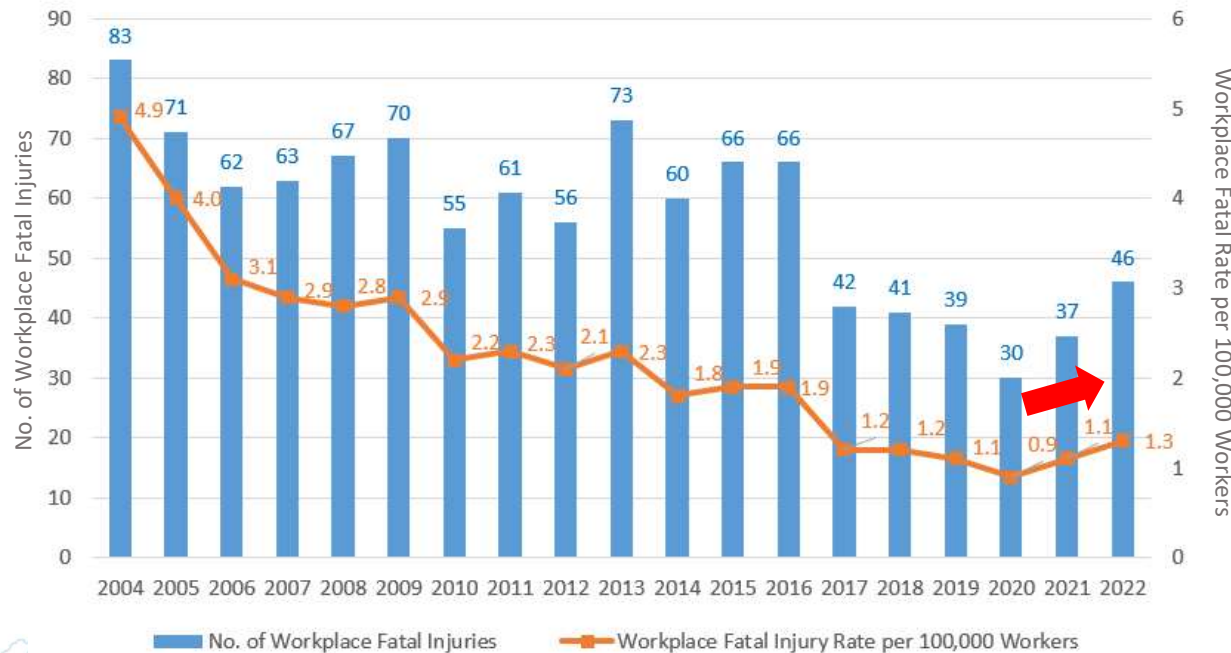


* Classes of persons at work exempted from WSHA includes Mindef, MHA officers, crew onboard international ship/aircraft

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Singapore's Workplace Fatality Rate Declined by 78% From 4.9 per 100,000 Workers in 2004 to 1.1 in 2021, but Spiked in 2022

Our WSH Journey Since the Reform



WSH 2028

A Healthy Workforce in Safe Workplaces;
A Country Renowned for Best Practices in
Workplace Safety and Health

Strategic Outcomes



STRATEGIES



KEY RECOMMENDATIONS

- Strengthen WSH Ownership**
 - a. Make WSH more salient in business decisions
 - b. Align company directors and top management to WSH ownership
 - c. Strengthen WSH ownership of workers
- Enhance Focus on Workplace Health**
 - a. Expand occupational disease prevention efforts
 - b. Build companies' capabilities to promote workforce health
- Promote Technology-Enabled WSH**
 - a. Develop a WSH technology ecosystem to deepen industry capability
 - b. Strengthen WSH training through technology

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MOM Announced Heightened Safety Period Measures to Address Spate of Workplace Fatalities in 2022

← Tuesday, May 10

THE STRAITS TIMES



Recent workplace deaths far too many and unacceptable: PM Lee

As economy reopens, safety standards seem to have fallen; firms urged to impose time-out

Shermaine Ang

The recent spate of workplace fatalities is far too many and too unacceptable, Prime Minister Lee said on Tuesday.

Companies have been urged to impose a two-week safety time-out from operations after a workplace fatality or a particularly serious incident.

This brings the total number of workplace deaths in the last year to 35 – the highest number of fatalities in the same period since 2015.

The Ministry of Manpower (MOM), Workplace Safety and Health (WSH), National Trades Union Congress (NTUC) and industry partners had called for this measure.

"We have been working hard for years to prevent workplace accidents, especially deaths. We have made good progress," PM Lee said in a Facebook post yesterday.

"But with our economy reopening and activities ramping up, safety standards and practices seem to have slipped. Accident rates have gone up, and we have to act now."

Companies are urged to review workplace safety, reinforce their safety processes and address safety issues immediately.

Each time-out involves a company taking a pause from work so that senior management can engage workers and reinforce new workplace safety and health (PSH) processes, and act on any issues that may arise.

Companies should also review their PSH systems and ensure that workers implement risk controls as well as have WSH training on-site.

Firms have been asked to fund safety workers with training points from their own training, as well as to have safety workers on-site to avoid a repeat of these incidents.

The safety time-out will have two aims: the safety use of equipment – such as ladders – and working safely at heights.



Construction workers working at height at a block of flats. Companies have been urged to impose a two-week safety time-out from operations after 10 workplace fatalities in the last month. (Photo: Singapore Press Photo)

which includes working on fragile surfaces and those at heights.

PM Lee said: "We must get this right. It is our responsibility to ensure that workers implement risk controls as well as have WSH training on-site."

Firms have been asked to fund safety workers with training points from their own training, as well as to have safety workers on-site to avoid a repeat of these incidents.

The safety time-out will have two aims: the safety use of equipment – such as ladders – and working safely at heights.

their WSH system and work processes, and address any weaknesses and take the necessary action before resuming work.

It added in its statement that the time-out is for firms to ensure that workers are familiar with all the incidents in the past year.

"With the reopening of the Singapore economy, employers should put the health and safety of workers as a priority as their workers return to the workplace and economic activities pick up."

It said company leaders have the responsibility to ensure that

workers do not come to work and return home safely every day.

"Company leaders should ensure that workers are familiar with all the incidents in the past year."

WSH said it will continue to work with MOM, WSH, NTUC and employers towards its goal of reducing workplace fatalities to a new low by the year 2028.

It said company leaders have the responsibility to ensure that

KEEP WORKERS SAFE
I call on everyone involved – supervisors and workers – to take safety at the workplace seriously. Lives are at stake. We have a responsibility to keep all our workers safe, whether they are local or foreign.

PRIME MINISTER LEE HSEN LONG on Facebook post

Tuesday, Jun 14

THE STRAITS TIMES

Stiffer penalties for firms with poor workplace safety

Aqil Hamzah

Companies with poor workplace safety and health (WSH) performance will incur stiffer penalties from today.

These include the doubling of suspension fines for offenders observed during safety inspections, up to a maximum of \$5,000, the Ministry of Manpower (MOM) said.

Companies that have been issued stop-work orders or have had workers experiencing major injuries will also have to engage external auditors to review current systems.

Speaking to reporters after a workplace safety inspection in Ulu Pandan yesterday, Senior Minister of State for Manpower, Zaqi Mohamad said it is important to tackle the issue up front.

"From our recent inspections, including today's, it is clear that companies need to take greater ownership of safety at the workplace," he said, adding that MOM will be placing more accountability on company management.

Enhanced enforcement measures are being introduced in the wake of a spike in workplace fatalities.

There have been 26 cases this year to date – the most in the same



Officers from the Manpower Ministry's Occupational Safety and Health Division inspecting a platform at a workplace. Safety inspection was part of ramped-up enforcement efforts.

period since 2015.

The surge prompted a call for employers to implement a safety time-out last month to renew workplace safety and health.

MOM said more than 200 major injuries were reported during the first four months of this year.

Added that 65 per cent of fatalities and major injuries involved workers employed by small and medium-sized enterprises.

During the inspection, Mr Zaqi

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Workplace fatalities

Heightened safety period extended amid rise in workplace accidents; higher penalties for breaches



Workers at a construction site. (Photo: Singapore Press Photo)

SINGAPORE The heightened safety period imposed on companies in higher-risk industries will be extended by three months from Mar 1 until the end of May, with additional measures such as higher penalties for workplace safety breaches.

Announcing this on Friday (Feb 10), the Ministry of Manpower (MOM) noted that the heightened safety period was introduced in September 2022 for six months to address the "concerning rise" in workplace fatalities.

Related Topics

Workplace safety
Ministry of Manpower

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May 2018: Fatal Accident involving Commercial Diving Activity



Singapore World Big Read Adulting 101 Gen Y Speaks Gen Z Speaks Voices Commentary 8 Days More

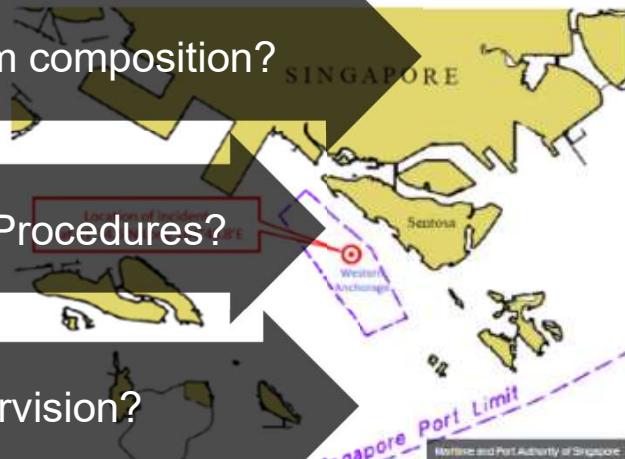
Jail for ex-commercial diving superintendent who failed to notice distress call from drowning diver

Dive team composition?

Safe Work Procedures?

Supervision?

Penalties imposed on parties responsible



The location of the incident involving freelance commercial diver Jake Seet Choon Heng.

Post on Instagram and Facebook for our Singapore channel for the latest updates.

- Former diving superintendent Mohd Zakaria Mohd Saleh was working with a diving team three days into his job.
- He did not do anything when the supervisor knowingly failed to monitor the diver's video and audio feed for almost six minutes.
- The supervisor was discussing the next part of the dive plan with him when the diver drowned.



JY WONG PEI TING

Published May 19, 2021
Updated May 19, 2021



yahoo/news Yahoo News Singapore

Diver who died off Sentosa: 'A brother' who worked hard for his family, say ex-colleagues



Wong Casandra · Senior Reporter
8 May 2018



The wake of diver Jake Seet Choon Heng at Pasir Ris Drive 1. (PHOTO: Yut so News Singapore)

By all accounts, Jake Seet Choon Heng, 33, was "one of the fittest" amongst a close-knit group of freelance commercial divers.

The young father and avid football player was also described as a jovial person who loved to banter even while doing his highly demanding job.

At his wake at Pasir Ris Drive 1 on Tuesday evening (8 May), well-wishers – many of them fellow commercial divers – gathered together to pay respects to Seet, whom some described as "a brother" and "a family member".

TRENDING

'Mum, I don't want to survive another day': Adorable Singapore boy tries his best on first day of...

Cosmo Singapore · 2 mins read

33-year-old woman found dead on train tracks in Punggol

Cosmo Singapore · 3 mins read

'Sea change': disruptive Saudi prince shows new pragmatism with Iran



8 Fatal Diving Accidents From 2008 to 2018

2008

Sep 2008



A diver was **fixing a sea chest grating** on a vessel when the grating swing suddenly and hit him and his co-diver. Both **lost their breathing regulator** and decided to surface. While waiting for their dive boat, the diver disappeared below the water.

2009

Sep 2009



Deceased and co-diver were tasked to dive underwater to **connect strand jack wire to the bow thrusters** to oil rig. While surfacing up, the Deceased's **air supply in the tank had depleted** and he became panicked and shoot up to the surface quickly but was found missing thereafter.

2012

May 2012



Deceased and his buddy diver were tasked to carry out **underwater hull cleaning** for vessel. Buddy diver surfaced and returned to the workboat, leaving the Deceased alone to continue the cleaning works. Dive sup. realized **maximum dive time for the Deceased had reached** and tried to search for the Deceased but in vain.

2014

Sep 2012

Deceased, who was involved in **aligning a vessel that had docked into a floating dock**. He re-surfaced and dived into the waters again but was found submerged at the bottom of the dock.

Sep 2012

5 divers were deployed to **align and set a jack-up rig and drill ship that had been docked** into Dry Dock. Deceased was subsequently found submerged at bottom of rig.

2018

May 2018

Deceased and co-diver were **cleaning the hull** of vessel when the Deceased went missing. He likely **removed his diving equipment** and attempted to swim up to the surface.

Jun 2018

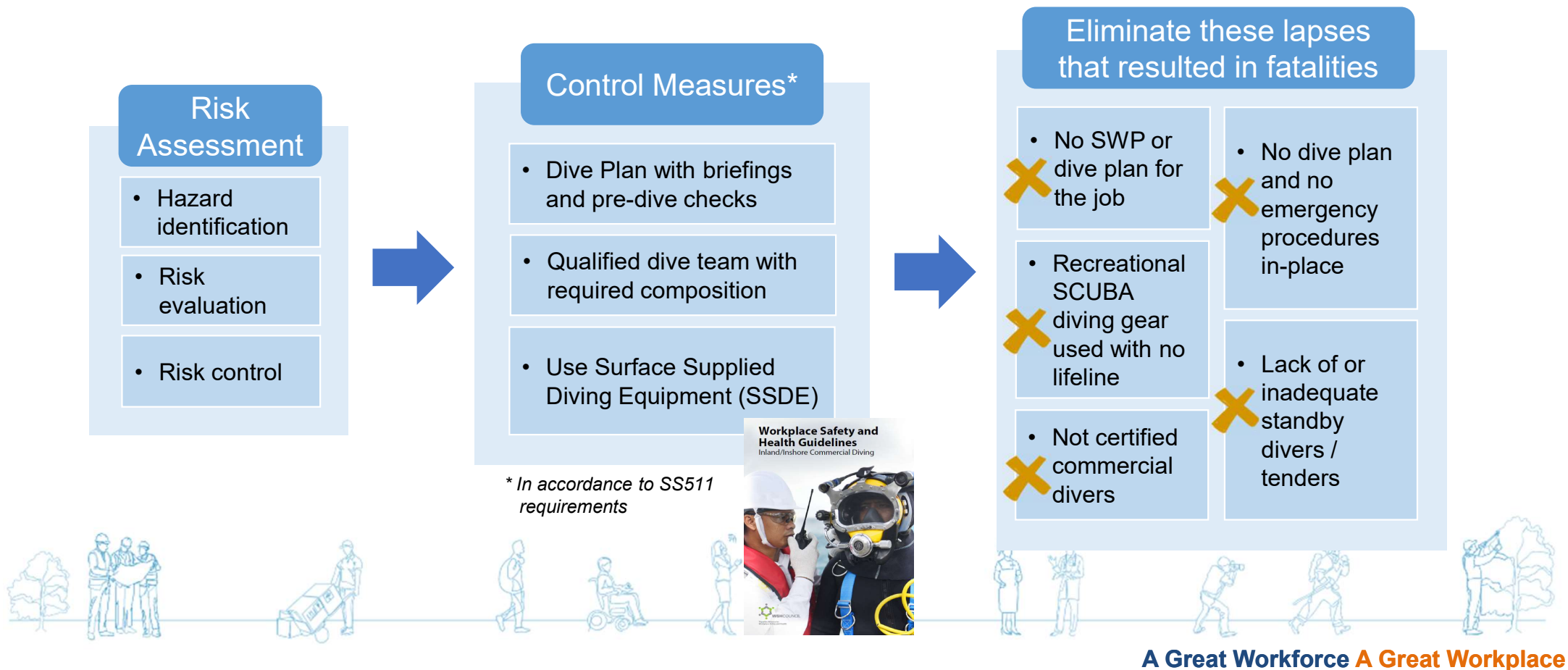
Deceased and his co-diver were working underwater, **installing brackets onto a concrete pile**, when he was **struck by a collapsed concrete pile** and subsequently pinned against the seabed by the pile



Deceased was SCUBA diving and **taking photographs to document the works done in the starboard sea chest** of the vessel where he was drawn towards the pipe orifice inside the sea chest. He was found motionless when rescued by his co-divers.

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8 Fatal Diving Accidents From 2008 to 2018



Stepping Up Engagement with Diving Community since 2018

OUR INITIATIVES

Capability Building
e.g. WSH Council

Setting Good Practices
e.g. CDAS, WSHC

Enforcement
e.g. MOM, MPA

Enhanced Efforts in 2018-19
e.g. MOM, WSHC, CDAS

MOS Dialogue with divers

- Held on Aug 2018, in response to the spate of two fatal diving incidents.
- Diving companies, divers, service buyers were reminded on their duties.
- MOS chaired a dialogue on ways to improve the WSH situation.



Pre-dialogue engagement with service providers, equipment suppliers, service buyers and divers

As the diving community was fragmented and not well understood, there were a series of dialogues with various stakeholders in Jul 2018 together with ASMI. The dialogues allowed us to understand the ground issues and garner support ahead of the MOS dialogue.

Dialogue with freelance divers

The freelance divers were most vocal during the MOS dialogue. Therefore a separate session was held in Oct 2018 to hear their concerns and challenges. The session was led by WSHC and supported by NTUC.

CDAS Diving Seminar

Organised by CDAS and SMEEU, supported by WSHC, the association had its annual seminar in Aug 2018. MOM took the opportunity to share recent enforcement efforts and findings.



Note: MOM will be reviewing licensing or accreditation regime for diving contractors / divers.

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Percentage of Serious Diving Related Contraventions Remains High

- Sharp decline in % of contraventions observed from 2017 to 2018 after MOM's increased inspections
- However, the percentage of serious contraventions continued to remain high thereafter.



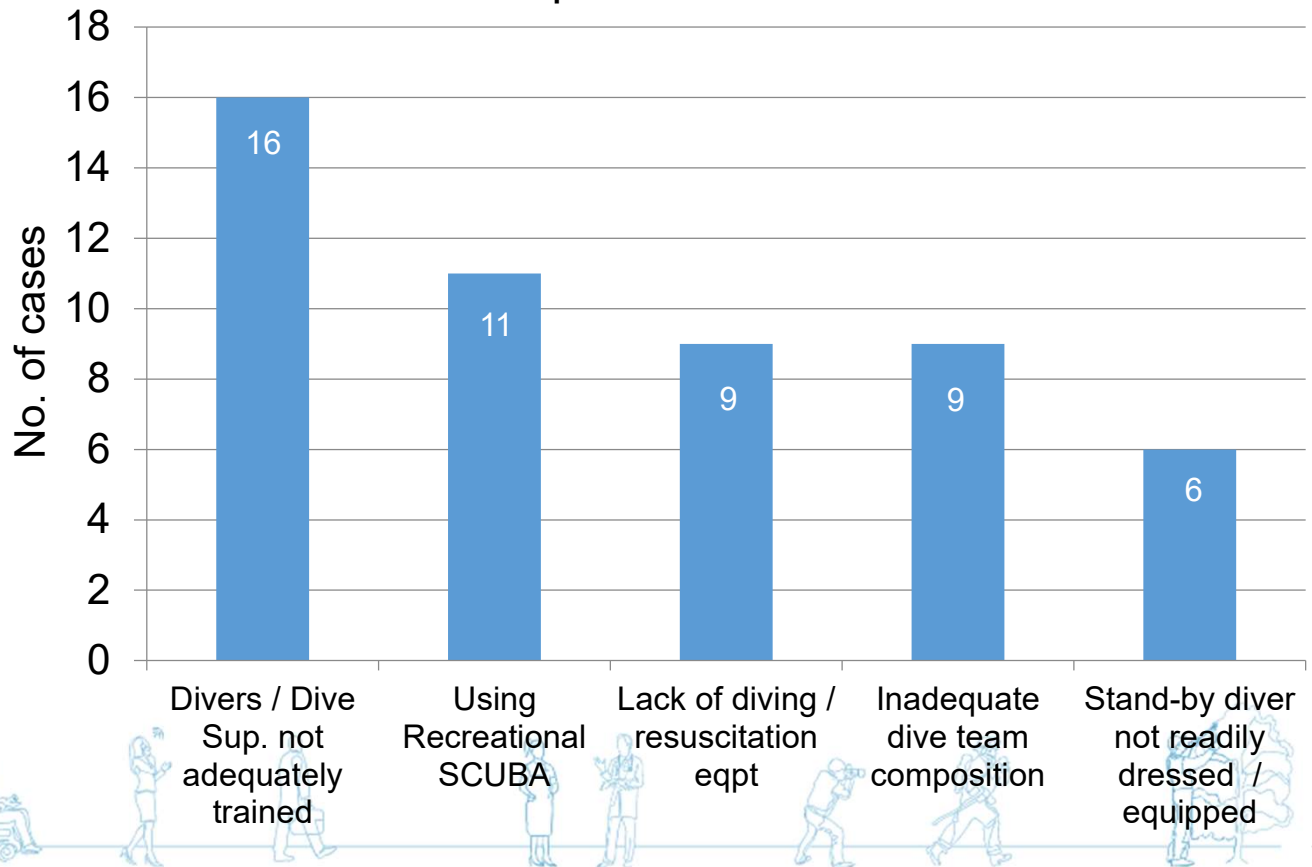
Top Contraventions from MOM Inspection Findings on Commercial Diving



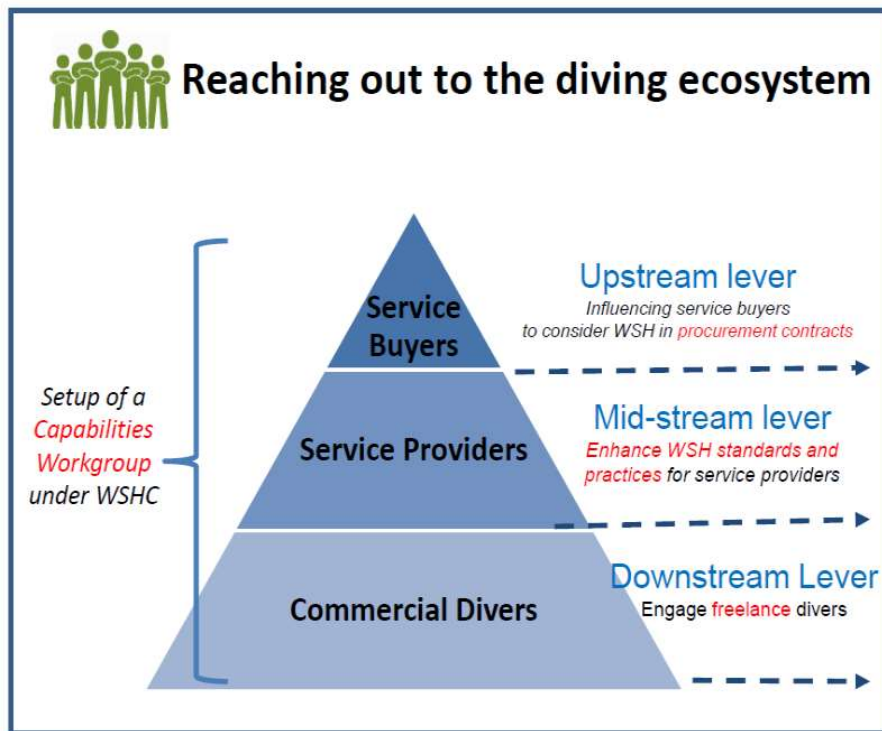
Commercial Diving Inspections (2018 to 2022)

No. of Stop Work Orders	3
No. of Contraventions	88
Total fines issued	\$34,000

Top 5 Contraventions



Moving Upstream of the Diving Ecosystem to Curb the Unsafe Practices



Received complaints and referral from Maritime Port of Authority (MPA) and Members of Public on unsafe diving activities which MOM responded



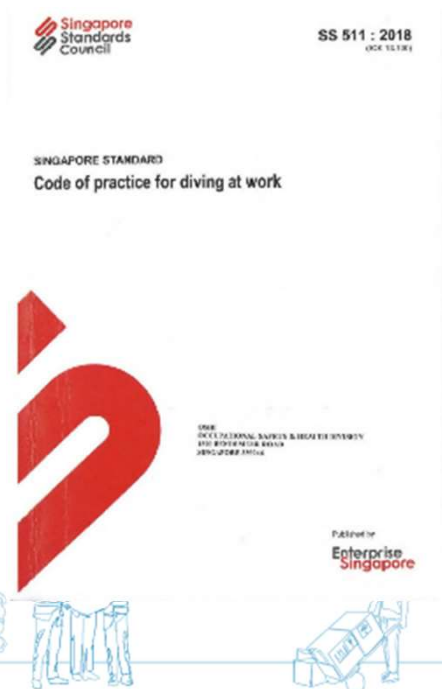
Received feedback from Commercial Diving Association Singapore (CDAS), which promotes safety and professionalism in commercial diving industry, that small start-up diving firms carrying out diving work with practices deviated from SS511 requirements



Clients (e.g. ship owners, ship agents) were also asking for 1 or 2 divers instead of full dive team (5-person team) to perform some diving works

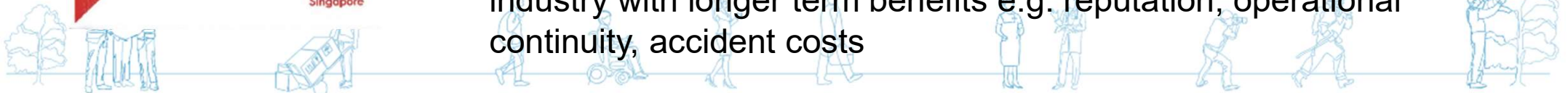
➤ MOM will continue to take enforcement actions on non-compliant diving contractors, but we are also moving upstream along the value chain to address the unsafe practices

Strengthening WSH Ownership



Desired Outcome:

- ✓ Creating awareness amongst the Ship Agents on WSH and SS511 requirements
- ✓ Equip with the right WSH knowledge when engaging a diving contractor
- ✓ Understand the duty of a Principal (aka Service Buyers) under WSH Act
- ✓ Improves WSH standards for both shipping and commercial diving industry with longer term benefits e.g. reputation, operational continuity, accident costs

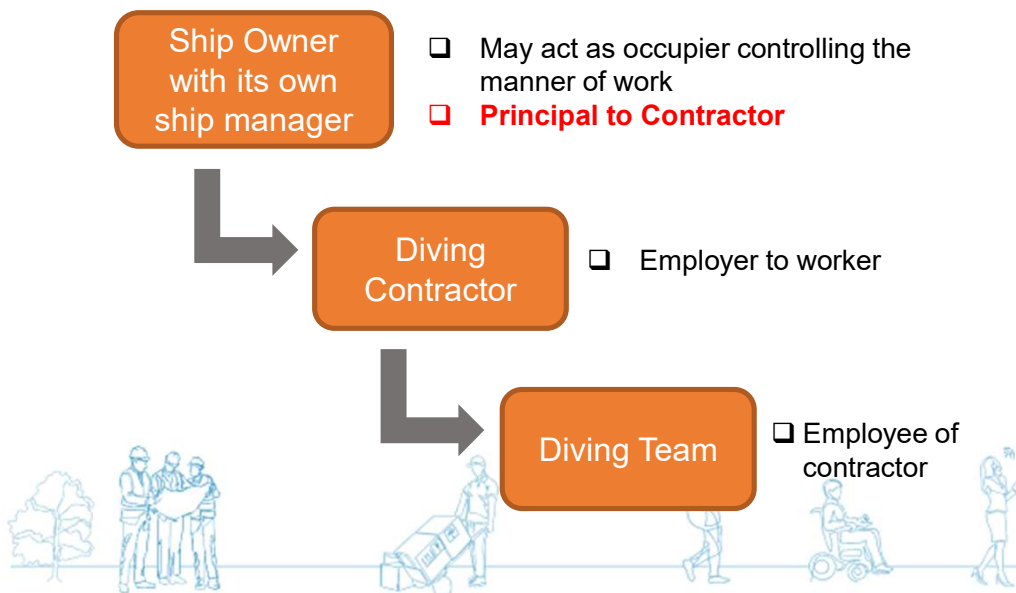


Role of Ship Agent as a Principal under WSHA

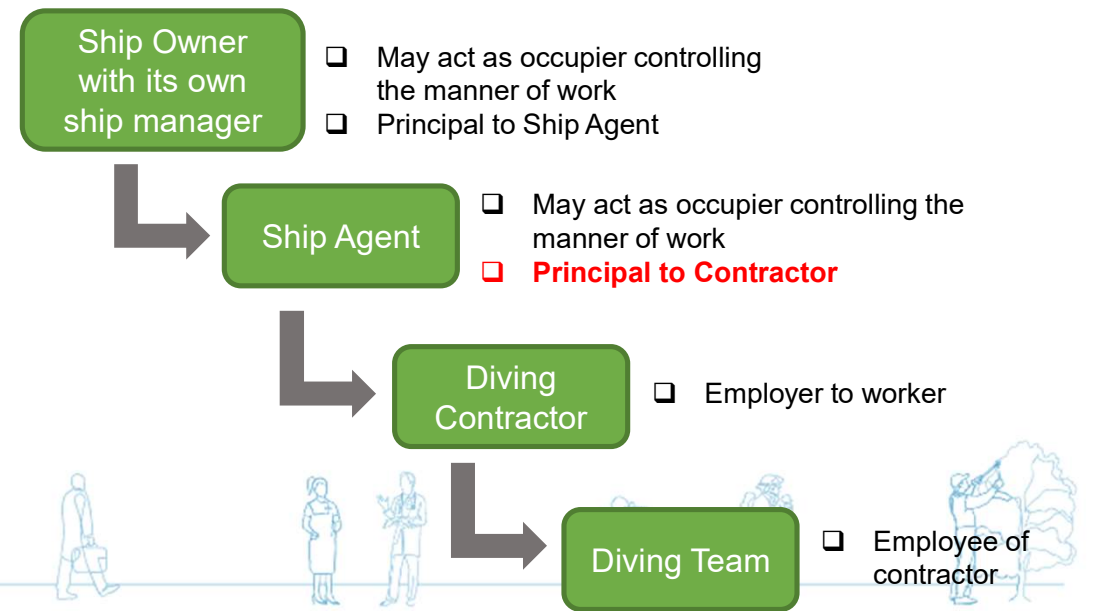
- ❑ Under WSHA, a Principal is defined as a person, who engages any other person for service, and is required to ensure the contractor has necessary expertise and put in place adequate measures to carry out work safely e.g. checking contractor's experience and training, has the necessary licence, permit, certificate or any relevant document.

WSH relationship between the Ship Agent and other relevant stakeholders can come in various permutations:

Relationship 1



Relationship 2



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Basic Knowledge and Checks on SS511 Requirement

Code of Practice on Workplace Safety and Health (WSH) Risk Management



Workplace Safety and Health Guidelines Inland/Inshore Commercial Diving



1

Ensure diving contractor has conducted a comprehensive Risk Assessment and prepared a dive plan for the planned commercial diving operation

Department, Activity, or Trade Assessed				RA Leader			Approved by			RA Reference Number				
Process/ Design Consideration				RA Member 1:			Signature							
Process/ Activity Location				RA Member 2:										
Original RA Date				RA Member 3:										
This RA Review Date				RA Member 4:										
Next RA Review Date				RA Member 5:										
Name				Designation			RA Approval Date							
Hazard Identification (LOOK)				Risk Evaluation (THINK)				Risk Control (DO)						
S/No	Work Activity/ Sub-activity	Hazard	Potential injury/ ill-health	Existing Risk Controls	S	L	R P N	Additional Controls (First Consideration: How to design out this hazard)	S	L	R P N	Implementation Person	Due Date	Remarks
1														
2														
3														
4														
5														
6														
7														
8														

S = Severity; L=Likelihood; RPN = Risk Prioritization Number; RA = Risk Assessment
Note:

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Basic Knowledge and Checks on SS511 Requirement

2

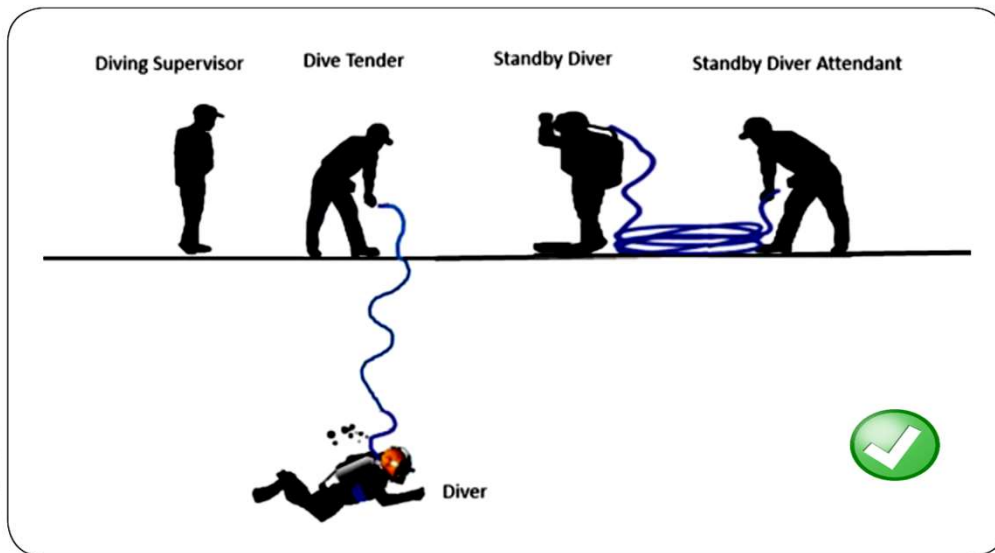
Establish the dive team in accordance to S511, where it must have at least a 5-person composition comprising 1 Diving Supervisor, 2 Divers and 2 Tenders



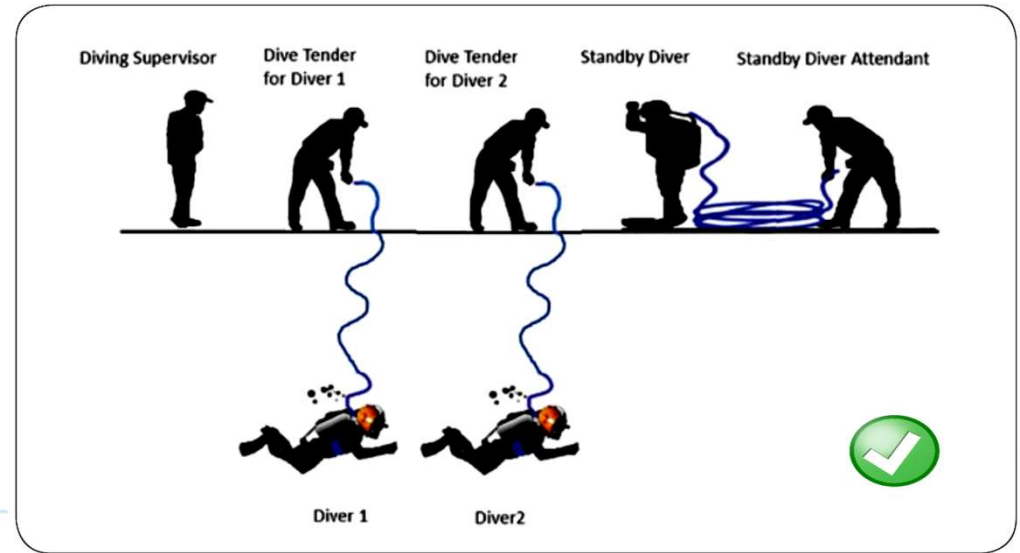
SS 511 : 2018
(R02:13.100)

SINGAPORE STANDARD
Code of practice for diving at work

5-person team with 1 diver



7-person team with 2 divers



Basic Knowledge and Checks on SS511 Requirement

Examples of unacceptable diving standards



Examples of acceptable diving standards



3

Ensure diving supervisors, divers and tenders, involved in the dive job, have the relevant commercial diving and first aid certifications

<https://www.tal.sg/wshc/resources/training-materials/resources-for-training-providers/list-of-acceptable-commercial-diving-certifications>

Annex C

4 List of Acceptable Commercial Diving Certifications

Country / Accreditation	CSCUBA (30m)	CSSDE (30m)	Offshore (50m)
Divers			
Australia (ADAS)*	Occupational SCUBA to 30m (previously, ADAS Part 1)	Occupational SSBA to 30m (previously, ADAS Part 2)	Occupational SSBA to 50m (previously ADAS Part 3)
Canada (DCBC)*	Unrestricted SCUBA	Restricted Surface Supplied Diver	Unrestricted Surface Supplied Diver & above
France (INPP)*	Class 1 Mention A – (SCUBA and Surface Supply to 40m)	Class 1 Mention A – (SCUBA and Surface Supply to 40m)	Class II Mention A
Malaysian (CIDB)*	Construction Diver Level 1	Construction Diver Level 2	N/A
Norway (PSA)*	N/A	N/A	Norwegian PSA Class 1 Surface Oriented Diver
Singapore (MOM)	Canada (DCBC)*	Onshore Supervisor	Offshore Air/Saturation Diving Supervisor
South Africa (DOL)*	Malaysian (CIDB)*	Onshore SCUBA Supervisor	Onshore SSBA Supervisor
United Kingdom (HSE) pr	Singapore (MOM)	CSCUBA Supervisor	SSDE Supervisor
United Kingdom (HSE) pr	Association of Diving Contractors – ADC UK*	Surface-Supplied Air Diving Supervisor (need to be supplemented with any certification in the List of Acceptable Commercial Diving Supervisor Certifications)	N/A
ADCI*	ADCI*	Surface-Supplied Air Diving Supervisor (need to be supplemented with any certification in the List of Acceptable Commercial Diving Supervisor Certifications)	N/A
IMCA* approved training	IMCA*	N/A	IMCA Offshore Air Diving Supervisor & Mix Gas Bell Diving Supervisor
Diving Supervisors			
Australia (ADAS)*			



NOTE: The WSH Act requires employers and principals to ensure that workers performing commercial diving activities are provided with sufficient instructions, information, training and supervision as is necessary for them to perform their work. While divers may possess overseas diving qualifications that are recognised, the employer/principal needs to ensure that local requirements in the WSH Act, relevant industry standards such as the SS511 Code of Practice for Diving at Work are complied with. Some of these local requirements can be taken in reference from section 2.1.1 Legislation and Standards (CD-CCD-100A-0) of the Commercial Diving Competency Standard ([Link](#)).

Abbreviations:

ADAS	Australian Diver Accreditation Scheme	CTAG	Curriculum, Training and Assessment Guide
DCBC	Diver Certification Board of Canada	CSCUBA	Commercial Self-Contained Underwater Breathing Apparatus
DOL	Department of Labour	SSDE	Surface Supplied Diving Equipment
INPP	Institut National de Plongée Professionnelle	MOM	Ministry of Manpower
HSE UK	Health Safety Executive (United Kingdom)	ADC UK	Association of Diving Contractors
ADCI	Association of Diving Contractors International	PSA	Petroleum Safety Authority
IMCA	International Marine Contractors Association		

Occupational First Aid and Diving First Aid Training



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3 Basic Checks will help Ship Agents meet the requirements under WSH Act

1

Risk Assessment

Ensure diving contractor has conducted a comprehensive Risk Assessment and prepare a dive plan for the planned commercial diving operation

2

Dive Team

Establish the dive team in accordance to S511, where it must have at least a 5-person composition comprising 1 Diving Supervisor, 2 Divers and 2 Tenders

3

Certifications

Ensure diving supervisors, divers and tenders, involved in the dive job, have the relevant commercial diving and first aid certifications

**Safe
Dive**



Free Online Resources @ WSH Council

The screenshot shows the WSH Council website's 'Resources' page. The header includes the WSH Council logo, navigation links (About Us, Awards and Competitions, Media, Events, Campaigns, Search, Topics, Programmes, Resources, Contact Us), and a search bar. The main heading is 'Resources', followed by a sub-heading: 'Find out how you can improve your WSH Practices with our resources for various groups from management and safety professionals to supervisors and workers.' Below this, there is a search bar with a 'Clear' button and a 'Filter' section. The 'Filter' section has a 'By type' dropdown and a list of checkboxes for 'Publications' (Case studies, Checklists and Articles, Codes of Practice, Guides and Handbooks, Others, Resource Kits, Technical Advisories, WSH Guidelines) and 'Collaterals' (Banners, Cards, Flyers, Pictograms and Graphics, Posters, Newsletters, SHINE Newsletters). The main content area is titled 'Featured resources' and displays a grid of resource cards. The first card is 'Code of Practice on Workplace Safety and Health (WSH) Risk Management'. Other cards include '8 Basic Workplace Safety and Health (WSH) Rules for Working with...', 'Guide to Good WSH Practices', and 'Pictograms'. Below the featured resources, it says 'Found 1306 results' and shows a preview of the 'WSH BULLETIN' dated 15 MAR 2023, with a link to 'NEWSLETTERS > WSH BULLETIN'. Another preview shows '14 MAR 2023 | EVENT RESOURCES > PRESENTATION SLIDES'.

The screenshot shows the WSH Council website's 'Commercial Diving Services' page. The header is identical to the previous screenshot. The main heading is 'Commercial Diving Services'. Below it, the text reads: 'When procuring the services of commercial diving contractors, you must ensure that the appointed contractor has the necessary expertise to carry out work safely.' This is followed by another paragraph: 'To know if the divers and/or diving supervisors possess recognised diving qualifications, check out the [List of Acceptable Commercial Diving Certifications \(PDF\)](#).'

Commercial Diving Services

When procuring the services of commercial diving contractors, you must ensure that the appointed contractor has the necessary expertise to carry out work safely.

To know if the divers and/or diving supervisors possess recognised diving qualifications, check out the [List of Acceptable Commercial Diving Certifications \(PDF\)](#).

For More Information

- SS 511: Code of practice for diving at work



<https://www.tal.sg/wshc/resources>

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Official (Closed)



Thank you

**A Healthy Workforce In
Safe Workplaces**

