

EPCI OF WELLHEAD PLATFORMS, ASSOCIATED PIPELINES, BROWNFIELD MODIFICATION AND TIE-INS FOR G1/61 PHASE 1A

STRUCTURAL BASIS OF DESIGN FOR GAS PLATFORM (TOPSIDE & SUBSTRUCTURE)



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REVISION CODE: A = Issued for Review, B = Issued for Approval, C = Approved for Construction, 00 = As-built					
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		PTTEP ENERGY DEVELOPMENT COMPANY LIMITED			
		EPCI OF WELLHEAD PLATFORMS, ASSOCIATED PIPELINES, BROWNFIELD MODIFICATION AND TIE-INS FOR G1/61 PHASE 1A			
		TH-G1-61-1A-GEN-STR-BOD-1001		REVISION C1	

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EPCI of Wellhead Platforms, Associated Pipelines,
Brownfield Modification and Tie-ins for G1/61 PHASE 1A
Erawan Field Development Project

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EPCI FOR ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A

PLATFORM INSTALLATION PROCEDURE

REV	DATE	CONTRACTOR APPROVAL	CHECK	APPR.
C4	15/JUL/22			
C3	4/MAR/22			
C2	1/MAR/22			
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	EPCI FOR ARTHIT PHASE 3D, G1/61 PHASE 1A & G2/61 PHASE 1A	
	TH-ART-3D-GEN-TNI-PDR-8040 TH-G1-61-1A-GEN-TNI-PDR-8040 TH-G2-61-1A-GEN-TNI-PDR-8040	REVISION C4 C4 C4

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ภาคผนวก PTTEP-19

การสำรวจข้อมูลตำแหน่งก๊าซระดับดิน

FINAL REPORT

GEOPHYSICAL SITE INVESTIGATION SURVEY REPORT PROPOSED GBA-15 LOCATION GULF OF THAILAND

VESSEL: VOS ARES
SURVEY DATE: 5TH – 7TH MAY 2022
Report No.: GS-638-0822-GBA-15
Revision: 1.1
Date: 16th December 2022

PROJECT TITLE

PROVISION OF GEOPHYSICAL SITE INVESTIGATION (GSI) #2A/2022
FOR
BLOCKS G1/61, G2/61, ART AND BKT SOLE
Project No.: GS-638-0822-PTTEP-C02A2022

Prepared for:



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FINAL REPORT

GEOPHYSICAL SITE INVESTIGATION SURVEY REPORT PROPOSED NTA-02 LOCATION GULF OF THAILAND

VESSEL: VOS ARES
SURVEY DATE: 31st Aug to 4th Sept 2022

Report No.: GS-638-0822-NTA02
Revision: 1
Date: 25th October 2022

PROJECT TITLE

PROVISION OF GEOPHYSICAL SITE INVESTIGATION (GSI) #2A/2022
FOR
BLOCKS G1/61, G2/61, ART AND BKT SOLE

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FINAL REPORT

PIPELINE ROUTE SURVEY REPORT GBA-15 to AWP22 PIPELINE GULF OF THAILAND

VESSEL: SMS RADIANCE
SURVEY DATE: 6th - 7th November 2023
Report No.: GS-729-0723-GBA-15 TO AWP22
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PROJECT TITLE

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FOR
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Prepared for:



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PIPELINE ROUTE SURVEY REPORT
HTA-01 TO GL26R WYE PIPELINE
GULF OF THAILAND

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FINAL REPORT

PIPELINE ROUTE SURVEY REPORT NTA-02 to AWP41 PIPELINE GULF OF THAILAND

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เรือสับสนุน

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ข้อกำหนดและนโยบายต่างๆ ของเรือส่นับสนุน



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Originator by :
Marine OSHE Manager

Revision : 12

Reviewed by :
Marine OSHE Manager

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Approved by :
Deputy Managing Director

EMERGENCY AND CONTINGENCY

SECTION 11 : EMERGENCY PREPAREDNESS AND CONTINGENCY PLANNING

P-11-01

Emergency and Contingency



Date : 02/09/2024

Originator by :
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Reviewed by :
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Deputy Managing Director

EMERGENCY AND CONTINGENCY

RECORD OF CHANGES & REVISION STATUS		
Rev. Status	Originator	Description of change
0	Ongarj S.	Wholly reviews for compatible with OVMSA
1	Ongarj S.	Fully update and New establishes
2	Ongarj S.	New SMS Formatting which is revived & refilled by ABS Class
3	Ongarj S.	Revise Item No.5.3.9 : Ship to Shore Drills (Table Top Drills)
4	Ongarj S.	Revise wording to Item 4.5.6,7
5	Ongarj S.	Revise wording to page 10,14,17,19-20,22,24-26,29-31,38
6	Ongarj S.	Change to Item 5.1.1 HO-ERT, item 5.3.9 , add wording 5.3.11 and add item 8 : Reference Standard
7	Ongarj S.	Revise wording to item 4.5.1,1.5.3.1,5.3.11,5.4.5,4.6,5.4.22,5.4.23-5.4.25
8	Ongarj S.	Add item 5.4.26 : Typhoon Evacuation
		Change name appendix 7.4 : Emergency Alarm
		Add appendix 7.5 Typhoon Evacuation Plan, Gulf of Thailand
9	Ongarj S.	Change wording to item 5.1 : HO-ERT, 5.3.11 , 6
10	Ongarj S.	Delete item 5.3.12: Safety briefing for passengers, cancelled Form F-11-QAS/25, F-11-QAS/26 (remove to P-06-01) , add wording to appendix 7.2
11	Ohm J.	Correct wording to Position Operation Manager to Operation and Ship Vetting Manager and item 5.3.3 Emergency response team
12	Wasana J.	New SMS Formatting compiled with P-01-01 and review to appendix 7.1 and appendix 7.2

	Date : 02/09/2024	Revision : 12	Ref : P-11-01
	Originator by : Marine OSHE Manager	Reviewed by : Marine OSHE Manager	Approved by : Deputy Managing Director
	EMERGENCY AND CONTINGENCY		

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	EMERGENCY AND CONTINGENCY		

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	Date : 02/09/2024	Revision : 12	Ref : P-11-01
	Originator by : Marine QSHE Manager	Reviewed by : Marine QSHE Manager	Approved by : Deputy Managing Director
EMERGENCY AND CONTINGENCY			

1. OBJECTIVES

- To ensure that there are the particularly contingency plans, such as measures, such as promptly mitigation and such as recovery planned, in place to deal with the potential consequences those might be occurred in any un-intentional event at shipboard operational.
- To ensure that the all of company's contingency plans have been developed, addressed and updated for appropriate to all hazards, accidents and emergencies those may be arisen from company's activities as well as have covered an entirely the shore-based and shipboard response to those accident, and
- To ensure that the Company's responds to an emergency shall be coordinated, prompted and effective performed, when needs.
- To ensure that all of individuals both of shipboard personnel and shore-based office staffs are well familiarize with their emergency roles and responsibilities through regularly and periodically drills and exercises.

2. SCOPE

All levels of employees who have work and/or assigned for any company's tasks and activities within the working areas both of Shore-based Head Office, Locally Office-Based & Fleet Vessels.

3. DEFINITIONS

Abandon Ship

An order given by the **Master** or his substitute to go to life rafts and leave the vessel when face with any disaster that is beyond control.

Contingency Plan

A pre-established to mitigate a usual situation which has the potential for harm, which incorporates the best use of local as well as remote facilities and resources.

Grounding

The act or situation of running a vessel onto the bottom of the seabed

Incident

A general term for unforeseen occurrence and as no direct classification. An event or chain of events which has caused or could have caused injury, illness and / or damage to assets, the environment or third parties.

Injury

Any cut, fracture, sprain, amputation etc., which results from a work incident or exposure involving a single event in the work environment

Mede-vac

The evacuation for medical reasons from the work location to a hospital or similar medical facility.

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EMERGENCY AND CONTINGENCY			

Procedure

A description giving details guidelines and instructions as to how an activity is to be performed

4. RESPONSIBILITY

- The Company's ERT Team Member is comprise of:
 - Managing Director (MD)
 - Deputy Managing Director (DMD)
 - Marine Crew Director
 - Designated Person Ashore (DPA)
 - Operations and Ship Vetting Manager (OPT)
 - Technical Manager (TEC)
 - Marine QSHE Manager (QSHE)
 - Crew Manager (CRW)
 - Line Departments Supports' Team

Head Office Emergency Response Team (HO-ERT) Managing Director (MD)

- Inform the SC Group – Managing Director, as required,
- Manage and release the media queries,
- Makes decision on the financial and insurance matters,
- Authorize all announcements to next of kin.
- Finalize in any decision making authorize the organization for personnel
- Liaise with the Company lawyers.
- MD** is delegated his functional when dismiss.

Deputy Managing Director (DMD) and/or Director

- Co-operates an additional resource to the ERT as may be found necessary,
- Call and Set up the HO-ERT once reported the need by **DPA**,
- Supporting resources decision as the HO-ERT's' Leader,
- Mobilize and demobilize the committee.
- Secure emergency details including sensitively to decide on deployment of Senior Management Team to site if warranted,
- Highlight any potential problems,
- Liaise and instruct to the **SHE Team** to initiate an investigation process,
- DPA** is delegates his functional when dismiss.

Designated Person Ashore (DPA)

- Performing as an Initially Focal point of the HO-ERT
- Secretariat of the HO-ERT,
- Supports all related Laws, Regulations, Standards and/or Requirements,



GARBAGE MANAGEMENT PLAN

Name of Ship	:	SC WINTER
Flag	:	THAILAND
Port of Registry	:	BANGKOK
Call Sign	:	HSB 6251
IMO Ship Identification Number	:	9753064

THIS PLAN PREPARED ACCORDING TO RESOLUTIONS MEPC.201(62), MEPC.220(63), MEPC 277(70)
AND MEPC.295(71)

EFFECTIVE DATE: FEBRUARY 14, 2020, REVISION 03

เรือสนับสนุน-1.2 แผนการจัดการของเสียของเรือ

1. SHIPS PARTICULAR

Note: All information should be filled comply with the ship

VESSEL	:	SC WINTER
FLAG	:	THAILAND
PORT OF REGISTRY	:	BANGKOK
CALL SIGN	:	HSB 6251
GROSS TONNAGE	:	2332
L.O.A.	:	64.8
IMO NO	:	9753064
NUMBER OF CREW	:	15
WORKING SEA AREA	:	GULF OF THAILAND
Environmental Control Officer* (E.C.O)	:	CHIEF OFFICER

2. PLACARDS


3.1. As a minimum labels of receptacles placards and declaration stating the prohibition and restrictions for discharging garbage from ships under MARPOL Annex V placards are placed to below area.

- GALLEY
- OFFICER MESS ROOM
- CREW MESS ROOM
- MAIN GARBAGE DUMP AREA
- ENGINE ROOM
- BRIDGE

Note : APPENDIX-2 GARBAGE TYPE AND MINIMUM DISTANCES FOR DISPOSAL FACILITIES

APPENDIX-6 LABELS OF RECEPTACLES
APPENDIX-7 CARGO RESIDUES (If any)

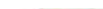
EFFECTIVE DATE: FEBRUARY 14, 2020, REVISION 03

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ENVIRONMENTAL MANAGEMENT			


SECTION 10 : ENVIRONMENTAL MANAGEMNT

P-10-01

Environmental Management

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ENVIRONMENTAL MANAGEMENT			

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1. OBJECTIVES

- The Company endeavors to meet the requirements of MARPOL Convention, as voluntary international standard through which the necessary waste from ship operational and marine and/or air pollution prevention are established, documented, implemented, maintained and continuously improved.
- An Environmental Management System meeting the requirements of MARPOL Annex VI is a management tool enabling the Company to:
 - Establish a formal framework for compliance with national and international regulations, MARPOL Convention, and customer expectations;
 - Identify and control the environmental impact of its activities, products or services;
 - Improve its environmental performance continually;
 - Implement a systematic approach to setting environmental objectives and targets, to achieving these and to demonstrating that they have been achieved;
 - Develop and implement procedures to measure the environmental impact of operations;
 - Development of a [Shipboard Energy Efficiency Management Plan](#).

2. SCOPE


- The Company has developed environmental management procedures that shall be used to identify, evaluate, reduce and monitor the environmental effects of operations, including provisions for the following:
 - The systematic identification and assessment of sources of marine pollution;
 - Ensuring the safe and responsible disposal of residual wastes;
 - Contingency plans for dealing with potential pollution incidents;
 - Reporting arrangements for all pollution incidents or near-miss occurrences that could have resulted in pollution;
 - Establishing requirements for Ballast Water Management.
- This procedural is not implemented when emergency which has risks to Safety of Life and/or Ship at sea.

3. DEFINITIONS

N/A

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4. RESPONSIBILITY

Deputy Managing Director

Ensuring that the requirements of this procedure are implemented, applied and complied.

Technical Manager


Ensuring that the requirements and expectations for environmental management are communicated and implemented onboard all vessels under his/her jurisdiction.

Vessel Master

Ensuring the implementation and application of this procedure onboard the vessel under his command.

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5. PROCEDURE

5.1 Sources of Marine and Atmospheric Pollution

5.1.1 Marine Pollution

- The **Master** shall ensure that the suitably and properly environmental prevention measures have been developed and effectively implemented onboard in accordance with the MARPOL convention.
- The following specific preventing procedurals, but not limited to, shall be developed for protection a related pollution from the following sources:-
 - Oils or Hydro Carbon substances Pollution,
 - Noxious Liquid Substances,
 - Sewage Pollutions,
 - Garbage onboard Pollutions
 - Engine exhaust emissions and volatile organic compounds pollution,
 - Ballast Water Management,
 - Anti-Fouling Paints Pollution
- The systematic identification and assessment of sources of marine pollution is carried out through the continuous monitoring, evaluation and assessment of all the records and reports associated with environmental issues: waste management, refrigerant management and oil and hydrocarbon products. Incident reports and investigations, including near misses are studied. The data is carefully analyzed to determine trends to ensure marine pollution is kept to an absolute minimum.
- Masters** are responsible for reporting incidents involving environmental pollution and the Company is responsible for the investigation of incidents involving environmental pollution as described within the [SMS Section 8 – Incident Management, Reporting, and Investigation](#).

5.1.2 Air Pollution


- The **Master**, as the company's representative overall in command on board, shall be ensured that his ship's emissions are always properly and suitably controls within limitations those are in accordance with the requirement of MARPOL Annex VI.
- The following gasses/activities emissions are defined as risks to air pollutant:-
 - Ozone depleting substances,
 - Nitrogen Oxides (NOx),
 - Sulphur Oxides (SOx),
 - Volatile Organic Compounds (VOCs), and
 - Emissions from shipboard incinerator, when fitted.

5.1.3 Management Objectives

- The target is ZERO accidental environment releases (pollution) and a continual reduction in environmental indicators defined by [Management SHE planning](#).

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5.2 Environmental Management System

- An Environmental Management System is a structured system or management tool, which once implemented, helps the Company to identify the environmental impacts due to nature of the business activities and to improve its environmental performance. The system aims to provide a methodical approach to planning, implementing and reviewing an organization's environmental management.

5.2.1 Environmental Aspect

- Company shall ensure that all environmental aspects that may pose significant impacts to the environment are under control and prioritized for improvements.

5.2.2 Environmental Impact

- In cause and effect, if one considers an environmental aspect to be the cause, then the environmental impact is the effect. An environmental impact is any change to the environment, whether adverse or beneficial, wholly or partially resulting from the organization's activities, products or services. Essentially, the environmental impact is the result of the environmental aspect.

5.2.3 Significant Environmental Aspect

- A significant environmental aspect is one that can have a significant environmental impact. These environmental aspects are recorded periodically and initiatives for continuous improvements are elaborated and executed.

5.3 Oily and Hydro Carbon Pollution Management


- Generally, sources of this type of pollution are, not limited to:-
 - Bilges water within the engine compartments which is occurred from engines/systems operational such as contaminated cooling water of main or auxiliary engines, propeller shafts or lubricating oils or from any leakages;
 - Oily residues or sludge which have occurred from the process of bilges discharging or Oily-water separator operating and lubricating oil;
 - Contaminated oily-water from the Cargo Tanks Cleaning operational when cargo types switching requires;
 - Contaminated oily-water from the F.O. Tanks cleaning process;

5.3.1 Bilge water discharges

- Bilge waters discharging shall be granted by the **Chief Engineer** approval only;
- Discharging process shall be performed in accordance with the MARPOL Annex I, Reg.15 control of discharge of oil;
- The Oily-Water Separator Equipment shall be classification approved type (MARPOL Annex I, Reg. 14: not exceeding to 15 ppm);

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- Loading and discharging hydrocarbon products including fuel oil, base oil and oil-base mud are subject to full pre-task planning, including risk assessment and checklist use prior to starting the operation.
- It is the responsibility of the **Master** to ensure that the **Oil Record Book** is updated. (*Part I is for Technical Operations while Part II is for Deck Operations*);
- Recording shall be complied with those are addressed in the MARPOL Annex I, reg.17_Oil Record Book Part 1 – Machinery Space operations.
- Any minor spillage shall be immediately cleaned up using onboard spill clean-up equipment.
- Larger spillage on deck or into the water shall be attended to as described in the vessel's **Shipboard Oil/Marine Pollution Emergency Plan (SOPEP/SMPEP)**.

5.3.2 Oils residues or Sludge discharges

- Onboard Oily Residues or Sludge shall be eliminated by burning in shipboard incinerator, when applicable, or discharges into shore facilities;
- The **Chief Engineer** shall ensure for the **Oil Record Book Part-1** recording prior the Master's verification;

5.3.3 Bunkers Tanks Cleaning discharges

- This contaminated type must be directly discharged into the shore facilities only;
- All discharging shall be clearly recorded within the **Oil Record Book Part-1** with documented evidence;

5.4 Noxious Liquids Substances management


- When ship has classified as the NLS Ship, the **Master** shall ensure that the specific **Procedure and Arrangement Manual (P&A Manual)** as well as the **Shipboard Marine Pollution Emergency Plan (SMPEP)** which are approved by the Administration or recognized organization are well kept and maintained in place on board;
- All discharging of the NLS cargo's residues, Ballast waters and Tank's cleaning waters shall be complied with the MARPOL Annex II, Reg. 13;
 - Underway with speed not less than 7 knots and not less than 4 knots (when un-self-propelled);
 - Under water discharges outlet within limitation rate;
 - Distance of not less than 12 nautical miles from the nearest land in depth of water not lesser than 25 meters;
- Records of discharging shall be clearly addressed within the **Cargo Record Book** in compliance with Cargo Record Book for ships carrying Noxious Liquids Substance in bulk the MARPOL Annex II, Reg. 15;

5.5 Sewage discharges management

- The following items are classified as Sewage;
 - Drainage and other wastes from any form of toilets and urinals.
 - Drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs, and suppers located in such premises.

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- Drainage from spaces containing living animals
- Other waste waters when mixed with the drainages defined above.
- All sewages are prohibited to discharge into the sea except the following:
 - Discharge through Sewage Treatment Plant which complied either IMO Resolution MEPC.2(VI) or MEPC.159 (55).
- The Overboard Sewage discharging shall be complied with the MARPOL Annex IV, reg. 11 throughout the approved treatment system (Refer to MARPOL Annex IV, Reg. 9.1.2);
 - Discharge is only to take place while vessel is underway and making way on passage.
 - All bilge waters shall be passed through an approved oily water separator equipped with a 15 ppm sensor.
 - Discharge at distance more than 3 nautical miles **from the nearest land** if the vessel is installed sewage comminuting and disinfecting system.
 - Discharge at distance more than 12 nautical miles **from the nearest land** if sewage is stored in holding tanks. Discharge shall not be done instantaneously but at moderate rate when the ship is en-route and proceeding at not less than 4 knots. **The discharge rate approved by the Administration shall be provided on board.**
- Maximum discharging shall not over limit of holding tank capacities, which is certified by the Administration;
- Testing report of the shipboard treatment system shall be stated within the **International Sewage Pollution Prevention Certificate**;
- Discharge to shore facility through standard discharge connection. Documented evidence for this discharge shall be retained on board.

5.6 Waste (Garbage) Management

- Shipboard waste (garbage) management shall be complied in accordance with the MARPOL Annex V, Reg. 3, 4, 5, 6, 7, 8, 9 and 10;
- The **Master** shall ensure that the particular **Garbage Management Plan** as well as the **Garbage Record Book** are well kept and maintained onboard;
- Records of all discharging with documented evidences shall be kept and maintained;
- Placards of the Shipboard Garbage Management Guidelines** shall be clearly posted in places for ensuring that all shipboard personnel are well understood and familiarized with discharging operation; refer to vessel's Garbage Management Plan

5.7 Engine Exhaust Emissions and Volatile Organic Compounds


- The atmospheric pollutant which addressed in the MARPOL Annex VI, those might be occurred by the shipboard operations (but not limited to):-

5.7.1 Ozone Depleting Substances

- Any deliberate emissions of ozone depleting substances shall be prohibited. Deliberate emissions include emissions occurring in the course of maintaining, servicing, repairing or

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- disposing of systems or equipment, except that deliberate emissions do not include minimal releases associated with recapture or recycling of this substances;
- The Shipboard Ozone Depleting Substances are, but not limited to, HALON (Halon 1211, 1301, 2402) in the fire-extinguishing system and CHLOROFLUOROCARBON - CFC (CFC no.11, 12, 113, 114, 115) in the air conditioner or cooling system includes within the vary insulations;
- The **Ozone Depleting Substances – Record Book** shall be provided for recording without delays on each occasion, in respect of the following:-
 - recharge, full or partial, of equipment containing ozone depleting substances;
 - repair or maintenance of equipment containing ozone depleting substances;
 - discharge of ozone depleting substances to the atmosphere:
 - 1 deliberate; and
 - 3.2 non-deliberate;
 - discharge of ozone depleting substances to land-based reception facilities; and
 - supply of ozone depleting substances to the ship.
- The **Ozone Depleting Substances – Record Book** may developed as part of an existing **log-book** or **electronic recording system** as approved by the Administration.

5.7.2 Nitrogen Oxides (NOx)

- The Specific NOx controls in accordance with the MARPOL Annex VI, Reg. 13, is apply to all marine diesel engines with a power output more than 130 kW installed on a ship;
- Exempted other those are solely for emergencies or engine installed in lifeboats intended to be used solely for emergencies;
- The requirements has divided into THREE TIERS which is described as below:-


Constructed date	RPM < 130	130 or more but less than 2000 RPM	RPM 2000 or more
Tier #1 After 1 January 2000 Prior 1 January 2011	17.0 g/kWh	45 x n ^(-0.2) g/kWh	9.8 g/kWh
Tier # 2 After 1 January 2011	14.4 g/kWh	44 x n ^(-0.23) g/kWh	7.7 g/kWh
Tier # 3 On or After 1 January 2016	3.4 g/kWh	9 x n ^(-0.2) g/kWh	2.0 g/kWh

Remark: when "n" = rated engine speed (crankshaft revolutions per minute)

- The **Master** shall ensure that the **International Air Pollution Prevention Certificate** has been certified by the Administration or recognized organization, and maintained in place;
- The **Certification of an Approved Method** shall be provided to the manufacturer, the Company shall ensure that all repairs and/or maintenance shall be provided in line with the manufacturer's guidelines only without different spare-part changes;

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- The NOx Technical Code 2008 is comply for the marine diesel engines durability and reliability;

5.7.3 Sulphur Oxides (SOx)

- The Specific SOx controls in accordance with the MARPOL Annex VI, Reg. 14, which is developed for control the Sulphur content of any fuel oil used on board ships shall not exceed the following limits;

Outside an ECA established to limit Sox and particulate matter emissions	Inside an ECA established to limit Sox and particulate matter emissions
4.50% m/m prior to 1 st January 2012	1.50% m/m prior to 1 st July 2010
3.50% m/m on and after 1 st January 2012	1.00% m/m on and after 1 st July 2010
0.50% m/m on and after 1 st January 2020*	0.10% m/m on and after 1 st January 2015

- Remark: The Emission Control Areas (ECA) are established and defined in MARPOL as following;
- Baltic Sea area – as defined in Annex I of MARPOL (SOx only);
 - North Sea area – as defined in Annex V of MARPOL (SOx only);
 - North American area (entered into effect 1 August 2012) – as defined in Appendix VII of Annex VI of MARPOL (SOx, NOx and PM); and
 - United States Caribbean Sea area (entered into effect 1 January 2014) – as defined in Appendix VII of Annex VI of MARPOL (SOx, NOx and PM).

- The **Master** shall ensure that all **Bunkers Delivery Note** shall be identified the Sulphur Content of the fuel oils that is comply in accordance with the above table prior commence bunkering on board;

5.7.4 Shipboard Incinerator


- The MARPOL Annex VI, Reg. 16, is comply only in a shipboard incinerator only;
- The following substances shall be prohibited for incineration:-
 - residues of cargoes subject to Annex I, II or III or related contaminated packing materials;
 - polychlorinated biphenyls (PCBs);
 - garbage, as defined by Annex V, containing more than traces of heavy metals;
 - refined petroleum products containing halogen compounds;
 - sewage sludge and sludge oil either of which are not generated on board the ship; and
 - exhaust gas cleaning system residues.
- Designated crew** shall be trained to implement the guidance provided in the manufacturer's operating manual as required by MARPOL;

5.7.5 Energy Efficiency Design Index (EEDI)

- The attained EEDI shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency, and be accompanied by the **EEDI Technical File** that contains the information necessary for the calculation of the attained EEDI and that shows the process of calculation.

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urgency;

- The specific **AFS Certificate** shall be valid and kept in place onboard.

5.10 Reporting and Record Keeping

5.10.1 Garbage Records

- Refer to vessel's **Garbage Management Plan** and the **Garbage Record Book**.

5.10.2 Waste Oil Transfer Certificate

- When waste oil offloaded ashore, to another vessel or to an offshore installation, the receiving facility shall provide a **certified transferring certificate/documentation**.
- The document shall specify the category of the waste oil (sludge, engine oil etc.), quantity of the waste oil, location, and date.
- The document shall bear the name of the reception facility and relevant license (as applicable) and be signed by a responsible person at the receiving facility.
- The document shall be kept on board in the **Oil Record Book** for a period of TWO years.
- When the company vessel is the receiving vessel, the document shall be completed and provided to the issuing vessel.
- In the event that this procedure cannot be followed (as in when the reception facility cannot for any reason complete or issue the document) an entry is to be made in the **Oil Record Book** giving details accordingly.
- When recording of operations in the **Oil Record Book**:
 - The operations shall be recorded in chronological order as they have been executed on board;
 - The dates shall be entered in day month and year format (dd-mm-yy); for example 23-05-15 (23rd May 2015);
 - All entries are to be made and signed by the **Officer or Officers in charge** of the operations concerned and each completed page shall be signed by the **Master**;
 - If a wrong entry has been recorded in the **Oil Record Book**, it shall immediately be struck through with a single line in such a way that the wrong entry is still legible. The wrong entry shall be initiated and dated, with the new corrected entry following;
 - Tank nomenclature shall be recorded as per the format noted within the **International Oil Pollution Prevention Certificate (IOPPC)**;

5.10.3 Ballast Water Management Log


- It is part of the specific ship's **Ballast Water Management Plan**, thus the **Master** shall ensures that it will have up to date recorded and maintained;

5.10.4 Pollution Incident Reporting

- All pollution incidents and near-miss occurrences shall be reported and investigated as required in accordance with the procedures detailed in SMS Section 8 **Incident Management, Reporting, and Investigation** and SMS form '**Initial Incident Report (F-08-SHE/01)**'

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- The attained EEDI shall be verified, based on the EEDI technical file, either by the Administration or by any organization duly authorized by it.
- Attained EEDI ≤ Required EEDI = (1-X/100) x reference line value where 'X' is the reduction factor specified in table 1 for the required EEDI compared to the EEDI reference line
- The EEDI calculation has been clearly addressed within the particularly **Ship Energy Efficiency Management Plan (SEEMP)**.

5.7.6 Ship Energy Efficiency Management Plan (SEEMP)

- The **Master** shall ensure that the specific **SEEMP** has been developed and kept in place onboard;
- On the operational side for energy efficient ship operation, the **Ship Energy Efficient Management Plan (SEEMP)** has been developed to assist the shipping industry in achieving energy efficiency improvements in order to reduce Greenhouse Gas Emission to Atmosphere.
- The Company works continuously to reduce fuel consumption and emission of greenhouse gases from their vessels. Fuel consumption management is a high priority in order to comply with international environmental requirements and to support an ambitious CO₂ reduction plan.
 - During the vessels' lifetime, a number of operational strategies are applied to achieve fuel savings;
 - Optimized voyage planning is used to identify the most fuel efficient route and a "just in time" steady running strategy is applied to keep the engine load at a minimum;
 - Weather routing is considered when planning the voyage;
 - Minimum safe ballast is carried to ensure enabling fuel consumption optimization at high safety standards;
 - Hull and propeller maintenance is conducted.

5.8 Ballast Water Management


- The **Master** shall ensure that the particular vessel's **Ballast Water Management Plan**, which has been approved by the Administration or recognized organization, is well kept and maintained in place;
- All shipboard personnel shall well understood and familiarized with all contents by periodically shipboard trainings, records of training shall be retained on board.
- Since 8th September 2017 or the first renewal survey in associated with IOPP certification, the D-2 Ballast Water Management Systems shall be put in place on board for ensuring that all discharged ballast into the sea shall not exceed the specified concentrations requirements.

5.9 Anti – Fouling Management

- The **Master** in liaison with the **Technical Manager** or **Designated Superintendent** shall be ensured that there is this suitably Anti Fouling Systems which are effective and environmentally safe;
- This system is fitted to prevent the built up of organisms on the surface on ships is of critical importance to address the harmful effects of anti-fouling systems used on board as a matter

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6. RELATED FORMS

F-08-SHE/01 Initial Incident Report

7. APPENDIX

N/A

8. REFERENCE STANDARDS

N/A

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ภาคผนวกเรือส่นับสนุน-2

ใบรับรองการตรวจสอบเรือส่นับสนุน

STATEMENT OF COMPLIANCE FOR SEWAGE POLLUTION PREVENTION (1973)

Issued under the provisions of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, and as amended by resolution MEPC.115(51), (hereinafter referred to as "the Convention") under the authority of the Government of:

Kingdom of Thailand
(full designation of the country)

Particulars of Ship: **by American Bureau of Shipping**

Name of ship	Distinctive number or letters	Port of Registry
SC WINTER	HSB 8251	Bangkok
Gross tonnage	Number of persons which the ship is certified to carry	IMO Number ¹
2332	50	9753064

New Ship / ~~Existing Ship~~^{*}
Type of ship for the application of regulation 11.3.2^{*}

~~New / Existing Passenger Ship~~^{*}

Ship other than a passenger ship

Date on which keel was laid or ship was at a similar stage of construction or where applicable, date on which work for a conversion or an alteration or modification of a major character was commenced: 25 November 2014

THIS IS TO CERTIFY:

(1) That the ship is equipped with a Sewage Treatment Plant / ~~Commencement~~ Holding Tank * and a discharge pipeline in compliance with regulations 9 and 10 of Annex IV of the Convention as follows:

*(1.1) Description of the sewage treatment plant:

Type of sewage treatment plant SBH-65

Name of manufacturer

TAIKO KIKAI INDUSTRIES CO., LTD.

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.159 (55).

*(1.2) Description of comminuter¹

Type of comminuter N/A

Name of manufacturer

N/A

Standard of sewage after disinfection N/A

*(1.3) Description of holding tank:

Total capacity of the holding tank 14.2 m³

Location

Engine Room Double Bottom Frame no.70 - 76

(1.4) A pipeline for the discharge of sewage to a reception facility, fitted with a standard shore connection.

^{*} Delete as appropriate

¹ In accordance with resolution A.800(15) - IMO Ship Identification Number Scheme, this information may be included voluntarily

(2) The ship has been surveyed in accordance with regulation 4 of Annex IV of the Convention.

(3) That the survey shows that the structure, equipment, systems, fittings, arrangements and material of the ship and the condition thereof are in all respects satisfactory and the ship complies with the applicable requirements of Annex IV of the Convention.

This statement is valid until 05 June 2028 ² subject to surveys in accordance with regulation 4 of Annex IV of the Convention.

Completion date of the survey on which this statement is based: 20 April 2021

Issued at Songkhla, Thailand on

20 April 2021



Electronically Signed By:
Charoenkitungrohana, Charatnarai Bangkok Port
(Surveyor, American Bureau of Shipping)

INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE

(This Certificate shall be supplemented by a Record of Construction and Equipment)

Issued under the Provisions of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto and as amended, (hereinafter referred to as "the Convention") under the authority of the Government of

Kingdom of Thailand
(name of state)

by American Bureau of Shipping

Particulars of Ship	Name of Ship	Distinctive Number or Letters	Port of Registry
	SC WINTER	HSB 6251	Bangkok
Gross Tonnage ¹		Maximum Deadweight of Ship (metric tons) ⁴	IMO Number
a) According to footnote ² ; b) According to footnote ³	2332		9753064

Type of Ship¹:

Oil Tanker

Ship other than an oil tanker with cargo tanks coming under Regulation 2(2) of Annex I of the Convention
Ship other than any of the above

THIS IS TO CERTIFY:

- That the ship has been surveyed in accordance with Regulation 6 of Annex I of the Convention;
- That the survey shows that the structure, equipment, systems, fittings, arrangement and material of the ship and the condition thereof are in all respects satisfactory and that the ship complies with the applicable requirements of Annex I of the Convention.

This Certificate is valid only when Supplement Form B issued at Songkhla, Thailand
on 08 August 2021 is attached.

This certificate is valid until 05 June 2026⁵ subject to surveys in accordance with Regulation 6 of Annex I of the Convention.



Completion date of the survey on which this certificate is based: 20 April 2021
Issued at Songkhla, Thailand on 08 August 2021
(Place of Issue of Certificate)



Electronically signed by
Thongpun, Sittiporn, Bangkok Port
Surveyor, American Bureau of Shipping

1. Unless as appropriate
2. The above gross tonnage has been determined in accordance with the International Convention on Tonnage Measurement of Ships, 1969.
3. The above gross tonnage has been determined by the authorities of the Administration in accordance with the national tonnage rules which were in force prior to the coming into force for existing ships of the International Convention on Tonnage Measurement of Ships, 1969.
4. For oil tankers
5. The date of expiry as specified by the Administration in accordance with regulation 10.1 of Annex I of the Convention. The day and the month of date corresponds to the anniversary date as defined in regulation 1.27 of Annex I of the Convention, unless amended in accordance with regulation 10.8 of Annex I of the Convention.

ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

THIS IS TO CERTIFY that, at a survey required by Regulation 6 of Annex I of the Convention, the ship was found to comply with the relevant requirements of the Convention.



Annual Survey:

Signed:

Place:

Date:

Annual / Intermediate¹ Survey:

Signed:

Place:

Date:

~~Annual~~ / Intermediate¹ Survey:

Signed:

Place:

Date:

Annual Survey:

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)



¹ Delete as appropriate

ANNUAL / INTERMEDIATE SURVEY IN ACCORDANCE WITH REGULATION 10.8.3

THIS IS TO CERTIFY that, at an annual / intermediate¹ survey in accordance with Regulation 10.8.3 of Annex I of the Convention, the ship was found to comply with the relevant provisions of the Convention.

Signed:

(Surveyor, American Bureau of Shipping)

Place:

Date:

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN 5 YEARS
WHERE REGULATION 10.3 APPLIES

The ship complies with the relevant provisions of the Convention, and this Certificate shall, in accordance with Regulation 10.3 of Annex I of the Convention, be accepted as valid until _____

Signed:

(Surveyor, American Bureau of Shipping)

Place:

Date:

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED
AND REGULATION 10.4 APPLIES

The ship complies with the relevant provisions of the Convention, and this Certificate shall, in accordance with Regulation 10.4 of Annex I of the Convention, be accepted as valid until _____

Signed:

(Surveyor, American Bureau of Shipping)

Place:

Date:

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF
SURVEY OR FOR A PERIOD OF GRACE WHERE REGULATION 10.5 OR 10.6 ¹ APPLIES

This Certificate shall, in accordance with regulation 10.5 /10.6¹ of Annex I of the Convention, be accepted as valid until _____

Signed:

(Surveyor, American Bureau of Shipping)

Place:

Date:



¹ Delete as appropriate

**ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE
WHERE REGULATION 10.8 APPLIES**

In accordance with Regulation 10.8 of Annex I of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

In accordance with Regulation 10.8 of Annex I of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____



CARGO SHIP SAFETY EQUIPMENT CERTIFICATE
THIS CERTIFICATE SHALL BE SUPPLEMENTED BY A RECORD OF EQUIPMENT (FORM E)

ISSUED UNDER THE PROVISIONS OF THE
INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974,
IN ACCORDANCE WITH ASSEMBLY RESOLUTION A.883(21) RELATING TO THE GLOBAL
IMPLEMENTATION OF THE HARMONIZED SYSTEM OF SURVEY AND CERTIFICATION
UNDER THE AUTHORITY OF THE GOVERNMENT OF
Kingdom of Thailand
(name of the State)
by American Bureau of Shipping

Particulars of Ship:

Name of Ship	Distinctive Number or Letters	Port of Registry	Gross Tonnage ¹ a) According to footnote 2 b) According to footnote 3
SC WINTER	HSB 6251	Bangkok	2332
Maximum Deadweight of Ship (Metric Tons) ⁴	Length of Ship (Regulation III/3.12)	IMO Number	Date on Which Keel Was Laid ⁵
-	60.962 m	9753064	25 November 2014

Type of ship:¹

- Bulk Carrier
Oil Tanker
Chemical Tanker
Gas Carrier
Cargo Ship other than any of the above

THIS IS TO CERTIFY:

- that the ship has been surveyed in accordance with the requirements of Regulation I/8, of the Convention.
- that the survey showed that:
 - the ship complied with the requirements of the Convention as regards fire safety systems and appliances and fire control plans;
 - the life-saving appliances and the equipment of the lifeboats, liferafts and rescue boats were provided in accordance with the requirements of the Convention;
 - the ship was provided with a line-throwing appliance and radio installations used in life-saving appliances in accordance with the requirements of the Convention;
 - the ship complied with the requirements of the Convention as regards shipborne navigational equipment, means of embarkation for pilots and nautical publications.

1 Delete as appropriate.
2 The above gross tonnage has been determined in accordance with the International Convention on Tonnage Measurement of Ships, 1969.
3 The above gross tonnage has been determined by the authorities of the Administration in accordance with the national tonnage rules which were in force prior to the coming into force for existing ships of the International Convention on Tonnage Measurement of Ships, 1969.
4 The above deadweight has been determined by the authorities of the Administration in accordance with the national deadweight rules which were in force prior to the coming into force for existing ships of the International Convention on Tonnage Measurement of Ships, 1969.
5 Date on which keel was laid or ship was at a similar stage of construction or, where applicable, date on which work for a conversion or an alteration or modification of a major character was commenced.

- the ship was provided with lights, shapes, means of making sound signals and distress signals in accordance with the requirements of the Convention and the International Regulations for Preventing Collisions at Sea in force;
- in all other respects, the ship complied with the relevant requirements of the Convention.
- the ship was not subjected to an alternative design and arrangements in pursuance of regulation(s) II-2/17 / III/38 of the Convention;
- a Document of approval of alternative design and arrangements for fire protection / life-saving appliances and arrangements is not appended to this Certificate.
- That the ship operates in accordance with regulation III/26.1.1⁶ within the limits of the trade area
N/A

4. That an Exemption Certificate has been issued.

This Certificate is valid only when Record Form E issued at Songkhla, Thailand on 20 April 2021 is attached.

This certificate is valid until 05 June 2026 Subject to the annual and periodical surveys in accordance with regulation I/8 of the Convention.

Completion date of the survey on which this certificate is based: 20 April 2021

Issued at Songkhla, Thailand on 20 April 2021
(Place of Issue of Certificate) (Date of Issue)

Electronically Signed By:
Charoenkitungrochana, Chanchai, Bangkok Port
Surveyor, American Bureau of Shipping



1 Delete as appropriate.
6 Refer to the 1983 amendments to SOLAS (MSC 64(8)), applicable to ships constructed on or after 1 July 1986, but before 1 July 1998 in the case of self-righting partially enclosed lifeboats.
7 Inward the date of expiry as specified by the Administration in accordance with Regulation I/4(a) of the Convention. The day and the month of this date correspond to the anniversary date defined in Regulation I/2(n) of the Convention, unless amended in accordance with Regulation I/4(n).

ENDORSEMENT FOR ANNUAL AND PERIODICAL SURVEYS

THIS IS TO CERTIFY that, at a survey required by Regulation 1/8 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual Survey:

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)

21 May - 2022

Annual / Periodical¹ Survey:

Signed:

Place:

Date:

Sri Panj Thaul Funi BAJEWAK BART
(Surveyor, American Bureau of Shipping)

Southeast Asia, Thailand

21 - June - 2023

~~Annual~~ / Periodical¹ Survey:

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)

19 - Jun - 2024

Annual Survey:

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)



¹ Delete as appropriate.

ANNUAL/PERIODICAL SURVEY IN ACCORDANCE WITH REGULATION 1/14(h)(iii)

THIS IS TO CERTIFY that, at the annual / periodical¹ survey in accordance with regulation 1/14(h)(iii) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN 5 YEARS WHERE REGULATION 1/14(C) APPLIES

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with Regulation 1/14(c) of the Convention, be accepted as valid until _____

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED AND REGULATION 1/14(D) APPLIES

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with Regulation 1/14(d) of the Convention, be accepted as valid until _____

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)



¹ Delete as appropriate.

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD OF GRACE WHERE REGULATION I/14(E) OR I/14(F) APPLIES

This certificate shall, in accordance with Regulation I/14(e) / I/14(f)¹ of the Convention, be accepted as valid until _____⁷

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE WHERE REGULATION I/14(H) APPLIES

In accordance with Regulation I/14(h) of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

In accordance with Regulation I/14(h) of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____



¹ Delete as appropriate.
⁷ Insert the date of expiry as specified by the Administration in accordance with Regulation I/14(e) of the Convention. The day and the month of this date correspond to the anniversary date as defined in Regulation I/2(n) of the Convention, unless amended in accordance with Regulation I/14(f).

CARGO SHIP SAFETY RADIO CERTIFICATE

(This certificate shall be supplemented by a Record of Equipment of Radio Facilities (Form R))

Issued under the provisions of the International Convention for the Safety of Life at Sea, 1974, as modified by the protocol of 1988 relating thereto under the authority of the Government of _____

Kingdom of Thailand
(Name of the State)

by American Bureau of Shipping

Particulars of Ship:

Name of Ship	Distinctive Number or Letters	Port of Registry
SC WINTER	HSB 6251	Bangkok
Gross Tonnage	Sea Areas in Which Ship is Certified to Operate (Regulation IV/2) ¹	IMO Number ²
2332	A3	9753064
		Date on Which Keel Was Laid ³
		25 November 2014

THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with the requirements of regulation I/9 of the Convention.
2. That the survey showed that:
 - 2.1 the ship complied with the requirements of the Convention as regards radio installations;
 - 2.2 the provision and functioning of the radio installations used in life-saving appliances complied with the requirements of the Convention;
3. That an Exemption Certificate ~~has~~ has not⁴ been issued.

This Certificate is valid only when Record Form R issued at _____ on _____
07 July 2025 is attached. _____
Songkhla, Thailand

This certificate is valid until _____
05 June 2026⁵ subject to periodical surveys in accordance with Regulation I/9 of the Convention.

Completion date of the survey on which this certificate is based: _____
20 April 2021
Issued at _____
Songkhla, Thailand
(Place of Issue of Certificate)



https://abs-cert.org/eng/eng

Electronically signed by
Sansuk, Atapol, Bangkok Port
(Surveyor, American Bureau of Shipping)

¹ For a ship certified to operate in sea area A3, indicate the recognized mobile satellite service in brackets.
² Indicate the ship's identification number in the IMO Ship Identification Number Scheme, adopted by resolution A.1117(30).
³ Date on which keel was laid or ship was at a similar stage of construction or, where applicable, date on which work for a conversion or an alteration or modification of a major character was commenced.
⁴ Delete as appropriate.
⁵ Insert the date of expiry as specified by the Administration in accordance with Regulation I/14(a) of the Convention. The day and the month of this date correspond to the anniversary date as defined in Regulation I/2(n) of the Convention, unless amended in accordance with Regulation I/14(f).

ENDORSEMENT FOR PERIODICAL SURVEYS

THIS IS TO CERTIFY that, at a survey required by Regulation I/9 of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Periodical Survey:

Signed:

Place:

Date:

REQUIRED SURVEY CARRIED OUT PREVIOUSLY
(Surveyor, American Bureau of Shipping)

Periodical Survey:

Signed:

Place:

Date:

REQUIRED SURVEY CARRIED OUT PREVIOUSLY
(Surveyor, American Bureau of Shipping)

Periodical Survey:

Signed:

Place:

Date:

REQUIRED SURVEY CARRIED OUT PREVIOUSLY
(Surveyor, American Bureau of Shipping)



Periodical Survey:

Signed:

Place:

Date:

Electronically Signed by
Sansuk, Atapol, Bangkok Port
(Surveyor, American Bureau of Shipping)
Songkhla, Thailand
07 July 2025



THIS IS TO CERTIFY that, at the periodical survey in accordance with regulation I/14(h)(III) of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)

ENDORSEMENT TO EXTEND CERTIFICATE IF VALID FOR LESS THAN
5 YEARS WHERE REGULATION I/14(C) APPLIES

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with Regulation I/14(c) of the Convention, be accepted as valid until _____

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED
AND REGULATION I/14(D) APPLIES

The ship complies with the relevant requirements of the Convention, and this certificate shall, in accordance with Regulation I/14(d) of the Convention, be accepted as valid until _____

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF
SURVEY OR FOR A PERIOD OF GRACE WHERE REGULATION I/14(E) OR I/14(F) APPLIES

This certificate shall, in accordance with Regulation I/14(e) / I/14(f)⁴ of the Convention, be accepted as valid until _____

Signed:

Place:

Date:

(Surveyor, American Bureau of Shipping)



**ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE
WHERE REGULATION I/14(H) APPLIES**

In accordance with Regulation I/14(h) of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

In accordance with Regulation I/14(h) of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____



ภาคผนวกเรือสแนบสนุน-3

บันทึกต่างๆ ของเรือสแนบสนุน



CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF LIFTING APPLIANCE

Local Certificate No:
TH/25/SKL5936 Rev. 0

Date of Inspection:
20-October-2025

Name and Address of the Client: Icon Energy Service Co., Ltd. 255/9 Moo.1 T. Sathingmo A. Singhanakorn, Songkhla 90280	Place of Inspection: ICON Yard, Singhanakorn, Songkhla
Manufacturer OR Supplier: Icon Energy Service Co., Ltd.	DNV NPS No.:
Intended For: SC Management Co., Ltd.	DNV Order No.:
Reference Standards: PTTEP: Integrity management of lifting appliance Guideline (Cranes & Hoists), Docs No. 10017-GDL-5-INT-006-R00 (December 2022), Lifting Equipment Inspection Requirement Summary Guideline No. 10289-GDL-5-INT-001-R00, (June, 2023) Chevron Offshore Thailand: Portable Lifting Equipment Operation Practices Version 1.5 (22 Feb 2021), Appendix 1- Version 1.7 (27 Dec 2022), Appendix 2- Version 1.3 (1 Jul, 2016) Valeura Energy: Inspection of Lifting Equipment Procedure Docs No. TH-GEN-AI-QA-PRC-0139 Rev R3 (25 July 2023)	DNV Project No.: 10550442

ID No.	Qty.	Equipment Description	SWL (Tonne)	Test Load Applied (Tonne)
SC WINTER-01	1	"HS TYPE", Chain Block, Length 2.5 m.	1.00	1.50
180832	1	"VITAL", Chain Block, Length 2.5 m.	1.00	1.50
134885	1	"VITAL", Chain Block, Length 2.5 m.	1.00	1.50
195248	1	"VITAL", Chain Block, Length 2.5 m.	1.00	1.50

Note: - Require of MPI on quad assembly at weld, report attached with certificate.

Date of Last Examination	Date of Next Examination	Date of Last Proof Load Test	Date of Next Proof Load Test
N/A	19-October-2026 (PTTEP, Chevron, Valeura)	Initial	After substantial repair or alteration

Authorized Name: Wiwat T

Surveyor's Name: C

Authorized Signature:

Surveyor's Signature

LEGAL DISCLAIMER: THIS IS TO CERTIFY THAT the above competent surveyor thoroughly examined the lifting equipment in the above-mentioned place as per relevant International Standard. Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Country Office - THAILAND, Vibhavadi Rangsit Road 349 S.J. - Infinite I Business Complex, Room 1501
Chompton, Chatuchak - 10900 Bangkok - Tel. +6621159988

Form code: ISI-INSP-5-7-A1-TH Revision: 2021-03

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เรือสนับสนุน-3.1 ตัวอย่างรายงานการตรวจสอบและการซ่อมบำรุง

CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF LIFTING APPLIANCE

Local Certificate No:
TH/25/SKL5937 Rev. 0

Date of Inspection:
20-October-2025

Name and Address of the Client: Icon Energy Service Co., Ltd. 255/9 Moo.1 T. Sathingmo A. Singhanakorn, Songkhla 90280	Place of Inspection: ICON Yard, Singhanakorn, Songkhla
Manufacturer OR Supplier: Icon Energy Service Co., Ltd.	DNV NPS No.:
Intended For: SC Management Co., Ltd.	DNV Order No.:
Reference Standards: PTTEP: Integrity management of lifting appliance Guideline (Cranes & Hoists), Docs No. 10017-GDL-5-INT-006-R00 (December 2022), Lifting Equipment Inspection Requirement Summary Guideline No. 10289-GDL-5-INT-001-R00, (June, 2023) Chevron Offshore Thailand: Portable Lifting Equipment Operation Practices Version 1.5 (22 Feb 2021), Appendix 1- Version 1.7 (27 Dec 2022), Appendix 2- Version 1.3 (1 Jul, 2016) Valeura Energy: Inspection of Lifting Equipment Procedure Docs No. TH-GEN-AI-QA-PRC-0139 Rev R3 (25 July 2023)	DNV Project No.: 10550442

ID No.	Qty.	Equipment Description	SWL (Tonne)	Test Load Applied (Tonne)
240100160	1	"TOYO", Chain Block, Length 3.0 m.	1.00	1.50
CB202411	1	"OKURA", Chain Block, Length 3.0 m.	1.00	1.50
188578	1	"VITAL", Chain Block, Length 3.0 m.	1.00	1.50
185772	1	"VITAL", Chain Block, Length 3.0 m.	1.00	1.50
169091	1	"VITAL", Chain Block, Length 3.0 m.	1.00	1.50

Note: - Require of MPI on quad assembly at weld, report attached with certificate.

Date of Last Examination	Date of Next Examination	Date of Last Proof Load Test	Date of Next Proof Load Test
N/A	19-October-2026 (PTTEP, Chevron, Valeura)	Initial	After substantial repair or alteration

Authorized Name: Wiwat

Surveyor's Name: C

Authorized Signature:

Surveyor's Signature

LEGAL DISCLAIMER: THIS IS TO CERTIFY THAT the above competent surveyor thoroughly examined the lifting equipment in the above-mentioned place as per relevant International Standard. Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Country Office - THAILAND, Vibhavadi Rangsit Road 349 S.J. - Infinite I Business Complex, Room 1501
Chompton, Chatuchak - 10900 Bangkok - Tel. +6621159988

Form code: ISI-INSP-5-7-A1-TH Revision: 2021-03

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BOSS NOT AND INSPECTION	BOSS SUPPLY AND SERVICE CO., LTD. 39/2, Moo 2, Tambol Ching Kho, Amphur Singhanakorn, Songkhla, Thailand, 90280 Email: Admin@bosservice-th.com Tel 074-592639, +66 27101881	CPG Certified Partner Global 1949 1988	JAS-ANZ G
MAGNETIC PARTICLE TESTING REPORT			
CLIENT: ICON ENERGY SERVICE CO.,LTD.		REPORT NO.: IES-MT-2510187	
END USER: SC MANAGEMENT CO.,LTD.		WORK ORDER NO: 2510033	
LOCATION: ICON YARD		EXAMINATION DATE: 20-October-2025	
Procedure No. : WI-OP-002	Rev: 0	Acceptance Criteria/Specifications: <input checked="" type="checkbox"/> AWS D1.1 <input checked="" type="checkbox"/> ASME V/Article 7 <input checked="" type="checkbox"/> ASTM E709, <input checked="" type="checkbox"/> PTTEP Doc. 10289-GDL-5-INT-001-R00 <input checked="" type="checkbox"/> Chevron General Guideline Apd 1&2 <input type="checkbox"/> DNV-ST-E271 (Section 9) <input type="checkbox"/> Other...	
PART IDENTIFICATION & INFORMATION			
Material Type: Steel	Description: See Part Item No		
EQUIPMENT MATERIALS & OPERATION PARAMETER			
Consumable: C	Magnetizing Equipment: Magnetic Particle	Contrasting:	
Brand/Model: HANDY MAGNA/PM-AZ	NABAKEM/SM-15	NABAKEM/MP-35	
Serial/Batch No.: MP 6052	241126	241102	
Magnetic Particle Property:	<input type="checkbox"/> Dry <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Color <input type="checkbox"/> Fluorescent <input type="checkbox"/> Dual		
Magnetizing Technique:	<input checked="" type="checkbox"/> Permanent Yoke <input type="checkbox"/> Electromagnetic Yoke <input type="checkbox"/> Prod <input type="checkbox"/> Coil <input type="checkbox"/> AC <input type="checkbox"/> DC		
Magnetizing Process:	<input checked="" type="checkbox"/> Continuous <input type="checkbox"/> Residual Magnetic Field: <input checked="" type="checkbox"/> Longitudinal <input type="checkbox"/> Circular		
Pre-cleaning:	<input type="checkbox"/> Solvent <input checked="" type="checkbox"/> Brushing/Grinding <input type="checkbox"/> Other.....	<input type="checkbox"/> Post-cleaning: Brushing	
Area Inspected:	<input type="checkbox"/> Lifting Pad Eyes <input type="checkbox"/> Weldment Area <input type="checkbox"/> Stress Area <input type="checkbox"/> Full Body <input type="checkbox"/> Master link		
State of Examination:	<input type="checkbox"/> Fabricated/Manufactured <input checked="" type="checkbox"/> In-service <input type="checkbox"/> Other...	Surface Temperature: Ambient	
Lighting Type/Equipment:	<input checked="" type="checkbox"/> Natural <input type="checkbox"/> Visible <input type="checkbox"/> UV	Lifting Power: <input checked="" type="checkbox"/> 4.5kg <input type="checkbox"/> 18kg <input type="checkbox"/> N/A	
Time Of Inspection:	<input type="checkbox"/> After Visual <input checked="" type="checkbox"/> Before Load Test <input checked="" type="checkbox"/> After Load Test <input type="checkbox"/> Other.....	Measured Value: <input checked="" type="checkbox"/> ≥ 1,076 Lux <input type="checkbox"/> uW/cm ²	
Item	S/N.	Description	Result
1	185772, 188578 195248, 169091 180832, 134885 CB202411, SC WINTER-01 240100160	Chain Block WLL: 1.00 Ton. Qty: 9 ea.	<input checked="" type="checkbox"/> ACCEPTED <input type="checkbox"/> REJECTED
MPI ON HOOK FULL BODY			
Pictures: 			
OBSERVATION: Inspection carried out as per procedure and not found any relevant indication			
Inspector (Level II) Company: BOSS SUPPLY AND SERVICE CO., LTD. Name: Mr. Singhanat		Client Reviewed / Approved Company: SC MANAGEMENT CO.,LTD. Name: Signature: Date: 20-October-2025	
DATE OF NEXT INSPECTION		FOR CHEVRON/PTTEP/MEDCO/PTTEP-I/CPQC/VALEURA (12MONTHS)	
		19-October-2026	

FIRE DETECTOR TESTING RECORD													
Testing Date	WEEK 1			WEEK 2			WEEK 3			WEEK 4			Location
	P	S	ISOL	P	S	ISOL	P	S	ISOL	P	S	ISOL	
ZONE 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Bridge Deck
ZONE 2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Upper forecastle deck
ZONE 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Lower forecastle deck
ZONE 4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Lower forecastle deck
ZONE 5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Main deck
ZONE 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Main deck
ZONE 7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Steering gear room
ZONE 8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Engine control room
ZONE 9	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	B/T Room
ZONE 10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Engine room
ZONE 11	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Cement/Bulk room
ZONE 12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Mud/Brine room
Legend: P = Manual call point dry spaces C = Manual call point wet spaces S = Smoke detector T = Heat detector ISOL = Barrier isolator <input checked="" type="checkbox"/> X = Passed Fail													

	Date : 11/11/2021	Revision : 1	Ref :
LSA & FFA INVENTORY			

Ship's name:SC Winter..... Date:October 2025.....

No.	Safety Equipment Name / Model	S/N	Quantity	Location	Last service	Next service / EXP.	Remark
Firefighting Equipment Inventory							
1	Fire Hose, Boxes and Assesary		24 Pcs	Nav. Bridge [2] P & STBD			Hydro test every 5 years
				Upper F'CLE [3]			
				Upper & Lower F'CLE [3 (40A)]			Stair 3 (40A)
				Lower F'CLE [2]			
				Main Deck [7]			
				FWD B.T.comt [1]			
				TWEEN Deck [1]			
				Engine Room [2]			21(50A)
				Dry Bulk & ST. Gear Comp. [2]			
				R.O. TANK Compt. [1]			
2	Portable Fire Extinguisher Foam (9 Ltr)		23 cdl	Bow Store [1]	19 Jan 2025	19 Jan 2026	Annually
				Bosun Store [2]	19 Jan 2025	19 Jan 2026	
				Safety Store [1]	19 Jan 2025	19 Jan 2026	
				Winch compt. [2]	19 Jan 2025	19 Jan 2026	
				Engine Room [4]	19 Jan 2025	19 Jan 2026	
				Accommodation [8]	19 Jan 2025	19 Jan 2026	
				Galley [2]	19 Jan 2025	19 Jan 2026	
				In front of paint store [1]	19 Jan 2025	19 Jan 2026	
				Wheel house top [2]	19 Jan 2025	19 Jan 2026	
3	Portable Fire Extinguisher Foam (45 Ltr)		1 cdl	Engine Room	19 Jan 2025	19 Jan 2026	
4	Dry chemical powder 6 KG.		21 cdl	Bridge [2]	19 Jan 2025	19 Jan 2026	
				Lower F'CLE [1]	19 Jan 2025	19 Jan 2026	
				Main Deck [6]	19 Jan 2025	19 Jan 2026	
				FWD B.T.comt [1]	19 Jan 2025	19 Jan 2026	
				ECR [2]	19 Jan 2025	19 Jan 2026	
				Engine Room [7]	19 Jan 2025	19 Jan 2026	
				Steering Gear Room [2]	19 Jan 2025	19 Jan 2026	
5	Fixed fire fighting system (CO2)		23 ctyds	CO2 Room	19 Jan 2025	19 Jan 2026	Test weight every 2 years
6	Fire fighting system (Foam Applicator)		20 Ltrs 4 sets	Engine Room [1]	19 Jan 2025	19 Jan 2026	Exp.12/2028
				Winch room [2]	19 Jan 2025	19 Jan 2026	Exp.12/2028
				ECR R.O. TANK Compt. [1]	19 Jan 2025	19 Jan 2026	Exp.12/2028
7	45.5 KG. Dry powder (Supply on 27 Mar 2024)		2 sets	Main Deck [1] Port	19 Jan 2025	19 Jan 2026	
				Main Deck [2] Stbd	19 Jan 2025	19 Jan 2026	
8	Fire man outfit		2 sets	F.E. Locker [Bridge]	19 Jan 2025	19 Jan 2026	
			4 sets	Safety Store	19 Jan 2025	19 Jan 2026	
9	Breathing Apparatus		2 sets	F.E. Locker [Bridge]	19 Jan 2025	19 Jan 2026	
			4 sets	Safety Store	19 Jan 2025	19 Jan 2026	
			2 sets	IMDG [2]	19 Jan 2025	19 Jan 2026	14 Cylinder
10	Air Bottle - Breathing Apparatus		14 cdl	Safety Store	19 Jan 2025	19 Jan 2026	Spare & Training
11	E.E.B.D.		10 sets	Crew Cabins	19 Jan 2025	19 Jan 2026	

Original : Vessel, Copy: Nil , Retention : 1 years

Page 1 of 3

	Date : 11/11/2021	Revision : 1	Ref :
LSA & FFA INVENTORY			

LSA Inventory							
1	Life Raft						
	Life Raft No.1		1	Bridge wing (Stbd)	23 Jan 2025	23 Jan 2026	HRU: 01/2026
	Life Raft No.2		1	Bridge wing (Stbd)	23 Jan 2025	23 Jan 2026	HRU: 01/2026
	Life Raft No.3		1	Bridge wing (Stbd)	23 Jan 2025	23 Jan 2026	HRU: 01/2026
	Life Raft No.4		1	Bridge wing (Port)	23 Jan 2025	23 Jan 2026	HRU: 01/2026
	Life Raft No.5		1	Bridge wing (Port)	23 Jan 2025	23 Jan 2026	HRU: 01/2026
	Life Raft No.6		1	Bridge wing (Port)	23 Jan 2025	23 Jan 2026	HRU: 01/2026
2	FRC.		1	Bridge wing (Port)	07 Jul 2025	06 Jul 2026	9 persons.
	Medical First Aid		1	Bridge Deck			Exp: Mar/2026
3	Life buoy with line 30 m.		2	Main deck (Stbd)			
			2	Main deck (Port)			
	Life buoy light & smoke (MOB)		2	Bridge wing (Port&STBD)			Exp Sep/2029
						Monthly Inspection	
	Life buoy with Igniting light		1	Lower F'CLE(Stbd)			Batt Exp 04/29
			1	Lower F'CLE (Port)			Batt Exp 04/29
	Life buoy with line 30 m.		1	Upper F'CLE (Stbd)			
			1	Upper F'CLE (Port)			
4	Life Jacket (Light & Whistle)		78	Bridge Locker[2]		Aug 2029 (78)	
				Crew Cabins[56]			
				Engine Control Room[2]			
				Rescue boat[18]			
5	Hand Flares.		6	Bridge Locker	Aug 2022	Feb 2026	
6	Line Throwing - Rocket		4	Bridge Locker	Dec 2020	Nov 2026	
7	Parachute Flares		12	Bridge Locker	Dec 2024	Dec 2028	
8	GMDSS walkie-talkie (2-way VHF)		3	Bridge	07 Jul 2025	06 Jul 2026	Battery: Mar-2026
9	EPIRB (Maker: GME, Type: MT603FG EPIRB, Battery Exp: 03/2029)		1	Compass Deck (Port)	07 Jul 2025	06 Jul 2026	HRU: 04/2026


Original : Vessel, Copy: Nil , Retention : 1 years

Page 2 of 3

	Date : 11/11/2021	Revision : 1	Ref :
LSA & FFA INVENTORY			

10	SART		1	Bridge (port)	07 Jul 2025	06 Jul 2026	Batt: Mar 2030
			1	Bridge (Stbd)	07 Jul 2025	06 Jul 2026	Batt: Mar 2030
11	International Shore Connection		2 set	Main deck (Port & Stbd)			
	1 Connection flange		1				
	2 head Bolts		4				
	3 brass Nuts		4				
	4 Washers (ring)		8				
	5 Spanners		1				
	6 Gasket		1				
12	Portable Fire Extinguisher Foam (9 Ltr)	Spare part	17 cdl	Bow Store	19 Jan 2025	19 Jan 2026	
	Dry chemical powder 6.8 KG.	Spare part	17 cdl	Bow Store	19 Jan 2025	19 Jan 2026	
	Dry chemical powder 2.5 KG.	Spare part	1 cdl	Bow Store	19 Jan 2025	19 Jan 2026	

Prepared by (2/O)


Name: Mr. Pongpitak Watcharasukhum

Approves by Master


Name: Capt. Roegrart Viengthong

Original : Vessel, Copy: Nil , Retention : 1 years

Page 3 of 3



APT TECHNOLOGY AND CONSULTANT CO., LTD.

140/29 Soi Kingkiew 9/1, Moo 12, Kingkiew Road,
Tambon Rachathewa, Amphur Bangplee,
Samutprakarn 10540 THAILAND
Tel: +66 (0) 2312 4447 Fax: +66 (0) 2312 4474 E-mail: info@apt.in.th

CERTIFICATE OF BREATHING AIR CYLINDERS

VESSEL NAME : SC WINTER
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19 / 01 / 2025

CERTIFICATE NO. FFE-059/2025
PAGE 1 OF 3

THIS IS TO CERTIFY THAT THE EQUIPMENT SPECIFIED BELOW HAD BEEN INSPECTED AND SERVICED.

BREATHING APPARATUS (BA)

Description of working Codes

1 = Checked 2 = Tested 3 = Repaired 4 = Renewed

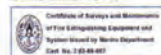
NO.	BRAND	EXTERNAL CONDITION	PRESSURE REGULATOR	DEMAND VALVE	FACE MASK	AIR HOSE	WHISTLE	PRESSURE GAUGE	REMARKS
1.	DIABLO / SNO 15A10237	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED
2.	DIABLO / SNO 15A10234	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED
3.	DIABLO / SNO 15A10238	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED
4.	DIABLO / SNO 15A10240	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED
5.	DIABLO / SNO 15A10236	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED
6.	DIABLO / SNO 15A10239	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED
7.	DIABLO / SNO 15A10228	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED
8.	DIABLO / SNO 15A10248	1	1,2	1,2	1,2	1,2	1,2	1,2	INSPECTED / PASSED

CYLINDERS FOR BREATHING APPARATUS

AIR PRESSURE IN CYLINDERS WERE COMPLETELY CHECKED AND FOUND ON LIMIT.

NO.	BRAND	LOCATION	CYLNS. NO.	MFD.	LAST HYDRO TEST	HYDRO TEST	VOLUME	WORKING PRESSURE	REMARKS
1.	FANGZHAN	NAV.BRM DECK	QJ 5025	01/2016	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
2.	FANGZHAN	NAV.BRM DECK	QJ 5180	01/2015	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
3.	FANGZHAN	SAFETY STORE	QJ 5161	01/2015	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
4.	FANGZHAN	SAFETY STORE	QJ 5093	01/2015	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
5.	FANGZHAN	SAFETY STORE	QJ 5026	01/2015	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
6.	FANGZHAN	SAFETY STORE	QJ 5047	01/2015	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
7.	FANGZHAN	SAFETY STORE	QJ 5023	01/2015	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
8.	FANGZHAN	SAFETY STORE	QJ 5019	01/2015	03/2020	01/2025	7.0 L	200 BAR	INSPECTED / HYDRO TEST / REFILLED
9.	FANGZHAN	MDG	014975	04/2015	03/2020	01/2025	6.0 L	300 BAR	INSPECTED / HYDRO TEST / REFILLED
10.	FANGZHAN	MDG	042337	04/2015	03/2020	01/2025	6.0 L	300 BAR	INSPECTED / HYDRO TEST / REFILLED

(OPTIONAL: SERVICE: APPROVAL)



Effective date : 17 April 2025

PM-OPD-011 Rev.04



NO.	BRAND	LOCATION	CYLINDERS NO.	MFD.	LAST HYDRO TEST	HYDRO TEST	VOLUME	WORKING PRESSURE	REMARKS
11.	FANGZHAN	INDO	042336	04/2015	03/2020	01/2025	6.0 L	300 BAR	INSPECTED / HYDRO TEST / REFILLED
12.	FANGZHAN	INDO	042414	04/2015	03/2020	01/2025	6.0 L	300 BAR	INSPECTED / HYDRO TEST / REFILLED
13.	FANGZHAN	INDO	042873	04/2015	03/2020	01/2025	6.0 L	300 BAR	INSPECTED / HYDRO TEST / REFILLED
14.	FANGZHAN	INDO	041781	04/2015	03/2020	01/2025	6.0 L	300 BAR	INSPECTED / HYDRO TEST / REFILLED

WE HEREBY CERTIFY THAT ALL ABOVE EQUIPMENT WERE IN GOOD SERVICEABLE CONDITION AND HYDROSTATIC TEST HAD PASSED AT THE TIME OF SERVICE.

DATE OF NEXT INSPECTION : 19/01/2026

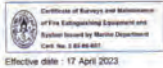
THIS CERTIFICATE IS VALID FOR 12 MONTHS FROM DATE OF ISSUE OR STIPULATED BY FLAG ADMINISTRATION.

INSPECTED BY
[REDACTED]
INSPECTION PERFORMER
19/01/2025



APPROVED BY
[REDACTED]
MANAGER
19/01/2025

APPROVAL SERVICE SUPPLIER:



FM-OPD-011 Rev 04



FM-OPD-024 Rev 03

VESSEL NAME : SC WINTER
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19/01/2025

CYLINDER HYDRO TEST REPORT

Item	Brand	Cylinders Serial No.	Weight (kg)	DOM	Last Test	Hydro Test	Volume Liters	Visual Inspect	W.P.	Hydro T.P.	Results	Remarks
1.	FANGZHAN	CJ 3025	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
2.	FANGZHAN	CJ 3150	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
3.	FANGZHAN	CJ 3151	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
4.	FANGZHAN	CJ 3033	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
5.	FANGZHAN	CJ 3038	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
6.	FANGZHAN	CJ 3047	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
7.	FANGZHAN	CJ 3023	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
8.	FANGZHAN	CJ 3019	6.0	01/2015	03/2020	01/2025	7.0	PASSED	200 BAR	300 BAR	✓	-
9.	FANGZHAN	014875	10.0	04/2015	03/2020	01/2025	6.0	PASSED	300 BAR	450 BAR	✓	-



CERTIFICATE OF CHEMICAL SUIT INSPECTION

CERTIFICATE NO.: FFE-064/2025

VESSEL NAME : SC WINTER	DATE OF INSPECTION : 19/01/2025
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.	TOTAL : 6 SUITS

NO.	BRAND	S.NO.	SUITS	HOOD	GLOVE/BOOTS	REMARKS
1.	TRELLCHEM	APT-126-21	GOOD	GOOD	GOOD	INSPECTED / PASSED
2.	TRELLCHEM	APT-121-21	GOOD	GOOD	GOOD	INSPECTED / PASSED
3.	TRELLCHEM	APT-122-21	GOOD	GOOD	GOOD	INSPECTED / PASSED
4.	TRELLCHEM	APT-123-21	GOOD	GOOD	GOOD	INSPECTED / PASSED
5.	JIANGBO	191027	GOOD	GOOD	GOOD	INSPECTED / PASSED
6.	JIANGBO	191028	GOOD	GOOD	GOOD	INSPECTED / PASSED

INSPECTED BY

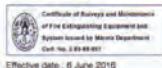
(AKANIT PHARANGKUL)
INSPECTION PERFORMER
19/01/2025



APPROVED BY

MANAGER
19/01/2025

APPROVAL SERVICE SUPPLIER:



FM-OPD-045 Rev 01



FM-OPD-04 Rev 03

TEST CARRIED OUT

☐ VOLUMETRIC EXPANSION

☒ PROOF TYPE

CERTIFIED THAT THE FOURTEEN (14) CYLINDERS ENGINEERED ABOVE HAD BEEN CARRIED HYDROSTATIC TEST AND REFILLED BY THIS WORKSHOP AND THAT AGENT CONTENT WERE AS STATED AT THE TIME OF SERVICE.

INSPECTION PERFORMER
19/01/2025



APPROVED BY



CERTIFICATE OF COMPRESSED AIR ANALYSIS

VESSEL NAME : SC WINTER CERTIFICATE NO. FFE-062/2025
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19 / 01 / 2025
MANUFACTURER : COLTRI COMPRESSORS
MODEL : MCH 13 ET STANDARD
SERIAL NUMBER : 049

THIS IS TO CERTIFY THAT THE COMPRESSED AIR TAKEN FROM ABOVE VESSEL'S BA AIR COMPRESSOR HAD BEEN TESTED BY THE UNDERSIGNED IN COMPLIANCE WITH THE STANDARDS AND SPECIFICATIONS OF BS 4001 / GREAT BRITAIN-SPECIFICATION FOR AIR.

AIR ANALYSIS REPORT AND TEST RESULTS :

COMPONENT	BS 4001	RESULTS
OIL CONTENT	< 1 mg/m ³	0 mg/m ³
CARBON DIOXIDE	< 300 ppm	150 ppm
CARBON MONOXIDE	< 10 ppm	1 ppm
WATER CONTENT	< 500 mg/m ³	250 mg/m ³

NOTE : NO OTHER REPRESENTATIONS OR WARRANTIES ARE EXPRESSED OR IMPLIED OTHER THAN THE ANALYSIS RESULTS STATED ABOVE.

THIS CERTIFICATE IS VALID FOR 12 MONTHS FROM DATE OF ISSUE.

INSPECTED BY

(AKANIT PHARANGKUL)

INSPECTION PERFORMER

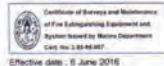
19 / 01 / 2025

APPROVED BY

MANAGER

19 / 01 / 2025

APPROVAL SERVICE SUPPLIERS



FM-OPD-014 Rev.02



CERTIFICATE OF CONTROL VALVE INSPECTION

VESSEL NAME : SC WINTER CERTIFICATE NO. FFE-067/2025
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19 / 01 / 2025

THIS IS TO CERTIFY THAT THE EQUIPMENT SPECIFIED BELOW HAD BEEN INSPECTED AND SERVICED.

TECHNICAL DESCRIPTION		
SYSTEM	CO ₂ HIGH PRESSURE SYSTEM	
VALVE TYPE	PNEUMATIC VALVE	
LOCATION	FOR CO ₂ ROOM	
VALVE SIZE	DN 50 (2.0")	
SERIAL NUMBER	421	
DESCRIPTION OF INSPECTION / TEST		
ITEM OF INSPECTION	CONTENTS OF INSPECTION	RESULT
VALVE BODY EXTERNAL	INSPECTED / CLEANED	PASSED
VALVE INTERNALLY	INSPECTED / CLEANED	PASSED
VALVE DISC	INSPECTED / CLEANED	PASSED
VALVE STEM	INSPECTED / CLEANED	PASSED
VALVE SEAT RING	INSPECTED / CLEANED	PASSED
VALVE SEAT	INSPECTED / CLEANED	PASSED
O-RING	RENEW	PASSED
HANDLE	INSPECTED / CLEANED	PASSED
OPEN FUNCTION TEST	TESTED	PASSED
CLOSE FUNCTION TEST	TESTED	PASSED
REMARKS :		

CONDITION OF SYSTEM :

SATISFACTORY ☒

UNSATISFACTORY ☐

INSPECTED BY

(AKANIT PHARANGKUL)

INSPECTION PERFORMER

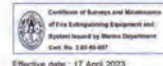
19 / 01 / 2025

APPROVED BY

MANAGER

19 / 01 / 2025

APPROVAL SERVICE SUPPLIERS



Effective date : 17 April 2023

FM-OPD-022 Rev.02

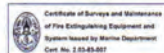


ITEM 1. CONTROL VALVE Result / Remark



GOOD CONDITION

APPROVAL SERVICE SUPPLIERS



FM-OPD-014 Rev.02



CERTIFICATE OF CONTROL VALVE INSPECTION

VESSEL NAME : SC WINTER CERTIFICATE NO. FFE-068/2025
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19 / 01 / 2025

THIS IS TO CERTIFY THAT THE EQUIPMENT SPECIFIED BELOW HAD BEEN INSPECTED AND SERVICED.

TECHNICAL DESCRIPTION		
SYSTEM	CO ₂ HIGH PRESSURE SYSTEM	
VALVE TYPE	PNEUMATIC VALVE	
LOCATION	FOR CO ₂ ROOM	
VALVE SIZE	DN 40 (1.5")	
SERIAL NUMBER	422	
DESCRIPTION OF INSPECTION / TEST		
ITEM OF INSPECTION	CONTENTS OF INSPECTION	RESULT
VALVE BODY EXTERNAL	INSPECTED / CLEANED	PASSED
VALVE INTERNALLY	INSPECTED / CLEANED	PASSED
VALVE DISC	INSPECTED / CLEANED	PASSED
VALVE STEM	INSPECTED / CLEANED	PASSED
VALVE SEAT RING	INSPECTED / CLEANED	PASSED
VALVE SEAT	INSPECTED / CLEANED	PASSED
O-RING	RENEW	PASSED
HANDLE	INSPECTED / CLEANED	PASSED
OPEN FUNCTION TEST	TESTED	PASSED
CLOSE FUNCTION TEST	TESTED	PASSED
REMARKS :		

CONDITION OF SYSTEM :

SATISFACTORY ☒

UNSATISFACTORY ☐

INSPECTED BY

(AKANIT PHARANGKUL)

INSPECTION PERFORMER

19 / 01 / 2025

APPROVED BY

MANAGER

19 / 01 / 2025

APPROVAL SERVICE SUPPLIERS



Effective date : 17 April 2023

FM-OPD-022 Rev.02



CERTIFICATE OF EMERGENCY ESCAPE BREATHING DEVICE

VESSEL NAME : SC WINTER
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19 / 01 / 2025
CERTIFICATE NO. FFE-060/2025

THIS IS TO CERTIFY THAT THE EQUIPMENT SPECIFIED BELOW HAD BEEN INSPECTED AND SERVICED.

EMERGENCY ESCAPE BREATHING DEVICE (EEBD)

HOOD BRAND : FANGZHAN

THE INSPECTION AND TESTING TO HOODS WERE COMPLETED AND FOUND IN GOOD CONDITIONS :

- CHECK EXTERNAL CONDITION FOR DEFECT AND / OR ANY IRREGULAR CONDITION.
- INSPECTION FACE PIECE, INHALATION TUBE AND EXHALATION VALVE.

AIR PRESSURE IN CYLINDERS WERE ALL CHECKED AND FOUND ON LIMIT.

NO.	BRAND	LOCATION	CYLINDERS NO.	MFD.	LAST HYDRO TEST	HYDRO TEST	VOLUME	WORKING PRESSURE	REMARKS
1.	FANGZHAN	NAV. BRIDGE	003865	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
2.	FANGZHAN	UPPER FLOOR	003866	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
3.	FANGZHAN	LOWER FLOOR	003867	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
4.	FANGZHAN	MESS ROOM	003868	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
5.	FANGZHAN	MESS ROOM	003869	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
6.	FANGZHAN	ECR	003742	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
7.	FANGZHAN	ENGINE ROOM	003955	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
8.	FANGZHAN	BOY TRUSTER	003832	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
9.	FANGZHAN	SAFETY STORE	003474	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED
10.	FANGZHAN	SAFETY STORE	003938	01/2015	03/2020	01/2025	3.2 L	210 BAR	INSPECTED / HYDRO TEST / REFILLED

WE HEREBY CERTIFY THAT ALL ABOVE EQUIPMENT WERE IN GOOD SERVICEABLE CONDITION AND HYDROSTATIC TEST HAD PASSED AT THE TIME OF SERVICE.

(AKANITI PHARANGKUL)
INSPECTION PERFORMER
19 / 01 / 2025

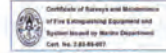


APPROVED BY
(APIWAL JOOMSUPHAN)
MANAGER
19 / 01 / 2025

APPROVAL SERVICE SUPPLIERS



APPROVAL SERVICE SUPPLIERS



Effective date : 17 April 2023

FM-OPD-012 Rev.03



CYLINDER HYDRO TEST REPORT

☐ FIRE EXTINGUISHERS ☐ FIRED CO2 ☐ SCBA ☒ EEBD ☐ OTHER :

VESSEL NAME : SC WINTER
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19 / 01 / 2025
TEST REPORT NO. : HYD-APT-0150025
PAGE 1 OF 2

Item	Brand	Cylinders Serial No.	Weight (kg)	DOB	Last Test	Hydro Test	Volume Liters	Visual Impact		W.P.	Hydro T.P.	Results		Remark
								Interior	Exterior			Passed	Failed	
1.	FANGZHAN	003865	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
2.	FANGZHAN	003866	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
3.	FANGZHAN	003867	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
4.	FANGZHAN	003868	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
5.	FANGZHAN	003869	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
6.	FANGZHAN	003742	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
7.	FANGZHAN	003955	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
8.	FANGZHAN	003832	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	
9.	FANGZHAN	003474	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	

APPROVAL SERVICE SUPPLIERS



FM-OPD-024 Rev.02



Item	Brand	Cylinders Serial No.	Weight (kg)	DOB	Last Test	Hydro Test	Volume Liters	Visual Impact		W.P.	Hydro T.P.	Results		Remark
								Interior	Exterior			Passed	Failed	
10.	FANGZHAN	003838	4.1	01/2015	03/2020	01/2025	3.2	PASSED	PASSED	210 BAR	210 BAR	✓	-	

CERTIFIED THAT THE TEN (10) CYLINDERS ENUMERATED ABOVE HAD BEEN CARRIED HYDROSTATIC TEST AND REFILLED BY THIS WORKSHOP AND THAT AGENT CONTENT WERE AS STATED AT THE TIME OF SERVICE.

TEST CARRIED OUT ☐ VOLUMETRIC EXPANSION ☒ PROOF TYPE

(AKANITI PHARANGKUL)
INSPECTION PERFORMER
19 / 01 / 2025



APPROVED BY
(APIWAL JOOMSUPHAN)
MANAGER
19 / 01 / 2025

APPROVAL SERVICE SUPPLIERS



FM-OPD-024 Rev.02



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CYLINDER HYDRO TEST REPORT

☒ FIRE EXTINGUISHERS ☐ FIXED CO2 ☐ SCBA ☐ EBBB ☐ OTHER :

VESSEL NAME : SC WINTER TEST REPORT NO. : HYD-APT-032025
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD. PAGE 1 OF 4
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19/01/2025

Item	Brand	Cylinder Serial No.	Weight (kg)	DOB	Last Test	Hydro Test	Volume Liters	Visual Inspect		W. P.	Hydro T. P.	Results		Remark
								Interior	Exterior			Passed	Failed	
1.	XINGDUN	01906	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
2.	XINGDUN	01290	3.2	03/2015	03/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
3.	XINGDUN	000679	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
4.	XINGDUN	000660	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
5.	XINGDUN	000667	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
6.	XINGDUN	000611	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
7.	XINGDUN	001067	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
8.	XINGDUN	001003	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
9.	XINGDUN	000017	2.5	03/2015	03/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	

OPTIONAL SERVICE PROVIDER:



Effective date: 13 February 2024

FM-OPS-024 Rev.02



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PAGE 2 OF 4

Item	Brand	Cylinder Serial No.	Weight (kg)	DOB	Last Test	Hydro Test	Volume Liters	Visual Inspect		W. P.	Hydro T. P.	Results		Remark
								Interior	Exterior			Passed	Failed	
10.	XINGDUN	000418	2.5	03/2015	03/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
11.	XINGDUN	001007	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
12.	XINGDUN	011091	3.2	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
13.	XINGDUN	000021	2.5	03/2015	03/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
14.	XINGDUN	000038	2.5	03/2015	03/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
15.	XINGDUN	000065	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
16.	XINGDUN	01700	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
17.	XINGDUN	002504	3.2	03/2015	03/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
18.	XINGDUN	001027	3.2	03/2015	03/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
19.	XINGDUN	001012	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
20.	XINGDUN	01707	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
21.	XINGDUN	001423	3.2	03/2015	03/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
22.	XINGDUN	001204	3.2	03/2015	03/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
23.	XINGDUN	000702	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
24.	XINGDUN	001745	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
25.	XINGDUN	001407	3.2	03/2015	03/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	

OPTIONAL SERVICE PROVIDER:



Effective date: 13 February 2024

FM-OPS-024 Rev.02

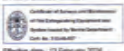


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PAGE 3 OF 4

Item	Brand	Cylinder Serial No.	Weight (kg)	DOB	Last Test	Hydro Test	Volume Liters	Visual Inspect		W. P.	Hydro T. P.	Results		Remark
								Interior	Exterior			Passed	Failed	
26.	XINGDUN	130004	35.0	05/2015	05/2015	01/2025	55.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
27.	XINGDUN	000640	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
28.	XINGDUN	000870	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
29.	XINGDUN	0031	10.4	01/2015	01/2015	01/2025	7.0	PASSED	PASSED	-	25 BAR	✓	-	
30.	XINGDUN	01010	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
31.	XINGDUN	01024	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
32.	XINGDUN	01004	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
33.	XINGDUN	001427	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
34.	XINGDUN	01070	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
35.	XINGDUN	002138	3.2	03/2015	03/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
36.	XINGDUN	000000	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
37.	XINGDUN	000030	2.5	04/2015	04/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
38.	XINGDUN	001001	3.2	04/2015	04/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	
39.	XINGDUN	000454	2.5	03/2015	03/2015	01/2025	10.3	PASSED	PASSED	14 BAR	24 BAR	✓	-	
40.	XINGDUN	0004	10.4	01/2015	01/2015	01/2025	7.0	PASSED	PASSED	-	25 BAR	✓	-	

OPTIONAL SERVICE PROVIDER:



Effective date: 13 February 2024

FM-OPS-024 Rev.02



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PAGE 4 OF 4

Item	Brand	Cylinder Serial No.	Weight (kg)	DOB	Last Test	Hydro Test	Volume Liters	Visual Inspect		W. P.	Hydro T. P.	Results		Remark
								Interior	Exterior			Passed	Failed	
41.	XINGDUN	000371	3.2	06/2015	06/2015	01/2025	7.0	PASSED	PASSED	14 BAR	24 BAR	✓	-	

CERTIFIED THAT THE FORTY-ONE (41) CYLINDERS ENUMERATED ABOVE HAD BEEN CARRIED HYDROSTATIC TEST AND REFILLED BY THIS WORKSHOP AND THAT AGENT
CONTENT WERE AS STATED AT THE TIME OF SERVICE.

TEST CARRIED OUT

☐ VOLUMETRIC EXPANSION

☒ PROOF TYPE

INSPECTION PERFORMER
19/01/2025



APPROVED BY
MANAGER
19/01/2025

OPTIONAL SERVICE PROVIDER:



Effective date: 13 February 2024

FM-OPS-024 Rev.02

Hydrostatic Release Unit Test Report

This is to certify that the under mentioned
Hydrostatic Release Unit had been serviced and tested by our service station

Ship Name	SC WINTER
Owner Name	SC MANAGEMENT CO., LTD.
Hydrostatic Release Unit	
Maker	JIAXING RONGSHENG LIFESAVING EQUIPMENT CO., LTD.
Type/Model	JSQ-III
Serial No.	2004007
Pressure Test	0.380 Bar
Next Test	01/2026
Remarks	PASSED

This document is valid 12 months from the date of issuance.

For Apt Technology and Consultant Co., Ltd.

Cert. No. HRU-032/2025 Issue Date: 23/01/2025

APPROVAL SERVICE (SUPPLIER)



Effective date: 1 June 2016

FM-OPD-032 Rev.02



APT TECHNOLOGY AND CONSULTANT CO., LTD.
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CYLINDER HYDRO TEST REPORT

☐ FIRE EXTINGUISHERS ☐ PRESS CO2 ☐ SCBA ☐ EEBD ☒ OTHER : CYLINDER FOR LR

VESSEL NAME : SC WINTER
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 23 / 01 / 2025
TEST REPORT NO. : HYD-APT-010205
PAGE 1 OF 2

Item	Brand	Cylinders Serial No.	Weight (kg)	DOM	Last Test	Hydro Test	Volume L/Bar	Visual Inspect		W. P.	Hydro T. P.	Results		Remarks
								Interior	Exterior			Passed	Failed	
1.	UNIDENTIFIED	982449	18.5	04/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
2.	UNIDENTIFIED	982580	18.5	04/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
3.	UNIDENTIFIED	982598	18.5	04/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
4.	UNIDENTIFIED	982602	18.5	04/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
5.	UNIDENTIFIED	982612	18.5	04/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
6.	UNIDENTIFIED	982613	18.5	04/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
7.	UNIDENTIFIED	982611	18.5	01/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
8.	UNIDENTIFIED	982616	18.5	01/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
9.	UNIDENTIFIED	982616	18.5	01/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304
10.	UNIDENTIFIED	982613	18.5	01/2015	03/2025	01/2025	7.0	PASSED	PASSED	210 BAR	315 BAR	✓	-	FOR LIFESAVING SHIPPING YOUNG KHA-25 IMO 6304



Effective date: 13 February 2020



Effective date: 1 June 2016

FM-OPD-032 Rev.02



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FFE & SCBA INVALIDATION NOTIFICATION

VESSEL NAME : SC WINTER
OWNER / MANAGER NAME : SC MANAGEMENT CO., LTD.
CLASSIFICATION SOCIETY : ABS
DATE OF INSPECTION : 19 / 01 / 2025
CERTIFICATE NO. IN-FFE-010/2025

Description of Type	
AF = AFFF Foam	DP = Dry Powder
BCP = Halon 1211	F = Chemical Foam
CO ₂ = Carbon Dioxide	W = Water CO ₂
DC = Dry Chemical	PFA = Portable Foam Applicator
SCBA = Air Breathing Apparatus	EEBD = Emergency Escape Breathing Device

ITEM	BRAND NAME	CYLNS. NO.	MFD.	TYPE	CAPACITY	WORKING PRESSURE
1.	VICTORY	APT-214-22	01/2019	AF	9.0 LTRS.	14 BAR
2.	FIRE KILLER	900019	11/2021	DP	45.5 KGS.	14 BAR

CAUSES OF INVALIDATION

- ☐ 1. Hydrostatic Testing Unsatisfactory
- ☒ 2. Exterior Inspection Unsatisfactory
- ☐ Bulges, Bow ☐ Dust, Gouges, Digs ☒ Corrosion
- ☐ Cracks
- ☐ 3. Interior Inspection Unsatisfactory
- ☐ Corrosion ☐ Cracks ☐ Damages
- ☐ Fold
- ☐ 4. Threads Inspection Unsatisfactory
- ☐ Damages ☐ Cracks ☐ Corrosion
- ☐ Valleys
- ☐ 5. Cover Head Inspection Unsatisfactory
- ☐ Damages ☐ Ring
- ☐ 6. Other Causes

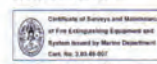
Remarks :

INSPECTED BY
(AK [REDACTED])
INSPECTION PERFORMER
19 / 01 / 2025




APPROVED BY
(APRAT PETCHOO)
MANAGER
19 / 01 / 2025


APPROVAL SERVICE (SUPPLIER)




Effective date: 8 June 2019

FM-OPD-025 Rev.01

		Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01		
Planned Maintenance System						
Prepare by : Second Engineer				Date : 25-Oct-25		
Inspected by : Chief Engineer				Date : 25-Oct-25		
Ship Name : SC WINTER				Month : Oct-25		
Ship Name : SC WINTER (MAIN GENERATOR No.1) (CRITICAL EQUIPMENT)				Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.		26088.6 28713.9 274.7
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	Remark หมายเหตุ
SW001-03-001	GE 2039	Disassemble, and check (4000-6000)	6000	25-Nov-2024	26019.9 2968.7	
SW001-03-001	GE 2040	Replacement of O-rings (4000-6000)	6000	25-Nov-2024	26019.9 2968.7	
SW001-03-001	GE 2041	Plunger assembly and delivery valve replacement (16000-24000)	24000	1-Apr-2021	14430.1 14558.5	
SW001-03-001	GE 2042	Spring, tappet replacement (16000-24000)	24000	1-Apr-2021	14430.1 14558.5	
Fuel oil injection valve						
SW001-03-001	GE 2043	Check and clean and adjust the injection pressure (1000-1500)	1500	4-Sep-2024	27988 1000.6	
Fuel oil piping system						
SW001-03-001	GE 2044	Replacement of O-rings (4000-6000)	6000	3-Sep-2024	25184 3804.6	
Valve operating device						
SW001-03-001	GE 2045	Disassemble the swing arm and check the tappet roller (4000-6000)	6000	25-Nov-2024	26019.9 2968.7	
Governor						
SW001-03-001	GE 2046	Disassemble, and check	*	28-Mar-2021		ditto
SW001-03-001	GE 2047	Governor Lub oil change (1500-3000)	3000	3-Mar-2025	26595.6 2393	
Governor driving device						
SW001-03-001	GE 2048	Disassemble, check and clean (16000-24000)	24000	28-Mar-2021	14430.1 14558.5	
SW001-03-001	GE 2049	Replace the bearing and O-ring (16000-24000)	24000	28-Mar-2021	14430.1 14558.5	
Turbocharger						
SW001-03-001	GE 20450	Disassemble, check and clean	6000	21-Jan-2023	23898 5090.6	
Air cooler						
SW001-03-001	GE 2051	Disassemble, check, clean, and water pressure test (4000-6000)	6000	25-Nov-2024	26019.9 2968.7	
Starting air valve						
SW001-03-001	GE 2052	Disassemble, check and clean (8000-12000)	12000	1-Oct-2024	25468 3520.6	
SW001-03-001	GE 2053	Replacement of O-rings (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Starting air rotary valve						
Original : Vessel Copy : TEC, Retention : 5 year	SW001-03-001	Disassemble, check and clean (8000-12000)	12000	1-Oct-2024	25468 3520.6	Page 5

		Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01		
Planned Maintenance System						
Prepare by : Second Engineer			Date : 25-Oct-25			
Inspected by : Chief Engineer			Date : 25-Oct-25			
Ship Name : SC WINTER			Month : Oct-25			
Ship Name : SC WINTER (MAIN GENERATOR No.1) (CRITICAL EQUIPMENT)					Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	26088.6 28713.9 274.7
Date						
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	Remark หมายเหตุ
Fuel oil relief valve						
SW001-03-001	GE 2055	Disassemble and check (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Pulse absorber						
SW001-03-001	GE 2056	Replacement (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Fuel oil feed pump						
SW001-03-001	GE 2057	Disassemble and inspection, bearing replacement (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Lubricating oil pump						
SW001-03-001	GE 2058	Disassemble, check and clean (8000-12000)	12000	1-Oct-2024	25468 3520.6	
SW001-03-001	GE 2059	Replacement the bearing and oil seal (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Lubricating oil cooler						
SW001-03-001	GE 2060	Disassemble, check, clean, and water pressure test (4000-6000)	6000	25/11/202	26019.9 2968.7	
Lubricating oil relief valve						
SW001-03-001	GE 2061	Disassemble, check and clean (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Lubricating oil thermostat valve						
SW001-03-001	GE 2062	Disassemble, check, clean and replace the pellet (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Lubricating oil filter						
SW001-03-001	GE 2063	Disassemble, check and clean	1000	14-Sep-2025	28602.6 386	
Lubricating system						
SW001-03-001	GE 2064	Lub. Oil sump tank clean and renewed	4000	12-Mar-2025	26595.6 2393	
Cooling water pump						
SW001-03-001	GE 2065	Disassemble, check and clean (8000-12000)	12000	1-Oct-2024	25468 3520.6	
SW001-03-001	GE 2066	Replace the oil seal and mechanical seal (8000-12000)	12000	1-Oct-2024	25468 3520.6	
SW001-03-001	GE 2067	Replace the bearing (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Cooling water temperature control valve						
Original : Vessel Copy : TEC, Retention : 5 year	SW001-03-001	Disassemble, check and clean (8000-12000)	12000	1-Oct-2024	25468 3520.6	Page 6



Date : 01/01/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second Engineer _____

Date : 25-Oct-25

Inspected by : Chief Engineer _____

Date : 25-Oct-25

Ship Name : SC WINTER


Month : Oct-25


Ship Name : SC WINTER (MAIN GENERATOR No.1) (CRITICAL EQUIPMENT)


Total running hrs.
Previous M. run. Hrs.
Run. Hrs. from prev. M.

26088.6
28713.9
274.7

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	Remark หมายเหตุ
Fuel oil shut-down device						
SW001-03-001	GE 2069	Disassembly, inspection, and cleaning (8000-12000)	12000	1-Oct-2024	25468 3520.6	
SW001-03-001	GE 2070	O-ring replacement (8000-12000)	12000	1-Oct-2024	25468 3520.6	
Gauges						
SW001-03-001	GE 2071	Replacement of pressure gauge hose (16000-24000)	24000	28-Mar-2021	14430.1 14558.5	
SW001-03-001	GE 2072	Inspection of pressure gauge and tachometer (Calibration) (1000-1500)	15000	3-Oct-2024	14430.1 14558.5	
SW001-03-001	GE 2073	Replacement of O-ring pressure gauge ethylene glycol (in case of heavy fuel oil specification)	6000	10-Apr-2024	23762 5236.6	
SW001-03-001	GE 2074	Engine Oil Sample - Obtain	6 MONTHS	11-Jun-2025	8-Dec-25	
SW001-03-001	GE 2075	Replace zinc anode s.w cooler all unit (250)	250	11-Oct-2025	28825 164	
GENERATOR BEARING						
SW001-03-001	GE 2076	Generator Bearing lub oil change (1500-3000)	3000	3-Mar-2025	26595.6 29596	

		Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01		
Planned Maintenance System						
Prepare by : Second Engineer			Date : 25-Oct-25			
Inspected by : Chief Engineer			Date : 25-Oct-25			
Ship Name : SC WINTER			Month : Oct-25			
Ship Name : SC WINTER (MAIN GENERATOR No.2) (CRITICAL EQUIPMENT)				Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	20418.9 30153.0 266.9	
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	Remark หมายเหตุ
Cylinder head						
SW001-03-002	GE 1001	Checking that the cylinder head bolts are tightened, and re-tightening (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1003	Cylinder head inspection and cleaning (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1004	Replacement of O-ring nozzle holder guide (16000-24000)	24000	30-Mar-2021	14927.4 15492.5	
SW001-03-002	GE 1005	Replacement of exhaust valve seat and O-ring (16000-24000)	24000	30-Mar-2021	14927.4 15492.5	
SW001-03-002	GE 1006	Jacket inspection (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1007	Disassembly, inspection and running-in of intake and exhaust valves (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1008	Disassembly and inspection of valve rotor (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1009	Inspection of valve spring and cotter (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1010	Disassembly and inspection of starting valve (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1011	Disassembly and inspection of rocker arm (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1012	Disassembly and inspection of indicator and safety valve (8000-12000)	12000	23-Nov-2024	27209.7 3210.2	
Piston						
SW001-03-002	GE 1013	Piston extraction (including connecting rod small end part) (8000-12000)	12000	21-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1014	Piston inspection, cleaning and measurement (8000-12000)	12000	21-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1015	Piston ring replacement (8000-12000)	12000	21-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1016	Piston pin inspection and measurement (8000-12000)	12000	21-Nov-2024	27209.7 3210.2	
SW001-03-002	GE 1017	Piston pin bush inspection (8000-12000)	12000	21-Nov-2024	27209.7 3210.2	
Connecting rod						
SW001-03-002	GE 1018	Connecting rod bolt inspection and retightening (8000-6000)	6000	28-Nov-2024	27248.8 3171.1	
SW001-03-002	GE 1019	Crankpin bearing overhaul inspection, and metal replacement (8000-12000)	12000	13-Nov-2024	27110.6 3309.3	
SW001-03-002	GE 1020	Crankpin inspection and measurement (8000-12000)	12000	13-Nov-2024	27110.6 3309.3	
Original : Vessel Copy : TEC, Retention : 5 year	SW001-03-002	Disassemble, check and clean (8000-12000)	12000	13-Nov-2024	27110.6 3309.3	Page 7
Protection ring						

		Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01			
Planned Maintenance System							
Prepare by : Second Engineer			Date : 25-Oct-25				
Inspected by : Chief Engineer			Date : 25-Oct-25				
Ship Name : : SC WINTER			Month : Oct-25				
Ship Name : SC WINTER (MAIN GENERATOR No.2) (CRITICAL EQUIPMENT)				Total running hrs.	30418.9		
เดิม				Previous M. run. Hrs.	30153.0		
				Run. Hrs. from prev. M.	266.9		
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	R/H	Remark หมายเหตุ
SW001-03-002	GE 1022	Extraction, inspection, cleaning and measurement (8000-12000)	12000	13-Nov-2024	27110.6	3309.3	
Cylinder liner							
SW001-03-002	GE 1023	Cylinder liner inner surface inspection and measurement (8000-12000)	12000	13-Nov-2024	27110.6	3309.3	
SW001-03-002	GE 1024	Cylinder liner extraction (16000-24000)	24000	27-Mar-2021	14927.4	15492.5	
SW001-03-002	GE 2025	Inspection on jacket side (16000-24000)	24000	27-Mar-2021	14927.4	15492.5	
Main bearing							
SW001-03-002	GE 2026	Replacement of O-ring (16000-24000)	24000	27-Mar-2021	14927.4	15492.5	
SW001-03-002	GE 2027	Checking that the main bearing bolt is tightened (16000-24000)	24000	27-Mar-2021	14927.4	15492.5	
SW001-03-002	GE 2028	Checking main bearing accessibility and inspection, replacement or repair (2000-3000)	12000	13-Nov-2024	27110.6	3309.3	
Crankshaft							
SW001-03-002	GE 2029	Deflection measurement balance weight bolt tightening check (2000-3000)	8000	19-Oct-2024	26858.8	3561.1	
SW001-03-002	GE 3030	Wiring inspection (4000-6000)	6000	14-Apr-2024	25119.2	5300.7	
SW001-03-002	GE 3031	Inspection by torque wrench (16000-24000)	24000	27-Mar-2021	14927.4	15492.5	
Timing gear							
SW001-03-002	GE 3032	Check and retighten the tightening bolts (8000-12000)	12000	12-Nov-2024	27110.6	3309.3	
SW001-03-002	GE 3033	Check and backlash of gears (8000-12000)	12000	12-Nov-2024	27110.6	3309.3	
SW001-03-002	GE 3034	Overhaul the side gear, and check and measure the bush (8000-12000)	12000	12-Nov-2024	27110.6	3309.3	
Cam gear							
SW001-03-002	GE 3035	Disassemble and check the gear (8000-12000)	12000	12-Nov-2024	27110.6	3309.3	
Camshaft							
SW001-03-002	GE 3036	Draw out, check and measure the camshaft (8000-12000)	12000	12-Nov-2024	27110.6	3309.3	
Camshaft bearing							
SW001-03-002	GE 3037	Check and measure the cam bearing (8000-12000)	12000	12-Nov-2024	27110.6	3309.3	
Fuel oil injection timing							
SW001-03-002	GE 3038	Check (4000-6000)	6000	28-Nov-2024	27248.8	3171.1	เพิ่ม
Fuel oil injection pump							



Date : 01/01/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second Engineer

Inspected by : Chief Engineer

Ship Name : : SC WINTER

Date : 25-Oct-25

Date : 25-Oct-25

Month : Oct-25

Ship Name : SC WINTER (MAIN GENERATOR No.2) (CRITICAL EQUIPMENT)

เดิม

Total running hrs.

Previous M. run. Hrs.

Run. Hrs. from prev. M.


30418.9

30153.0

266.9

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	R/H (NEXT DUE)	Remark หมายเหตุ
SW001-03-002	GE 2039	Disassemble, and check (4000-6000)		6000	28-Nov-2024	27248.8	3171.1
SW001-03-002	GE 2040	Replacement of O-rings (4000-6000)		6000	28-Nov-2024	27248.8	3171.1
SW001-03-002	GE 2041	Plunger assembly and delivery valve replacement (16000-24000)		24000	1-Apr-2021	14927.4	15492.5
SW001-03-002	GE 2042	Spring, tappet replacement (16000-24000)		24000	1-Apr-2021	14927.4	15492.5
Fuel oil injection valve							
SW001-03-002	GE 2043	Check and clean and adjust the injection pressure (1000-1500)		1500	1-Feb-2025	29501	918.9
Fuel oil piping system							
SW001-03-002	GE 2044	Replacement of O-rings (4000-6000)		6000	28-Nov-2024	27248.8	3171.1
Valve operating device							
SW001-03-002	GE 2045	Disassemble the swing arm and check the tappet roller (4000-6000)		6000	28-Nov-2024	27248.8	3171.1
Governor							
SW001-03-002	GE 2046	Disassemble, and check	*	-	1-Apr-2021		
SW001-03-002	GE 2047	Governor Lub oil change (1500-3000)		3000	3-Mar-2025	28297.4	2122.5
Governor driving device							
SW001-03-002	GE 2048	Disassemble, check and clean (16000-24000)		24000	28-Mar-2021	14927.4	15492.5
SW001-03-002	GE 2049	Replace the bearing and O-ring (16000-24000)		24000	28-Mar-2021	14927.4	15492.5
Turbocharger							
SW001-03-002	GE 20450	Disassemble, check and clean		6000	1-Sep-2024	26429	3990.9
Air cooler							
SW001-03-002	GE 2051	Disassemble, check, clean, and water pressure test (4000-6000)		6000	1-Sep-2024	26429	3990.9
Starting air valve							
SW001-03-002	GE 2052	Disassemble, check and clean (8000-12000)		12000	10-Nov-2024	27110.6	3309.3
SW001-03-002	GE 2053	Replacement of O-rings (8000-12000)		12000	10-Nov-2024	27110.6	3309.3
Starting air rotary valve							
Original : Vessel Copy : TEC, Retention : 5 year	GE 2054	Check and clean (8000-12000)		12000	10-Nov-2024	27110.6	3309.3
Fuel oil relief valve							

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Date : 01/01/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second Engineer

Inspected by : Chief Engineer

Ship Name : : SC WINTER

Date : 25-Oct-25

Date : 25-Oct-25

Month : Oct-25

Ship Name : SC WINTER (MAIN GENERATOR No.2) (CRITICAL EQUIPMENT)


Total running hrs. 30418.9

Previous M. run. Hrs. 30153.0

Run. Hrs. from prev. M. 266.9

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	Remark หมายเหตุ
SW001-03-002	GE 2055	Disassemble and check (8000-12000)	12000	10-Nov-2024	27110.6	3309.3
Pulse absorber						
SW001-03-002	GE 2056	Replacement (8000-12000)	12000	10-Nov-2024	27110.6	3309.3
Fuel oil feed pump						
SW001-03-002	GE 2057	Disassemble and inspection, bearing replacement (8000-12000)	12000	10-Nov-2024	27110.6	3309.3
Lubricating oil pump						
SW001-03-002	GE 2058	Disassemble, check and clean (8000-12000)	12000	10-Nov-2024	27110.6	3309.3
SW001-03-002	GE 2059	Replacement the bearing and oil seal (8000-12000)	12000	10-Nov-2024	27110.6	3309.3
Lubricating oil cooler						
SW001-03-002	GE 2060	Disassemble, check, clean, and water pressure test (4000-6000)	6000	28-Nov-2024	27248.8	3171.1
Lubricating oil relief valve						
SW001-03-002	GE 2061	Disassemble, check and clean (8000-12000)	12000	10-Nov-2024	27110.6	3309.3
Lubricating oil thermostat valve						
SW001-03-002	GE 2062	Disassemble, check, clean and replace the pellet (8000-12000)	12000	10-Nov-2024	27110.6	3309.3
Lubricating oil filter						
SW001-03-002	GE 2063	Disassemble, check and clean	1000	6-Aug-2025	29722.8	697.1
Lubricating System						
SW001-03-002	GE 2064	Lub. Oil sump tank clean and renewed	4000	12-May-2025	28912.1	1507.8
Cooling water pump						
SW001-03-002	GE 2065	Disassemble, check and clean (8000-12000)	12000	9-Nov-2024	27110.6	3309.3
SW001-03-002	GE 2066	Replace the oil seal and mechanical seal (8000-12000)	12000	9-Nov-2024	27110.6	3309.3
SW001-03-002	GE 2067	Replace the bearing (8000-12000)	12000	9-Nov-2024	27110.6	3309.3
Cooling water temperature control valve						
SW001-03-002	GE 2068	Disassembly, inspection, cleaning and element replacement (8000-12000)	12000	9-Nov-2024	27110.6	3309.3
Fuel oil shut-down device						
SW001-03-002	GE 2069	Disassembly, inspection, and cleaning (8000-12000)	12000	9-Nov-2024	27110.6	3309.3
SW001-03-002	GE 2070	Spring replacement (8000-12000)	12000	9-Nov-2024	27110.6	3309.3
Gauges						

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Date : 01/01/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second Engineer

Inspected by : Chief Engineer

Ship Name : : SC WINTER

Date : 25-Oct-25

Date : 25-Oct-25

Month : Oct-25

Ship Name : SC WINTER (MAIN GENERATOR No.2) (CRITICAL EQUIPMENT)

เดิม

Total running hrs.

Previous M. run. Hrs.


Run. Hrs. from prev. M.

30418.9

30153.0

266.9

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours (NEXT DUE)	Remark หมายเหตุ
SW001-03-002	GE 2071	Replacement of pressure gauge hose (16000-24000)	26000	27-Mar-2021	14927.4	15492.5
SW001-03-002	GE 2072	Inspection of pressure gauge and tachometer (Calibration) (1000-1500)	15000	23-Oct-2025	30419	1 checked
SW001-03-002	GE 2073	Replacement of F.O. pressure gauge ethylene glycol (in case of heavy fuel oil specifications) (4000-6000)	4000	6-Feb-2024	24439.1	5980.8
SW001-03-002	GE 2074	Engine Oil Sample - Obtain		6 MONTHS	11-Jun-2025	8-Dec-25
SW001-03-002	GE 2075	Replace zinc anode in re-cooler air unit (2500)	250	23-Oct-2025	30419	1
GENERATOR BEARING						
SW001-03-002	GE 2076	Generator Bearing Lub oil change (1500-3000)	3000	3-Mar-2025	28297.4	2122.5



Date : 01/1/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second EngineerDate : 25-Oct-25


Inspected by : Chief EngineerDate : 25-Oct-25

Ship Name : SC WINTERMonth : Oct-25

Ship Name : SC WINTER (MAIN GENERATOR No.3) (CRITICAL EQUIPMENT)

Total running hrs. 29154.7
Previous M. run. Hrs. 28880.2
Run. Hrs. from prev. M. 274.5

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
SW001-03-003	GE 2074	Replacement of pressure gauge liner (16000-24000)	12000	27-Mar-2021	14453.3	14701.4	
SW001-03-003	GE 2072	Inspection of pressure gauge and tachometer (Calibration) (1000-1500)	12000	30-Mar-2021	14453.3	14701.4	
SW001-03-003	GE 2074	Replacement of F.O. pressure gauge rubber gasket (in case of heavy fuel oil specification) (4000)	6000	2-Dec-2024	26031.9	3120.8	
SW001-03-003	GE 2074	Engine Oil Sample - Obtain	6 MONTHS	11-Jun-2025		8-Dec-25	
SW001-03-003	GE 2075	Replace zinc anode in sea cooling oil unit (200)	250	20-Oct-2025	29109	45.7	
GENERATOR BEARING							
SW001-03-003	GE 2076	Generator Bearing lub oil change (1500-3000)	8000	3-Mar-2025	26911.1	2241.6	



Date : 01/1/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second EngineerDate : 25-Oct-25


Inspected by : Chief EngineerDate : 25-Oct-25

Ship Name : SC WINTERMonth : Oct-25

Ship Name : SC WINTER (MAIN GENERATOR No.4) (CRITICAL EQUIPMENT)

Total running hrs. 30147.5
Previous M. run. Hrs. 29928.6
Run. Hrs. from prev. M. 218.9

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
Cylinder head							
SW001-03-004	GE 1002	Checking that the cylinder head bolts are tightened and re-tightening (8000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1003	Cylinder head inspection and cleaning (8000-12000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1004	Replacement of O-ring nozzle holder guide (16000-24000)	24000	30-Mar-2021	14338.9	15808.6	
SW001-03-004	GE 1005	Replacement of exhaust valve seat and O-ring (16000-24000)	24000	30-Mar-2021	14338.9	15808.6	
SW001-03-004	GE 1006	Jacket inspection (8000-12000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1007	Disassembly, inspection and running-in of intake and exhaust valves (8000-12000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1008	Disassembly and inspection of valve rotor (8000-12000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1009	Inspection of valve spring and cotter (8000-12000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1010	Disassembly and inspection of starting valve (8000-12000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1011	Disassembly and inspection of rocker arm (8000-12000)	12000	4-Sep-2024	26047	4100.5	
SW001-03-004	GE 1012	Disassembly and inspection of indicator and safety valve (8000-12000)	12000	4-Sep-2024	26047	4100.5	
Piston							
SW001-03-003	GE 1013	Piston extraction (including connecting rod small end part) (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 1014	Piston inspection, cleaning and measurement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 1015	Piston ring replacement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 1016	Piston pin inspection and measurement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 1017	Piston pin bush inspection (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Connecting rod							
SW001-03-003	GE 1018	Connecting rod bolt inspection and re-tightening (4000-6000)	6000	18-Nov-2024	26771.9	3375.6	
SW001-03-003	GE 1019	Crankpin bearing overhaul inspection, and metal replacement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 1020	Crankpin inspection and measurement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 1021	Connecting rod bolt inspection and replacement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Protection ring							



Date : 01/1/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second EngineerDate : 25-Oct-25


Inspected by : Chief EngineerDate : 25-Oct-25

Ship Name : SC WINTERMonth : Oct-25

Ship Name : SC WINTER (MAIN GENERATOR No.4) (CRITICAL EQUIPMENT)

Total running hrs. 30147.5
Previous M. run. Hrs. 29928.6
Run. Hrs. from prev. M. 218.9

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
SW001-03-003	GE 1022	Extraction, inspection, cleaning and measurement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Cylinder liner							
SW001-03-003	GE 1023	Cylinder liner liner surface inspection and measurement (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 1024	Cylinder liner extraction (16000-24000)	24000	27-Mar-2021	14338.9	15808.6	
SW001-03-003	GE 2025	Inspection on jacket side (16000-24000)	24000	27-Mar-2021	14338.9	15808.6	
Main bearing							
SW001-03-003	GE 2026	Replacement of O-ring (16000-24000)	24000	27-Mar-2021	14338.9	15808.6	
SW001-03-003	GE 2027	Checking that the main bearing bolt is tightened (16000-24000)	24000	27-Mar-2021	14338.9	15808.6	
SW001-03-003	GE 2028	Prevent water entering seal and inspect and replace water seal	12000	3-Sep-2024	26047	4100.5	
Crankshaft							
SW001-03-003	GE 2029	Deflection measurement Balance weight bolt tightening check (2000-3000)	3000	5-Oct-2024	26391.3	3756.2	
SW001-03-003	GE 2030	Wiring inspection (4000-6000)	6000	15-Apr-2024	24943.5	5204.0	
SW001-03-003	GE 2031	Inspection by torque wrench (16000-24000)	24000	27-Mar-2021	14338.9	15808.6	
Timing gear							
SW001-03-003	GE 2032	Check and retighten the tightening bolts (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 2033	Check and backlash of gears (8000-12000)	12000	3-Sep-2024	26047	4100.5	
SW001-03-003	GE 2034	Overhaul the idle gear, and check and measure the bush (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Cam gear							
SW001-03-003	GE 2035	Disassemble and check the gear (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Camshaft							
SW001-03-003	GE 2036	Draw out, check and measure the camshaft (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Camshaft bearing							
SW001-03-003	GE 2037	Check and measure the cam bearing (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Fuel oil injection timing							
SW001-03-003	GE 2038	Check (4000-6000)	6000	14-Apr-2024	24838.9	5308.6	
Fuel oil injection pump							



Date : 01/1/2018

Revision : 3

Ref : F-04-TEC/01

Planned Maintenance System

Prepare by : Second EngineerDate : 25-Oct-25

Inspected by : Chief EngineerDate : 25-Oct-25

Ship Name : SC WINTERMonth : Oct-25

Ship Name : SC WINTER (MAIN GENERATOR No.4) (CRITICAL EQUIPMENT)

Total running hrs. 30147.5
Previous M. run. Hrs. 29928.6
Run. Hrs. from prev. M. 218.9

Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/I/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
SW001-03-003	GE 2039	Disassemble, and check (4000-6000)	6000	14-Apr-2024	24838.9	5308.6	
SW001-03-003	GE 2040	Replacement of O-rings (4000-6000)	6000	14-Apr-2024	24838.9	5308.6	
SW001-03-003	GE 2041	Plunger assembly and delivery valve replacement (16000-24000)	24000	1-Apr-2021	14338.9	15808.6	
SW001-03-003	GE 2042	Spring, tappet replacement (16000-24000)	24000	1-Apr-2021	14338.9	15808.6	
Fuel oil injection valve							
SW001-03-003	GE 2043	Check and clean and adjust the injection pressure (1000-1500)	1500	8-Oct-2024	29199	948.5	
Fuel oil piping system							
SW001-03-003	GE 2044	Replacement of O-rings (4000-6000)	6000	18-Nov-2024	26771.9	3375.6	
Valve operating device							
SW001-03-003	GE 2045	Disassemble the swing arm and check the tappet roller (4000-6000)	6000	18-Nov-2024	26771.9	3375.6	
Governor							
SW001-03-003	GE 2046	Disassemble, and check	*	28-Mar-2021			
SW001-03-003	GE 2047	Governor lub oil change (1500-3000)	3000	5-Mar-2025	27819.4	2328.1	
Governor driving device							
SW001-03-003	GE 2048	Disassemble, check and clean (16000-24000)	24000	28-Mar-2021	14338.9	15808.6	
SW001-03-003	GE 2049	Replace the bearing and O-ring (16000-24000)	24000	28-Mar-2021	14338.9	15808.6	
Turbocharger							
SW001-03-003	GE 2049S	Disassemble, check and clean	6000	22-Apr-2024	24558.3	5589.2	
Air cooler							
SW001-03-003	GE 2051	Disassemble, check, clean, and water pressure test (4000-6000)	6000	22-Apr-2024	24558.3	5589.2	
Starting air valve							
SW001-03-003	GE 2052	Disassemble, check and clean (8000-12000)	12000	27-Nov-2024	26884.8	3262.7	
SW001-03-003	GE 2053	Replacement of O-rings (8000-12000)	12000	27-Nov-2024	26884.8	3262.7	
Starting air rotary valve							
SW001-03-003	GE 2054	Disassemble, check and clean (8000-12000)	12000	3-Sep-2024	26047	4100.5	
Fuel oil relief valve							

	Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Third Engineer Date : 25-Oct-25
Inspected by : Chief Engineer Date : 25-Oct-25
Ship Name : : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code Գործիքային	Job Code Գործիքային	Job Name / Description Ձևադր	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark Ծանոթություն
AIR COMPRESSOR (No.1)			9271.8		9201.8		70
SW001-04-001	AC 1001	O/H AIR COMPRESSOR	5000	3-Jul-2023	5766	10746	
SW001-04-001	AC 1002	CHECK AND CLEANING OF VALVE AIR COMPRESSOR	3 MONTHS	4-Aug-2025	8975.4	2-Nov-2025	Renewal
SW001-04-001	AC 1003	CHANGE LUB OIL OF AIR COMPRESSOR	500	4-Aug-2025	8975.4	8475.4	
SW001-04-001	AC 1004	CHECK CRANK CASE OF AIR COMPRESSOR	1000	4-Aug-2025	8975.4	8975.4	
SW001-04-001	AC 1005	CHECK COUPLING BELT	1500	4-Aug-2024	8975.4	10475.4	
SW001-04-001	AC 1006	SAFETY DEVICE TEST	MONTHLY	12-Oct-2025	9271.8	11-Nov-2025	
AIR RECEIVER TANK No.1							
SW001-04-002	AR 1007	CHECK AND CLEAN AIR RESERVOIR	5 YEARS	5-Apr-2021	-	4-Apr-2026	
SW001-04-002	AR 1008	O/A SAFETY VALVE	5 YEARS	5-Apr-2021	-	4-Apr-2026	
SW001-04-002	AR 1009	LAPPING VALVE IN SYSTEM	YEARLY	9-May-2025	-	9-May-2026	
SW001-04-002	AR 1010	TEST AND RESET SAFETY VALVE	YEARLY	9-May-2025	-	9-May-2026	
AIR COMPRESSOR (No.2)			8901.8		8709.9		191.9
SW001-04-003	AC 1011	O/H AIR COMPRESSOR	5000	25-Dec-2022	3422.3	8422.3	
SW001-04-003	AC 1012	CHECK AND CLEANING OF VALVE AIR COMPRESSOR	3 MONTHS	16-Sep-2025	8709.9	13-Dec-2025	Renewal
SW001-04-003	AC 1013	CHANGE LUB OIL OF AIR COMPRESSOR	500	16-Sep-2025	8709.9	9209.9	
SW001-04-003	AC 1014	CHECK CRANK CASE OF AIR COMPRESSOR	1000	16-Sep-2025	8709.9	8709.9	
SW001-04-003	AC 1015	CHECK COUPLING BELT	1500	29-Dec-2024	8622.1	9122.1	
SW001-04-003	AC 1016	SAFETY DEVICE TEST	MONTHLY	12-Oct-2025	8709.9	11-Nov-2025	
AIR RECEIVER TANK No.2							
SW001-04-004	AR 1017	CHECK AND CLEAN AIR RESERVOIR	5 YEARS	5-Apr-2021	-	4-Apr-2026	
SW001-04-004	AR 1018	O/A SAFETY VALVE	5 YEARS	5-Apr-2021	-	4-Apr-2026	
SW001-04-004	AR 1019	LAPPING VALVE IN SYSTEM	YEARLY	9-May-2025	-	9-May-2026	
SW001-04-004	AR 1020	TEST AND RESET SAFETY VALVE	YEARLY	9-May-2025	-	9-May-2026	
SERVICE COMPRESSOR			7986.2		7981.2		105
SW001-04-005	AC 2001	O/H AIR COMPRESSOR	5000	24-Feb-2024	2877.7	9877.2	
SW001-04-005	AC 2002	CHECK AND CLEANING OF VALVE AIR COMPRESSOR	3 MONTHS	14-Oct-2025	7644.2	12-Jan-2026	
SW001-04-005	AC 2003	CHANGE LUB OIL OF AIR COMPRESSOR	500	8-Oct-2025	7615	8115	

Original : Vessel ,

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	Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Third Engineer Date : 25-Oct-25
Inspected by : Chief Engineer Date : 25-Oct-25
Ship Name : : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code Գործիքային	Job Code Գործիքային	Job Name / Description Ձևադր	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark Ծանոթություն
SW001-04-006	AC 2004	CHECK CRANK CASE OF AIR COMPRESSOR	1000	14-Oct-2025	7644.2	8644.2	
SW001-04-006	AC 2005	CHECK BELT AND RENEW	1500	14-Oct-2025	7644.2	9144.2	
SW001-04-006	AC 2006	SAFETY DEVICE TEST	MONTH	14-Oct-2025	7644.2	13-Nov-2025	
SERVICE AIR RECEIVER TANK							
SW001-04-006	AR 3001	CHECK AND CLEAN AIR RESERVOIR	5 YEARS	5-Apr-2021	-	4-Apr-2026	
SW001-04-006	AR 3002	O/A SAFETY VALVE	5 YEARS	5-Apr-2021	-	4-Apr-2026	
SW001-04-006	AR 3003	LAPPING VALVE IN SYSTEM	YEARLY	9-May-2025	-	9-May-2026	

Original : Vessel , Copy : TEC, Retention : 5 year

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	Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Third Engineer Date : 25-Oct-25
Inspected by : Chief Engineer Date : 25-Oct-25
Ship Name : : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code Գործիքային	Job Code Գործիքային	Job Name / Description Ձևադր	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark Ծանոթություն
LUB OIL PURIFIER (No.1)			0		0	No Running	0
SW001-05-001	LO 1001	ROUTINE BOWL PART CLEANING & INSPECTION	1,000	12-Jan-2016	0	1500	
SW001-05-001	LO 1002	GEAR CASE INSPECTION	1500	12-Jan-2016	0	1500	
SW001-05-001	LO 1003	GEAR CASE OIL CHANGE	3 MONTHS	5-Oct-2023	0	3-Jan-2024	renew
SW001-05-001	LO 1004	ALARMS & SAFETY TRIP	3 MONTHS	5-Oct-2023	0	3-Jan-2024	Checked
SW001-05-001	LO 1005	COMPLETE OVERHAUL VERTICAL SHAFT	5000	10-Jan-2016	0	5000	
SW001-05-001	LO 1006	COMPLETE OVERHAUL HORIZONTAL SHAFT	10000	11-Jul-2016	0	10000	
SW001-05-001	LO 1007	FRICTION PADS INSPECTION	6 MONTHS	8-Jan-2023	0	7-Jul-2023	
SW001-05-001	LO 1008	FRICTION PADS RENEWED	AS REQUIRES	12-Jul-2022	0	12-Jul-2023	Checked
SW001-05-001	LO 1009	SOUNDLO VALVE CHECK & OVERHAUL	6 MONTHS	8-Jan-2023	0	7-Jul-2023	Checked
LUB OIL PURIFIER (No.2)			0		0	No Running	0
SW001-05-002	LO 1010	ROUTINE BOWL PART CLEANING & INSPECTION	1,000	21-Feb-2018	0	1000	
SW001-05-002	LO 1011	GEAR CASE INSPECTION	1500	12-Jan-2016	0	1500	
SW001-05-002	LO 1012	GEAR CASE OIL CHANGE	3 MONTHS	18-Oct-2022	0	16-Jan-2023	renew
SW001-05-002	LO 1013	ALARMS & SAFETY TRIP	3 MONTHS	18-Oct-2022	0	16-Jan-2023	Checked
SW001-05-002	LO 1014	COMPLETE OVERHAUL VERTICAL SHAFT	5000	12-Jan-2016	0	5000	
SW001-05-002	LO 1015	COMPLETE OVERHAUL HORIZONTAL SHAFT	10000	11-Jul-2016	0	10000	
SW001-05-002	LO 1016	FRICTION PADS INSPECTION	6 MONTHS	12-Jul-2022	0	8-Jan-2023	
SW001-05-002	LO 1017	FRICTION PADS RENEWED	AS REQUIRES	12-Jul-2022	0	12-Jul-2023	Checked
SW001-05-002	LO 1018	SOUNDLO VALVE CHECK & OVERHAUL	6 MONTHS	12-Jul-2022	0	8-Jan-2023	Checked
FUEL OIL PURIFIER (No.1)			66069.2		66892.2		130
SW001-05-003	FO 2001	ROUTINE BOWL PART CLEANING & INSPECTION	1,000	10-Jul-2025	66464.7	67465	
SW001-05-003	FO 2002	GEAR CASE INSPECTION	1500	12-Jan-2025	66308.7	67809	
SW001-05-003	FO 2003	GEAR CASE OIL CHANGE	3 MONTHS	9-Oct-2025	66923.2	7-Jan-2026	Renewal
SW001-05-003	FO 2004	ALARMS & SAFETY TRIP	3 MONTHS	9-Oct-2025	66923.2	7-Jan-2026	Checked

Original : Vessel , Copy : TEC, Retention : 5 year

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	Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Third Engineer Date : 25-Oct-25
Inspected by : Chief Engineer Date : 25-Oct-25
Ship Name : : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code Գործիքային	Job Code Գործիքային	Job Name / Description Ձևադր	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark Ծանոթություն
SW001-05-003	FO 2005	COMPLETE OVERHAUL VERTICAL SHAFT	5000	24-Jan-2021	5477	10477	
SW001-05-003	FO 2006	COMPLETE OVERHAUL HORIZONTAL SHAFT	10000	11-Jul-2016	0	10000	
SW001-05-003	FO 2007	FRICTION PADS INSPECTION	6 MONTHS	1-Oct-2025	66888.2	30-Mar-2026	Inspection
SW001-05-003	FO 2008	FRICTION PADS RENEWED	AS REQUIRES	12-Oct-2024	61852	12-Oct-2025	renew
SW001-05-003	FO 2009	SOUNDLO VALVE CHECK & OVERHAUL	6 MONTHS	10-Jul-2025	66464.7	6-Jan-2026	Checked

Original : Vessel , Copy : TEC, Retention : 5 year

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	Date : 04/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Electrician Engineer Date : 25-Oct-25
 Inspected by : Chief Engineer Date : 25-Oct-25
 Ship Name : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code #EQUIP#	Job Code #JOB#	Job Name / Description #JOB#	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark #REMARK#
AIR CONDITION No. 1							
SW001-06-001	AC 1001	AIR CONDITION COMPRESSOR PRESSURE & SAFETY TRIPS	MONTHLY	22-Oct-2025	-	21-Nov-2025	
SW001-06-001	AC 1002	AIR CONDITION FILTER DRYER RENEW	3 MONTHS	24-Aug-2025	-	22-Nov-2025	Renew
SW001-06-001	AC 1003	AIR COMPRESSOR COMPLETE OVERHAULED	5 YEARS	3-Nov-2020	-	2-Nov-2025	Renew
SW001-06-001	AC 1004	AIR COMPRESSOR CRANKCASE INSPECTION , OIL RENEW	6 MONTHS	26-Aug-2025	-	22-Feb-2026	
SW001-06-001	AC 1005	AIR CONDITION CONDENSER CLEAN	3 MONTHS	30-Sep-2025	-	9-Dec-2025	
SW001-06-001	AC1006	AHU UNIT INSPECTION, BELT ADJUST, GREASING	MONTHLY	22-Oct-2025	-	21-Nov-2025	
SW001-06-001	AC 1007	GAS LEAK TEST	MONTHLY	22-Oct-2025	-	21-Nov-2025	
AIR CONDITION No.2							
SW001-06-002	AC 1008	AIR CONDITION COMPRESSOR PRESSURE & SAFETY TRIPS	MONTHLY	22-Oct-2025	-	21-Nov-2025	Renew
SW001-06-002	AC 1009	AIR CONDITION FILTER DRYER RENEW	3 MONTHS	14-Sep-2025	-	13-Dec-2025	
SW001-06-002	AC 1010	AIR COMPRESSOR COMPLETE OVERHAULED	5 YEARS	24-Jun-2022	-	23-Jun-2027	Renew required
SW001-06-002	AC 1011	AIR COMPRESSOR CRANKCASE INSPECTION , OIL RENEW	6 MONTHS	31-Jul-2025	-	27-Jan-2026	
SW001-06-002	AC 1012	AIR CONDITION CONDENSER CLEAN	3 MONTHS	15-Sep-2025	-	14-Dec-2025	
SW001-06-002	AC1013	AHU UNIT INSPECTION, BELT ADJUST, GREASING	MONTHLY	22-Oct-2025	-	21-Nov-2025	
SW001-06-002	AC 1014	GAS LEAK TEST	MONTHLY	22-Oct-2025	-	21-Nov-2025	
PROVISION COMPRESSOR No.1							
SW001-06-003	PV 2001	FRIDGE COMPRESSOR PRESSURE & SAFETY TRIPS	MONTHLY	22-Oct-2025	-	21-Nov-2025	
SW001-06-003	PV 2002	FILTER DRYER RENEW	6 MONTHS	21-Jun-2025	-	18-Dec-2025	Renew
SW001-06-003	PV 2003	AIR COMPRESSOR COMPLETE OVERHAULED	5 YEARS	27-Nov-2022	-	26-Nov-2027	
SW001-06-003	PV 2004	CRANKCASE INSPECTION , OIL RENEW	6 MONTHS	6-Aug-2025	-	2-Feb-2026	
SW001-06-003	PV 2005	CONDENSER CLEAN	3 MONTHS	21-Aug-2025	-	19-Nov-2025	
SW001-06-003	PV2006	CHILLER ROOM, HEATER INSPECTION	MONTHLY	22-Oct-2025	-	21-Nov-2025	
SW001-06-003	PV 2007	GAS LEAK TEST	MONTHLY	22-Oct-2025	-	21-Nov-2025	
PROVISION COMPRESSOR No.2							
SW001-06-004	PV 2008	FRIDGE COMPRESSOR PRESSURE & SAFETY TRIPS	MONTHLY	22-Oct-2025	-	21-Nov-2025	
SW001-06-004	PV 2009	FILTER DRYER RENEW	6 MONTHS	21-Jun-2025	-	18-Dec-2025	Renew

Original : Vessel, Copy : TEC, Retention : 5 year

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	Date : 04/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Electrician Engineer Date : 25-Oct-25
 Inspected by : Chief Engineer Date : 25-Oct-25
 Ship Name : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code #EQUIP#	Job Code #JOB#	Job Name / Description #JOB#	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark #REMARK#
SW001-06-004	PV 2010	AIR COMPRESSOR COMPLETE OVERHAULED	5 YEARS	24-Nov-2022	-	23-Nov-2027	Renew Complete
SW001-06-004	PV 2011	CRANKCASE INSPECTION , OIL RENEW	6 MONTHS	5-Aug-2025	-	1-Feb-2026	
SW001-06-004	PV 2012	CONDENSER CLEAN	3 MONTHS	11-Aug-2025	-	19-Nov-2025	
SW001-06-004	PV 2013	CHILLER ROOM, HEATER INSPECTION	MONTHLY	22-Oct-2025	-	21-Nov-2025	
SW001-06-004	PV 2014	GAS LEAK TEST	MONTHLY	22-Oct-2025	-	21-Nov-2025	

Original : Vessel, Copy : TEC, Retention : 5 year

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	Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Third Engineer Date : 25-Oct-25
 Inspected by : Chief Engineer Date : 25-Oct-25
 Ship Name : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code #EQUIP#	Job Code #JOB#	Job Name / Description #JOB#	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark #REMARK#
DRY BULK COMPRESSOR No. 1							
SW001-07-001	DC 1001	DRY BULK COMPRESSOR LUB. OIL RENEWS (2000 HRS.)	2000 Hrs.	13-Dec-2022	830	2830	Renew
SW001-07-001	DC 1002	DRY BULK COMPRESSOR LUB. OIL FILTER RENEWS (2000 HRS.)	2000 Hrs.	13-Dec-2022	830	2830	Renew
SW001-07-001	DC 1003	DRY BULK COMPRESSOR OIL ELEMENT RENEWS (4000 HRS.)	4000 Hrs.	13-Dec-2022	830	4830	
SW001-07-001	DC 1004	DRY BULK COMPRESSOR AIR FILTER RENEWS (2000 HRS.)	2000 Hrs.	13-Dec-2022	830	2830	Renew
SW001-07-001	DC 1005	DRY BULK COMPRESSOR AIR FILTER CLEANS (500 HRS.)	500 Hrs.	24-Jul-2025	1381.3	1881.3	
SW001-07-001	DC1006	DRY BULK COMPRESSOR OIL COOLER CLEAN (500 HRS.)	500 Hrs.	24-Jul-2025	1381.3	1881.3	
SW001-07-001	DC1007	MOTOR INSPECTION AND GREASING	6 Months	21-Aug-2025	1418	17-Feb-2026	
SW001-07-001	DC1008	DRY BULK COMPRESSOR OVERHAUL(5000 HRS.)	50,000 Hrs.	1-Jul-25	0	30000	
SW001-07-001	DC1009	MOTOR INSPECTION AND OVERHAUL(500 HRS.)	50,000Hrs.	1-Jul-2025	0	30000	
DRY BULK COMPRESSOR No. 2							
SW001-07-002	DC 1010	DRY BULK COMPRESSOR LUB. OIL RENEWS (2000 HRS.)	2000 Hrs.	13-Dec-2022	830	2830	Renew
SW001-07-002	DC 1011	DRY BULK COMPRESSOR LUB. OIL FILTER RENEWS (2000 HRS.)	2000 Hrs.	13-Dec-2022	830	2830	Renew
SW001-07-002	DC 1012	DRY BULK COMPRESSOR OIL ELEMENT RENEWS (4000 HRS.)	4000 Hrs.	13-Dec-2022	830	4830	
SW001-07-002	DC 1013	DRY BULK COMPRESSOR AIR FILTER RENEWS (2000 HRS.)	2000 Hrs.	13-Dec-2022	830	2830	Renew
SW001-07-002	DC 1014	DRY BULK COMPRESSOR AIR FILTER CLEANS (500 HRS.)	500 Hrs.	23-Jul-2025	1373.8	1873.8	
SW001-07-002	DC 1015	DRY BULK COMPRESSOR OIL COOLER CLEAN (500 HRS.)	500 Hrs.	23-Jul-2025	1373.8	1873.8	
SW001-07-002	DC 1016	MOTOR INSPECTION AND GREASING	6 Months	21-Aug-2025	1418	17-Feb-2026	
SW001-07-002	DC 1017	DRY BULK COMPRESSOR OVERHAUL(5000 HRS.)	50,000Hrs.	1-Jul-2025	0	30000	
SW001-07-002	DC 1018	MOTOR INSPECTION AND OVERHAUL(500 HRS.)	50,000Hrs.	1-Jul-2025	0	30000	
AIR DRYER No.1							
SW001-07-003	AD 2001	AIR DRYER AIR AUTO DRAIN CLEANS (100 HRS.)	100 Hrs.	25-Sep-2025	2302	2502	
SW001-07-003	AD 2002	AIR DRYER RENEWS (10000 HRS.)	7 YEAR	12-Jun-2018	-	10-Jun-2025	N.A.
SW001-07-003	AD 2003	CLEAN SUCTION AIR FILTER	100 HRS.	25-Sep-2025	2302.8	2302.8	
SW001-07-003	AD 2004	TEST LEAKING SYSTEM	6 Months	21-Aug-2025	-	17-Feb-2026	Running tests
SW001-07-003	AD 2005	FULL SERVICE AIR DRYER SYSTEM	YEARLY	21-Aug-2025	-	21-Aug-2025	
AIR DRYER No. 2							
SW001-07-004	AD 2006	AIR DRYER AIR AUTO DRAIN CLEANS (100 HRS.)	100 Hrs.	25-Sep-2025	2389.5	2389.5	
SW001-07-004	AD2007	AIR DRYER RENEWS (10000 HRS.)	7 YEAR	23-Sep-2018	-	10-Jun-2025	
SW001-07-004	AD2008	CLEAN SUCTION AIR FILTER	100 HRS.	25-Sep-2025	2389.5	2389.5	
SW001-07-004	AD2009	TEST LEAKING SYSTEM	6 Months	21-Sep-2025	-	24-Mar-2026	Running tests
SW001-07-004	AD2010	FULL SERVICE AIR DRYER SYSTEM	YEARLY	21-Aug-2025	-	21-Aug-2025	

Original : Vessel, Copy : TEC, Retention : 5 year

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	Date : 01/01/2018	Revision : 3	Ref : F-04-TEC/01
Planned Maintenance System			

Prepare by : Third Engineer Date : 25-Oct-25
 Inspected by : Chief Engineer Date : 25-Oct-25
 Ship Name : SC WINTER Month : Oct-25

Ship Name : SC WINTER (AUXILIARY EQUIPMENT)						Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.	
Equipment Code #EQUIP#	Job Code #JOB#	Job Name / Description #JOB#	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark #REMARK#
DRY BULK TANK AND SYSTEM							
SW001-07-005	DS 3001	CEMENT STORAGE TANK No. 1 INSPECTION	MONTH	25-Oct-2025	-	18-Nov-2025	
SW001-07-005	DS 3002	CEMENT STORAGE TANK No. 2 INSPECTION	MONTH	25-Oct-2025	-	18-Nov-2025	
SW001-07-005	DS 3003	BARRITE STORAGE TANK No. 3 INSPECTION	MONTH	25-Oct-2025	-	18-Nov-2025	
SW001-07-005	DS 3004	BARRITE STORAGE TANK No. 4 INSPECTION	MONTH	25-Oct-2025	-	18-Nov-2025	
SW001-07-005	DS 3005	VALVE OPERATION SYSTEM INSPECTION AND SYSTEM TEST	6 MONTHS	25-Oct-2025	-	17-Jan-2026	
SW001-07-005	DS 3006	SAFETY VALVE INSPECTION AND TEST OPERATION	6 MONTHS	25-Oct-2025	-	17-Jan-2026	
SW001-07-005	DS 3007	HIGH LEVEL ALARM TEST	6 MONTHS	25-Oct-2025	-	17-Jan-2026	
SW001-07-005	DS 3008	MANIFOLDS AND PIPELINES INSPECTION	MONTHS	25-Oct-2025	-	17-Jan-2026	
SW001-07-005	DS 3009	EMERGENCY BULK STOP TEST	MONTHS	25-Oct-2025	-	18-Nov-2025	

Original : Vessel, Copy : TEC, Retention : 5 year


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		Date : 31/03/2017	Revision : 00	Ref : F-04-TEC/06			
Planned Maintenance System							
Prepare by : Second Engineer				Date : 25-Oct-25			
Inspected by : Chief Engineer				Date : 25-Oct-25			
Ship Name : SC WINTER				Month : Oct-25			
Ship Name : SC WINTER				Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.			
รหัส							
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
SEWAGE TREATMENT PLANT							
SE001-11-000							
SE001-11-000	ST 1601	CHECK SCREEN / TANK	3 MONTHS	11-Oct-2025		9-Jan-2026	
SE001-11-000	ST 1602	SERVICE AIR BLOWER	3 MONTHS	11-Oct-2025		9-Jan-2026	
SE001-11-000	ST 1603	REFILL CHLORINE	6 MONTHS	11-Oct-2025		9-Apr-2026	
SE001-11-000	ST 1604	CHECK ELECTRIC CONTROL SYSTEM	YEARLY	15-Apr-2025		15-Apr-2026	
SE001-11-000	ST 1605	SERVICE DISCHARGE PUMP	YEARLY	15-Apr-2025		15-Apr-2026	
SE001-11-000	ST 1606	SEWAGE TANK CLEANING	5 YEARS	9-Apr-2021		8-Apr-2026	
OILY WATER SEPARATOR							
SE001-11-001							
SE001-11-001	OW 1701	CLEAN 1 STAGE FILTER	6 MONTHS	6-Sep-2025		5-Mar-2026	
SE001-11-001	OW 1702	INSPECTION COALESCEB	6 MONTHS	6-Sep-2025		5-Mar-2026	
SE001-11-001	OW 1703	SERVICE PRESS ADJUST VALVE	6 MONTHS	6-Sep-2025		5-Mar-2026	
SE001-11-001	OW 1704	CALIBRETON 15 PPM MONITORING	5 YEARS	05/02/2025		1-May-2030	New sensor
SE001-11-001	OW 1705	INSPECT AND TANKS CLEANING	5 YEARS	3-Apr-2021		2-Apr-2026	
O2 FLOODING SYSTEM							
SE001-11-002							
SE001-11-002	O2 1501	CHECK ALL HOSES CONNECTIONS	YEARLY	3-Mar-2025		3-Mar-2026	
SE001-11-002	O2 1502	BOW THRUSTER FLOOD LINE	YEARLY	3-Mar-2025		3-Mar-2026	

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SE001-11-002	O2 1503	TEST EVACUATE ALARM	YEARLY	3-Mar-2025		3-Mar-2026	
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		Date : 01/01/2018	Revision : 00	Ref : F-04-TEC/06			
Planned Maintenance System							
Prepare by : Third Engineer			Date : 25-Oct-25				
Inspected by : Chief Engineer			Date : 25-Oct-25				
Ship Name : : SC WINTER			Month : Oct-25				
Ship Name : : SC WINTER			Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.				
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
Tanks Ventilator Ballast-F.O & Fresh Water tanks							
SW001-13-002	AV 2000	Checking of Tanks Ventilator NO. 1 Fuel Oil Wing Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2001	Checking of Tanks Ventilator NO. 1 Fuel Oil Wing Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2002	Checking of Tanks Ventilator NO. 1 Fuel Oil D.B. Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2003	Checking of Tanks Ventilator NO. 1 Fuel Oil D.B. Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2004	Checking of Tanks Ventilator NO. 2 Fuel Oil Wing Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2005	Checking of Tanks Ventilator NO. 2 Fuel Oil Wing Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2006	Checking of Tanks Ventilator NO. 2 Fuel Oil Wing Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2007	Checking of Tanks Ventilator NO. 2 Fuel Oil D.B. Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2008	Checking of Tanks Ventilator NO. 2 Fuel Oil D.B. Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2009	Checking of Tanks Ventilator NO. 3 Fuel Oil D.B. Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2010	Checking of Tanks Ventilator NO. 3 Fuel Oil D.B. Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2011	Checking of Tanks Ventilator NO. 4 Fuel Oil Wing Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2012	Checking of Tanks Ventilator NO. 4 Fuel Oil Wing Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2013	Checking of Tanks Ventilator NO. 4 Fuel Oil D.B. Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2014	Checking of Tanks Ventilator NO. 4 Fuel Oil D.B. Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2015	Checking of Tanks Ventilator NO. 4 Fuel Oil D.B. Tank (C)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2016	Checking of Tanks Ventilator NO. 5 Fuel Oil Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2017	Checking of Tanks Ventilator NO. 5 Fuel Oil Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2018	Checking of Tanks Ventilator NO. 6 Fuel Oil D.B. Tank (C)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2019	Checking of Tanks ventilator Fuel Oil Overflow Tank (C)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2020	Checking of Tanks Ventilator Fuel Oil Day Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2021	Checking of Tanks Ventilator Fuel Oil Day Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2022	Checking of Tanks Ventilator Fuel Oil Seli Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2023	Checking of Tanks Ventilator Fuel Oil Seli Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	


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SW001-13-002	AV 2024	Checking of Tanks ventilator NO. 1 Potable Water Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2025	Checking of Tanks ventilator NO. 1 Potable Water Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2026	Checking of Tanks ventilator NO. 2 Potable Water Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2027	Checking of Tanks ventilator NO. 2 Potable Water Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2028	Checking of Tanks ventilator NO. 3 Potable Water Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2029	Checking of Tanks ventilator NO. 3 Potable Water Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2030	Checking of Tanks ventilator P/F W & DW & WB Tank (C)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2031	Checking of Tanks ventilator NO. 1 FW & DW & WB Tank (C)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2032	Checking of Tanks ventilator NO. 2 FW & DW & WB Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2033	Checking of Tanks ventilator NO. 2 FW & DW & WB Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2034	Checking of Tanks ventilator NO. 3 FW & DW & WB Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2035	Checking of Tanks ventilator NO. 3 FW & DW & WB Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2036	Checking of Tanks ventilator NO. 4 FW & DW & WB Tank (C)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2037	Checking of Tanks ventilator NO. 5 FW & DW & WB Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2038	Checking of Tanks ventilator NO. 5 FW & DW & WB Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2039	Checking of Tanks ventilator NO. 6 FW & DW & WB Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2040	Checking of Tanks ventilator NO. 6 FW & DW & WB Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2041	Checking of Tanks ventilator NO. 6 FW & DW & WB Tank (C)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2042	Checking of Tanks ventilator NO. 1 Mud & BR & RO Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2043	Checking of Tanks ventilator NO. 1 Mud & BR & RO Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2044	Checking of Tanks ventilator NO. 2 Mud & BR & RO Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2045	Checking of Tanks ventilator NO. 2 Mud & BR & RO Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2046	Checking of Tanks ventilator Base Oil Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2047	Checking of Tanks ventilator Base Oil Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2048	Checking of Tanks ventilator Hyd. Oil Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2049	Checking of Tanks ventilator Hyd. Oil Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2050	Checking of Tanks ventilator Lub. Oil Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2051	Checking of Tanks ventilator Lub. Oil Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2052	Checking of Tanks ventilator Dirty Oil Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2053	Checking of Tanks ventilator Bilge Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2054	Checking of Tanks ventilator Sewage Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2055	Checking of Tanks ventilator Dispenser Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2056	Checking of Tanks ventilator Foam Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2057	Checking of Tanks ventilator FWD Void Tank	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2058	Checking of Tanks ventilator E/R Void Tank (P)	weekly	25-Oct-2025	-	1-Nov-2025	
SW001-13-002	AV 2059	Checking of Tanks ventilator E/R Void Tank (S)	weekly	25-Oct-2025	-	1-Nov-2025	


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		Date : 31/03/2017	Revision : 00		Ref : F-04-TEC/06		
Planned Maintenance System							
Prepare by : Chief officer			Date : 25-Oct-25				
Inspected by : Master			Date : 25-Oct-25				
Ship Name : SC WINTER			Month : Oct-25				
Ship Name : SC WINTER			Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.				
Data							
Equipment Code විලාසනකේ	Job Code විලාසන	Job Name / Description විස්තරය	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark විවරණය
SHARK JAW							
SE001-13-000							
SI 2001	SI 2001	Inspection hydraulic ram	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-000	SI 2002	Inspection hydraulic hose	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-000	SI 2003	Replace hydraulic hose	5 YEARS	18-Jun-2021	17-Jun-2025		Replace 18-Jun-2025
SE001-13-000	SI 2004	Greasing movement point	6 MONTHS	24-Oct-2025		22-Apr-2026	
TOWING PIN							
SI001-13-001							
TP 3001	TP 3001	Inspection hydraulic ram	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-001	TP 3002	Inspection hydraulic hose	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-001	TP 3003	Replace hydraulic hose	5 YEARS	10-Apr-2021	9-Apr-2026		
SE001-13-001	TP 3004	Greasing movement point	6 MONTHS	24-Oct-2025		22-Apr-2026	
ANCHOR WINCH							
SE001-13-002							
WI 3003	WI 3003	INSPECTION WINCHES (GREASING)	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3004	OIL LEVEL CHECK	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3005	CHECK AND ADJUST BRAKE CLAMP	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3006	CHECK STOPPER CONDITION	6 MONTHS	24-Aug-2025		20-Feb-2026	
SE001-13-002	TW 3007	ADJUST BREAK CLAMP	6 MONTHS	24-Aug-2025		20-Feb-2026	
SE001-13-002	TW 3008	CHECK BREAK BAND THICKNESS	YEARLY	24-Mar-2025		24-Mar-2026	
SE001-13-002	TW 3009	REPLACE BREAK BAND	5 YEARS	10-Apr-2021	9-Apr-2026		


Original : Vessel, Copy : TEC, Retention : 5 year

		Date : 31/03/2017	Revision : 00		Ref : F-04-TEC/06		
Planned Maintenance System							
Prepare by : Chief officer			Date : 25-Oct-25				
Inspected by : Master			Date : 25-Oct-25				
Ship Name : SC WINTER			Month : Oct-25				
Ship Name : SC WINTER			Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.				
Data							
Equipment Code විලාසනකේ	Job Code විලාසන	Job Name / Description විස්තරය	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark විවරණය
SE001-13-002	TW 3010	Greasing movement point	6 MONTHS	30-Jun-2025		17-Dec-2025	
SE001-13-002	TW 3011	Inspection hydraulic hose	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-002	TW 3012	Replace hydraulic hose	5 YEARS	10-Apr-2021		9-Apr-2026	
TOW WIRE / WORK WIRE WINCH							
SE001-13-002	TW 3010	INSPECTION WINCHES (GREASING)	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3011	CHECK AND ADJUST BRAKE CLAMP	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3012	OIL LEVEL CHECK	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3013	CHECK AND TESTING SENSOR SYSTEM	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3014	CONDUCT BRAKE SLIP TEST FOR TOW WIRE	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3015	TEST EMERGENCY RELEASE	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3016	CHECK AND CLEAN WIRE ROPES (GREASING)	YEARLY	24-Mar-2025		24-Mar-2026	
SE001-13-002	TW 3017	ANNUAL RE-TERMINATION OF TOW WIRE	YEARLY	24-Mar-2025		24-Mar-2026	Renewed 21.08.20
SE001-13-002	TW 3018	MAIN TOW WIRE END FOR ENDED	2 YEARS	20-Apr-2024		20-Apr-2026	
SE001-13-002	TW 3019	DESTRUCTIVE TEST OF TOW WIRE	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-002	TW 3020	REPLACE BREAK BAND of Tow wire	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-002	TW 3021	ANNUAL RE-TERMINATION OF WORK WIRE	YEARLY	24-Mar-2025		24-Mar-2026	Renewed 21.08.20
SE001-13-002	TW 3022	WORK WIRE END FOR ENDED	2 YEARS	24-Mar-2025		24-Mar-2027	
SE001-13-002	TW 3023	DESTRUCTIVE TEST OF WORK WIRE	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-002	TW 3024	REPLACE BREAK BAND of Work wire	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-002	TW 3025	STERN ROLLER FILL UP GREASING	6 MONTHS	22-May-2025		18-Nov-2025	

Original : Vessel, Copy : TEC, Retention : 5 year

		Date : 31/03/2017	Revision : 00		Ref : F-04-TEC/06		
Planned Maintenance System							
Prepare by : Chief officer			Date : 25-Oct-25				
Inspected by : Master			Date : 25-Oct-25				
Ship Name : SC WINTER			Month : Oct-25				
Ship Name : SC WINTER			Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.				
Data							
Equipment Code විලාසනකේ	Job Code විලාසන	Job Name / Description විස්තරය	R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark විවරණය
SE001-13-002	TW 3026	Inspection hydraulic ram	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-002	TW 3027	Inspection hydraulic hose	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-002	TW 3028	Replace hydraulic hose	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-002	TW 3029	Greasing movement point	6 MONTHS	24-Oct-2025		22-Apr-2026	
TUGGER WINCH							
SE001-13-003	TG 3022	INSPECTION WINCHES (GREASING)	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-003	TG 3023	CHECK AND ADJUST BRAKE CLAMP	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-003	TG 3024	CHECK AND ADJUST BRAKE CLAMP	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-003	TG 3025	MPI TEST HOOK	YEARLY	7-Jan-2025		7-Jan-2026	Inspected by MCI Supply and Service co., Sri
SE001-13-003	TG 3026	CHECK AND CLEAN WIRE ROPES (GREASING)	YEARLY	14-Jan-2025		14-Jan-2026	
SE001-13-003	TG 3027	RENEWED BREAK BAND	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-003	TG 3028	TUGGER WIRE RENEWED	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-003	TG 3029	Inspection hydraulic ram	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-003	TG 3030	Inspection hydraulic hose	MONTHLY	24-Oct-2025		23-Nov-2025	
SE001-13-003	TG 3031	Replace hydraulic hose	5 YEARS	10-Apr-2021		9-Apr-2026	
SE001-13-003	TG 3032	Greasing movement point	6 MONTHS	24-Oct-2025		22-Apr-2026	
SPARE TOWING WIRE AND WORK WIRE WINCH							
SE001-13-002	TW 3029	INSPECTION WINCHES (GREASING)	3 MONTHS	24-Oct-2025		22-Jan-2026	
SE001-13-002	TW 3032	CHECK AND TESTING SENSOR SYSTEM	3 MONTHS	24-Oct-2025		22-Jan-2026	

Original : Vessel, Copy : TEC, Retention : 5 year

		Date : 31/03/2017	Revision : 00		Ref : F-04-TEC/06			
Planned Maintenance System								
Prepare by : Chief officer				Date : 25-Oct-25				
Inspected by : Master				Date : 25-Oct-25				
Ship Name : SC WINTER				Month : Oct-25				
Ship Name : SC WINTER				Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.				
Data								
Equipment Code විලාසනකේ	Job Code විලාසන	Job Name / Description විස්තරය		R/H/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark විවරණය
SE001-13-002	TW 3035	CHECK AND CLEAN WIRE ROPES (GREASING)		YEARLY	24-Mar-2025		24-Mar-2026	
SE001-13-002	TW 3036	ANNUAL RE-TERMINATION OF TOW WIRE		YEARLY	24-Mar-2025		24-Mar-2026	
SE001-13-002	TW 3038	DESTRUCTIVE TEST OF TOW WIRE		5 YEARS	10-Apr-2021		9-Apr-2026	

Original : Vessel, Copy : TEC, Retention : 5 year

	Date : 01/01/2018	Revision : 00	Ref : F-04-TEC/06
Planned Maintenance System			

Prepare by : Chief officer

Date : 25-Oct-25

Inspected by : Master

Date : 25-Oct-25

Ship Name : SC WINTER

Month : Oct-25

Ship Name : SC WINTER		Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.				
Equipment Code ທຳລາຍ	Job Code ໜີ້ສິນ	Job Name / Description ໜີ້ສິນ	RM/P	Last M. date	Last M. Hours	R/H (NEXT DUE)
Communication Equipment						
SW001-12-002	CE 2000					
SW001-12-002	CE 2001	Inspection And Chirping GPS	3Months	20-Oct-2025	-	18-Jan-2026
SW001-13-002	CE 2002	Inspection Antenne Connection And Cables Inspect	Monthly	23-Oct-2025	-	22-Nov-2025
SW001-12-002	CE 2003	Checking Of BMMARSAT C	3Months	20-Oct-2025	-	18-Jan-2026
SW001-12-002	CE 2004	Annual Routine Of Gyro Compass	Yearly	9-May-2025	-	9-May-2026
SW001-12-002	CE 2005	Checking Of Echo Sounder	Weekly	24-Oct-2025	-	31-Oct-2025
SW001-12-002	CE 2006	Checking Of Watertight Doors	Monthly	24-Oct-2025	-	23-Nov-2025
SW001-12-002	CE 2007	Checking Of Manoverboard (MOB) with Light and Smoke Signal	Monthly	24-Oct-2025	-	23-Nov-2025
SW001-12-002	CE 2008	Check of Automatic Identification System (AIS)	3Months	20-Oct-2025	-	18-Jan-2026
SW001-12-002	CE 2009	Check of DSC MF/HF & SSB Radio Telephony (SSB Transceiver)	weekly	24-Oct-2025	-	31-Oct-2025
SW001-12-002	CE 2010	Check of DSC VHF & Telephony (VHF Radiotelephone)	weekly	24-Oct-2025	-	31-Oct-2025
SW001-12-002	CE 2011	Checking Of VHF (GMDSS)	weekly	24-Oct-2025	-	31-Oct-2025
NAVIGATION EQUIPMENT						
SE001-13-000						
SE001-13-000	NE 2001	RADAR	YEARLY	22-Dec-2024		22-Dec-2025
SE001-13-000	NE 2002	RADAR No. 1 Magnetron Replacement	5000	21-Feb-2024		Renewed 21/02/2024
SE001-13-000	NE 2003	RADAR No. 2 Magnetron Replacement	5000	21-Apr-2021		Renewed 11/04/2021
SE001-13-000	NE 2004	MAGNETIC COMPASS		24-Oct-2025		24-Oct-2026

SE001-13-000	NE 2005	Check of Wind Speed Indicator	Monthly	24-Aug-2025		24-Aug-2026
SE001-13-000	NE 2006	Check of NAVTEX	Monthly	24-Aug-2025		24-Aug-2026
SE001-13-001		COMMUNICATION EQUIPMENT				
SE001-13-001	CE 3001	VHF RADIO	YEARLY	9-Jun-2025		9-Jun-2026
SE001-13-001	CE 3002	HANDHELD VHF	YEARLY	9-Jun-2025		9-Jun-2026

	Date : 01/01/2018	Revision : 00	Ref : F-04-TEC/06
Planned Maintenance System			

Prepare by : Chief officer

Date : 25-Oct-25

Inspected by : Master

Date : 25-Oct-25

Ship Name : SC WINTER

Month : Oct-25

Ship Name : SC WINTER		Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.				
Equipment Code ທຳລາຍ	Job Code ໜີ້ສິນ	Job Name / Description ໜີ້ສິນ	RM/P	Last M. date	Last M. Hours	R/H (NEXT DUE)
FIRE FIGHTING EQUIPMENT						
SW001-16-002	FF 1301	Inspection Of Fire Detection & General Alarm	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1302	Inspection Of Fireman Outfit Condition	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1303	Inspection Of Fire Hose Condition	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1304	Inspection Of Fire Nozzle Condition	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1305	Inspection of Sprinkle Nozzles	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1306	Testing And Inspection Of Fire Doors	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1307	Testing And Inspection Of Fixed Co2 & Control System	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1308	Testing of Fire Alarm Sub-panel	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1309	Testing of Fire Alarm Bells & Horns	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1310	Testing of Heat Detector all unit	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1311	Testing of Smoke Detector all unit	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1312	Testing of Manually Operated Call Point	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1313	Testing of General Alarm	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1314	Checking of Watertight Doors	Monthly	23-Oct-2025	-	22-Nov-2025
SW001-16-002	FF 1315	Fixed fire detection and alarm systems	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1316	Self-Contained Breathing Apparatus (SCBA)	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1317	Emergency Escape Breathing Device (EEBD)	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1318	Water mist, water spray & sprinkler systems	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1319	Fire doors	weekly	24-Oct-2025	-	31-Oct-2025
SW001-16-002	FF 1320	Public address systems	weekly	24-Oct-2025	-	31-Oct-2025

SW001-16-002	FF 1321	General alarm systems	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1322	Fire mains	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1323	Fire pumps	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1324	Fire hydrants	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1325	Fire Hoses / Nozzles	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1326	Isolation Valves	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1327	Fixed fire-extinguishing systems and Alarms	weekly	24-Oct-2025	-	31-Oct-2025	Latest service 19/01/25
SW001-16-002	FF 1328	Portable fire extinguishers	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1329	Foam extinguishers	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1330	Drychemical extinguishers	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1331	CO2 extinguishers	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1332	Fireman's outfits	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1333	Ventilation systems and fire dampers	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1334	Fire Blanket & Flame Trap in Galley	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1335	Galley and deep fat cooking fire extinguishing systems	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1336	Fire Protection - Paint Lockers	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1337	International shore connection	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1338	Flu	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1339	FFE IMO symbol	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1340	Checking of Pilot Ladder	weekly	24-Oct-2025	-	31-Oct-2025	
SW001-16-002	FF 1341	Visual check of Rescue Boat Davit System	weekly	24-Oct-2025	-	31-Oct-2025	



Date : 01/01/2018

Revision : 00

Ref : F-04-TEC/06

Planned Maintenance System

Prepare by : Chief officer

Inspected by : Master

Ship Name : SC WINTER

Date : 25-Oct-25

Date : 25-Oct-25

Month : Oct-25

Ship Name : SC WINTER		Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.					
Ship Name							
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	W/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
SW001-17-000	LS 1300						
SW001-17-000	LS 1301	Moving from stowed position (Lifeboat)	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1302	Test run engines (not less than 3 min)	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1303	Visual inspection (Launching appliances)	Weekly	24-Oct-2025	-	31-Oct-2025	
		Lifeboat / Rescue Boat					
SW001-17-000	LS 1304	Inspection of equipment (Inventory)	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1305	Visual inspection (Condition)	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1306	Maintenance Launching arrangement	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1307	Liferafts No.1 / Davit – launched liferaft	Weekly	24-Oct-2025	-	31-Oct-2025	Liferaft version LS1312/25
SW001-17-000	LS 1308	Liferafts No.2 / Davit – launched liferaft	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1309	Liferafts No.3 / Davit – launched liferaft	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1310	Liferafts No.4 / Davit – launched liferaft	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1311	Liferafts No.5 / Davit – launched liferaft	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1312	Liferafts No.6 / Davit – launched liferaft	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1313	Life buoys	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1314	Life buoys with line	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1315	Life buoys with light	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1316	Life buoys with light and line	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1317	Life buoy light & smoke (MGB)	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1318	Life jekets with whistle & light	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1319	Thermal Protective Aids	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1320	Immersion suits	Weekly	N/A	-	N/A	
SW001-17-000	LS 1321	Line-throwing appliances	Weekly	24-Oct-2025	-	31-Oct-2025	

SW001-17-000	LS 1322	Parachute rocket signal	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1323	Emergency lighting	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1324	Oxygen resuscitation	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1325	Stretcher / Paraguard/escel rescue stretcher	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1326	SART 1: S/N: 2021090161 Batt. Exp. Feb-2027 2: S/N: RT 198680, Batt. Exp. Mar-2025	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1327	EPH8 S/N: 01164746	Weekly	24-Oct-2025	-	31-Oct-2025	HRU Exp. Apr 2026
SW001-17-000	LS 1328	Two way VHF radio / Battery	Weekly	24-Oct-2025	-	31-Oct-2025	
SW001-17-000	LS 1329	LSA IMO symbol	Weekly	24-Oct-2025	-	31-Oct-2025	



Date : 01/01/2018

Revision : 00

Ref : F-04-TEC/06

Planned Maintenance System

Prepare by : Chief officer

Inspected by : Master


Ship Name : SC WINTER

Date : 25-Oct-25

Date : 25-Oct-25

Month : Oct-25

Ship Name : SC WINTER		Total running hrs. Previous M. run. Hrs. Run. Hrs. from prev. M.					
Ship Name							
Equipment Code รหัสอุปกรณ์	Job Code รหัสงาน	Job Name / Description ชื่องาน	W/P	Last M. date	Last M. Hours	R/H (NEXT DUE)	Remark หมายเหตุ
SW001-19-000	HI 2000						
		HOSE INSPECTION					
SW001-19-000	HI 2001	FRESH WATER HOSE 2"x 25 m.	Monthly	23-Oct-2025	-	21-Nov-2025	Next pressure test: 05 Jan 2026
SW001-19-000	HI 2002	FRESH WATER HOSE 3"x 30 m.	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2003	BUNKER HOSE 3"x 30m. (MFD issue cert: 21/06/2016)	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2004	BUNKER HOSE 3"x 30m. (MFD issue cert: 14/09/2017)	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2005	BULK HOSE 4"x 30 m. (CBM)	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2006	BULK HOSE 5" x 25 m.	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2007	TOTO	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2008	BREAKAWAYS	-	-	-	N/A	
SW001-19-000	HI 2009	HOSE UNIT	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2010	TANK LIMIT	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2011	REDUCER 3" to 2"	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2012	REDUCER 4" to 2"	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2013	REDUCER 4" to 3"	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2014	REDUCER 5" to 3"	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2015	REDUCER 5" to 4"	Monthly	23-Oct-2025	-	21-Nov-2025	
SW001-19-000	HI 2015	REDUCER 5" to 4"	Monthly	23-Oct-2025	-	21-Nov-2025	



MONTHLY SOPEP/SMPEP MATERIALS EQUIPMENT INVENTORY LISTS

Vessel Name : SC Winter

Date: 01-Oct-25

No.	Description	Location	Quantity Requires	Remain onboard	Condition	Remarks
1	Sawdust ไม้เลื้อย	Lower P/cle DK "STBD"	50 kgs	50 kgs	Good	
2	Scupper Plugs (to meet requirements/size)	Lower P/cle DK "STBD"	6 pcs	6 pcs	Good	
3	Bucket –Non static ถัง	Lower P/cle DK "STBD"	4 pcs	4 pcs	Good	
4	Dust Pan –Non static ถังเก็บผง	Lower P/cle DK "STBD"	2 pcs	2 pcs	Good	
5	Shovel – Non Static พลั่ว	Lower P/cle DK "STBD"	2 pcs	2 pcs	Good	
6	Cotton Rags ผ้าขาว	Lower P/cle DK "STBD"	50 kgs	50 kgs	Good	
7	Plastic Broom ไม้กวาดพลาสติก	Lower P/cle DK "STBD"	2 pcs	2 pcs	Good	
8	Oil/Notions Liquid Substance Dispersant Liquid น้ำมันชนิดกระจาย	Lower P/cle DK "STBD"	100 Ltrs	100 Ltrs	Good	
9	Rubber Gloves ถุงมือยาง	Lower P/cle DK "STBD"	4 pairs	4 pairs	Good	
10	Boots รองเท้าบูท	Lower P/cle DK "STBD"	2 pairs	2 pairs	Good	
11	Oil Boom รั้วกั้นน้ำมัน	Lower P/cle DK "STBD"	2 Set	2 Set	Good	
12	ABSORBENTS PLATE 4/แผ่นน้ำมัน	Lower P/cle DK "STBD"	200 pcs	200 pcs	Good	
Date of Inspection / Rank				Verification by :		
Date: 01-October-2025				Date: 01-October-2025		

สมุดบันทึกเล่มนี้

PART I - MACHINERY SPACE OPERATIONS

ภาค 1 - การปฏิบัติงานในห้องเครื่อง

(All Ships)

(เรื่อทุกลำ)

Name of Ship: SC WINTER

Official Number: 6000-01280

เลขทะเบียนเรือ

Gross tonnage: 2,332

ต้นกรอส

Period from: ๒๕.๖๔.๒๐๒๕ to: ๓๐.๖๔.๒๐๒๕
ระยะเวลาตั้งแต่: ๒๕.๖๔.๒๐๒๕ ถึง: ๓๐.๖๔.๒๐๒๕

ระยะเวลาตั้งแต่

Note: Oil Record Book Part I shall be provided to every oil tanker of 150 gross tonnage and above and every ship of 400 gross tonnage and above, other than oil tankers, to record relevant machinery space operations. For oil tankers, Oil Record Book Part II shall also be provided to record relevant cargo/ballast operations.

Signature of Master:
นายมือสอนนายเรือ

MASTER

Name of Ship:

100

Distinctive number or letters:

ความยาก หรือ สัญญาณเรียก

MACHINERY SPACE OPERATIONS

สารปฏิบัติงานในห้องเครื่อง

Date: วันที่	Code(letter) รหัส(ตัวอักษร)	Item(number) หัวข้อ(หมายเลข)	Operation/signature of in charge บันทึกการปฏิบัติงาน/ลายเซ็นของนาย
10 Oct 2025	C	11.1	Dinky oil tank.
		11.2	Cap. 9.60 m ³
		11.3	Total retained 2.03m
10 Oct 2025	I		Chaiyaporn T. 012 10 Oct 2025. Weekly inventory of big holding tank, cap. 9.70 m ³ , was retained. 0.69 m ³
10 Oct 2025	C	11.1	Chaiyaporn T. 012 10 Oct 2025. Dinky oil tank.
		11.2	Cap. 9.60 m ³
		11.3	Total retained 2.08 m ³
		11.4	0.05 m ³ collected from 150-pm filter. Chaiyaporn T. 012 20 Oct 2025.
22 Oct 2025	I		12321MT of 100.58, 0.8313 @ 1.159 3:0000421. Deburked from tank. Tank no. Deburked Retained (MT) 11.1 15.99 0.71 11.2 16.00 0.67 11.3 16.10 0.82 11.4 16.20 0.85 M.V SCWINTER

เรือสนับสนุน-3.2 ตัวอย่างสมุดบันทึกน้ำมัน

Name of Ship: SC Winder
 ชื่อเรือ
 Distinctive number or letters: H3B 6251
 หมายเลข หรือ สัญลักษณ์เรียกขาน

MACHINERY SPACE OPERATIONS

การปฏิบัติงานในห้องเครื่อง

Date วันที่	Code(letter) รหัส(ตัวอักษร)	Item(number) หัวข้อ(หมายเลข)	Record of operation/signature of officer in charge บันทึกการปฏิบัติงาน/ลายมือชื่อนายช่าง
			Tank no. Reburnked Reburnked.
		2WP	24.242 0.72
		2WS	24.216 0.68
		3DWP	24.10 12.81
		3DWS	6.10 10.55
23 Oct 2025	e	11.1	Chaiyaporn T. e.p. 22 Oct 2025. Dirty oil tank.
		11.2	Cap. 9.60 m ³
		11.3	Total retained 2.13 m ³
		11.4	0.05 m ³ collected from Fuel tank.
25 Oct 2025	I		Chaiyaporn T. e.p. 23 Oct 2025. 82.12 m ³ of MGO, SO. 8.8313 @ 150 3:0.00021. Reburnked from tanks. Tank no. Reburnked Reburnked. 4WS 30.824 0.58 4WS 30.83 0.61 4DWS 0.87 0.18 4DWS 24.90 10.15 Reburnked to 150 - 1 ad. Amp-27 Edw: 1818 hrs. Stop. 2024 hrs. Chaiyaporn T. e.p. 23 Oct. 2025.
			M.V. SC WINDER
			MASTER

Signature of Master:
ลายมือชื่อนายเรือ

Name of Ship: SC Winder
 ชื่อเรือ
 Distinctive number or letters: H3B 6251
 หมายเลข หรือ สัญลักษณ์เรียกขาน

MACHINERY SPACE OPERATIONS

การปฏิบัติงานในห้องเครื่อง

Date วันที่	Code(letter) รหัส(ตัวอักษร)	Item(number) หัวข้อ(หมายเลข)	Record of operation/signature of officer in charge บันทึกการปฏิบัติงาน/ลายมือชื่อนายช่าง
26 Oct 2025	C	12.1	1.58 m ³ Used oil from Dirty oil tank, reburnked 0.55 m ³ and 1.60 m ³ . Used oil from DG 3 20.3 m ³ pump. Crankcase oil (renewed). Total 5.18 m ³ in 200 liter drums (Choketch Pumping) drums to shore facilities during port stay at Southport Jockey, Bangkok, Thailand. Chaiyaporn T. e.p. 26 Oct 2025. 26 Oct 2025
	e	11.1	Dirty oil tank.
		11.2	Cap. 9.60 m ³
		11.3	Total retained 0.55 m ³
26 Oct 2025	I		Chaiyaporn T. e.p. 26 Oct 2025. Weekly inventory of bilge holding tank cap. 0.570 m ³ Now retained 0.69 m ³ Chaiyaporn T. 26 Oct 2025 27 Oct 2025
	e	11.1	Dirty oil tank
		11.2	Cap. 9.60 m ³
			Total retained 0.69 m ³
			M.V. SC WINDER
			MASTER

Signature of Master:
ลายมือชื่อนายเรือ

APPENDIX-3 GARBAGE RECORD BOOK PART I

For all garbage other than cargo residues as defined in regulation 1.2 (Definition)
(All ships)

Name of Ship	Distinctive number or letters	IMO number
SC Winter	HSB 6251	9753064

Garbage category	B- Food wastes	C- Domestic wastes	D- Cooking oil	E- Incinerator ashes
A- Plastics				
F- Operational wastes				
G- Animal carcasses				
H- Fishing gear				
I- E-waste				

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) OR PORT (if discharged ashore) OR NAME OF SHIP (if discharged to another ship)	CATEGORY	ESTIMATED AMOUNT DISCHARGED INTO SEA (m ³)	TO RECEPTION FACILITIES ANOTHER SHIP (m ³)	ESTIMATED AMOUNT INCINERATED (m ³)	REMARKS: start-up time and position of incinerator; remarks	CERTIFICATION / SIGNATURE
29 08/25 20 : 00	08° 11.1' N 102° 29.6' E	B	0.04				
30 08/25 20 : 10	08° 11.5' N 102° 31.5' E	B	0.04				
01 10/25 15 : 00	PSB Jethy	A C	-	A=0.5 C=0.5			
02 10/25 20 : 00	08° 11.1' N 102° 29.6' E	B	0.04				
03 10/25 19 : 50	08° 11.1' N 102° 29.6' E	B	0.04				
04 10/25 20 : 10	08° 11.1' N 102° 29.5' E	B	0.04				
05 10/25 19 : 58	08° 11.1' N 102° 29.6' E	B	0.04				
06 10/25 20 : 10	08° 10.4' N 102° 29.6' E	B	0.04				

Exceptional discharge or loss of garbage under regulation 7 (Exceptions)

DATE/TIME	POSITION OF THE SHIP (latitude/longitude and water depth if known)	CATEGORY	ESTIMATED AMOUNT LOST OR DISCHARGED (m ³)	REMARKS ON THE REASON FOR THE DISCHARGE OR LOSS (e.g. reasonable precautions taken to prevent or minimize loss and general remarks)	CERTIFICATION / SIGNATURE
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/ /					
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/ /					

Master's signature: _____

Date: 06 OCT 2025



EFFECTIVE DATE: FEBRUARY 14, 2020, REVISION 03

26

APPENDIX-3 GARBAGE RECORD BOOK PART I

For all garbage other than cargo residues as defined in regulation 1.2 (Definition)
(All ships)

Name of Ship	Distinctive number or letters	IMO number
SC Winter	HSB 6251	9753064

Garbage category	B- Food wastes	C- Domestic wastes	D- Cooking oil	E- Incinerator ashes
A- Plastics				
F- Operational wastes				
G- Animal carcasses				
H- Fishing gear				
I- E-waste				

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) OR PORT (if discharged ashore) OR NAME OF SHIP (if discharged to another ship)	CATEGORY	ESTIMATED AMOUNT DISCHARGED INTO SEA (m ³)	TO RECEPTION FACILITIES ANOTHER SHIP (m ³)	ESTIMATED AMOUNT INCINERATED (m ³)	REMARKS: start-up time and position of incinerator; remarks	CERTIFICATION / SIGNATURE
09 10/25 10 : 00	PSB Jethy	A C	-	0.50 0.90			
08 10/25 20 : 00	08° 10.4' N 102° 29.6' E	B	0.04				
09 10/25 20 : 10	08° 10.4' N 102° 29.6' E	B	0.04				
10 10/25 20 : 00	08° 11.0' N 102° 29.5' E	B	0.04				
11 10/25 20 : 10	08° 11.5' N 102° 31.5' E	B	0.04				
12 10/25 10 : 00	PSB Jethy	A C	-	0.50 0.90			
13 10/25 20 : 00	08° 11.4' N 102° 31.4' E	B	0.04				
14 10/25 20 : 00	08° 11.1' N 102° 29.5' E	B	0.04				

Exceptional discharge or loss of garbage under regulation 7 (Exceptions)

DATE/TIME	POSITION OF THE SHIP (latitude/longitude and water depth if known)	CATEGORY	ESTIMATED AMOUNT LOST OR DISCHARGED (m ³)	REMARKS ON THE REASON FOR THE DISCHARGE OR LOSS (e.g. reasonable precautions taken to prevent or minimize loss and general remarks)	CERTIFICATION / SIGNATURE
/ /					
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/ /					

Master's signature: _____

Date: 14 OCT 2025



EFFECTIVE DATE: FEBRUARY 14, 2020, REVISION 03

APPENDIX-3 GARBAGE RECORD BOOK PART I

For all garbage other than cargo residues as defined in regulation 1.2 (Definition)
(All ships)

Name of Ship	Distinctive number or letters	IMO number
SC Winter	HSB 6251	9753064

Garbage category	B- Food wastes	C- Domestic wastes	D- Cooking oil	E- Incinerator ashes
A- Plastics				
F- Operational wastes				

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) OR PORT (if discharged ashore) OR NAME OF SHIP (if discharged to another ship)	CATEGORY	ESTIMATED AMOUNT DISCHARGED		REMARKS: start-up time and position of incinerator (general remarks)	CERTIFICATION / SIGNATURE
			INTO SEA (m³)	TO RECEPTION FACILITIES OR ANOTHER SHIP (m³)		
15/10/20 08:11 N 15:50 102° 15.4' E	B	B	0.04			
16/10/20 08:03 N 20:05 102° 15.4' E	A	A	—	0.5		
17/10/20 08:03 N 20:05 102° 15.4' E	B	B	0.04	0.5		
18/10/20 08:03 N 20:05 102° 15.4' E	B	B	0.04	0.5		
19/10/20 08:03 N 20:05 102° 15.4' E	B	B	0.04	0.5		
20/10/20 08:03 N 20:05 102° 15.4' E	B	B	0.04	0.5		
21/10/20 08:03 N 20:05 102° 15.4' E	B	B	0.04	0.5		
22/10/20 08:03 N 20:05 102° 15.4' E	B	B	0.04	0.5		

Exceptional discharge or loss of garbage under regulation 7 (Exceptions)

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) (if known)	CATEGORY	ESTIMATED AMOUNT LOST OR DISCHARGED (m³)	REMARKS ON THE REASON FOR THE DISCHARGE OR LOSS AND GENERAL REMARKS: (e.g. reasonable precautions taken to prevent such discharge or accidental loss and general remarks)	CERTIFICATION / SIGNATURE
/ /					
/ /					
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Master's signature: _____

Date: 22 OCT 2025

M.V SC WINTER

MASTER

EFFECTIVE DATE: FEBRUARY 14, 2020, REVISION 03

26

APPENDIX-3 GARBAGE RECORD BOOK PART I

For all garbage other than cargo residues as defined in regulation 1.2 (Definition)
(All ships)

Name of Ship	Distinctive number or letters	IMO number
SC Winter	HSB 6251	9753064

Garbage category	B- Food wastes	C- Domestic wastes	D- Cooking oil	E- Incinerator ashes
A- Plastics				
F- Operational wastes				

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) OR PORT (if discharged ashore) OR NAME OF SHIP (if discharged to another ship)	CATEGORY	ESTIMATED AMOUNT DISCHARGED		REMARKS: start-up time and position of incinerator (general remarks)	CERTIFICATION / SIGNATURE
			INTO SEA (m³)	TO RECEPTION FACILITIES OR ANOTHER SHIP (m³)		
03/10/25 08:03 N 20:10 102° 29.4' E	B	B	0.04			
24/10/25 08:03 N 20:00 102° 04.3' E	B	B	0.04			
25/10/25 15:30 26/10/25 15:30	PSB Jethy	A	—	0.5		
27/10/25 08:03 N 20:00 102° 52.6' E	PSB Jethy	B	0.18			
28/10/25 08:03 N 20:05 102° 31.4' E	B	B	0.04			
29/10/25 08:03 N 20:00 102° 31.4' E	B	B	0.06			
30/10/25 08:03 N 19:50 102° 39.0' E	B	B	0.03			

Exceptional discharge or loss of garbage under regulation 7 (Exceptions)

DATE/TIME	POSITION OF THE SHIP (latitude/longitude) (if known)	CATEGORY	ESTIMATED AMOUNT LOST OR DISCHARGED (m³)	REMARKS ON THE REASON FOR THE DISCHARGE OR LOSS AND GENERAL REMARKS: (e.g. reasonable precautions taken to prevent such discharge or accidental loss and general remarks)	CERTIFICATION / SIGNATURE
/ /					
/ /					
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/ /					

Master's signature: _____

Date: 30 OCT 2025

M.V SC WINTER

MASTER

EFFECTIVE DATE: FEBRUARY 14, 2020, REVISION 03

26

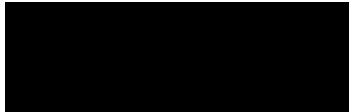
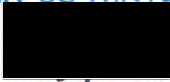

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MONTHLY SOPEP/SMPEP MATERIALS EQUIPMENT INVENTORY LISTS

Vessel Name : **SC Winter**

Date: **01-Oct-25**

No.	Description	Location	Quantity Requires	Remain onboard	Condition	Remarks
1	Sawdust ขี้เลื่อย	Lower F'cle DK "STBD"	50 kgs	50 kgs	Good	
2	Scupper Plugs (to meet requirements/size)	Lower F'cle DK "STBD"	6 pcs	6 pcs	Good	
3	Bucket –Non static ถัง	Lower F'cle DK "STBD"	4 pcs	4 pcs	Good	
4	Dust Pan –Non static ที่โกยผง	Lower F'cle DK "STBD"	2 pcs	2 pcs	Good	
5	Shovel – Non Static พลั่ว	Lower F'cle DK "STBD"	2 pcs	2 pcs	Good	
6	Cotton Rags ผ้าขาวรด	Lower F'cle DK "STBD"	50 kgs	50 kgs	Good	
7	Plastic Broom ไม้วาดพลาสติก	Lower F'cle DK "STBD"	2 pcs	2 pcs	Good	
8	Oil/Noxious Liquid Substance Dispersant Liquid น้ำมันขจัดคราบ	Lower F'cle DK "STBD"	100 Ltrs	100 Ltrs	Good	
9	Rubber Gloves ถุงมือยาง	Lower F'cle DK "STBD"	4 pairs	4 pairs	Good	
10	Boots รองเท้าบูท	Lower F'cle DK "STBD"	2 pairs	2 pairs	Good	
11	Oil Boom ที่กั้นน้ำมัน	Lower F'cle DK "STBD"	2 Set	2 Set	Good	
12	ABSORBENTS PLATE ผ้าซับน้ำมัน	Lower F'cle DK "STBD"	200 pcs	200 pcs	Good	
Date of Inspection / Rank			Verification by :			
 Date: 01-October-2025			  Date: 01-October-2025			



CM-EDRILL1-112/2025

Consignee: PSB Jetty SKL

No.	DAN / Invoice / Packing List	Consignee	Description	Qty.	Pkg.	W/slugs	Gross Wt (Tons.)	Dimension In (m.)			Volume(m³)
								Length	Width	Height	
1	EDRILL I-P-190/2025	PTTEP	BLUE RUBBISH SKIP SN: 13378	1	SKIP	Y	1.90	3.96	1.82	1.50	10.81
2		EDRILL	EDRILL BASKET SN: ED1-HH-005	1	BSK	Y	2.20	2.39	1.69	1.38	5.57
3		EDRILL	EDRILL BASKET SN: ED1-HH-006	1	BSK	Y	2.10	2.39	1.69	1.38	5.57
4		EDRILL	EDRILL BASKET SN: ED1-HH-001	1	BSK	Y	2.10	2.99	2.43	1.28	9.30
5		EDRILL	EDRILL BASKET SN: ED1-CB-001	1	BSK	Y	2.30	10.00	1.19	1.08	12.85
6		EDRILL	EDRILL CONTAINER SN: ED1-MC-002	1	BSK	Y	2.20	2.53	2.33	3.13	18.45
7		EDRILL	EDRILL CONTAINER SN: ED1-MC-008	1	CONT	Y	1.80	1.90	1.66	2.80	8.83
8		EDRILL	JETA1 TANK SN:NM/TT/0001/23	1	TANK	Y	3.10	1.85	1.85	2.50	8.56
9		EDRILL	JETA1 TANK SN:NM/TT/0004/23	1	TANK	Y	2.70	1.85	1.85	2.50	8.56
10		BHI - MUD	BASKET NO.TOMS-BK-110	1	BSK	Y	1.00	1.60	1.60	1.62	4.15
11		BHI - MUD	BASKET NO.TOMS-BK-197	1	BSK	Y	1.00	1.60	1.60	1.62	4.15
12		BHI - MUD	PALLET CARRIER SN: PROMPT-0004, 0349AVP-116GTM-0154, 0218, 0263, 0146 (A STACK OF 7 PALLETS)	1	PL	Y	1.00	1.58	1.58	0.80	2.00
13		BHI - MUD	PALLET CARRIER SN: TXP-0244, 0138, 0098, 0024, 0280, 0042 (A STACK OF 6 PALLETS)	1	PL	Y	1.00	1.58	1.58	0.80	2.00
14		BHI - MUD	PAC LV - 40 SX, WITH PALLET CARRIER SN: PROMPT-0054	1	PL	Y	1.00	1.58	1.58	0.80	2.00
15		SIB CMT	BASKET SN:TXP-BKC-ABB-0029	1	BSK	Y	1.00	1.65	1.65	1.85	5.04
16		SIB CMT	BASKET SN:TOM-BK-0012	1	BSK	Y	1.00	1.65	1.65	1.85	5.04
17		SIB CMT	Skid CMH-701 + 7" Conventional Cement head	1	SKID	Y	1.00	1.60	0.80	1.33	1.70
18		WFT DD	USED 4-3/4" Jar	1	BDL	Y	0.50	8.50	0.20	0.20	0.34
19		WFT MWD	Skid basket 'AORU250044-2	1	BSK	Y	1.00	2.50	1.20	1.40	2.0
				Total	19		30				

เรือสนับสนุน-3.5 ตัวอย่างใบกำกับการขนส่งของเสีย

Date:

1. ส่วนของผู้ก่อกำเนิดของเสียอันตราย : This section must completed by the Generator

1) ชื่อผู้กำเนิด : Generator Name SC WINTER	2) เลขประจำตัวผู้กำเนิดของเสียอันตราย : Generator's ID DIW-G-
สถานที่กำเนิด : Generator Address 159/6 ต.ชัยคิ อ.สิงหนคร จ.สงขลา	โทรศัพท์ : Phone โทรสาร : Fax กรณีฉุกเฉิน : Emergency

3) ผู้ขนส่งของเสียอันตราย : Transporter	เลขประจำตัวผู้ขนส่งของเสียอันตราย : Transporter's ID DIW-T- 065600033
ชื่อบริษัท : Company Name	

4) ผู้เก็บกัก บำบัด และกำจัดของเสียอันตราย : Treatment Storage Disposal Facilities (TSDF's)	เลขประจำตัวผู้เก็บกัก บำบัด และกำจัดของเสียอันตราย : Disposer's ID DIW-D-186000113
ชื่อบริษัท : TSDF's Name บริษัท ก้องเพชร จำกัด	<input type="checkbox"/>

5) รายละเอียดของของเสียอันตรายที่ขนส่งเคลื่อนย้าย :

ลำดับ No.	รายละเอียด (Description)	รหัสของเสีย อันตราย : Waste ID	รหัสสิ่งปฏิกูลหรือ วัสดุที่ไม่ใช่แล้ว	ภาชนะที่บรรจุ : Containers จำนวน : No. ชนิด : Type	ปริมาตรสุทธิ : Quantity	หน่วยน้ำหนัก : Unit Wt / Vol	รายละเอียดเพิ่มเติม : Additional Information
1	น้ำมันหล่อลื่น ใช้จนแล้ว	90-3082	13.02.08	16 กังโกละ	3,180	ลิตร	
2	น้ำมันพืช ใช้จนแล้ว	"	"	11 แกลอน	55	ลิตร	
3							
4							
5							
6							

รวมปริมาตรของเสียอันตรายทั้งหมด : Total Quantity ของเหลว : Liquid 3135 ลิตร/ลูกบาศก์เมตร : Liters/Cu.m ของแข็ง : Solid กิโลกรัม/ตัน : Kgs/To
--

6) การปฏิบัติที่มีลักษณะพิเศษ และข้อมูลเพิ่มเติม Special Handling Instructions and Additional Information	เวลาขาออก เลขไมล์ขาออก	เวลาเข้าบริษัท เลขไมล์เข้าบริษัท
--	---------------------------	-------------------------------------

7) คำรับรอง : ข้าพเจ้าขอรับรองว่าได้ส่งมอบของเสียอันตรายแล้ว ตามที่ระบุข้างต้นและมีการบรรจุ ติดป้าย หรือฉลากอย่างเหมาะสมและตรงตามข้อกำหนดของกฎหมายทุกประการ :
Generator Certificate : I hereby declare that the contents of this consignment are accurately described above and have been packed and labeled and are in proper condition for transport according to regulation.

ลงชื่อ Generator's Name	ลายเซ็น : Signature	วันที่ : Date 26 เดือน : Month 10 พ.ศ. : Year 2025
-------------------------	---------------------	--

2. ส่วนของผู้ขนส่งของเสียอันตราย : This section must completed by the Transporter

1) ชื่อผู้ขนส่ง : Transporter's Name	2) พาหนะที่ใช้ Vehicle Truck <input checked="" type="checkbox"/> รถบรรทุก <input type="checkbox"/> รถไฟ <input type="checkbox"/> เรือ <input type="checkbox"/> เครื่องบิน <input type="checkbox"/>
เลขประจำตัวผู้ขนส่ง : Transporter's ID DIW-T- 065600033	3) เลขทะเบียน พาหนะ : Vehicle ID ฝท 8780
โทรศัพท์ : Phone โทรสาร : Fax	ฉุกเฉิน : Emergency

4) คำรับรอง : ข้าพเจ้าขอรับรองว่าได้รับของเสียอันตรายแล้วตามที่ระบุข้างต้น และการขนส่งได้เป็นไปตามข้อกำหนดของกฎหมายทุกประการ
Transporter Certification : I hereby declare that I have received the type and quantity of waste as described above by the generator and that waste has transported according to regulations.

โดยขนส่งจากจังหวัด : From สงขลา ไปยังจังหวัด : To สมุทรสาคร	ใช้ระยะเวลาประมาณ : Time Spending ชม./วัน : Hours/Day
ลงชื่อผู้ขนส่ง : Transporter's Name	ลายเซ็น : Signature
วันที่ : Date 26 เดือน : Month 10 พ.ศ. : Year 2025	

3. ส่วนของผู้ประกอบการสถานเก็บกัก บำบัด และกำจัดของเสียอันตราย : This section must completed by TSDF's

1) ชื่อผู้รับกำจัด TSDF's Name บริษัท ก้องเพชร จำกัด	2) เลขประจำตัวผู้รับกำจัด TSDF's ID DIW-D-186000113
สถานที่กำจัด : TSDF's Address 25/58 หมู่ 3 ตำบลนาดี อำเภอเมือง จังหวัดสมุทรสาคร 74000	โทรศัพท์ : Phone 0-3446-6242 โทรสาร : Fax 0-3446-6243 กรณีฉุกเฉิน : Emergency

3) คำรับรอง : ข้าพเจ้าขอรับรองว่าได้รับของเสียอันตรายแล้วตามปริมาณที่ระบุข้างต้นนี้
TSDF's certificate of arrival : I hereby declare that I have received the reference load.

และสามารถกำจัดของเสียที่รับมานี้ได้ภายในระยะเวลา : Treatment Period ☐ วัน : Day ☐ เดือน : Month ☐ ปี : Year นับจากวันที่ได้รับของเสีย : Since the day that received waste

ลงชื่อผู้รับกำจัด : TSDF's Name	ลายเซ็น : Signature	วันที่ : Date	เดือน : Month	พ.ศ. : Year
---------------------------------	---------------------	---------------	---------------	-------------

4) กรณีของเสียอันตรายไม่ตรงตามที่แจ้ง : Discrepancy Notification


ประเภทของเสียอันตราย : Type of Waste	ปริมาณ : Quantity
--------------------------------------	-------------------

การดำเนินงาน : Action Taken <input type="checkbox"/> ส่งคืน : Returned <input type="checkbox"/> จัดประเภทใหม่ : Reclassified / รหัส : Waste ID <input type="checkbox"/> รับกำจัด : Accepted เหตุผล : Reason of Action

วันที่ส่งคืน : Date Returned (วัน/เดือน/ปี : dd / mm / yy) เลขทะเบียนใบกำกับที่ขนส่งของเสียอันตรายที่ส่งกลับ : Returned Manifest No

ชื่อผู้ส่งคืน : TSDF's Name	ลายเซ็นผู้ส่งคืน : TSDF's Signature
-----------------------------	-------------------------------------


*ฉบับวันที่

	Date : 02/09/2024	Revision : 9	Ref : P-03-02
	Originator by : Crew Manager	Reviewed by : Marine QSHÉ Manager	Approved by : Deputy Managing Director
COMPETENCE AND TRAINING			

SECTION 3 : MANAGEMENT OF VESSEL PERSONNEL

P-03-02

Competence and Training

	Date : 02/09/2024	Revision : 9	Ref : P-03-02
	Originator by : Crew Manager	Reviewed by : Marine QSHSE Manager	Approved by : Deputy Managing Director


COMPETENCE AND TRAINING

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เรือสนับสนุน-3.6 การฝึกอบรมพนักงานและผู้รับเหมาของเรือ

[illegible]

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	<h3 style="text-align: center;">COMPETENCE AND TRAINING</h3>		

1. OBJECTIVES


Procedures to ensure that Shipboard and Head Office Staff are adequately trained.

2. SCOPE

These procedures are applicable to the Head Office and Shipboard Staffs.

3. DEFINITIONS

N/A

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4. RESPONSIBILITY

Deputy Managing Director

- The **DMD** is overall responsible for effective training for the Head Office and Shipboard Staffs, and approves training.
- Approving the training program according to the training need and the Budget.
- The **DMD** is responsible for, ensuring a training needs assessment is conducted annually, a training matrix developed, adequate training is approved and conducted, and that feedback on training conducted is taken into account in the next assessment.

Crew Manager

The **Crew Manager** is responsible for

- Communicating the Marine Training Policy to all personnel
- Ensuring that adequate resources are provided, in terms of personnel, facilities, equipment and materials
- Monitor the effectiveness of training programs, assessing reports and taking appropriate action
- Effecting liaising between Head of each Departments of the Company, to ensure effectiveness in both technical and human factors in training.

The Crew Manager is responsible for the identification of training needs, training and review of training, for his staff and for shipboard staff.

Marine Training Officer

Marine Training Officer is responsible for onboard training program.


- Gathering training needs from every department for O/B Training.
- Design O/B Training Program for each vessel according crew certification and training needs requirement.
- Conduct O/B Training according to training plan.
- Completing other tasks associate with training assigned by **Crew Manager**
- To co-ordinate with Department and Team to access Sea Staffs Training.
- Need Analysis, Training Budget and Training Plan.
- Manage and Organize Training materials/ equipment and effective operations.
- To evaluate and assessment of Vessel Training Program, and follow up.
- Completing other tasks associate with training assign by the **Crew Manager**.

Heads of Department


The Heads of Department are responsible for the, training and review of training, for their staff.

They shall be responsible for

- Identification of training needs
- Communicating with the **DMD** on the training needs of personnel, the resources required for training.
- Communicating with the **Crew Manager** on the Marine Training Policy and the objectives and effectiveness of training.

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- Liaising with Company Trainers or contracted Training Organizations, to arrange specialized training for the staff in each department.
- Communicating the Company's training policy to the personnel in their department.
- Reporting on the training programs in their department to the **DMD**, with a copy to the **Crew Manager**.
- Monitoring the effectiveness of training programs in his department, assessing reports and taking appropriate action.
- The **Crew Manager** is responsible for the identification of training needs, training and review of training, for his staff and for shipboard staff.

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5. PROCEDURE

5.1 Marine Training Policy

All staff involved in the Safety Management System are to be properly trained. This allows the Company to operate efficiently and ships to be operated safely.

The Company has systematized training, including:

- Training needs identification
- Provision of training
- Stated duties and responsibilities with respect to training and being trained
- Regular review of training.

In providing systematized training comply with national and international rules, regulations, codes and guidelines, the Company seeks to:

- Ensure that all staff is fully conversant with the Company's Safety and Environmental Pollution Policy
- Ensure that new Head Office and Shipboard personnel and personnel transferred to new assignments are given proper familiarization with their duties
- All persons involved in the Company's Safety Management System have an adequate understanding of relevant rules, regulations codes and guidelines.
- Any training required in support of the Safety Management System is provided
- Encourage safe working practices
- Ensure that all Shipboard and Shipboard staff are suitably equipped to carry out their duties
- Encourage all staff to further their knowledge and understanding
- Prepare for emergencies on board ship
- Prepare the office staff for adequate response to emergencies

5.2 Shore Based Personnel Training Procedures

5.2.1 General


The shore-based personnel may be trained or upgraded in their respective area of responsibilities, such as marine operation management, computers, or safety management.

The following persons are responsible for identifying the training needs, arranging training and reviewing training for the staff in their departments:

- Operation Manager
- Technical Manager
- Crew Manager
- QSHE Manager

5.2.2 Training Needs

- It is the responsibility of the department heads noted above to assess the training needs of the staff in his department (including himself).
- In particular, the analysis shall include ensuring that the head office management have adequate knowledge to advise on operating, maintaining and repairing the vessel, cargo stowage and carriage, cargo transfer and emergency response.

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- The heads of department shall ensure that the persons, including themselves in their departments are trained to the level specified in the training needs analysis.
- Training can be defined as having undergone a course by a recognized authority such as a Classification Society, Consultancy, School or College, engine manufacturer or in - house. There shall be records kept of such training, which shall be filed as mentioned above.

5.2.3 Training Review

The heads of department shall assess the training needs at least once per year.

5.2.4 Resources

Minimum resources for training shall be those to meet the requirements of national and international rules, regulations, codes and guidelines.

Each Head Office department is to be provided with necessary equipment and materials to the approval of the **DMD**.

5.2.5 Shore Base Training Subjects


The training provided ashore is divided as follows:

- Appraisal reports from vessels
- Performance during a drill and / or exercise as reported by **Master**
- Appraisal reports from Superintendents
- Company requirements
- Industry requirements, including Oil Majors
- Regulatory changes
- Installation of new equipment / machinery
- Introduction of new systems / processes

Areas to be considered for training needs may be taken from the following:

Management

- Administrative skills
- Economics and Management
- Health and safety
- Maritime Commerce
- Maritime Law
- Personnel Management
- Quality Assurance & Safety Management
- Training of Auditors
- Training of Trainers
- Personnel Administration
- Risk Management and Insurance.

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Maritime Technology

- Cargo Operations
- Cargo Care
- Catering and Hotel Services
- Communications
- Computer Awareness
- Control Systems and Automation
- Electrical and Electronic Engineering
- Information Technology
- Loss Prevention
- Maintenance and Planned Maintenance
- Marine Engineering
- Medical and First Aid
- Navigation
- Prevention of Pollution
- Radio Communication
- Seamanship and Nautical Knowledge
- Security and Crime Prevention
- Ship Construction and Maintenance
- Ship and Machinery Surveys
- Special Operations
- Survival

General Interest and Recreational Knowledge


- Career Development
- Computer Based Learning Opportunities
- Educational Programmed and Qualifications
- Language Courses
- Libraries and Information Sources
- Oceanography and the Marine Environment
- Open and Distance Learning Sources
- Ports and the Maritime Infrastructure
- Ship broking and Agency Work
- Transport Management

5.2.6 Training Records

Training records and copies of certificates relating to the various courses attended by the individual staff are kept in their respective personal files.
Additionally, a duplicate training file on all key personnel in the respective departments shall be kept by the department heads noted above.

Controlled document do not duplicate.

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5.3 Shipboard Personnel Training Procedures

5.3.1 General

The Company is committed to provide training for all **Officers** and **Crew employed** with the company over and above the minimum requirements of Flag State. With rapidly changing technology and rules, it is understood by Company management that there is no alternative to continuous training for upgrading professional skills and keeping the staff abreast with current industry requirement.

The **DMD** is responsible for, and shall approve all shipboard and shore based training.

The **Crew Manager** is responsible for Shipboard Training.

The **Master** is responsible for the training on board his vessel.

5.3.2 Training Needs

The **Crew Manager** shall assess the training needs for the fleet in line with clients' requirement and [Appendix 7.1: Crew Certification & Training Need Requirement](#)

5.3.3 Training Review

The **Master** shall review the training needs at least once per year and **Crew Manager** will set up training year plan in advance as [F-03-CRW/16 Crew Training Year Plan](#)

5.3.4 Resources

Minimum resources for training shall be those to meet the requirements of national and international rules, regulations, codes and guidelines.

The **Crew Manager** is responsible for ensuring the effectiveness.

5.3.5 Appraisal

Results of appraisals may indicate that the Officer or Rating requires training in a particular subject. It is the responsibility of the **Crew Manager** to identify such needs if any.

5.3.6 Personal Request

The Department Head shall consider any request by **Officers** or Ratings for training such as courses, certificates or seminars.

5.3.7 Recommendation


Masters or **Chief Engineers** may recommend training for **Officers** or Ratings, which shall be considered by the Department Head.

5.3.8 On the Job Training for Sea Staff

It is the responsibility of the **Master** to ensure that adequate and pertinent training of Officers and Ratings is performed, as applicable. See the Shipboard Operations Procedures Manual. The **Crew Manager** shall monitor the on - board training.

Controlled document do not duplicate.

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5.3.9 Training Record Book

The crew shall ensure that their own Training Record Book is handed to the **Master** once joining to a vessel and handed to the Crew Department once Relieving from the vessel.

The Crew Department shall provide Training Record Book for each crew and handed to them before joining vessel.

5.3.10 Special training required

When special training course is requires by the Marine Industrial Standards and/or Client/Charterer's requirement in especially for ensuring that our **Master** and shipboard personnel are met with those standards/requirements.

These additional training may relate to experience of the **Master** and/or shipboard personnel on the specific job assignment or experience on the ship's type.

The Company shall ensure that those special training courses shall take place with individual Master or Shipboard personnel in time prior performs their tasks.

Records shall be updated within the Training Record Book (see 5.3.9)

6. RELATED FORMS

- F-03-CRW/16 Crew Training Year Plan
- F-03-CRW/17 Attendant Form
- F-03-CRW/18 Evaluation Form

7. APPENDIX

- Appendix 7.1 : Crew Certification & Training Need Requirement

8. REFERENCE STANDARDS

N/A

Controlled document do not duplicate.

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เรือสนับสนุน-3.7 ตัวอย่างรายงานการตรวจประเมินความปลอดภัย
และสุขลักษณะของสถานที่ทำงานและที่พักอาศัย

SC WINTER

14 March 2025



NOISE SURVEY REPORT

Vessel : SC WINTER
Date : 14 March 2025

1.10 Displacement at maximum draught

4041.34 t

1.11 Date of keel laying

25 Nov 2014

1.12 Date of delivery

06 Jun 2016

2. Machinery particulars

1) Propulsion machinery

Manufacturer : Rolls-Royce

Type : Azimuth Thruster US 255 Number of units: 2

Maximum cont. rating power: 2400 x2 kW

Normal designed service shaft speed: Nil r.p.m.

Normal service rating power: 2400 kW

2) Auxiliary diesel engines

Manufacturer : Daihatsu Diesel Mfg. Co., Ltd., Japan Type : 6DEE-23

Output : 1425 kW Number of units: 4

3) Main reduction gear: N/A

4) Type of propeller (fixed propeller, controllable pitch propeller, Voith-Schneider propeller)

Number of propellers : 2 Number of blades : 4

Designed propeller shaft speed : Nil r.p.m.

1. Ship particulars

1.1 Name of ship

SC WINTER

1.2 Port of registry

Bangkok

1.3 Name and address of ship owner, managing owner or agent

SC Management Co., Ltd.
SC Group Building, 88 , The Parkland Rd , Bangna-nuea, Bangna ,
Bangkok , 10260

1.4 Name and address of shipbuilder

Nam Cheong International Co. Ltd / ...LOT 1, Level2, Wisma Siamloh, Jalan
Kemajuan, 87007 Federal Territory of Labuan, Malaysia

1.5 Place of build

China

1.6 Builder's number

IMO No. 9753064

1.7 Gross tonnage

2332 MT

1.8 Type of ship

AHTS

1.9 Ship's dimensions

- Length 64.0 m.
- Breadth 16.0 m.
- Depth 6.8 m.
- Maximum draught (summer load line) 5.47 m.

3. Measuring instrumentation

1) Instrumentation

	Make	Type	Serial No.
Sound level meter	BSWA TECH/NDSM 309	BSWA 309	598015
Microphone	BSWA TECH	MPA309T: 1/2 inch pre-polarized measurement microphone, Class 2. Sensitivity: 40mV/Pa. Frequency Range: 250Hz	MP309/590860
	Make	Type	Serial No.
Filter	BSWA TECH	All float-point digital signal processing (digital detector and filter)	591684
Windscreen	BSWA TECH	-	540258
Calibrator	BK4231	CA111, Class 1, 94dB/114dB, 1kHz	-
Other equipment	-	-	-

2) Calibration of sound level meter

- at survey by competent authority

	Date	Calibration	Start	Finish
Calibration of sound level meter	26-11-2024	- Test Standard EN 61326-1:2013 EN 51326-2-2:2013	26-11-2024	26-11-2024

4. Conditions during measurement

1) Date of measurement : 14 February 2025

Starting time : 12.30 hrs. Completion time : 14.00 hrs.

2) Vessel's position during measurement

Southern logistic jetty, Songkhla

3) Type of voyage Maintenance day

4) Conditions during measurement

- Draught forward 4.8 m.

- Draught aft 4.9 m.

- Depth of water under keel 4.2 m.

5) Weather conditions

- Wind force 7.5 – 8 Kts.

- Sea state Light breeze

6) Ship speed Kts.

7) Actual propeller shaft speed : r.p.m.

8) Propeller pitch :

9) Propulsion machinery speed : r.p.m.

10) Propulsion machinery power : DG3 160 KW / DG4 165 KW

11) Number of propulsion machinery units operating : Unit

12) Number of diesel auxiliary engines operating : 2 Unit

13) Number of turbo generators operating : Unit

14) Other auxiliary equipment operating : Unit

5. Measuring data

Position	Noise limits dB (A)	Measured sound pressure levels dB(A)	Exposure Limit Time / PPE
Work Spaces			
1.Machinery spaces	85	100.9	12 min. Not use ear plug/ ear muff
2. Machinery Control rooms	85	68.8	
3 Workshops	85	79.1	
Navigation spaces			
4.Navigating bridge and chartrooms	65	60.4	
Accommodation spaces			
5.Hospitals	60	59	
6.Cabins	60	58.8	
7.Offices	65	55.5	
8.Mess rooms	65	60.1	
Service spaces			
9.Galleys	75	57.7	
10. Unoccupied spaces, such access ways etc.	85	71.7	

*The value of the measurement exceed the safety standards

6. Main noise abatement measure (list measure taken)

- Safety Sign should be posted at the entrance.
- Use properly PPE.
- In case of noise over 85 dB must wear equipment PPE every time.

7. Remark (list any exception to the code)

Mr.Theephop Phithakphongphan

Name

SC Management Co., Ltd
88 The Parkland Rd.,
Bangna-uea, Bangna
Bangkok 10260
Address

Southern logistic Jetty

Place

14 March 2025

Date

Signature

การเก็บผลการตรวจวัดเสียง

Vessel : SC WINTER

Date : 14 March 2025

Measuring Data

Position	Noise limit dB(A)	Measured sound pressure levels dB(A)	Exposure Limit Time / PPE
Work Spaces			
1.Machinery spaces	85	100.9	Before use PPE 12 min./ After use ear plug 1 hrs.49 min. And use ear muff 7 hrs. 17 min

* Thai Law : Analysis of Work Environment Regulations on Illumination and Noise 26 January 2561 (ประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง มาตรฐานระดับเสียงที่อนุญาตให้ถูกฟังได้รับตลอดระยะเวลาการทำงานในแต่ละ วัน)

บริเวณที่ไม่มีเสียงดังเกินกว่า 85 เดซิเบล(เอ) คือบริเวณห้องเครื่อง (Machinery space) โดยเสียงดังที่เกิดขึ้นมาจากเครื่องจักรที่ใช้เดินเครื่องเรือ ซึ่งทางบริษัทฯ ได้จัดให้คนประจำเรือสวมใส่อุปกรณ์ป้องกันอันตรายทางการได้ยินในการปฏิบัติงาน ประกอบไปด้วย

1. Ear Plug

Ear plug ขอบ 3M รุ่น E- A- R soft yellow neon ; NRR= 33 dB(A)



Ear plug มีค่าอัตราการลดเสียง (NRR) คือ 33 ซึ่งเมื่อคนประจำเรือได้ขณะทำงานบริเวณ

1. Machinery space ที่มีเสียงดัง 100.9 dB(A) สามารถลดระดับเสียงได้ 9.5 เดซิเบล หลังจากการคำนวณคนประจำเรือจึงได้รับสัมผัสเสียง 91.4 เดซิเบล ซึ่งเกินค่ามาตรฐานที่ทางกฎหมายกำหนด คือ 85 เดซิเบล ดังนั้นได้จาก

$$\begin{aligned} \text{สูตร } L_{\text{eq}} &= \text{dB(A)} - [(NRR - 50\%NRR) - C_0] * \dots\dots\dots(1) \\ L_{\text{eq}} &= \text{ระดับเสียงดังภายใต้อุปกรณ์ป้องกันการได้ยิน (dB(A))} \\ NRR &= \text{อัตราการลดทอนเสียง (dB(A))} \\ C_0 &= 7 \text{ กรณีระดับเสียงก่อนใส่อุปกรณ์ มีความถี่ของเสียง ในช่วงความถี่ A ซึ่งเป็นความถี่ที่มนุษย์ได้ยิน} \end{aligned}$$

* สูตรอ้างอิงจากประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องการคำนวณระดับเสียงที่สัมผัสในชุมชนเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล เล่ม ๑๑๕ ตอน พิเศษ ๑๑๖ ราชกิจจานุเบกษา ๑๔ กุมภาพันธ์ ๒๕๖๑

ระยะเวลาในการรับสัมผัสเสียงหลังจากการใช้ Ear Plug

1.Machinery space จากการรับสัมผัสเสียง 100.9 เดซิเบล คนประจำเรือสามารถรับสัมผัสเสียงต่อเนื่องตลอดระยะเวลาทำงานได้ติดต่อกันไม่เกิน 1 ชั่วโมง 49 นาที สามารถคำนวณได้จาก

$$\text{สูตร } T_{\text{ชั่วโมง}} = \frac{8}{2^{(L-85)/3}} \dots\dots\dots(2)$$

T ชั่วโมง = เวลาการทำงานที่อนุญาตให้ได้รับเสียง (ชั่วโมง)
L = ระดับเสียง (dB(A))

* สูตรอ้างอิงจากประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องการคำนวณระดับเสียงที่สัมผัสในชุมชนเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล เล่ม ๑๑๕ ตอน พิเศษ ๑๑๖ ราชกิจจานุเบกษา ๑๔ กุมภาพันธ์ ๒๕๖๑

2. Ear muff

1) Ear muff 3M รุ่น PELTOR_op-time 105 H10A HV NRR; 30



Ear Muff มีค่าอัตราการลดเสียง (NRR) คือ 30 ซึ่งเมื่อคนประจำเรือใส่ขณะทำงานบริเวณที่มีเสียงดัง 100.9 เดซิเบล สามารถลดระดับเสียงได้ 15.5 เดซิเบล คนประจำเรือจึงได้รับสัมผัสเสียง 85.4 เดซิเบล ซึ่งไม่เกินค่ามาตรฐานที่ทางกฎหมายกำหนด คือ 85 เดซิเบล ซึ่งคำนวณได้จาก สูตร (1)

สูตร $L'_{A1} = dB(A) - [(NRR - 25\%NRR) - C_0]^{***} \dots\dots\dots(1)$
 L'_{A1} = ระดับเสียงดังภายใต้อุปกรณ์ปกป้องการได้ยิน (dB(A))
NRR = อัตราการลดทอนเสียง (dB(A))
 $C_0 = 7$ กรณีระดับเสียงก่อนใส่อุปกรณ์ มีความถี่ของเสียง ในช่วงความถี่ A ซึ่งเป็นความถี่ที่มนุษย์ได้ยิน

* สูตรอ้างอิงจากประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องการคำนวณระดับเสียงที่สัมผัสในขณะสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล เล่ม ๑๑๕ ตอน พิเศษ ๑๑๖ ราชกิจจานุเบกษา ๑๔ กุมภาพันธ์ ๒๕๖๑

Appended

ระยะเวลาในการรับสัมผัสเสียงหลังจากการใส่ Ear muff 3M รุ่น PELTOR_op-time 105 H10A HV NRR; 30
1.Machinery space จากการรับสัมผัสเสียง 100.9 เดซิเบล คนประจำเรือสามารถรับสัมผัสเสียงต่อเนื่องตลอดระยะเวลาทำงานได้ คิดต่อกัน ไม่เกิน 7 ชั่วโมง 17 นาที สามารถคำนวณได้จาก สูตร (2)

สูตร $T_{ชั่วโมง} = \frac{8}{2^{(L-85)/3}} \dots\dots\dots$ สูตร(2)

$T_{ชั่วโมง}$ = เวลาการทำงานที่อนุญาตให้ได้รับเสียง (ชั่วโมง)
L = ระดับเสียง (dB(A))

* สูตรอ้างอิงจากประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่องการคำนวณระดับเสียงที่สัมผัสในขณะสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล เล่ม ๑๑๕ ตอน พิเศษ ๑๑๖ ราชกิจจานุเบกษา ๑๔ กุมภาพันธ์ ๒๕๖๑

ATTACHMENT						
Measurements and analysis in the work environment						
Name of the work.	To the employee	Volume, the employee has been exposed (dB(A)			Time work. The interview (hours).	The average noise exposure over time (dB(A)
		S1	S2	S3		
1 Machinery spaces	Engine crew	99.1	98.1	98.8	6	98.6
2 Machinery control rooms	Engine crew	70.1	70.5	70.4	6	70.3
3 Workshops	Engine crew	78.8	79.4	79.2	6	79.1
4 Navigating bridge and chartrooms	Engine crew	60.8	58.1	58	6	58.9
5 Hospitals	Engine crew	58.5	58.9	58.8	6	58.7
6 Cabins	Master, crew	59.2	59.5	59.5	6	59.4
7 Mess rooms	Engine crew	58.2	57.5	59.1	6	58.2
8 Offices	Engine crew	60.1	60.9	59.9	6	60.3
9 Gallies	Engine crew	64.2	64	64.9	6	64.3
10 Unoccupied spaces, such access ways etc.	Engine crew	72.8	71.6	72.5	6	72.3

*The value of the measurement exceed the safety standards

Sensing image

SC WINTER at Southern Logistic Jetty on 14 March 2025



Theepop

Mr.Theepop Phithakphongphan
Senior Safety Marine & Offshore

CERIFICATE OF CALIBRATION



Certificate of Calibration

Certificate Number : SPR24110366-1 Page : 1 of 3
Customer : SC OFFSHORE SERVICES CO., LTD.
88 THE PARKLAND RD., BANGNA NUEA, BANGNA, BANGKOK
10260

Equipment Name : Sound Level Meter
Manufacturer : Neediss
Model : NDSM 309
Serial Number : 598015
ID. Number : BS-NDSM309
Environmental Conditions
Ambient Temperature : 23 °C ± 3 °C Received Date : 22 Nov 2024
Relative Humidity : 50 % ± 15 % Calibration Date : 26 Nov 2024
Location of Calibration : In-Lab Recommend Due Date : 26 Nov 2025
Calibration Procedure : SP-CPE-04-01 Date of Issue : 27 Nov 2024

Method of Calibration

This certifies that the above instrument was calibrated in compliance with the calibration system requirement of ISO/IEC 17025:2017 in accordance with reference procedure. Standards used to perform this calibration are certified by NIST or equivalent, National metrology institute, Natural physical constants, consensus standards. The result reported herein apply only to the calibration of the item described above as received. Our decision rule is to contact the customer if the item pass and fail calibration when the results include the uncertainties and the customer must determine if the results meets their needs.
The calibration certificate shall not be reproduced except in full, without written approval of SP Metrology System (Thailand).

Calibrated by : Mr.Chumpon Dokpikul

Calibration Officer

Approved by :

(Mr.Prayoon Topart)

Authorized Signatory



Calibration Report

Certificate Number : SPR24110366-1 Page : 2 of 3

Reference Standards

Equipment Name	Model	Serial No.	Certificate No.	Due Date
Sound Level Calibrator	ST-120	211203773	EELBP. 140/0167	26 Jan 2025

Traceability

This certification is traceable to the International System of Unit maintained at :
TISTR - Thailand Institute of Scientific and Technological Research



Result of Calibration

Certificate Number : SPR24110366-1

Page : 3 of 3

Range : 94 to 114 dB

Function : @1kHz

Select : A

Unit : dB

Standard Setting	UUC Reading		Error		Uncertainty (±)
	Fast	Slow	Fast	Slow	
94	94.0	94.0	0.0	0.0	0.15
114	113.9	113.9	-0.1	-0.1	0.15

Select : C

Unit : dB

Standard Setting	UUC Reading		Error		Uncertainty (±)
	Fast	Slow	Fast	Slow	
94	94.0	94.0	0.0	0.0	0.15
114	113.9	113.9	-0.1	-0.1	0.15

Select : Z

Unit : dB

Standard Setting	UUC Reading		Error		Uncertainty (±)
	Fast	Slow	Fast	Slow	
94	94.0	94.0	0.0	0.0	0.15
114	113.9	113.9	-0.1	-0.1	0.15

Note :

The result of calibration was found accurate as show on date and place of calibration only.
This Certificate is not certified for any commercial transaction.

Measurement Uncertainty

The reported uncertainty of measurement is the expanded uncertainty obtained by multiplying the standard uncertainty with the coverage factor $k = 2.00$, providing a level of confidence approximately 95%.

- End of Certificate -

Laws

หน้า ๙

เล่ม ๑๓๕ ตอนพิเศษ ๓๓ ง ราชกิจจานุเบกษา ๑๔ กุมภาพันธ์ ๒๕๖๑

ประกาศกรมสวัสดิการและคุ้มครองแรงงาน

เรื่อง การคำนวณระดับเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล

โดยที่กฎกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ กำหนดให้นายจ้างต้องจัดให้อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคลตลอดเวลาที่ทำงาน เพื่อลดระดับเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคลแล้ว ไม่เกินมาตรฐานตามที่กฎหมายกำหนด

อาศัยอำนาจตามความในข้อ ๙ วรรคสาม แห่งกฎกระทรวงกำหนดมาตรฐานในการบริหาร จัดการ และดำเนินการด้านความปลอดภัย อาชีวอนามัย และสภาพแวดล้อมในการทำงานเกี่ยวกับ ความร้อน แสงสว่าง และเสียง พ.ศ. ๒๕๕๙ อธิบดีกรมสวัสดิการและคุ้มครองแรงงานจึงออกประกาศไว้ ดังต่อไปนี้

ข้อ ๑ ประกาศนี้เรียกว่า “ประกาศกรมสวัสดิการและคุ้มครองแรงงาน เรื่อง การคำนวณ ระดับเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล”

ข้อ ๒ ประกาศนี้ให้ใช้บังคับตั้งแต่วันถัดจากวันประกาศในราชกิจจานุเบกษา

ข้อ ๓ การคำนวณระดับเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล ให้เป็นไปตามหลักเกณฑ์ ซึ่งสอดคล้องกับข้อมูลการลดเสียงของผู้ผลิตอย่างหนึ่งอย่างใด ดังนี้

(๑) การคำนวณโดยใช้ค่า Noise Reduction Rating (NRR) ที่ระบุไว้บนผลิตภัณฑ์ กับค่าตรวจวัดระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน โดยใช้สูตรคำนวณ ดังนี้

$$\text{Protected dBA} = \text{Sound Level dBC} - \text{NRR}_{\text{adj}} \text{ หรือ}$$

$$\text{Protected dBA} = \text{Sound Level dBA} - [\text{NRR}_{\text{adj}} - ๗]$$

Protected dBA หมายถึง ระดับเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัย ในสเกล (Scale A) หรือ เดซิเบลเอ

Sound Level dBC หมายถึง ระดับเสียงที่ได้จากการตรวจวัดเฉลี่ยตลอดระยะเวลาการทำงาน ๘ ชั่วโมงในสเกลซี (Scale C) หรือ เดซิเบลซี

Sound Level dBA หมายถึง ระดับเสียงที่ได้จากการตรวจวัดเฉลี่ยตลอดระยะเวลาการทำงาน ๘ ชั่วโมง ในสเกลเอ (Scale A) หรือ เดซิเบลเอ

NRR_{adj} หมายถึง ค่าการลดเสียงที่ระบุไว้บนฉลากหรืออุปกรณ์คุ้มครองความปลอดภัย ส่วนบุคคลโดยกำหนดให้มีการปรับค่าตามลักษณะและชนิดของอุปกรณ์ คุ้มครองความปลอดภัยส่วนบุคคล ดังนี้

(ก) กรณีเป็นที่ครอบหูลดเสียง ให้ปรับลดเสียงร้อยละ ๒๕ ของค่าการลดเสียง ที่ระบุไว้บนฉลากหรือผลิตภัณฑ์

หน้า ๑๐

เล่ม ๑๓๕ ตอนพิเศษ ๓๓ ง ราชกิจจานุเบกษา ๑๔ กุมภาพันธ์ ๒๕๖๑

(ข) กรณีเป็นปลั๊กลดเสียงชนิดโฟม ให้ปรับลดเสียงร้อยละ ๕๐ ของค่าการลดเสียง ที่ระบุไว้บนฉลากหรือผลิตภัณฑ์

(ค) กรณีเป็นปลั๊กลดเสียงชนิดอื่น ให้ปรับลดเสียงร้อยละ ๗๐ ของค่าการลดเสียง ที่ระบุไว้บนฉลากหรือผลิตภัณฑ์

(๒) การคำนวณโดยใช้ค่า Single Number Rating (SNR) ที่ระบุไว้บนผลิตภัณฑ์กับค่า ตรวจวัดระดับเสียงเฉลี่ยตลอดระยะเวลาการทำงาน โดยใช้สูตรคำนวณดังนี้

$$L'_{AX} = (L_C - \text{SNR}_x) + ๔$$

L'AX หมายถึง ระดับเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัย ในสเกลเอ (Scale A) หรือ เดซิเบลเอ

L_C หมายถึง ระดับเสียงที่ได้จากการตรวจวัดเฉลี่ยตลอดระยะเวลาการทำงาน ๘ ชั่วโมงในสเกลซี (Scale C) หรือ เดซิเบลซี

SNR_x หมายถึง ค่าการลดเสียงที่ระบุไว้บนฉลาก/ผลิตภัณฑ์ของอุปกรณ์คุ้มครอง ความปลอดภัยส่วนบุคคล

(๓) การคำนวณระดับเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล นอกเหนือจาก (๑) และ (๒) ให้เป็นไปตามประกาศกระทรวงอุตสาหกรรม ฉบับที่ ๔๔๕๖ (พ.ศ. ๒๕๕๕) ออกตามความพระราชบัญญัติผลิตภัณฑ์อุตสาหกรรม พ.ศ. ๒๕๑๑ เรื่อง กำหนดมาตรฐาน ผลิตภัณฑ์อุตสาหกรรมข้อแนะนำในการเลือก การใช้ การดูแล และการบำรุงรักษาอุปกรณ์คุ้มครอง ความปลอดภัยส่วนบุคคล เล่ม ๑ อุปกรณ์การป้องกันการได้ยิน ข้อ ๔ หลักเกณฑ์การเลือกอุปกรณ์ ป้องกันการได้ยิน ลงวันที่ ๒๘ สิงหาคม พ.ศ. ๒๕๕๕

ข้อ ๔ การดำเนินการตามข้อ ๓ กรณีที่ฉลากหรืออุปกรณ์คุ้มครองความปลอดภัยส่วนบุคคล มีการระบุค่าการลดเสียงมากกว่า ๑ ค่าให้นายจ้างใช้ค่าที่ลดเสียงที่สัมผัสในหูเมื่อสวมใส่อุปกรณ์คุ้มครอง ความปลอดภัยส่วนบุคคลที่ได้จากการคำนวณน้อยที่สุดเป็นหลักในการพิจารณาการลดระดับเสียง จากสภาพแวดล้อมในการทำงาน

ประกาศ ณ วันที่ ๑๘ มกราคม พ.ศ. ๒๕๖๑

อนันต์ชัย อุทัยพัฒนาชีพ

อธิบดีกรมสวัสดิการและคุ้มครองแรงงาน

(ตารางแนบท้ายประกาศ)			
ตารางมาตรฐานระดับเสียงที่ยอมให้ลูกจ้างได้รับเฉลี่ยตลอดระยะเวลาการทำงานในแต่ละวัน			
ระดับเสียงเฉลี่ยตลอดเวลาการทำงาน (TWA)	ระยะเวลาการทำงานที่ได้รับเสียงต่อวัน*		
	ชั่วโมง	นาที	
๘๒	๑๖	-	
๘๓	๑๒	๔๒	
๘๔	๑๐	๕	
๘๕	๘	-	
๘๖	๖	๒๑	
๘๗	๕	๒	
๘๘	๔	-	
๘๙	๓	๑๑	
๙๐	๒	๓๑	
๙๑	๒	-	
๙๒	๑	๓๕	
๙๓	๑	๑๖	
๙๔	๑	-	
๙๕	-	๘๘	
๙๖	-	๓๘	
๙๗	-	๓๐	
๙๘	-	๒๔	
๙๙	-	๑๙	
๑๐๐	-	๑๕	
๑๐๑	-	๑๒	
๑๐๒	-	๙	
๑๐๓	-	๗.๕	
๑๐๔	-	๖	
๑๐๕	-	๕	
๑๐๖	-	๔	
๑๐๗	-	๓	
๑๐๘	-	๒.๕	
๑๐๙	-	๒	
๑๑๐	-	๑.๕	
๑๑๑	-	๑	

หมายเหตุ * ระดับเวลาการทำงานที่ได้รับเสียงและระดับเสียงเฉลี่ยตลอดเวลาการทำงาน (TWA) ให้ใช้ค่ามาตรฐานที่กำหนดในตารางข้างต้นเป็นลำดับแรก หากไม่มีค่ามาตรฐานที่กำหนดตรงตามตารางให้คำนวณจากสูตรดังนี้

$$T = \frac{C}{\frac{L - 85}{5}}$$

เมื่อ T หมายถึง เวลาจนถึงเวลาการทำงานที่ยอมให้ได้รับเสียง (ชั่วโมง)
L หมายถึง ระดับเสียง (เดซิเบล)

ในการใช้ค่าระดับเสียงเฉลี่ยตลอดเวลาการทำงาน (TWA) ที่ได้จากการคำนวณมีเกณฑ์นิยมใช้ได้แก่สหประชาชาติ



Vessel Name: SC WINTER
Date: 15/11/2023
Revision: 6
Ref: F-09-SHE/13
Month: August 2025

Checkbox (✓) when completed or checked

1. Accommodation (ที่พักอาศัย)									
No.	Descriptions	Checked					Remarks		
		Week 1	Week 2	Week 3	Week 4	Week 5			
	Date (DD/MM/YY)	3-4-25	10-8-25	17-8-25	24-8-25	31-8-25			
1	Walkways maintained clear without obstructions	✓	✓	✓	✓	✓			
2	Lighting in all areas should be adequate. Have failed or flickering lights been replaced	✓	✓	✓	✓	✓			
3	Damaged Flooring Repaired	✓	✓	✓	✓	✓			
4	Is spilled oil, chemical and/or water cleaned	✓	✓	✓	✓	✓			
5	Loose Fittings and Handles Repaired	✓	✓	✓	✓	✓			
6	Structure & Furnishings without protruding Hazards (e.g. nails & screws)	✓	✓	✓	✓	✓			
7	Jammed Doors or Loose Hinges Fixed	✓	✓	✓	✓	✓			
8	Emergency exit/aisle from ship unobstructed	✓	✓	✓	✓	✓			
9	Are all safety instruction plates, notices and operating indicators legible and working	✓	✓	✓	✓	✓			
10	Have objects likely to shift or fall been secured	✓	✓	✓	✓	✓			
11	Is waste including food waste appropriately collected and disposed	✓	✓	✓	✓	✓			
12	Are washroom taps and toilet flushes in working condition and clean	✓	✓	✓	✓	✓			
13	Cabins have hot and cold running water	✓	✓	✓	✓	✓			
14	Bedding is clean and hygienic	✓	✓	✓	✓	✓			
15	Heating and ventilation, including air conditioning, where fitted, is adequate and well-maintained	✓	✓	✓	✓	✓			

2. Galley Room (ห้องครัว)									
No.	Descriptions	Checked					Remarks		
		Week 1	Week 2	Week 3	Week 4	Week 5			
1	Is the galley floor clean and dry?	✓	✓	✓	✓	✓			
2	All kitchen elements are clean	✓	✓	✓	✓	✓			
3	Are the unused pots and pans cleaned and stored?	✓	✓	✓	✓	✓			
4	Temperature Log current Freezer temps (-18°C) Refrigerator temps (5°C)	✓	✓	✓	✓	✓			

Original Vessel Copy No. Retention: 2 years

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No.	Descriptions	Checked					Remarks
		Week 1	Week 2	Week 3	Week 4	Week 5	
5	All products are labelled and within expiry dates	✓	✓	✓	✓	✓	
6	Food storage on First in First out principle?	✓	✓	✓	✓	✓	
7	Food storage is made 15 cm above the floor	✓	✓	✓	✓	✓	
8	Food is separated according to type	✓	✓	✓	✓	✓	
9	Refrigerators are clean	✓	✓	✓	✓	✓	
10	Galley staff	✓	✓	✓	✓	✓	
11	Food Handling	✓	✓	✓	✓	✓	
12	Proper PPE in use	✓	✓	✓	✓	✓	
13	Cleaning log for the Kitchen in place and up to date	✓	✓	✓	✓	✓	
14	Galley Equipment	✓	✓	✓	✓	✓	
15	Is the galley waste food and garbage segregated and disposed accordingly?	✓	✓	✓	✓	✓	
16	Is the galley exhaust hood and ducting outlet clear of excessive oil residues	✓	✓	✓	✓	✓	

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3. Laundry (ซักผ้า)									
No.	Descriptions	Checked					Remarks		
		Week 1	Week 2	Week 3	Week 4	Week 5			
1	Dryer & Washing Machine are in good condition	✓	✓	✓	✓	✓			
2	Is the laundry floor clean and dry	✓	✓	✓	✓	✓			
3	Is Laundry Room tidy and uncollected clothing removed? Dirty and clean laundry should be segregated	✓	✓	✓	✓	✓			
4	Weekly Cleaning Filter Dryer & Washing Machine	✓	✓	✓	✓	✓			
5	Laundry powder properly stored	✓	✓	✓	✓	✓			
4. Mess Room (ห้องพักผ่อน)									
No.	Descriptions	Checked					Remarks		
		Week 1	Week 2	Week 3	Week 4	Week 5			
1	Lighting in all areas should be adequate. Have failed or flickering lights been replaced	✓	✓	✓	✓	✓			
2	Is the mess room floor clean and dry	✓	✓	✓	✓	✓			
3	Ensure no dirty clothing is allowed in the mess room	✓	✓	✓	✓	✓			
4	Structure & Furnishings without protruding Hazards (e.g. nails & screws)	✓	✓	✓	✓	✓			
5	Have objects likely to shift or fall been secured	✓	✓	✓	✓	✓			
6	Is waste including food waste appropriately collected and disposed	✓	✓	✓	✓	✓			
7	Cleanliness / Hygiene maintained?	✓	✓	✓	✓	✓			
8	Disinfectant hand wash available for use?	✓	✓	✓	✓	✓			
9	Presence of pest? Housefly etc.	✓	✓	✓	✓	✓			
5. Smoking Room (ห้องสูบบุหรี่)									
No.	Descriptions	Checked					Remarks		
		Week 1	Week 2	Week 3	Week 4	Week 5			
1	Lighting in all areas should be adequate. Have failed or flickering lights been replaced	✓	✓	✓	✓	✓			
2	Is the smoking room floor clean and dry?	✓	✓	✓	✓	✓			
3	Structure & Furnishings without protruding Hazards (e.g. nails & screws)	✓	✓	✓	✓	✓			
4	Have objects likely to shift or fall been secured	✓	✓	✓	✓	✓			
5	Electric lighter in smoking room	✓	✓	✓	✓	✓			

Original Vessel Copy No. Retention: 2 years

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6 Hospital (โรงพยาบาล)							
No.	Descriptions	Checked					Remarks
		Week 1	Week 2	Week 3	Week 4	Week 5	
1	The ship's hospital is clean and hygienic and for medical use only – it is not used as a cabin or storage space โรงพยาบาลบนเรือ สะอาดและใช้เฉพาะทางการแพทย์เท่านั้น ไม่ใช้สำหรับห้องพักหรือที่เก็บของ	/	/	/	/	/	
2	Medical equipment and supplies are provided and certified as per the flag state's requirement อุปกรณ์ทางการแพทย์และเวชภัณฑ์ได้รับการจัดหาและรับรองตามข้อกำหนดของประเทศ	/	/	/	/	/	
3	The medical log is kept up to date. A standard medical report form is used for both onshore and on-board medical personnel and the completed forms are kept confidential สมุดบันทึกทางการแพทย์ได้รับการอัปเดตอยู่เสมอ ใช้แบบฟอร์มรายงานทางการแพทย์มาตรฐานทั้งบนบกและบนเรือ และฟอร์มที่เสร็จแล้วจะถูกเก็บเป็นความลับ	/	/	/	/	/	

7. Main Deck (ท่าเรือ)							
No	Descriptions	Checked					Remarks
		Week 1	Week 2	Week 3	Week 4	Week 5	
1	Walkways maintained clear without obstructions ทางเดินได้รับการดูแลให้สะอาดปราศจากสิ่งกีดขวาง	/	/	/	/	/	
2	Is spilled oil or chemical cleared น้ำมันหรือสารเคมีที่หกถูกลบออกทันที	/	/	/	/	/	
3	Have ropes and wires stowed so as not to pose a tripping hazard เชือกและสายเคเบิลถูกจัดเก็บอย่างเหมาะสมเพื่อไม่ให้เกิดอันตรายจากการสะดุด	/	/	/	/	/	
4	Have objects likely to shift or fall been secured วัตถุที่อาจเคลื่อนที่หรือหล่นได้ถูกตรึงอย่างแน่นหนา	/	/	/	/	/	
5	W/F Doors working normally and secured. Are rubber door seals in working condition ประตูห้องทำงานเปิดปิดได้ตามปกติและถูกล็อกอย่างเหมาะสม ยางซีลประตูอยู่ในสภาพใช้งานได้	/	/	/	/	/	
6	Emergency exit/access from/to ship unobstructed ทางออกฉุกเฉินจาก/สู่เรือไม่ถูกกีดขวาง	/	/	/	/	/	
7	Lighting in all areas should be adequate. Have failed or flickering lights been replaced แสงสว่างในทุกพื้นที่ต้องเพียงพอ แสงไฟที่ชำรุดหรือกะพริบต้องได้รับการเปลี่ยน	/	/	/	/	/	
8	Have litter, unused boxes, pallets, garbage on deck been cleared ขยะ กล่องที่ไม่ได้ใช้ พาเลท และขยะบนดาดฟ้าได้รับการทำความสะอาด	/	/	/	/	/	
9	Are gas cylinder appropriately stowed and secured ถังแก๊สถูกจัดเก็บและตรึงอย่างเหมาะสม	/	/	/	/	/	
10	Are all stores, including paint store tidy and items secured. Is the SDS posted in the paint store พื้นที่เก็บของทั้งหมด รวมถึงห้องสี สะอาดและสิ่งของได้รับการตรึงอย่างเหมาะสม SDS ถูกติดไว้ในห้องสี	/	/	/	/	/	
11	Are drip trays cleaned of oil residues? Are the plugs in place and in working order? ถาดรองน้ำมันถูกทำความสะอาดหรือไม่? ปลั๊กอยู่ในที่และใช้งานได้หรือไม่?	/	/	/	/	/	
12	Are spare parts / consumables / raw materials / HAZMAT and etc. properly stowed and secured? อะไหล่ / อุปกรณ์ / วัสดุ / สารอันตราย และอื่นๆ ถูกจัดเก็บและตรึงอย่างเหมาะสมหรือไม่?	/	/	/	/	/	

8. Engine Room (ห้องเครื่อง)							
No.	Descriptions	Checked					Remarks
		Week 1	Week 2	Week 3	Week 4	Week 5	
1	Is spilled oil or chemical cleared (น้ำมันหรือสารเคมีที่หกถูกลบออกทันที)	/	/	/	/	/	
2	Are the E/R bilges clean and dry (ถังเก็บน้ำในห้องเครื่องสะอาดและแห้ง)	/	/	/	/	/	
3	Are the E/R Floor plates clean and dry (แผ่นพื้นในห้องเครื่องสะอาดและแห้ง)	/	/	/	/	/	
4	Emergency exit from engine room unobstructed (ทางออกฉุกเฉินจากห้องเครื่องไม่ถูกกีดขวาง)	/	/	/	/	/	

ตรวจสอบความพร้อมก่อนปฏิบัติงาน		Checked					Remarks
No.	Descriptions	Week 1	Week 2	Week 3	Week 4	Week 5	
5	Lighting in all areas should be adequate. Have failed or flickering lights been replaced แสงสว่างในทุกพื้นที่ต้องเหมาะสม แสงไฟที่ชำรุดหรือกะพริบต้องได้รับการเปลี่ยน	/	/	/	/	/	
6	Walkways maintained clear without obstructions ทางเดินได้รับการดูแลให้สะอาดปราศจากสิ่งกีดขวาง	/	/	/	/	/	
7	Have objects, engine spares likely to shift or fall been secured วัตถุ อะไหล่เครื่องยนต์ ที่อาจเคลื่อนที่หรือหล่นได้ถูกตรึงอย่างแน่นหนา	/	/	/	/	/	
8	Are all stores, including storage of chemicals tidy and secured พื้นที่เก็บของทั้งหมด รวมถึงการเก็บสารเคมี สะอาดและสิ่งของได้รับการตรึงอย่างเหมาะสม	/	/	/	/	/	
9	Have litter, including scrap steel, welding rod ends, rags and other waste, in E/R cleared ขยะ รวมถึงเศษเหล็ก ปลายแท่งเชื่อม และขยะอื่นในห้องเครื่อง ได้รับการทำความสะอาด	/	/	/	/	/	
10	Are spare parts / consumables / raw materials / HAZMAT and etc. properly stowed and secured? อะไหล่ / อุปกรณ์ / วัสดุ / สารอันตราย และอื่นๆ ถูกจัดเก็บและตรึงอย่างเหมาะสมหรือไม่?	/	/	/	/	/	

9. Steering gear room (ห้องควบคุมท้าย)							
No.	Descriptions	Checked					Remarks
		Week-1	Week-2	Week-3	Week-4	Week-5	
1.	Is spilled oil or chemical detected ตรวจพบการรั่วไหลของเหลวหรือสารอันตรายหรือไม่						
2.	Lighting in all areas should be adequate. Have failed or flickering lights been replaced แสงสว่างในทุกพื้นที่ต้องเพียงพอ แสงไฟที่ชำรุดหรือกะพริบต้องได้รับการเปลี่ยนหรือไม่						
3.	Are spare parts / consumables / raw materials / HAZMAT and etc. properly stowed and secured? อะไหล่ / อุปกรณ์ / วัสดุ / สารอันตราย และอื่นๆ ถูกจัดเก็บและตรึงอย่างเหมาะสมหรือไม่						

10. General Safety – Fire Fighting Equipment and System (การดับเพลิงทั่วทั้งลำ)							
No.	Descriptions	Checked					Remarks
		Week 1	Week 2	Week 3	Week 4	Week 5	
1	All Fire Fighting Appliances is fit in place in good order without obstruction อุปกรณ์ดับเพลิงทั้งหมดอยู่ในที่และพร้อมใช้งานโดยไม่กีดขวาง	/	/	/	/	/	
2	Conditions are check and maintain as per PMS สภาวะได้รับการตรวจสอบและดูแลรักษาตามข้อกำหนด PMS	/	/	/	/	/	
3	Fire detector panel and Emergency PA in good order แผงตรวจจับไฟไหม้และระบบประกาศฉุกเฉินพร้อมใช้งาน	/	/	/	/	/	

Remarks: Please record the result of inspection into ship's logbook every 7 days

Examiner (ผู้ตรวจสอบ) (Shipboard Safety Officer / Onshore Designated Person)		Approve (ผู้อนุมัติ) (Master / On-site Manager)	
<div> <div></div> <div>Signature: (ลงนาม)</div> <div>Date: 15/11/23</div> </div>		<div> <div>SC WINTER</div> <div></div> <div>Signature: (ลงนาม)</div> <div>Date: 15/11/23</div> </div>	

TOOLBOX MEETING

Vessel Name: SC WINTER		Date: 13 Sep 2025	
Location: Songkhla		Time: 0600-0615 Hrs.	
Description of work to be performed (รายละเอียดของงานที่จะดำเนินการ):			
- Vessel berthing & un-berthing at PSB Jetty			
JSA reviewed (การทบทวน JSA):	<input checked="" type="checkbox"/> Yes (มี)	<input type="checkbox"/> No (ไม่มี)	
JSA's Topic (หัวข้อ JSA):			
- JSA 08_BERTHING & UNBERTHING VESSEL AT JETTY			
Procedure Review (ทบทวนขั้นตอนการปฏิบัติงาน):	<input checked="" type="checkbox"/> Yes (มี)	<input type="checkbox"/> No (ไม่มี)	
Refer to (อ้างอิง):			
<ul style="list-style-type: none"> - Toolbox meeting. - Use the completed JSA. - Discuss all steps of the job to be undertaken. - Fully review and discuss the completed JSA with particular attention to identified hazards and the methods of controlling / removing them. - Carefully communicate the potential hazards associated with each job step. - Designate the duties of each individual in the workforce. - Ensure that all members of the work group are familiarized with any tools or equipment and any person assigned to use any tool or equipment is competent to do so. 			
Permit to work (ใบอนุญาตการทำงาน):	<input type="checkbox"/> Yes (มี)	<input checked="" type="checkbox"/> No (ไม่มี)	
Type (ประเภท):			
Duty of each one (หน้าที่ของแต่ละคน)			
Name	Duty	Name	Duty
Master	In command	AB1	AFT Station
Chief officer	Duty on bridge	AB2	AFT Station
Second officer	Duty on bridge	AB3	FWD Station
Bosun	FWD Station	AB4	FWD Station

เรือสนับสนุน-3.8 ตัวอย่างเอกสารการวิเคราะห์งานเพื่อความปลอดภัย

Risks/ Hazards Identified (ความเสี่ยง/ อันตราย):

- Motion - Vessel collide with other vessel, grounding
- Crews slip, trip and fall on deck and man overboard
- Line under tension.
- Mechanical - Engine or Machineries failure, Propeller entanglement.
- Temperature / Radiation - Heat and Radiation from sun shine.
- Hand injury
- Losing of communication
- Unable to maintain vessel position

Comments of meeting (ข้อสังเกตจากการประชุม):

- Crews involve the operation shall wear the appropriated PPE.
- Crews involve the operation shall aware of pinch point and line of fire.
- Clear communication between all concerned parties the operation.
- Bridge, Deck and Engine room shall be appropriated manned.
- All appropriated checklist shall be completed prior commencement the operation.
- SWA if observe any unsafe act, situation or environment.
- St-by at least 2 radio for communication
- EOW, E/E and Oiler must be stand-by E/R control room

Meeting members (ผู้เข้าร่วมประชุม):

Name	Signature	Name	Signature
Mr. Jaroonsak Jantawong		Mr. Tanakorn Panchakhan	
Mr. Pongpitak Watcharasukhum		Mr. Nattapot Chuenchop	
Mr. Trakulsak Pakdeenok		Mr. Supachai Wongwai	
Mr. Suriya Pormpha			
Person in charge (PIC):		Name	Title
ผู้ดำเนินการประชุม		Mr. Jaroonsak Jantawong	C/O
Authorising person (Permits task to go ahead):		Name	Title
ผู้อนุมัติ		M.V SC WINTER	MASTER
		Capt. Pichai Phungpensak	

SC GROUP Date: 15/03/2024 Revision: 5 Ref: F-09-SHE/04

JSA No. JSA 08 / J092025 Job: BERTHING & UNBERTHING VESSEL AT JETTY

Vessel Name: SC Winter Date: 13 Sep 2025 Location: Songkhla

Visibility: Good Wind (Direction / Speed): SW / 15 kts

Sea (Wave): 0.5 m. Current (Direction / Speed): To NE / 0.5 kts

TASK (i)	HAZARD (ii)	HAZARD (iii)	EXISTING CONTROL (iv)	RANKING (v)	ADDITIONAL CONTROL MEASURES (vi)	RE-RANKING (v)
Task (i)	Hazard (ii)	Hazard (iii)	Existing Control (iv)	Ranking (v)	Additional Control Measures (vi)	Re-Ranking (v)
1) Pilot embark/disembark at vessel	Motion, Gravity	Slip, trips and fall when pilot jump to vessel	Prior to commencement of work on the vessel a pre-job safety meeting or tool box talk must be held. - Crew stand by at pilot boarding area - Checks must be kept free from oil, grease and other slippery substances. Spillages must be cleaned up immediately. - Make sure the path to be taken is clear and free of debris and trip and slip hazards. - Check crew and OOW must keep contact with the helmsman at times for pilot movement. - Use flashlight or turn on deck lights at night. - Crew assist to assist pilot's belongings.	1 D 1D	- Local weather reports and forecasts will be obtained where possible - Additional deck crew to assist pilot at boarding location. - SWA if unsafe criteria arise - Safety Campaign March 2024 - 50/50 Safety Challenge - Safety Campaign April 2024 - 50/50 Safety Challenge - Safety Campaign May 2024 - 50/50 Safety Challenge - Safety Campaign June 2024 - 50/50 Safety Challenge - Safety Campaign July 2024 - 50/50 Safety Challenge - Safety Campaign August 2024 - 50/50 Safety Challenge - Safety Campaign September 2024 - 50/50 Safety Challenge - Safety Campaign October 2024 - 50/50 Safety Challenge - Safety Campaign November 2024 - 50/50 Safety Challenge - Safety Campaign December 2024 - 50/50 Safety Challenge	1 C 1C

SC GROUP Date: 15/03/2024 Revision: 5 Ref: F-09-SHE/04

JSA No. JSA 08 / J092025 Job: BERTHING & UNBERTHING VESSEL AT JETTY

Vessel Name: SC Winter Date: 13 Sep 2025 Location: Songkhla

Visibility: Good Wind (Direction / Speed): SW / 15 kts

Sea (Wave): 0.5 m. Current (Direction / Speed): To NE / 0.5 kts

TASK (i)	HAZARD (ii)	HAZARD (iii)	EXISTING CONTROL (iv)	RANKING (v)	ADDITIONAL CONTROL MEASURES (vi)	RE-RANKING (v)
Task (i)	Hazard (ii)	Hazard (iii)	Existing Control (iv)	Ranking (v)	Additional Control Measures (vi)	Re-Ranking (v)
- Gravity	- Man overboard	- Man overboard	- Manover vessel with require boarding speed - Current, wind and swell to be assessed. - Piloting passage plan discussed with all member of the bridge team prior to the pilot boarding the vessel. - Boarding arrangement comply with equipment and good condition. - Lifelines appliance provided at boarding location. - Pilot ladder or boat override above the position where the person embarks and disembarks on the ship should be adequately fast. - Make a tie for pilot boat	4 B 4B	- Each pilot ladder and associated equipment is properly maintained and regularly inspected to ensure that, so far as is reasonably practicable, each is safe to use - Personnel engaged in rigging or operating any equipment are instructed in the safe procedures to be adopted and that the equipment is to be used prior to each use - A safety line and harness, life buoy with a self-igniting light and a heaving line should be kept at hand ready for use - Prepare rescue boat for possible launch - Standby not in ready - SWA if unsafe criteria arise	3 A 3A

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JSA No. JSA 08 / J092025 Job: BERTHING & UNBERTHING VESSEL AT JETTY

Vessel Name: SC Winter Date: 13 Sep 2025 Location: Songkhla

Visibility: Good Wind (Direction / Speed): SW / 15 kts

Sea (Wave): 0.5 m. Current (Direction / Speed): To NE / 0.5 kts

TASK (i)	HAZARD (ii)	HAZARD (iii)	EXISTING CONTROL (iv)	RANKING (v)	ADDITIONAL CONTROL MEASURES (vi)	RE-RANKING (v)
Task (i)	Hazard (ii)	Hazard (iii)	Existing Control (iv)	Ranking (v)	Additional Control Measures (vi)	Re-Ranking (v)
2) Approaching / Depart from the Jetty	- Motion	- Collide with Jetty - Collide with other vessels	- Pre-arrival Pre-Departure checklist is completed prior approaching the jetty. - Pre-arrival exchange of information take place with pilot. - Piloting passage plan discussed with the pilot as soon as he comes on board. - Evaluation of existing and anticipated weather and other environmental conditions. - Establish effective communication between all party and set up secondary means of communication such as PA, talk back etc. - Check crew on feed & all station shall report clearance at regular interval & send every report if decreasing in distance. - Ensure Shipside & Jetty adequately manned. - Ensure berth clear and sufficient water and open space available. - Mooring gang ready on the jetty. - Anchors cleared and ready for deployment in emergency. - Visual maneuvering at very Slow speed, more like to idle.	4 C 4C	- Local information on harbor conditions obtained if any vessels have experienced problems, then this information should be shared with VTS to prevent accidents to other vessels. - Close observation of the movements of other vessels. - Weather forecast obtained and Observation of changes in the weather, i.e. sea conditions especially the gust wind and strong current Monitor squall on the radar. - Available navigation aids and their accuracy of emergency situation arise. - Fully aware of any special berthing requirements - SWA if unsafe criteria arise	1 C 1C

SC GROUP Date: 15/03/2024 Revision: 5 Ref: F-09-SHE/04


JSA No. JSA 08 / J092025 Job: BERTHING & UNBERTHING VESSEL AT JETTY

Vessel Name: SC Winter Date: 13 Sep 2025 Location: Songkhla

Visibility: Good Wind (Direction / Speed): SW / 15 kts


Sea (Wave): 0.5 m. Current (Direction / Speed): To NE / 0.5 kts

TASK (i)	HAZARD (ii)	HAZARD (iii)	EXISTING CONTROL (iv)	RANKING (v)	ADDITIONAL CONTROL MEASURES (vi)	RE-RANKING (v)
Task (i)	Hazard (ii)	Hazard (iii)	Existing Control (iv)	Ranking (v)	Additional Control Measures (vi)	Re-Ranking (v)
- Motion	- Grounding	- Grounding	- Advance/Recommendation in sailing direction - Check tide, current, depth of water and depth draft of vessel - Ship's draught in relation to available water depth - Effect of squat on under keel clearance must take into account while passing shallow water - Echo sounder should always be used when making a landfall and kept switch on to monitor water	2 C 2C	- Ensure all machinery comply with PMS - Ensure operator fully understand how to operate all machinery	2 A 2A
- Machinery	- Machinery failure	- Machinery failure	- Trial engines and machinery prior approach to jetty - Back out prevention is completed prior approaching the jetty. - Anchors cleared and ready for deployment in emergency - Watch out for ropes, nets & traps during approach - Type of fishing net/trap to be assessed	2 C 2C	- Man standby at local control - Ensure crew fully understand how to respond in case of Machinery failure regularly	1 B 1B
- Machinery	- Fishing net/trap	- Fishing net/trap	- Trial engines and machinery prior approach to jetty - Back out prevention is completed prior approaching the jetty. - Anchors cleared and ready for deployment in emergency - Watch out for ropes, nets & traps during approach - Type of fishing net/trap to be assessed	1 D 1D	- Look shore assistance such as tug boat, etc in case of machinery failure - Avoid passing between ropes, nets & traps	1 C 1C

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TASK (s)	HAZARD ID (s)	HAZARD (s)	EXISTING CONTROL (s)	RANKING (s)	ADDITIONAL CONTROL MEASURES (s)	RE-RANKING (s)
no	no	no	no	S P R	no	S P R
3) Preparing lines for mooring	- Motion	- Slip/Trip / Fall, - Standing in height of ropes, - Back injuries from strains, - Head injury - Rope burn	- Check all PPE prior commencement of work - Decks must be kept free from oil, grease and other slippery substances. Spillages must be cleaned up immediately - All equipment used in mooring operations must be regularly inspected for defect, Any found must be corrected as soon as possible - Mooring plan discuss prior preparing lines - Ensure sufficient personnel and ensure power deck crew placed in charge to oversee mooring team - Ensure deck crew share the load of working the ropes - Refrain from rushing, prepare mooring station early - Follow proper manual techniques (Squat / Hold / grab / Lift) - Take out lines on deck for smooth running over side - Keep feet well clear - Use capstan / winches where applicable - Make up lines not in use to prevent tripping hazards - Do not wear gloves when work near rotating machinery	1 D 1D	- Area where mooring operations are to be undertaken must be clear free as far as possible - Deck must have anti slip surface provided by fixed treads or anti slip paint coating - While working area must adequately lit for operation undertake during period of darkness	1 C 1C


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TASK (s)	HAZARD ID (s)	HAZARD (s)	EXISTING CONTROL (s)	RANKING (s)	ADDITIONAL CONTROL MEASURES (s)	RE-RANKING (s)
no	no	no	no	S P R	no	S P R
4) Throwing heaving line to shore	- Gravity	- Hitting shore personnel/equipment with well monkey fist	- Wear appropriate PPE - Nailed flume flat surface provided - Ensure both crew and shore personnel wear appropriate PPE - Only trained personnel allow throwing heaving line - Environmental effect to be assessed - No solid material inside 'monkey's fist' on heaving line (small rubber) - Avoid throwing directly at shore personnel/property - Wait for the vessel to get close to the quayside dewater overboard - No 'monkey launch' type throw - Watch out surround or any obstacle	1 C 1C	- Alert to the shore personnel prior throwing heaving line - Monkey's fist should highly visible	1 B 1B
	- Motion	- Back injury	- Ensure good footing and balance before throwing heaving line - Avoid excessive twist of body	1 C 1C	- Person who get previous injury should avoid	1 B 1B


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TASK (s)	HAZARD ID (s)	HAZARD (s)	EXISTING CONTROL (s)	RANKING (s)	ADDITIONAL CONTROL MEASURES (s)	RE-RANKING (s)
no	no	no	no	S P R	no	S P R
6) Heaving ropes and making fast	- Motion & Gravity	- Slip/Trip / Fall - Tripping hazard, lacerations and bruising - Back pain - Mooring rope goes way	- Check all PPE prior commencement of work - Decks must be kept free from oil, grease and other slippery substances. Spillages must be cleaned up immediately - Operator of winch must not be on mooring - Extreme care should be exercised to keep hands and fingers clear of lines on bollards, bits or capstans - Be sure that involved personnel have the training needed for operating, rigging and are familiar with the particulars of the winch - Minimum 2 turns of line around bit. Be ready to 'release' excess tension. Do not make rope fast until ordered by Master or Personnel in Charge - Ensure mooring ropes are not surface to sharp edges - Heavy strains should be avoided. When strain occurs that cannot be eased, stand well clear of the line - Avoid sudden jerks on line. When surging or easing the line, take off enough turns on the bit or capstan to ease the line smoothly - Visual check condition of the mooring rope to be done prior - SNIP BACK, once identify - Stand away from line of fire - Fast the mooring line gradually and avoid turning - Keep close lock out work mate particularly SSE do not involve this operation	4 B 4B	- Try not to use too much power on engines when securing vessel - Personnel should not in any circumstances stand in a light of rope - Operation of winch must preferably be undertaken by competent personnel to ensure that excessive loads do not arise on mooring - Brief eye view of the mooring deck arrangement is recommended to more readily identify danger area - When mooring are to be heaved on a drum end, one person should be stationed at the drum end, backed up by a second person backing and coiling down the slack - Care is needed so that the rope will not jam when they come under strain - Line made up on bits clear of pedestrians if at all possible - SWA if unsafe criteria arise	1 A 1A


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TASK (s)	HAZARD ID (s)	HAZARD (s)	EXISTING CONTROL (s)	RANKING (s)	ADDITIONAL CONTROL MEASURES (s)	RE-RANKING (s)
no	no	no	no	S P R	no	S P R
7) Making fast using Capstan / Winches	- Machinery	- Rope trapped on capstan/winch, parting / jamming and backlash hitting personnel - Hand trapped between ropes and capstan	- Check all PPE prior commencement of work - Operator at controls at all times - Plan the task in advance - Do not hurry - Do not let back control handle - When heaving in, do not allow layers to mount up on drums, 'large' line on capstan at intervals to ensure regular lay - Transferring to bits always display rope stopper to take tension then secure - Don't over tension the winch, no gradual control on the winches - Observe tension on the line all times	2 C 2C	- SWA if unsafe criteria arise	2 A 2A


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JOB SAFETY ANALYSIS						
TASK (s) no	HAZARD ID (s) no	HAZARD (s) no	EXISTING CONTROL (s) no	RANKING (s) no	ADDITIONAL CONTROL MEASURES (s) no	RE-RANKING (s) no
				S P R		S P R
	- Gravity	- Man overboard	- Maintain proper communication with shore gang properly - Use appropriate throwing method - Wear work Vest - Keep close lock out workmate - Life saving appliance available at work place	4 A 4A	- Do not expose the body outside bulkhead area	2 A 2A
5) Passing ropes to jetty	- Motion	- Slip/Trip / Fall, - Rope moving not quickly, - Tripping hands and legs	- Check all PPE prior commencement of work - Decks must be kept free from oil, grease and other slippery substances. Spillages must be cleaned up immediately - Keep ropes tension in the bridge - Keep Hands & feet clear of line fished on deck - Do not use ropes not controlled or use foot to control them, take a turn round bits to maintain control - The line on a moving cathead or capstan should not be seized. Stop the Machinery and then surge - Do not run all the ropes at once, run one at a time to maintain control - Keep hands clear of running rope - 'Front helps front', keep a close lock out work mates and for moving ropes	2 C 2C	- When passing heaving lines choose safe position, never step on the bulkhead or on bits - Ensure ropes must be properly fished - Wear safety harness - Ensure good footing when counting the weight of the mooring rope as it is pay out - Do not touch paid out mooring rope in the water - SWA if unsafe criteria arise	1 B 1B


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				S P R		S P R
- Machinery	- Heaving line and mooring ropes in water fishing (strains) / propellers	- Establish effective communication for safe mooring operation between bridge and deck especially information of heaving line/mooring rope appearance - Do not put out mooring rope at once - Avoid use engines when water logged - Observe weather condition particularly current and wind effect	2 B 2B	- Wait until vessel as close as practicable to quay side then send the line in order to avoid the line in the water	1 A 1A	


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no	no	no	no	S P R	no	S P R
8) Line stoppers to make fast ropes on bits	- Motion - Gravity	- Slip, Trip, or falls - Back injury - Rope jumps when turns are taken off bits	- Check all PPE prior commencement of work - Decks must be kept free from oil, grease and other slippery substances. Spillages must be cleaned up immediately - Ensure stoppers are long enough to keep the hands at a safe distance from the rope - Gloves must be worn at all time - Release the tension on the line slowly - Good communication between the winches operator and the rope holder - Never try to hold the rope with hands or with a foot - Stopper can only be released when the rope is fully secured	1 D 1D	- "West country method" (double and reverse stoppering) is preferable for rope - SWA if unsafe criteria arise	1 C 1C
	- Motion - Gravity	- Stopper parted hit to person	- Wear appropriate PPE - Do not stand in line of fire particularly SNIP BACK, once - Inspect condition of stopper prior use - Ensure stopper correct position to get a hold tension on the rope	2 B 2B	- Use proper stopper / Natural fiber rope should be stopped with natural fibre - If deterioration of stopper were sight during operation personnel must get away	1 A 1A

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no	no	no	no	S P R	no	S P R
9) Letting Go/Releasing Mooring Ropes	- Motion - Gravity	- Slip, trips, or falls - Back injury - Rope jumps when turns are taken off bits	- Check all PPE prior commencement of work - Decks must be kept free from oil, grease and other slippery substances. Spillages must be cleaned up immediately - Unriggering plan to be discussed. Good communication maintain all along the operation - Sufficient number of operation crew and shore gang - Work in pairs when heaving ropes - Use Capstan if possible - If the ropes has to be recovered manually, it must be handled by 2 AB - Don't let go of the rope if there is too much tension on it - Don't get fingers / hands too close to bits - Master / Chief Mate to use engine to assist when letting go ropes - Get good feet held before heaving on rope - All ropes to be secured as soon as they are released	1 D 1D	- Current, wind and swell to be assessed - Use the engine to assist when letting go ropes - Order to let go the lines should be given by the Master - SWA if unsafe criteria arise	1 B 1B
	- Gravity	- Man overboard	- Wear appropriate PPE - Do not expose the body outside bulkhead area - Keep close lock out work mate	2 A 2A		

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PERMIT TO WORK			


SECTION 9: SAFETY MANAGEMENT

P-09-02

Permit To Work

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SC GROUP

PERMIT TO WORK

รอสันับสนุน-3.9 ตัวอย่างใบขออนุญาตปฏิบัติงาน


PERMIT TO WORK

RECORD OF CHANGES & REVISION STATUS

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1. OBJECTIVES

To provide a system of control over all activities which have been identified as being potentially hazardous

2. SCOPE

This procedure applies to all Vessels, workshops, offices & sites, and the 3rd party works commencing therein.

3. DEFINITIONS

N/A

4. RESPONSIBILITY

Responsible Person

- The Responsible person shall ensure that:
 - o The form *Permit to Work (PTW) (F-09-SHE/11)* and all relevant supporting *Certificates and Work Control Checklist*, as detailed below, are duly completed & prepared prior to undertaking the task;
 - o All hazards are identified and all associated control measures, isolations & restrictions are in place as per JSA, PTW & supporting certificate's requirements, prior to commencement of the task;
 - o All involved personnel are supplied with, and are competent in the use of, all necessary PPE & specific safety equipment;
 - o All relevant parties & authorities required to be notified have been contacted and are aware of the task being undertaken;
 - o on completion of the task, all safety measures & isolations are removed & all equipment is restored to a normal, safe working condition;
 - o the PTW & all Certificates **and Work Control Checklist** are duly completed, signed & closed within 12 hours of first issuing;
 - o all parties & authorities are notified that work has been completed;
 - o all log books & records are duly updated, and any reports are filed & distributed where required

Authorizing Person


- Authorizing person on vessel shall be classify by area of vessel. In this document the area of work including 2 area are Deck and Engine and authorizing person as below table:

Area	Authorizing person
Deck	Master / Chief Officer
Engine	Chief Engineer / Second Engineer

- The Authorizing person shall ensure that the Responsible person has duly undertaken all requirements as per Responsible person above, prior to authorizing commencement of work. Additionally, the Authorizing person shall:

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- Examine the work site to ensure safety measures are in place and remain so for the duration of the job;
- Ensure that all persons conducting the work are aware of the precautions to be taken, the safety equipment to be used, and the procedures to be applied during the period of the permit;
- Ensure that No work will commence until the PTW & associated Certificates and Work Control Checklist have been approved;
- Ensure that they are notified of completion, or any suspension, of the work and any changing factors relevant to safety;
- Ensure that, before permit cancellation or close-out, all control measures and/or isolations are removed, all associated systems are returned to normal operating conditions & the work site is returned to a safe condition.

Work-Site Manager

- In this document work-site manager mean vessel master, each completed form *Permit to Work (PTW) (F-09-SHE/11)* and its' associated Certificates and Work Control Checklist shall be considered auditable documents, therefore each Work-site manager shall maintain a file onboard/at the site for their safe storage; these records should be maintained for a period of no less than 2 years.

5. PROCEDURE

5.1 Permit to Work

5.1.1 Permit to Work System Overview


- PTW's provide a system for **crew members/staff** to follow when undertaking certain types of tasks recognized to generate particular exposures to personnel or the facility. The PTW System also furnishes **vessel/site managers** with a systematic method to co-ordinate and control work that may adversely impact other concurrent work, impair safety systems or otherwise endanger personnel and/or the facility.

On a practical level, the PTW System shall:

- Limit the scope of the task & control the work within specified time limits;
- Ensure all staff follow procedures, all other requirements shall be complied with the *Permit to work special equipment and PPE matrix (see chapter 5.8)*
- Encourage pre-task planning, minimizing risk to personnel and plant, and reducing the inconvenience and interference to other operations;
- Increase the awareness of personnel responsible for the overall safety of the unit by providing documented details of potentially hazardous activities in progress;
- Provide a continuous control and record of on-going work activities, detailing the nature of the work, required precautions/safeguards, and the responsible competent person in charge. Ensure that upon completion of work, equipment and site are left in a safe condition;
- Provide formal notification of completion of all work to management staff (Master/work-site manager)

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Form *Permit to Work (PTW) (F-09-SHE/11)* itself provides a single, management document which ties together the various measures & procedures required for the safe undertaking of specific hazardous tasks. The specific safety measures to be taken for these tasks are further detailed in the various *Certificates* and *Work Control Checklist*, which should be completed and managed in conjunction with the relevant overarching *Permit to Work (PTW) (F-09-SHE/11)*.

The Certificates are as follows;

- Work at Heights Certificate and Work Control Checklist (F-09-SHE/05)*
To be completed for all work at heights equivalent and over 1.8 m from deck/ground level, or for any works conducted over water regardless of height. Specific guidance on working at height is provided in Section 5.2 of this manual. *Work Control Checklist (see chapter 5.7)*
- Isolation Certificate and Work Control Checklist (F-09-SHE/06)*
To be completed for all works on systems or equipment that requires to be isolated. This includes, but is not limited to, electrical systems, pressurized systems and/or Radiating/transmitting systems. Specific guidance on systems isolation is provided in Section 5.3 of this procedure. *Work Control Checklist (see chapter 5.7)*
- Hot Work Certificate and Work Control Checklist (F-09-SHE/07)*
To be completed for all works involving or generating heat sources. This includes, but is not limited to, all forms of welding, grinding & mechanical cutting. Specific guidance on hot work is provided in Section 5.4 of this manual. *Work Control Checklist (see chapter 5.7)*
- Confined Space Entry Certificate and Work Control Checklist (F-09-SHE/08)*
To be completed for any works involving entry to, or operations within, a confined or enclosed space. This includes, but is not limited to tanks, void spaces, closed containers and non-ventilated engine/machinery compartments. Specific guidance on confined space entry is provided in Section 5.5 of this manual. *Work Control Checklist (see chapter 5.7)*
- Diving Operations Certificate and Work Control Checklist (F-09-SHE/09)*
To be completed for all works involving diving operations, either from ashore or afloat. Specific guidance on diving operations is provided in Section 5.6 of this manual. *Work Control Checklist (see chapter 5.7)*

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FOR CERTAIN TASKS, MORE THAN ONE PTW CERTIFICATE MAY BE REQUIRED. THE RESPONSIBLE PERSON & AUTHORISING PERSON ARE BOTH TO ENSURE THAT ALL RELEVANT CERTIFICATES ARE COMPLETED.

5.1.2 Display of PTW and Certificate

After issue PTW and all certificate shall be clearly display at:

Original copy	Keep by vessel master on bridge
1 st Duplicate copy	Keep by Authorizing person and clearly display on working location
2 nd Duplicate copy	Keep by Chief Engineer in case of he is Authorizing person

P.S: In case of Authorizing person is master, the 2nd Duplicate copy is not required.

Each vessel/work-site is to ensure that they hold sufficient supplies of all forms. The **Master/worksites manager** is responsible for re-ordering sufficient stock within time to ensure that their vessel/work-site is never without copies of all PTW & PTW Certificate forms.

5.1.3 Step of Permit to Work issuance

Step of *Permit to Work (PTW) (F-09-SHE/11)* and any associated *Certificates issuance*, **Responsible person, Authorizing person and Work site manager** shall follow the below guidelines;

1. PERMIT TO WORK AND CERTIFICATED PREPARATION: COMPLETED BY RESPONSIBLE PERSON.

Prepare Permit to work, all certificates that relate to the job, and supporting documents such as JSA etc. All other requirements shall be complied with in the *Permit to work special equipment and PPE matrix (see chapter 5.8)*. Fulfill PTW information of PTW and certificates including Vessel name, Location area, operation unit and details of the task that is to be performed.

2. IDENTIFY RELATED CERTIFICATE

Tick related certificate that work being undertaken; this section will then cross reference to the Certificates and *Work Control Checklist* required to be completed in support of *Permit to Work (PTW) (F-09-SHE/11)*.


3. INDICATE THE 3RD PARTIES OR EXTERNAL AUTHORITIES TO BE NOTIFIED

It may be necessary to notify other parties (local operations office, port authorities, and coastguard etc.), that the work is being carried out. If so, indicate on the form once relevant notification has been passed. If not applicable, ticking 'N/A' as appropriate, on the form.

4. SIGN FOR ISSUING THE PERMIT

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The Responsible person & Authorizing person must **both together** sign the PTW for it to be considered open & applicable.

INDICATE PERMIT VALIDITY PERIOD

Put the date & time (using 24 hrs. clock format) to indicate the period that the permit is valid since & till. Permit validity will be start after Authorizing person sign on permit to work **EACH PTW CAN ONLY BE VALID FOR A PERIOD OF NOT MORE THAN 12 HOURS**. If work is to last beyond 12 hrs. another permit must be issued for each additional 12 hrs. period, or part there of.

5. WHEN COMPLETION OF WORKS

Once work is completed, use the form to check & ensure that all isolations, work restrictions & control measures have been removed, and all notifications have been passed where appropriate.

6. CLOSE THE PERMIT

The Responsible person & Authorizing person must **both together** sign on PTW and certificate for it to be considered closed-out. Then return all copy of PTW and certificate to vessel master.

Work must be stopped, hazards assessed and mitigated and all permits must be revalidated prior to work resuming when, including but not limited to:

- The Job site is left unattended for any period of time,
- The Fire Watch leaves the hot work area,
- An LEL of greater than or equal to 1% is detected**
- Portable or continuous gas testing equipment fails,
- An incident and/or near miss occurs.


Refer to Appendix 7.1 of this procedure: Permit to Work Flowchart

5.1.4 Managing PTW & Certificates and Work Control Checklist

All issued PTW's & Certificates and *Work Control Checklist* are to be registered on form *Permit to Work (PTW) Log (F-09-SHE/10)*. This log sheet is to be kept in at the front of a file, which shall be made available for the safe storage of all completed PTW & PTW Certificates and *Work Control Checklist*. Once work is completed, the relevant PTW, Certificates and *Work Control Checklist* & copies of any associated JSA's are to be stapled together and stored in this folder

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as auditable documents; all PTW's, **PTW Certificates and completed PTW Log sheets are to be held for a period of no less than 2 years.**

5.1.5 Acceptable Atmospheric Working Conditions

The opening of any equipment, pipelines, vessels, etc., for any purpose, may only be approved by the **Master** or relevant work-site manager. The **Master/work-site manager** is to appoint a suitably/experienced representative as the Responsible Person for co-ordination of all workplace operations. The workplace that contains(ed) hazardous materials (e.g. H2S, flammables, etc.) gas testing must be conducted in accordance with the Condition of Workplace and respirator selection as per below;

Acceptable Atmospheric Working Conditions	
Types of gas	Permissible Entry Level
Oxygen*	19.5%-23.5%
Flammable gases & vapors**	<1% LEL
Hydrogen Sulfide (H ₂ S)*	<10 PPM (8 hrs.)
Carbon Monoxide (CO)*	<35 PPM (8 hrs.)

* Occupational Safety and Health Administration (OSHA)

** IMO recommendations for entering enclosed spaces aboard ship

5.2 Working at Height

WORKING AT HEIGHT – "Working at Height" shall be taken to mean conducting any type of work activity at a height of equivalent and over 1.8 meters / 6 feet above a solid deck or ground level.

WORKING OVER WATER – "Working over Water" shall be taken to mean conducting any type of work activity over any body of water.


5.2.1 Limiting Risk

Work at height or over water should only be considered where it is not reasonably practicable to carry out the work safely in some other way. A JSA must be completed for all such work to ensure that measures are taken to prevent a fall occurring. Where measures do not eliminate the risk of a fall, then adequate measures must be taken to minimize the distance and consequences of such a fall.

Personnel working overhead shall notify everyone below of their location. Tools and materials shall be handed up or down and never thrown. When it is necessary to hoist tools with a rope, exercise care to make sure that the tools are securely attached to the rope and there is no danger of dropping them. Avoid storing tools at elevated heights when tools are not being used.

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Form **PTW Work at Heights Certificate and Work Control Checklist (F-09-SHE/05)** provides detailed guidance on specific measures to be implemented for all working at height operations.

5.2.2 Rescue Plans

Supervisors of persons working at elevated positions and using fall protection must, when carrying out a JSA, develop a rescue plan in the event of a fall. Consideration should be given to the safety of rescue personnel, the means of retrieval of the fallen person and the method to be used to lower them, perhaps in an injured condition, to the deck or ground.

Additional measures may be required for rescue of personnel from water; these shall be assessed during the JSA process & all necessary specific rescue equipment shall be made available at the work site. (Should be referred to the ships' specific Recovery of Persons from Water procedure)

5.2.3 General Fall Prevention

To prevent personnel from falling to lower levels, such as falls from a portable ladder or over a railing.

- Use ladders that give you an easy reach to work areas.
- Inspect all ladders and lifting equipment regularly and perform the required maintenance.
- Provide railing protection for areas with abrupt floor level changes.
- Install handrails and slip-resistant treads on stairs.
- Do not use stairways or walkways for Storage of any kind. Keep them clear.
- Working on portable ladder is required buddy system. At less 1 person must hold the ladder to prevent falling hazard.

To prevent personnel from falling from fixed ladder systems.

- Always maintain three points of contact when on a ladder.

Ladders that are designated and marked as Emergency Escape routes do not require a fall arrest system to be fitted.

Aft lifebuoy with lifeline shall be lowered to the water on the same side of work and lifeline shall be made fast to ship's structure.

5.2.4 Work Vest


THE SUITABLY WORK VEST MUST BE UTILISED FOR ALL WORKS OVER WATER

When anyone working over water, they shall wear an suitably work vest, capable of supporting an unconscious person face-up in the water. These work vest shall be donned **AFTER & OVER THE TOP OF** any full body harness, to avoid hampering their deployment.

All harness fittings, connectors & lanyards shall be connected & positioned in such a way as to avoid hampering the correct inflation of the work vest, if needed.

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5.2.5 Fall Arrest Systems

A FALL ARREST SYSTEM MUST BE UTILISED FOR ALL WORK AT HEIGHT AND/OR OVER WATER

A fall arrest system means a system used to arrest personnel in a fall from a working level. It consists of;

- An anchor point
- Connectors
- Full body harness
- Lanyard, deceleration/shock absorbing device, lifeline, or suitable combinations of these.

Personnel must ensure continuous use of the fall arrest system during the entire period of working at height. Further guidance on the system components are given below.

FULL BODY HARNESS

A relevant, type-approved full body harness shall be used as part of the fall arrest system. Full body harnesses and other fall arrest devices specify a maximum weight limit. This assumes the device is in good condition and includes the weight of the user, clothing, and tools being supported with the user.

LANYARD

- Working at height is required double lanyard, when people working at height, they must both lanyards must be tied off at all time. It is accepted that one lanyard can removed when worker moving from place to place.
- The lanyard must be secured so that personnel can neither free-fall more than 1.8 meters or make contact with a lower level, whichever is the least distance.
- The lanyard anchor end shall not be wrapped around an anchor point and connected onto itself unless the lanyard is specifically designed & certified for this function.
- So far as possible, efforts should be taken to minimize the working proximity to equipment that is rotating or moving, or has the potential to rotate or move, while using fall arrest systems.


5.2.6 Inspection, Maintenance, Storage & Servicing

Before each use, inspect the full body harness for damage or deterioration. Inspection shall include the following;

- Ensure that there is no damage to harness hardware (buckles, D-rings, back pad, loop keepers).
- Ensure buckles work freely. Inspect webbing and ensure that the material is not frayed, cut, or has broken fibers.
- Check for tears, abrasions, mound, burns or discoloration.
- Inspect all stitching; broken stitching may be an indication that the harness has been impact loaded and must be removed from service.

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- Inspect all labels; they should be present and fully legible.
- All components subjected to the impact loading forces of a free-fall must be immediately removed from use and appropriately inspected and serviced or discarded.
- Clean full body harness with water and mild soap solution; do not use bleach or bleach solutions.
- Wipe off hardware with a clean dry cloth and hang to air dry; do not force dry with heat.
- Store full body harnesses in a cool, dry, clean environment out of direct sunlight.
- Avoid storage areas where chemical vapor may exist.
- Additional maintenance and servicing procedures must be completed by a competent inspector.
- Do not attempt to disassemble any unit.

5.3 System Isolation

To provide guidelines on measures to be taken to protect personnel from the potential release of stored energy, or the start-up of machinery and/or equipment, which may cause injury.

This procedure applies to all vessels, workshops, offices & sites, and any the 3rd party works commencing therein.

All Employees

All employees are to ensure full compliance at all times with these guidelines and any associated Safe Systems of Work.

Master / Work – Site Manager

The **Master /work-site manager** is responsible for ensuring that all crew/staff under their management comply at all times with these guidelines and any associated Safe Systems of Work.

Certain work tasks may require the isolation of one or more systems in order to minimize risk from the task, or from the work site itself. This specifically includes any activity where electrical, mechanical, steam, hydraulic, pneumatic or other energy source is present. Additional hazards may include heated, flammable, toxic, corrosive or chemical materials, either directly present or stored in pipelines, containers or within systems machinery itself.

Form **Isolation Certificate and Work Control Checklist (F-09-SHE/06)** provides detailed guidance on specific measures to be implemented for all systems isolation operations.


Isolation must be performed by competence person and all isolation must be completed before issue PTW and certificate. Deisolation must be completed before closed out PTW & Certificate.

5.3.1 LOCK OUT –TAG OUT

When repair is being undertaken on a equipment, system or area e.g. Radars, H.P. fuel system, air pipes, electrical unit and etc. for which continuous monitoring of all the associated

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system/component is not possible then these should be tagged or locked and isolated. This is to prevent the system from being started inadvertently and causing an accident.

Lock out devices must be:

- Singularly identified,
- The only device(s) used for controlling energy,
- Not used for other purposes,
- Removed by employee who applied the device after finishes service work,
- Meet all applicable legal requirements, Client standards and/or industry best practices,
- Securely attached to the isolation point (e.g. don't tape tags to equipment),
- Durable for the environment in which they are used (e.g. withstanding extreme temperatures, rain, wind, etc.).

Tag out must:

- Substantial enough to prevent accidental removal,
- Non-reusable and attachable by hand,
- Warn against hazardous conditions,
- Can be used if an isolation device cannot be locked out.

When more than one crew work at the facility:

- Designated authorized employee takes lock out / tag out control responsibility,
- Coordinates affected work forces,
- Ensures continuity of protection,
- Each authorized employee affixes personal lock out / tag out device to group lockout device when beginning work,
- Each removes personal device when stopping work on this equipment.

If applying employee is not available, the device(s) shall be removed by someone other than the individual who applied the device includes but is not limited to:

- Verification that the applying employee is not at the facility,
- Make all reasonable efforts to contact / notify,
- Ensure authorized employee knows of removal before resuming work at facility,
- Documented approval on the isolation certificate by the Work-site Manager.
- The company Form F-09-SHE/32 "Lock Out – Tag Out (LOTO) Log" is reference used for control and monitoring all shipboard LOTO experience.

5.4 Hot Work


To provide guidelines on measures to be taken to protect personnel whilst undertaking hot work operations.

This procedure applies to all vessels, workshops, offices & sites, and any the 3rd party works commencing therein.

- Consider all practical cold work alternatives before performing hot work.

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- Potential hazards associated with isolation of hazardous energy shall be identified and mitigated before beginning work.
- Personnel involved in hot work activities shall be trained and competent in the roles for which they are responsible.
- A qualified gas tester shall conduct gas testing before beginning hot work where there is a potential for flammable gases to be present. The qualified gas tester shall determine the frequency of gas testing based on the potential risk.
- Fire Watch shall be present where open flame hot work is carried out, except in designated safe welding areas. Open flame sources include, but are not limited to, activities such as welding, cutting, brazing, burning, and grit blasting.
- The hot work shall begin within 30 minutes after the qualified gas tester has tested the area and cleared it for hot work to start.

When the work has been completed according to the job scope, the work team leader shall close out and return the Hot Work Permit and permit-related documents to the permit approver after:

- The job site has been left in a safe, clean, and orderly condition.
 - Adequate time (30 minutes) has elapsed for the Fire Watch to verify the condition of the job site.
 - The work that was performed meets the required scope and specifications.
 - If work is interrupted by Stop Work Authority, weather conditions, alarms, or unforeseen dangerous conditions, the Hot Work permit shall be revalidated before work can be restarted.
- Hot work that is carried out in a designated safe hot work area will require a Hot Work Permit Checklist to be completed prior to performing the hot work.

All Employees

All employees are to ensure full compliance at all times with these guidelines and any associated Safe Systems of Work.

Master Work – Site Manager

The **Master / work-site manager** is responsible for ensuring that all crew staff under their management comply at all times with these guidelines and any associated Safe Systems of Work.


"Hot Work" shall be taken to mean conducting any type of work activity that;

- involves direct sources of heat/ignition.
- may create sources of heat/ignition including, but not limited to, cutting, grinding, welding or burning.
- is to be conducted in an area where flammable vapors or liquids may be present.

Form **Hot Work Certificate and Work Control Checklist (F-09-SHE/07)** provides detailed guidance on specific measures to be implemented for all hot work operations, and shall be used in conjunction with the control measures identified in the JSA.

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A flammable gas test must be carried out prior to issue of a **Hot Work Certificate** for an area where the presence of gas is possible. Continuous monitoring shall be conducted when carrying out hot work in confined spaces. The results of this test and any subsequent tests shall be recorded on the **Hot Work Certificate**.

A **Hot Work Certificate** is not required for operations involving permanently mounted plant using an enclosed flame.

There is strongly prohibited for all HOT WORK at sea that will have performed outside the ships' specific workshop areas, the **Master** shall ensure that there are fully risk assessment, consideration and discussion with all shipboard personnel concerned during the process of **Tool Box Meeting**. These Risk Assessment shall be submitted with the reporting for 'HOT WORK Permission' requisition by the **Master** to the **Technical Manager or Higher Technical Titles**.

The HOT WORK Permission requests should be submitted by electronic mailing with attached files (Risk Assessment) that the Master shall ensure that all HOT WORK must not commence prior permission granted from **Technical Manager or Higher Technical Management**.

All HOT WORK Permission requests as well as permission grant evidences shall be kept and maintained in place onboard. (as part of the PTW Register Log)

5.5 Confined Space Entry

To provide guidelines on measures to be taken to protect personnel whilst undertaking work within confined and or enclosed spaces.

Applicable to all vessels & work-sites and any the 3rd party works commencing therein.

All Employees

All employees are to ensure full compliance at all times with these guidelines and any associated Safe Systems of Work.

Master / Work – Site Manager


The **Master / work-site manager** is responsible for ensuring that all crew/staff under their management comply at all times with these guidelines and any associated Safe Systems of Work.

"Confined space" shall be taken to mean any space that exhibits the following characteristics;

- has limited or restricted means of entry or exit.
- Unfavorable natural ventilation.
- Not designed for continuous worker occupancy.
- is large enough for a person to enter to perform tasks.
- is not designed or configured for continuous occupancy.

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Enclosed spaces include, but are not limited to, cargo spaces, double bottoms, fuel tanks, ballast tanks, fresh water tanks, scrubbers, pump rooms, compressor rooms, cofferdams, void spaces, duct keels, inter barrier spaces, engine crankcases and sewage tanks.

In view of the risk of serious injuries and fatalities associated with maintenance or repair work to ships' lifts shafts / elevators trucking, these are also included in the list of enclosed spaces.

If there is any uncertainty about the classification of a space or compartment, it shall be considered to be a confined space and action shall be taken accordingly.

Signs shall be permanently affixed to the exterior of the entryway of all identified confined spaces and shall read;

Danger – DO NOT ENTER. PTW Confined Space Entry Certificate required prior to entering this Space.

Signs shall be produced in both English and the appropriate local language as necessary.

5.5.1 Restrictions on Entering Confined Spaces

VESSEL PERSONNEL ARE EXPRESSLY FORBIDDEN TO ENTER ANY CONFINED SPACE UNLESS TO VERIFY WORK CONDUCTED DURING SCHEDULED DRY-DOCK/ MAINTENANCE PERIODS.

All confined space entries shall be properly permitted following the Permit to Work and Confined Space Entry standards.

Despite minimal involvement in enclosed space operations, it is essential for **SC Management** Vessel staff to manage these operations in order to minimize risk to the 3rd parties. As such, form **PTW Confined Space Entry Certificate and Work Control Checklist (F-09-SHE/08)** shall be used in conjunction with relevant JSA.


5.5.2 Supporting Confined Space Operations

During operations, **SC Management staff** shall only perform specific, limited tasks in support of workers within the space, as follows;

- ENSURE THE SPACE HAS BEEN ADEQUATELY VENTILATED
The **Responsible person** is to ensure that each space has been ventilated and has been issued with a certificate, from a 3rd party chemist, to prove that the space is gas-free & contains suitable levels of O₂
- ENSURING PRESENCE & VALIDITY OF RELEVANT GAS-FREE CERTIFICATION
The Responsible person is to ensure that before being allowed to work in a confined space, gas measurement must be inspected and the gas measurement results recorded. Gas measurement must be done every **1 hour** throughout the duration of the operation and each individual confined space has a specific gas free certificate that is no more than **12 hours**

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old, and that the period of validity for this certificate will cover the expected duration of works to be undertaken. If working conditions within the space have significantly changed, or the existing certificate has expired, or the works will take longer than the remaining period of validity on the certificate, then the space is to be re-tested & certified gas-free again by a qualified 3rd party chemist.

- ENSURING PROVISION OF SAFE MEANS OF ACCESS/EGRESS FROM THE SPACE
Each individual space is to be provided with a safe & practical means of access/egress for workers.
- ENSURING & MAINTAINING PROVISION OF LIGHTING
The access/egress point, and the space itself, is to be continuously well-lit for the duration of any works being undertaken.
- ENSURING & MAINTAINING PROVISION OF STAND-BY PERSONNEL
At all times, a **SC Management** employee is to be on stand-by at the space access/egress point, to provide safety oversight and communications co-ordination.
An Entry Watch shall be onsite at all times when personnel are in the confined space. The Entry Watch shall not leave his or her position unless a qualified replacement Entry Watch is in place.
- PROCEDURES TO DEAL WITH AN EMERGENCY SHOULD BE ESTABLISHED.
Rescue procedures are to be outlined & agreed upon prior to entry. Suitable rescue & medical equipment is to be available and ready for use at the access / egress point. Methods & requirements for contacting shore-based emergency services are to be communicated to all personnel.
A rescue plan shall be in place before any confined space entry.
Rescue personnel shall be trained and competent and have the ability to perform their responsibilities. Rescue personnel shall be equipped with the appropriate rescue equipment.


5.5.3 Verifying Completion of Confined Space Operations

One completion of confined space operations such as coatings work or repairs, it may be necessary for Vessel **SC Management staff** inspect spaces in order to verify satisfactory completion of required works, or to verify the condition of the space itself prior to re-entering to service. In this event, the following shall be complied with;
The confined space shall be secured and any flammable gas sources shall be removed whenever the confined space is left unattended for any period of time.

- ENSURE PRESENCE & VALIDITY OF RELEVANT GAS-FREE CERTIFICATION
The **Responsible person** & the **SC Management representative** entering the space are both to ensure that the space has a specific gas-free certificate that is no more than 12 hours old, and that the period of validity for this certificate will cover the expected duration of the entry.

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- ALL CONTROL MEASURES & GUIDELINES ARE COMPLIED WITH
All control measures as per **JSA** and **PTW Confined Space Entry Certificate and Work Control Checklist (F-09-SHE/08)**, are to be in place & complied with prior to entry.

- USE OF ALL NECESSARY SAFETY EQUIPMENT & PPE
Each person entering the space is to carry/wear the following as a minimum;
 - o hard hat, overalls, safety boots & gloves
 - o intrinsically-safe safe torch/lamp
 - o in-date, calibrated, personal oxygen meter
 - o EEBD or similar device with sufficient breathing duration to allow escape from the space

At least 1 person shall carry an **INTRINSICALLY- SAFE** Radio, capable of communicating to staff outside the space.

Additional PPE may be required, appropriate to the conditions of the space itself, and these shall be identified in the associated JSA

- USE OF RESCUE ROPES
If the personnel entering the tank are to go out of sight of the access point, then at least 1 fire-fighter's type rope is to be used in conjunction with Stand-by Personnel outside. Rope signals are to be agreed upon with all parties before entering the space.
- PROCEDURES TO DEAL WITH AN EMERGENCY SHOULD BE ESTABLISHED.
Rescue procedures are to be outlined & agreed upon prior to entry. Suitable rescue & medical equipment is to be available and ready for use at the access/egress point. Methods & requirements for contacting shore-based emergency services are to be communicated to all personnel.

On completion of any enclosed space operations, both the Responsible person & **Authorizing person** are to sign-off the **PTW Confined Space Entry Certificate and Work Control Checklist (F-09-SHE/08)**, verifying that the space has been vacated & returned to a normal operating condition.

5.6 Diving Operations


To provide guidelines on measures to be taken to protect personnel whilst undertaking diving operations. Applicable to all vessels & work-sites operated by SC Management, and any the 3rd party works commencing therein.

All Employees

All employees are to ensure full compliance at all times with these guidelines and any associated Safe Systems of Work.

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Master / Work – Site Manager

The **Master / work-site manager** is responsible for ensuring that all crew/staff under their management comply at all times with these guidelines and any associated Safe Systems of Work.

"Diving Operations" shall be taken to mean any operation, launched from afloat or ashore, which involves the use of personnel in the water to conduct any sort of sub-surface activity.

SC Management personnel are not expected to directly participate in the diving operations themselves, however there is a need to provide a management system to protect 3rd party employees undertaking work, and to outline responsibilities for emergency response in the event of such circumstances.

As such, form **PTW Diving Operations Certificate and Work Control Checklist (F-09-SHE/09)** is to be used, in conjunction with the relevant JSA and any specific guidance provided by the diving contractor. Additionally, it is essential that all representatives from the diving contractor attend the Toolbox Meeting prior to commencing the task.

Given that the surface support team from the diving contractor may be located some distance away from **SC Management staff** or assets, it is essential that the following is clearly identified by all personnel;

- Methods & means of communication between divers, surface support **team & SC Management vessels/staff**.
- Actions to be taken in the event of an emergency.
- Responsibilities for contacting various emergency services, including coastguard/port patrol, as appropriate.


5.7 Work Control Checklist

5.7.1 Work Control Checklist Overview

- **Work Control Checklists** are verification tools designed to help workers confirm critical safeguards are in place and functioning. Work Control Checklists shall be completed immediately before the start of work by Crew / worker(s). **Start Work Verifier by Responsible person and during work verifier by another person (no self-verification)**.
- Work Control Checklists apply for the tasks as follows;
 - o Diving Operation
 - o Confined Space Entry
 - o De-Energized Electrical Work
 - o Energized Electrical Work
 - o Hot Work
 - o Isolation of Hazardous Energy
 - o Lifting and Rigging
 - o Work at Heights
- Work Control Checklist will be used immediately prior to starting work and during work.
- Work Control Checklist **do not** replace the need for permits and/or JSA.

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- All workers should participate in safeguard verification activities. At least one worker from each work team and a Start Work Verifier must initial each Work Control Checklist.
- **During Work Verifier cannot be the same person as the worker in team (no self-verification)**.
- One Work Control Checklist can be completed by more than one Start Work Verifier if appropriate.
- If the job involved several Work Permits, all relevant Work Control Checklists shall be completed.
- The completed Work control Checklists should be kept within specified folder and 2 years period.
- All safeguards should be verified for ensuring there are prompt in place by Verifier.
- In cases where critical safeguards cannot be confirmed to be in place and functioning;
 - o Do not start work.
 - o Seek help and work with supervisor to identify ways to verify safeguards.

5.7.2 Step of Work Control Checklist Complete

Step of Work Control Checklist complete shall follow the below guidelines;

1. Determine and review relevant Work Control Checklists associated with the work to be performed. All applicable Work Control Checklists shall be completed.
2. Workers review each action on the Work Control Checklist and physically confirm safeguards are in place and functioning. At least one worker from each work team must initial each action on the Work Control Checklist.
3. Start / During Work Verifier physically confirms that safeguards are in place and functioning, initials each action on the Work Control Checklist(s) and signs his name and date at the bottom of the completed check.

5.8 Permit to work special equipment and PPE matrix.

No.	Equipment and PPE	Job Task				
		Working at Height	Isolation	Hot Work	Confine Space Entry	Diving Operation
1.	Coverall					
2.	Safety Boots					
3.	Safety Helmet					
4.	Impact Gloves					
5.	Electrical Gloves					
6.	Welding Gloves					
7.	Face Shield					
8.	Particulate respirator					
9.	Welding Mask					
10.	Safety Glasses					

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11. Safety Goggle					
12. Welding Apron					
13. Fall Arrest					
14. Radio					
15. Gas detector					
16. Fire extinguisher					
17. Flashback arrestors					
18. SCBA Set					
19. Hose/Fire blanket					
20. Signs / Barriers					
21. Firewatcher					
22. Work life vest					
23. Lock-out Tag-out					
24. Ventilation					

Mandate Recommend

6.RELATED FORMS

- F-09-SHE/05 PTW Work at Heights Certificate and Work Control Checklist
- F-09-SHE/06 PTW Isolation Certificate and Work Control Checklist
- F-09-SHE/07 PTW Hot Work Certificate and Work Control Checklist
- F-09-SHE/08 PTW Confined Space Entry Certificate and Work Control Checklist
- F-09-SHE/09 PTW Diving Operations Certificate and Work Control Checklist
- F-09-SHE/10 Permit to Work (PTW) Log
- F-09-SHE/11 Permit to Work (PTW)
- F-09-SHE/32 Lock Out – Tag Out (LOTO) Log

7.APPENDIX

Appendix 7.1: Permit to Work Flowchart

8. REFERENCE STANDARD

- The OSHA standard for The Control of Hazardous Energy.

	Date : 01/08/2019	Revision : 2	Ref : F-09-SHE/03
	TOOLBOX MEETING		

Vessel Name: SC Winter	Date: 15 October 2024		
Location: Songkhla anchorage	Time: 1000-1015 Hrs.		
Description of work to be performed (รายละเอียดของงานที่จะดำเนินการ): - Diving operation (Check Propeller)			
JSA reviewed (การทบทวน JSA): JSA's Topic (หัวข้อ JSA): - JSA 27_DIVING OPERATION	<input checked="" type="checkbox"/> Yes (ใช่) <input type="checkbox"/> No (ไม่ใช่)		
Procedure Review (ทบทวนขั้นตอนในการปฏิบัติงาน): Refer to (อ้างอิง): Work Control Checklist (Diving Operation) Isolation Certificate	<input checked="" type="checkbox"/> Yes (ใช่) <input type="checkbox"/> No (ไม่ใช่)		
Permit to work (ใบอนุญาตในการทำงาน): Type (ประเภท):	<input checked="" type="checkbox"/> Yes (ใช่) <input type="checkbox"/> No (ไม่ใช่)		
Duty of each one (หน้าที่ของแต่ละคน)			
Name	Duty	Name	Duty
Master	In command	AB	Duty on deck
Chief officer	Duty on bridge	AB	Duty on deck
Second officer	Duty on bridge	AB	Duty on deck
Bosun/AB	Banks man	AB	Duty on deck

Original : Vessel , Copy : Nil , Retention : 2 years

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Controlled document do not duplicate.

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	Date : 15/03/2024	Revision : 5	Ref : F-09-SHE/04
	JOB SAFETY ANALYSIS		
JSA No. : JSA 27/15182624	Job : DIVING OPERATION	The Residual Risk Matrix	
Vessel Name : SC Winter	Date : 15 October 2024	Location : Songkhla Anchorage	The Master will determine if the Risk is: Medium
Visibility : Good	Wind (Direction / Speed) : NW / 8-10 kts	Sea (Wave) : S.S. 6.7 m	Current (Direction / Speed) : SE / 0.6 kts
TASK (id)	HAZARD (id) as recognized by diver	EXISTING CONTROL (id) as recognized by diver	RANKING (id) as recognized by diver
1) Preparation	- Motion - Application / Disconnection / Caught between objects	- Ensure Divers are qualified & trained personnel - Master shall Lock-out Tag-out (LOTO) of all propulsion & motion systems - Master shall hoist the Diving flag to alert other vessel - Pre-checks shall be carried out on the Diving equipment by the supervisor - Spare bottles shall be available onboard - Life line will be second along the waist of divers - Means of Communication shall be identified between the Divers & dock personnel - Diving Checklist / Permit shall be obtained from the Master - Time log sheet shall be recorded for each individual diver - Stand-by diver at dive site in case of emergency	2 2 20

Original : Vessel, Copy Nil, Retention : 2 years

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	Date : 01/08/2019	Revision : 4	Ref : F-09-SHE/04
	JOB SAFETY ANALYSIS		
Emergency Preparedness			
Emergency Contingency that might be occurred :		Type of Shipboard Contingency Plan requires :	
1) Hand injuries	2) Medical First Aid		
2) Vessel Collision	3) Use Emergency Contingency Plan: 11/ 5.4.13 Collision/Avoidance		
3) Black Out	4) Use Emergency Contingency Plan: 11/ 5.4.8 Generator Failure (Black Out Recovery)		
4)	5)		
JSA Review (Closed Task)			
TASK	HAZARD (id)	HAZARD	EXISTING CONTROL
Job Completed with SAFETY			
Prepared By: Mr. Weeraphan Sriummasak	Signature :	Date : 15 Oct 2024	
Approved By: Capt. Chantana Uasetha	Signature :	Date : 15 Oct 2024	

Original : Vessel, Copy Nil, Retention : 2 years

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	Date : 01/08/2019	Revision : 4	Ref : F-09-SHE/04
	JOB SAFETY ANALYSIS		
Meeting members			
Name		Name	Signature
Mr. Weeraphan Sriummasak			
Mr. Rojjanin Khamtharukham			
Mr. Phiroet Lekont			
Mr. Wanchai Kealpravit			
Mr. Ponglak Watchararakham			
Mr. Pannasach Phangphat			
Mr. Soranan Klavickan			

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SC GROUP	Date: 01/08/2019	Revision: 0	Ref: F-09-SHE/22
WORK CONTROL CHECKLIST (DIVING OPERATION)			

Vessel Name : SC Winter Job: Diving cutting rope at Propeller port side Date: 15 / 10 / 2024

Please confirm below are verified prior to starting / during work and maintained in place.

All crew / workers must confirm each action below.	Crew / Worker(s)	Start work VERIFIER	During work VERIFIER
1. Approved procedures are in place for the planned diving work scopes.	✓	✓	✓
2. Hazards have been identified using a risk assessment for the planned diving work scopes.	✓	✓	✓
3. Appropriately dive contractor documentation is available at site.		✓	
4. Diving operations have been evaluated for Isolation of Hazardous Energy (IHE) requirements. Does the dive require IHE? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes: Complete IHE Work Control Checklist If no: Continue to Step 5.		✓	
5. Diving operations have been evaluated for Marine Assurance activities. Does the dive require Marine Assurance activities? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Verify assurance activities have been place. If no: Continue to Step 6.	✓	✓	
6. Diving operations have been evaluated for SimOps requirements. Does the dive involve SimOps? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes: Verify a SimOps plan is in place. If no: Continue to Step 7.	✓	✓	
7. Communications have been checked between all parties on vessels. Installations or work sites and communication plan agreed to.	✓	✓	✓

Stop Work Authority (SWA) if any of the above safeguards are not in place.

Role	Name	Rank	Date
Start work verifier	CAPT. CHAMNAN L.	MASTER	15-OCT-24
During work verifier	MR. WEERAPHAN S.	C/O	15-OCT-24

SC GROUP	Date: 15/11/2023	Revision: 4	Ref: F-09-SHE/11
PERMIT TO WORK (PTW)			
VESSEL: <u>SC WINTER</u>	DATE: <u>15 OCT 24</u>	PTW No: <u>2024 / 05</u>	
LOCATION AREA: <u>SONGKHALA ANCHORAGE</u>	<input checked="" type="checkbox"/> DECK	<input type="checkbox"/> ENGINE	
OPERATION UNIT: <u>DIVING OPERATION</u>			
TASK: <u>DIVING CUTTING ROPE AT Z-DRIVE PORT SIDE</u>			

INDICATE WORK TO BE COMPLETED (tick (✓) as many as applicable)			
WORKING AT HEIGHTS / OUTBOARD	<input type="checkbox"/>	COMPLETE F-09-SH E-05 PTW WORK AT HEIGHTS CERTIFICATE	
WORK REQUIRED ELECTRICAL / MECHANICAL	<input type="checkbox"/>	COMPLETE F-09-SHE-06 PTW ISOLATION CERTIFICATE	
WELDING / BURNING / CUTTING / HEATING	<input type="checkbox"/>	COMPLETE F-09-SHE-07 PTW HOT WORK CERTIFICATE	
ENTRY INTO CONFINED	<input type="checkbox"/>	COMPLETE F-09-SHE-08 PTW CONFINED SPACE ENTRY CERTIFICATE	
DIVING OPERATIONS	<input checked="" type="checkbox"/>	COMPLETE F-09-SHE-09 PTW DIVING OPERATIONS CERTIFICATE	
SOME TASKS MAY REQUIRE MORE THAN ONE PTW CERTIFICATE, DOUBLE-CHECK WHEN COMPLETING THE CERTIFICATE			
3 rd PARTIES / AUTHORITIES TO BE NOTIFIED (tick (✓) or indicate N/A, as appropriate)			
MASTER / CHIEF ENGINEER	<input checked="" type="checkbox"/> YES <input type="checkbox"/> N/A	Charterer / Client Representative	<input type="checkbox"/> YES <input type="checkbox"/> N/A
LOCAL PORT AUTHORITIES / COASTGUARD	<input type="checkbox"/> YES <input type="checkbox"/> N/A	FLAG / CLASS / INSURANCE REPRESENTATIVES	<input type="checkbox"/> YES <input type="checkbox"/> N/A
PERMIT VALID FROM:		PERMIT VALID UNTIL:	
DATE: <u>15 OCT 2024</u>	TIME: <u>1100</u> HRS.	DATE: <u>15 OCT 2024</u>	TIME: <u>1200</u> HRS.
VALIDITY OF EACH PERMIT MUST NOT EXCEED 120m IN TOTAL			
Hazards Identified by Permit Holder			
<input type="checkbox"/> Liquids / Gas Under Pressure	<input type="checkbox"/> Manual Handling	<input type="checkbox"/> Chemicals	<input type="checkbox"/> Electrical
<input type="checkbox"/> Explosive	<input type="checkbox"/> Hot Equip / Surfaces	<input type="checkbox"/> Flying particles	<input checked="" type="checkbox"/> Dropped Objects
<input checked="" type="checkbox"/> Moving / Rotating Machinery	<input type="checkbox"/> Heavy Lift Operations	<input type="checkbox"/> Dust / Fumes	<input type="checkbox"/> Weather / Sea State
<input type="checkbox"/> Work at Height / Lifting Equipment	<input type="checkbox"/> Adjacent Operations	<input type="checkbox"/> Safety System Disabled	<input type="checkbox"/> Confined Space
<input type="checkbox"/> Working Over Water	<input type="checkbox"/> Restricted Access / Egress	<input checked="" type="checkbox"/> Non-Routine Task	<input checked="" type="checkbox"/> Slip, trips & falls
<input type="checkbox"/> Other:			
Precaution to be taken			
<input checked="" type="checkbox"/> Toolbox meeting required	<input type="checkbox"/> Check equipment dead/switched	<input type="checkbox"/> Air line connection secured	<input type="checkbox"/> Work vest/buoy to be worn
<input type="checkbox"/> Consider adjacent work	<input type="checkbox"/> Depressure	<input type="checkbox"/> SDS	<input type="checkbox"/> JSA # <u>15102024 JSA NO. 27</u>
<input checked="" type="checkbox"/> Safety observer in place	<input type="checkbox"/> Provide with suitable spaces	<input type="checkbox"/> Ered Signs / barriers	
<input checked="" type="checkbox"/> Communications	<input type="checkbox"/> water Flush/Drain	<input type="checkbox"/> Scaffolding	
<input type="checkbox"/> Thoroughly ventilated	<input type="checkbox"/> Work place adequacy lit	<input checked="" type="checkbox"/> Lifting Equipment	
Safety Equipment Required and Extra PPE			
<input type="checkbox"/> Fall Arrest	<input type="checkbox"/> SCBA	<input type="checkbox"/> Floatation Device	<input type="checkbox"/> Eye Protection
<input type="checkbox"/> Face Shield	<input type="checkbox"/> Hearing Protection	<input type="checkbox"/> Particulate Respirator	<input type="checkbox"/> Gloves (Type)
<input type="checkbox"/> Full Chemical Suit	<input type="checkbox"/> Gas Detector	<input type="checkbox"/> Radio	<input type="checkbox"/> Others
PERMIT ISSUED TO: (name & signature)			
MR. WEERAPHAN SRITUMHASAK		RESPONSIBLE PERSON	
PERMIT ISSUED BY: (name & signature)			
CAPT. CHAMNAN LUWHEHA		AUTHORISING PERSON	
ON COMPLETION OF WORKS (tick when actions have been taken)			
HAVE ALL SAFETY CONTROL MEASURES, ISOLATIONS & WORKING RESTRICTIONS BEEN REMOVED?		<input type="checkbox"/>	
HAVE ALL RELEVANT 3 rd PARTIES & AUTHORITIES BEEN NOTIFIED OF COMPLETION?		<input type="checkbox"/>	
ALL ISSUED PTW CERTIFICATES ARE SIGNED-OFF & CLOSED OUT?		<input type="checkbox"/>	
HAVE ALL INVOLVED CREW / STAFF BEEN DE-BRIEFED?		<input type="checkbox"/>	
WORK COMPLETED: (name & signature)			
MR. WEERAPHAN SRITUMHASAK		RESPONSIBLE PERSON	
PERMIT CLOSED BY: (name & signature)			
CAPT. CHAMNAN LUWHEHA		AUTHORISING PERSON	

Remark: Use SWA when they face the risky situation, unsafe workplace and harmful condition to another people or environment.

Original Vessel Copy Location Retention: 2 years

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Original Vessel Copy Retention: 2 years

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SC GROUP	Date: 15/11/2023	Revision: 5	Ref: F-09-SHE/09
DIVING OPERATIONS CERTIFICATE			
DIVING OPERATIONS CERTIFICATE			
DATE: <u>15 OCT 2024</u>	DIV CERTIFICATE NO: <u>2024-05</u>		
VESSEL: <u>SC WINTER</u>	REF. PTW NO: <u>2024-05</u>		
LOCATION AREA: <u>SONGKHALA ANCHORAGE</u>	<input checked="" type="checkbox"/> DECK <input type="checkbox"/> ENGINE		
OPERATION UNIT: <u>DIVING OPERATION</u>			
1. DESCRIPTION OF WORK			
Reason for Certificate: <u>DIVING CUTTING ROPE AT Z-DRIVE PORT SIDE</u>		NOTE: All work to cease on sounding of fire alarm or PA Announcement. Work area and equipment to be made safe prior to leaving site at any time during the period of the permit.	
2. DIVING OPERATOR'S DETAILS			
COMPANY NAME: <u>PERSONAL INTERVIEW B.A.O.A. (BY SIGN 3 MRS)</u>			
ADDRESS:			
CONTACT DETAILS	PHONE: <u>099-3035565</u>	E-MAIL / FAX:	
ISO ACCREDITED?	YES / NO	CLASS / IACS APPROVED?	YES / NO
3. SAFETY MEASURES TO BE IN PLACE (tick (✓) when completed)			
Sufficient SC representatives have been designated as on-board / shore supervisors, and are suitably briefed?			
Appropriate authorities & 3 rd parties have been notified of operations?			
All crew / site staff are aware of the operation?			
All propulsion and turning gear units are isolated & locked?			
All sea-water suction & discharges are isolated & locked?			
All echo-sounders & cathodic protection systems are isolated & locked?			
Safe & secure access/egress to the water from the vessel/shore is in place?			
All applicable flags & warning signs are displayed / posted?			
Diving company reps have attended & contributed to the Toolbox Talk?			
Responsibilities for emergency response & medical aid are clearly defined & agreed between SC & diving staff (detail below)?			
Responsible for Rescue Operations? (delete as appropriate)		SC / Diving Company / Other (state) :-	
Responsible for Medical Response? (delete as appropriate)		SC / Diving Company / Other (state) :-	
Responsible for Contacting Emergency Services? (delete as appropriate)		SC / Diving Company / Other (state) :-	
4. ISSUE			
RESPONSIBLE PERSON		I declare the isolations required in this certificate have been completed.	
Name:	Rank: <u>C/E</u>	Signature:	Time: <u>1100</u>
AUTHORISING PERSON		I confirm the isolations required in this certificate have been completed in accordance with company procedure.	
Name:	Rank: <u>Master</u>	Signature:	Time: <u>1100</u>
5. COMPLETION			
RESPONSIBLE PERSON		I declare that all work site restrictions & control measures required in this certificate have been removed and the site is returned to normal operating status.	
Name:	Rank: <u>C/E</u>	Signature:	Time: <u>1200</u>
AUTHORISING PERSON		I declare that all work site restrictions & control measures required in this certificate have been removed and the site is returned to normal operating status. This certificate is cancelled.	
Name:	Rank: <u>Master</u>	Signature:	Time: <u>1200</u>

Original Vessel Copy Location Retention: 2 years

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Material Safety Data Sheet



1. Identification

Product Code : CHEMAX 316 FD
Product Name : Electric cleaner fast dry
Manufacturer : Chemax & Phypers Co., Ltd.

2. Hazards identification

Classification by GHS : Skin Irritation, Respiratory Sensitization
Hazard Pictograms



Eye Contact : Feel irritated eye
Skin Contact : May cause a little irritate skin
Ingestion : May cause feel queasy or diarrhea
Inhalation : People who have Asthma may cause gasp for breath.

3. Composition / Information on ingredients

Dispersing Agent

4. First aid measures

General advice : When you see the doctor that always show MSDS.
Eye Contact : Rinse thoroughly with plenty of water, then see The Oculist as soon as possible.
Skin Contact : Wash off immediately with soap and plenty of water.
Ingestion : Clean mouth with water and drink afterwards plenty of water, then induce vomiting
Inhalation : Move out of dangerous area, provide fresh air.

Material Safety Data Sheet



5. Firefighting measures

Extinguishing Media : Use water spray
Use alcohol-resistant foam
Use dry chemical or carbon dioxide
Special Protective equipment : Wear self-contained breathing apparatus and protective suit.
Hazardous Ingredients : None

6. Accidental release measures

Personal precautions : Ensure adequate ventilation.
Wear personal protective equipment.
Environmental precautions : Do not flush into surface water or sanitary sewer system.
Avoid subsoil penetration.
Methods for cleaning up : Soak up with liquid binder
Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

Handling :
Advice on safe handling : Provide sufficient air exchange and/or exhaust in work rooms.
Have eye wash bottle or eye rinse ready at the work place.
Avoid contact with skins and eyes.
Do not breathe vapors, aerosols.
Advice on protection fire : Normal measures for preventive fire protection
Storage :
Requirements for storage areas : Store at room temperature in the original container.
Store in a place accessible by authorized persons only.
Further information : Keep in dry place.
Keep away from heat and sources of ignition.
Storage Temperature : 5 °C - 40 °C

Material Safety Data Sheet



8. Exposure controls / Personal protection



Eye protection : Wear Safety glasses.
Skin and body protection : Wear chemical resistant protective clothing.
Respiratory protection : Wear respiratory equipment.
Hygiene measures : Do not breathe vapors or spray mist.
Take off contaminated clothing and shoes immediately.
Avoid contact with the skin and the eyes.
Keep away from food and drink.
Wash hands before breaks and immediately after handling the product.

9. Physical and Chemical properties

Appearance : Clear Liquid
Odour : Hydrocarbon
pH : 7
Flash Point : None
Freezing Point : -38°C
Density at 25°C : 1.6-1.7 Kg/l
Toxicity : TLV 850 ppm
Heavy Metal : None
Cyanide (asHCN) : None
Residue on evaporation : 10 ppm, Max
Free Chlorine : Non detectable

Material Safety Data Sheet



10. Stability and Reactivity

Stability : Stable
Incompatibility : None
Hazardous by-products : None
Hazardous polymerization : Will not occur

11. Toxicological information

Prolonged exposure may lead to irritation of sensitive skins.
The product is considered to be non-toxic

12. Ecological information

The base material is of natural origin and is relatively inert.

13. Disposal Considerations

Advice on Disposal : Local authority requirements should be checked before disposal of large quantities. Packaging can be recycled.
Dispose of as special waste in compliance with local and national regulations.

14. Transport information

UN No : None
IMDG Code : Not Classified
ADR / RID : Not Classified
ICAO / IATA : Not Classified
Shipping Name : Chemax 316 FD

15. Regulatory information

HAZARDOUS SUBSTANCE ACT B.E. 2535 : (9) Flammable Substance.
Responsible Agency : Department of Industrial Works

Material Safety Data Sheet



16. Other information

Dated : 01/03/2559

For further safety-related information,

Please contact : Chemax & Phypers Co., Ltd.
7/2 Soi Rama 3 53 Bangpoongrang Yannawa BKK. 10120

Tel : (66) 2 295 3687 – 91

Fax : (66) 2 295 3692

Email : chemaxphyper@hotmail.com

Website : www.chemaxphyper.com

This information is given in good faith, being based on knowledge currently available to Chemax & Phypers Co., Ltd. No. known relevant information has been omitted from this dated sheet and the information is designed to enable the user to use the product safely. However, Chemax & Phypers Co., Ltd. cannot accept liability for any loss, injury or damage which may have resulted from the product's use. Where the customer has particular concerns, we would recommend that they have their own tests carried out.

The Safety Data Sheets for catalogue items.
<http://www.chemaxphyper.com>

Effective date : 1 Jan 2018

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	SAFETY DATA SHEET			QC-SDS-L180
	Product	Rev.	Page	Date
	HYDRAULIC HVI 100	0	1/16	13/07/2018

1. Identification of the substance or mixture and of the supplier (ข้อมูลผลิตภัณฑ์และบริษัทผู้ผลิต)			
1.1 Product name :	Hydraulic HVI 100		
	ชื่อผลิตภัณฑ์ : ไฮดรอลิก เอชวีไอ 100		
1.2 Recommended use :	Hydraulic oil		
	การใช้ผลิตภัณฑ์ : ใช้เป็นน้ำมันไฮดรอลิก		
1.3 Detail of the supplier of the safety data sheet			
รายละเอียดผู้จำหน่าย			
Supplier			
Company Name :	PTT Oil and Retail Business Public Company Limited		
Address :	555/2 Energy Complex Building B, 12 th Floor, Vibhavadi Rangsit Rd., Chatuchak, Bangkok 10900		
Telephone :	+66 2196 5959		
Emergency Call :	+66 2239 7141		
ผู้จำหน่าย			
ชื่อบริษัท :	บริษัท ปตท. น้ำมันและการค้าปลีก จำกัด (มหาชน)		
ที่อยู่ :	555/2 ศูนย์เอนเนอร์ยี่คอมเพล็กซ์ อาคารบี ชั้น 12 ถนนวิภาวดีรังสิต แขวงจตุจักร เขตจตุจักร กรุงเทพฯ 10900		
หมายเลขโทรศัพท์ :	+66 2196 5959		
หมายเลขโทรศัพท์ฉุกเฉิน :	+66 2239 7141		

2. Hazards Identification (ข้อมูลระบุความเป็นอันตราย)	
2.1 Classification of the mixture according to Globally Harmonized System (GHS) standards.	
Acute toxicity (Oral)	Category 5
Acute toxicity (Inhalation)	Category 4
Skin Corrosion/Irritation	Category 3
Skin Sensitization	Category 1A
Hazardous to the aquatic environment, acute hazard	Category 3
Hazardous to the aquatic environment, long-term hazard	Category 4
การจำแนกประเภทของผสมตามระบบ GHS	
ความเป็นพิษเฉียบพลัน (ทางปาก)	ประเภทย่อย 5
ความเป็นพิษเฉียบพลัน (ทางการหายใจ)	ประเภทย่อย 4
การกัดกร่อนและการระคายเคืองต่อผิวหนัง	ประเภทย่อย 3
Additional Information Available from : Quality Analysis Department	
Address : 555 Ardnang Rd. Klongtoey, Bangkok 10260 Thailand Tel. +66 2239 7145, Fax : +66 2239 7149	

	SAFETY DATA SHEET			QC-SDS-L180
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การทำให้อัตราการระเหิดของอากาศเพิ่มขึ้น
ความเป็นพิษเฉียบพลันต่อสิ่งมีชีวิตในน้ำ
ความเป็นพิษเรื้อรังต่อสิ่งมีชีวิตในน้ำ

ประเภทย่อย 1A
ประเภทย่อย 3
ประเภทย่อย 4

GHS label elements (องค์ประกอบฉลากตามระบบ GHS)

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms (รูปสัญลักษณ์) :



Signal word : Warning

คำสัญญาณ : ระวัง

Hazard statements (ข้อความแสดงความเป็นอันตราย) :

H303 – May be harmful if swallowed.

อาจเป็นอันตรายเมื่อกลืนกิน

H316 – Causes mild skin irritation.

ระคายเคืองต่อผิวหนังเล็กน้อย

H317 – May cause an allergic skin reaction.

อาจทำให้เกิดการแพ้ที่ผิวหนัง

H332 – Harmful if inhaled.

เป็นอันตรายเมื่อหายใจเข้าไป

H402 – Harmful to aquatic life.

เป็นอันตรายต่อสิ่งมีชีวิตในน้ำ

H413 – May cause long lasting harmful effects to aquatic life.

อาจเป็นอันตรายต่อสิ่งมีชีวิตในน้ำ และมีผลกระทบระยะยาว

Precautionary statements (ข้อความแสดงข้อควรระวัง) :

P261 – Avoid breathing dust/fumes/gas/mist/vapours/spray.

หลีกเลี่ยงการหายใจเอาฝุ่น/ก๊าซ/ละอองเหลว/ไอระเหย/ละอองลอย

P271 – Use only outdoors or in a well-ventilated area.

ใช้เฉพาะนอกอาคารหรือในพื้นที่ที่ระบายอากาศได้ดี

P272 – Contaminated work clothing should not be allowed out of the workplace.

ไม่ควรอนุญาตให้นำชุดทำงานที่เปื้อนออกนอกไปนอกสถานที่ทำงาน

Additional Information Available from : Quality Analysis Department

Address : 555 Ardnang Rd. Klongtoey, Bangkok 10260 Thailand Tel. +66 2239 7145, Fax : +66 2239 7149

	SAFETY DATA SHEET			QC-SDS-L180
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P280 – Wear protective gloves/protective clothing/eye protection/face protection.

สวมถุงมือป้องกันชุดป้องกันดวงตา/อุปกรณ์ป้องกันใบหน้า

P302+P352 – IF ON SKIN: Wash with plenty of soap and water.

ถ้าสัมผัสผิวหนัง ล้างด้วยสบู่และน้ำปริมาณมาก

P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.

หากหายใจเข้าไปให้เคลื่อนย้ายผู้ป่วยไปยังบริเวณที่มีอากาศบริสุทธิ์และให้พักในท่าที่หายใจได้

P312 – Call a POISON CENTER or doctor/physician if you feel unwell.

ถ้ารู้สึกไม่สบาย ให้โทรศัพท์ปรึกษาศูนย์พิษวิทยาหรือแพทย์

P321 – Specific treatment (see section 4 on this SDS).

การรักษาเฉพาะ (ดูส่วนที่ 4 ของเอกสารความปลอดภัย)

P332+P313 – If skin irritation occurs: Get medical advice/attention.

หากเกิดระคายเคืองผิวหนัง ให้ปรึกษาแพทย์/พยาบาล

P333+P313 – If skin irritation or rash occurs: Get medical advice/attention.

หากเกิดระคายเคืองผิวหนังหรือผื่นแดงเกิดขึ้นที่ผิวหนัง ให้ปรึกษาแพทย์/พยาบาล

P362+P364 – Take off contaminated clothing and wash it before reuse.

ถอดเสื้อผ้าที่เปื้อนก่อนซัก แล้วซักก่อนนำมาใช้ซ้ำ

P501 – Dispose of contents/container in accordance with local/regional/national/international regulations.

กำจัดสาร/ภาชนะบรรจุ (ตามข้อบังคับของท้องถิ่น /ภูมิภาค /ประเทศ /สากล)

2.2 NFPA ratings (scale 0-4) :



Health = 2

Flammability = 1

Reactivity = 1

3. Composition / Information on Ingredients (ส่วนประกอบ / ข้อมูลส่วนประกอบ)


This material is defined as a mixture.

สารนี้จัดเป็นสารผสม

Component (สารประกอบ)	CAS No.	% Wt
Distillates (petroleum), hydrotreated heavy Paraffinic	64742-54-7	90-95
Additive Package	-	5-10

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4. First-aid Measures (มาตรการปฐมพยาบาล)

Inhalation (การสูดดม)
Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

ให้นำผู้ป่วยออกจากที่เกิดเหตุ สำหรับผู้ที่เป็นผู้เข้าทำการช่วยเหลือให้ป้องกันตัวเองจากการได้รับสารโดยการสวมหน้ากากชนิดที่เหมาะสม และถ้าระคายเคืองระบบทางเดินหายใจ เวียนหัว อาเจียน หรือหมดสติ ให้พบแพทย์โดยด่วน ถ้าหยุดหายใจให้ใช้เครื่องช่วยหายใจหรือทำการผายปอดแบบปากต่อปาก

Skin contact (การสัมผัสทางผิวหนัง)
Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

ล้างบริเวณที่สัมผัสด้วยสบู่และน้ำ ถ้าผลิตภัณฑ์ถูกฉีดเข้าไปในหรือใต้ผิวหนัง หรือเข้าส่วนอื่นของร่างกาย ไม่พาล้างจนหมดหรือขนาดของแผลเป็นเท่าไร ต้องให้แพทย์ศัลยกรรมฉุกเฉินประเมินเป็นรายบุคคลทันที แม้ว่าอาการเริ่มต้นจากการฉีดด้วยความดันสูงอาจน้อยหรือไม่เลยก็ตาม การรักษาทางศัลยกรรมตั้งแต่แรกภายใน 2-3 ชั่วโมงจะลดความรุนแรงของการบาดเจ็บได้

Eye Contact (การสัมผัสดวงตา)
Flush thoroughly with water for 15 minute. Flush thoroughly with water. If irritation occurs, get medical assistance.


ล้างตาทันทีด้วยน้ำอย่างน้อย 15 นาที หากมีอาการระคายเคือง ให้ปรึกษาแพทย์

Ingestion (สัมผัสโดยการกลืนกิน)
If swallow, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.
ห้ามทำให้อุป่วยอาเจียน และรีบนำไปส่งแพทย์

5. Fire-fighting Measures (มาตรการหยุดเพลิง)

Fire Fighting Instructions (ขั้นตอนการดับเพลิง)
- Water may be ineffective on flames, but should be used to keep fire-exposed containers cool. Large fire, such as tank fires, should be fought with caution. If possible, pump the content from the tank and cool adjoining structures cool and protect personnel. Avoid spreading burning liquid with water used for cooling purposes. Do not

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ที่ 4 มาตรการการปฐมพยาบาล คู่มือที่ 8 สำหรับคำแนะนำเรื่องอุปกรณ์ป้องกันอันตรายส่วนบุคคลอื่น ๆ อาจมีความจำเป็นในการใช้มาตรการป้องกันอื่นเพิ่มเติม ทั้งนี้ขึ้นอยู่กับสถานการณ์เฉพาะหน้า หรือวิจารณ์จากผู้มีหน้าที่รับผิดชอบในกรณีเหตุฉุกเฉิน

For emergency responders : respiratory protection will be necessary only in special cases, e.g., formation of mists. Half-face or full-face respirator with filter(s) for dust/organic vapor or Self Contained Breathing Apparatus (SCBA) can be used depending on the size of spill and potential level of exposure. If the exposure cannot be completely characterized or an oxygen deficient atmosphere is possible or anticipated, SCBA is recommended. Work gloves that are resistant to hydrocarbons are recommended. Gloves made of polyvinyl acetate (PVA) are not water-resistant and are not suitable for emergency use. Chemical goggles are recommended if splashes or contact with eyes is possible. Small spills : normal antistatic work clothes are usually adequate. Large spills : full body suit of chemical resistant, antistatic material is recommended.


สำหรับผู้ที่มีหน้าที่รับผิดชอบกรณีเกิดเหตุฉุกเฉิน การป้องกันทางเดินหายใจถูกจำเป็นให้ใช้ในกรณีพิเศษเช่น การมีละอองฝอยน้ำมัน อุปกรณ์ป้องกันแบบครึ่งหน้าหรือเต็มหน้าหรือใส่โครง สำหรับ ฝุ่น คริสตเคมิอินทรีย์ หรืออุปกรณ์หายใจที่สูดอากาศช่วยเหลือตัวเองได้ (SCBA) สามารถถูกใช้ขึ้นกับขนาดของการรั่วไหลและโอกาสระดับของการแผ่ออกมา ถ้าระดับที่แผ่ออกมาไม่สมบูรณ์หรือออกซิเจนไม่พอในบรรยากาศเป็นไปได้หรือถูกคาดหมายได้ SCBA จะถูกแนะนำให้ใช้ อุปกรณ์ทำงานป้องกันสารไฮโดรคาร์บอนถูกแนะนำให้ใช้ อุปกรณ์ที่ทำจากโพลีไวนิลอะซิเตด (PVA) ไม่ทนน้ำและไม่เหมาะสม สำหรับการหกรั่วไหลเพียงเล็กน้อย การสวมชุดป้องกันให้พาสีด้วยเครื่องมือเพียง ถ้าการหกรั่วไหลมีปริมาณมาก แนะนำให้ชุดป้องกันสารเคมีและป้องกันไฟฟ้สติดแบบทั้งตัว

Spill Mangement (การจัดการสารที่หกเปื้อน)
Land Spill : Stop leak if you can do so without risk. Recover by pumping or with suitable absorbent.
การรั่วไหลลงสู่พื้นดิน : หยุดการรั่วไหลถ้าสามารถทำได้โดยมีความเสี่ยง ล้อมบริเวณที่เกิดการรั่วไหลโดยทันทีด้วยทุ่นลอย (booms) แจ้งเตือนผู้เกี่ยวข้องอื่นๆ และเอาสารที่หกนั้นออกจากผิวหน้าโดยการกวาดหรือใช้สารดูดซับที่เหมาะสม ขอ

วัสดุดูดซับที่เหมาะสม
Water Spill : Stop leak if you can do so without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants. Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

การรั่วไหลลงสู่แหล่งน้ำ : หยุดการรั่วไหลถ้าสามารถทำได้โดยมีความเสี่ยง ล้อมบริเวณที่เกิดการรั่วไหลโดยทันทีด้วยทุ่นลอย (booms) แจ้งเตือนผู้เกี่ยวข้องอื่นๆ และเอาสารที่หกนั้นออกจากผิวหน้าโดยการกวาดหรือใช้สารดูดซับที่เหมาะสม ขอ

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flush down public sewers. The use of self-contained breathing apparatus and protective clothing is recommended for fire fighters. Avoid inhalation of vapors.

ไม่ควรใช้น้ำในการดับเพลิง แต่ควรใช้เพื่อรักษาอุณหภูมิของภาชนะที่เกิดเพลิงไหม้ให้เย็น ในกรณีที่เกิดเพลิงไหม้ภาชนะบรรจุขนาดใหญ่ เช่น ถังเก็บน้ำมัน ควรดับเพลิงด้วยความระมัดระวัง ถ้าเป็นไปได้ควรมีการสูบลดภัยที่ออกจากถังเก็บ และฉีดน้ำเพื่อรักษาอุณหภูมิให้ต่ำ หลีกเลี่ยงการฉีดน้ำโดยตรงเข้าไปยังผลิตภัณฑ์ที่เกิดเพลิงไหม้ ไม่ควรปล่อยของเสียสู่แหล่งน้ำ สาธารณะ สำหรับผู้ที่เข้าไปดับเพลิงควรใช้อุปกรณ์ช่วยหายใจและสวมชุดดับเพลิง หลีกเลี่ยงการสูดดมไอระเหยที่เกิดขึ้น
- Use water fog, foam, dry chemical or carbon dioxide (CO₂) to extinguish flames.
ใช้ละอองน้ำ โฟมดับเพลิง ผงเคมีแห้ง หรือคาร์บอนไดออกไซด์ สำหรับดับเพลิง

Special Fire Precaution (ข้อควรระวังในการดับเพลิง)
- Vapors can build explosive mixtures with air.
ไอระเหยของสารสามารถรวมกับอากาศประกอบของอากาศ และเกิดการระเบิดได้
- Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons and soot. These may be highly dangerous if inhaled.
การเผาไหม้ที่ไม่สมบูรณ์ อาจก่อให้เกิดก๊าซพิษ เช่น คาร์บอนมอนอกไซด์ คาร์บอนไดออกไซด์ สารไฮโดรคาร์บอนชนิดต่างๆ และเขม่า ซึ่งเป็นอันตรายทางสูดดม


Protective measures for firefighters (อุปกรณ์ป้องกันขณะดับเพลิง)
Insulated breathing apparatus must be worn in confined premises with heavy concentrations of fumes and gases.
ควรสวมใส่อุปกรณ์ป้องกันระบบทางเดินหายใจขณะดับเพลิง

6. Accidental release measures (มาตรการการจัดการเมื่อมีการหกั่วไหลของสาร)

Notification Procedures (กระบวนการแจ้งเหตุ)
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
ในกรณีที่มีการหกเปื้อนหรือปล่อยออกโดยอุบัติเหตุ ให้แจ้งหน่วยงานที่เกี่ยวข้องตามข้อกำหนด กฎหมายต่าง ๆ ที่บังคับใช้

Protective Measures (มาตรการป้องกัน)
Avoid contact with spilled material. See Section 5 for fire-fighting measures. See Section 2 the hazards identification. See Section 4 for first-aid measures. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.
หลีกเลี่ยงการสัมผัสสารที่เปื้อน คู่มือที่ 5 มาตรการการหยุดเพลิง คู่มือที่ 2 เรื่องข้อมูลระบุความเป็นอันตราย คู่มือส่วน

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คำแนะนำจากผู้เชี่ยวชาญก่อนใช้สารดูดซับสารเคมี
Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.
คำแนะนำสำหรับการรั่วไหลของสารลงสู่แหล่งน้ำและพื้นดินนี้ จัดทำขึ้นจากการจำลองสถานการณ์ของการรั่วไหลที่มีโอกาสเกิดขึ้น ทั้งนี้สภาพภูมิศาสตร์ ลม อุณหภูมิ ทิศทางของคลื่น กระแสน้ำและความเร็วที่แตกต่างกันนั้นมีผลอย่างมากในการจัดการที่ต่างกันออกไป ดังนั้นจึงควรปรึกษากับผู้เชี่ยวชาญ
หมายเหตุ : กฎหมายแต่ละท้องถิ่นอาจระบุหรือจำกัดข้อปฏิบัติบางประการ

Environmental Precautions (ข้อควรระวังเกี่ยวกับสิ่งแวดล้อม)
Large Spills : Dyke far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.
สารที่หกเปื้อนปริมาณมาก : สร้างกั้นกั้นของเหลวที่หกเปื้อนไกลออกจากบริเวณที่หกเพื่อกันกั้นกับลมกลับมาและกำจัดทั้งป้องกันไม่ให้ลงสู่ทางเดินของน้ำ ท่อน้ำเสีย แหล่งน้ำบาดาล หรือแหล่งน้ำใต้ดิน หรือบริเวณที่ติดอากาศ

7. Handling and storage (การจัดการและการเก็บรักษา)

Handling (การจัดการ)
Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). When the material is handled in bulk, an electrical spark could ignite any flammable vapors from liquids or residues that may be present (e.g., during switch-loading operations). Use proper bonding and/or earthing procedures. However, bonding and earthing may not eliminate the hazard from static accumulation. Consult local applicable standards for guidance. Additional references include API Recommended Practice 2003 (Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents) or National Fire Protection Association 77 (Recommended Practice on Static Electricity) or CENELEC CLO/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity).
ทั้งนี้สามารถทดสอบประจุไฟฟ้าซึ่งอาจทำให้เกิดประกายไฟ (แหล่งติดไฟ) เมื่อมีการจัดการสารจากภาชนะบรรจุ ไฟฟ้าที่เกิดประกายไฟอาจเกิดการลุกติดไฟเป็นผลมาจากไอของของเหลวหรือส่วนที่ตกค้างนี้ได้ (ตัวอย่างเช่น ระหว่างการถ่ายเทสาร) ใช้วิธีการที่เหมาะสมในการยึดและหรือต่อสายดิน อย่างไรก็ตามการยึดและต่อสายดินอาจไม่สามารถลดภัยอันตรายที่เกิดจากการสะสมไฟฟ้าสถิตได้ ให้ศึกษาหามาตรฐานการปฏิบัติการที่เป็นแนวทาง หรือหาข้อมูลอ้างอิงเพิ่มเติมได้จาก API Recommended Practice 2003 (Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents) หรือ National Fire Protection Association 77 (Recommended Practice on

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Static Electricity) หรือ CENELEC CLC/TR 50404 (Electrostatics - Code of practice for the avoidance of hazards due to static electricity)

Static Accumulator : This material is a static accumulator.
การเก็บสะสมไฟฟ้าสถิตย์ : สารนี้เป็นสารสะสมไฟฟ้าสถิตย์

Storage (การเก็บรักษา)
The type of container used to store the material may affect static accumulation and dissipation. Do not store in open or unlabelled containers.
ประเภทของบรรจุภัณฑ์ที่ใช้ในการบรรจุผลิตภัณฑ์ อาจทำให้เกิดไฟฟ้าสถิตย์สะสมและสลายตัวได้ อย่างไรก็ตามในการะเปิดหรือปิดฉลาก

8. Exposure controls / personal protection (การควบคุมการรับสัมผัสและการป้องกันส่วนบุคคล)

Engineering Controls (การควบคุมทางวิศวกรรม)
The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider. No special requirements under ordinary conditions of use and with adequate ventilation.

ระดับการป้องกันและวิธีการควบคุมที่จำเป็นนั้นแตกต่างกันไปตามสถานการณ์ที่มีโอกาสได้รับสาร มาตราการควบคุมที่นำมาพิจารณา : ไม่มีข้อกำหนดพิเศษ เมื่อใช้ตามปกติและมีการระบายอากาศที่เพียงพอ

Personal Protection (การป้องกันส่วนบุคคล)
Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.


การเลือกอุปกรณ์ป้องกันส่วนบุคคลนั้นแตกต่างกันไปตามลักษณะการสัมผัสสารที่เป็นไปได้ เช่น การใช้งาน วิธีจัดการสาร ความเข้มข้นและการระบายอากาศ ข้อมูลในการเลือกอุปกรณ์เพื่อใช้กับสารนี้ได้ระบุไว้ด้านล่าง ทั้งนี้ขึ้นอยู่กับวิธีการใช้ตามปกติ

General Advice : The use and choice of Personal Protection equipment is related to the hazard of the product, the workplace, and the way the product is handled. In general , We recommend as a minimum safety precaution the safety glasses with side-shields and work clothes protection arms, legs and body be used. In addition, any person visiting an area where this product is handles or processed should at least wear safety glasses with side-shields.

คำแนะนำทั่วไป : การเลือกใช้อุปกรณ์ป้องกันส่วนบุคคลจะขึ้นอยู่กับอันตรายของสารเคมี สถานที่ทำงาน และวิธีการใช้งานสารเคมี โดยทั่วไป ผู้ที่ทำงานประจำควรสวมแว่นตาป้องกันภัยอันตราย และเสื้อผ้าที่ปกป้องกันแขน ขา และร่างกายจากการสัมผัส สำหรับผู้ที่ไม่ทำงานในพื้นที่ทำงานชั่วคราว ควรสวมแว่นตาป้องกันภัยอันตรายประจำวันเป็นอย่างน้อย

Respiratory Protection : If engineering controls do not maintain airborne contaminant concentrations at a level

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handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

มาตรการสุขอนามัยเฉพาะ : ให้หมั่นตรวจสอบข้อปฏิบัติเพื่อสุขอนามัยส่วนบุคคลที่ดี เช่น การล้างมือหลังจากสัมผัสสารเคมี และก่อนรับประทานอาหาร ดื่มน้ำ และ/หรือ สูบบุหรี่ ชักล้างชุดทำงานและอุปกรณ์ป้องกันเพื่อกำจัดสารปนเปื้อน กำจัดเสื้อผ้าที่มีการปนเปื้อนและของเก่าที่ไม่สามารถทำความสะอาดได้ จัดเก็บสิ่งของต่าง ๆ ให้เป็นระเบียบเรียบร้อยอยู่เสมอ

Environmental Controls (การควบคุมทางสิ่งแวดล้อม)
Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

สอดคล้องกับกฎระเบียบด้านสิ่งแวดล้อมสามารถใช้งานได้ การจำกัด การปล่อยสู่อากาศ น้ำและดิน ในการป้องกันรักษาสิ่งแวดล้อมโดยการเฝ้าระวังการควบคุมที่เหมาะสมเพื่อป้องกันหรือจำกัดการปล่อยออก

9. Physical and chemical properties (คุณสมบัติทางกายภาพและทางเคมี)


Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications.

คุณสมบัติทางกายภาพและเคมีถูกให้ไว้สำหรับการศึกษาไว้เพื่อความปลอดภัย สุขภาพ และสิ่งแวดล้อม อาจจะไม่แสดงทั้งหมดในข้อกำหนดของผลิตภัณฑ์

General Information
Physical State : Liquid
Color : Yellow
Odor : Characteristic
Kinematics Viscosity @ 40 °C, mm²/s : 90-110
Flash Point : > 220 °C
Pour Point : ≤ -21 °C
Solubility in Water : Insoluble

ข้อมูลทั่วไป
สถานะทางกายภาพ : ของเหลว
สี : เหลือง
กลิ่น : มีกลิ่นเฉพาะตัว
ค่าความหนืดที่ 40 °C, mm²/s : 90-110
จุดวาบไฟ : ไม่ต่ำกว่า 220 °C
จุดไหลเท : น้อยกว่าหรือเท่ากับ -21 °C

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which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include : use a half face filter mask to protect from overexposure by inhalation. No special requirements under ordinary conditions of use and with adequate ventilation.

การป้องกันหายใจ : ถ้าระบบการควบคุมทางวิศวกรรมไม่สามารถรักษาระดับของสิ่งปนเปื้อนในอากาศที่เพียงพอต่อการป้องกันสุขภาพของพนักงานได้ อาจจำเป็นต้องใช้อุปกรณ์ป้องกันทางเดินหายใจที่ได้รับอนุญาต การเลือก การใช้และการบำรุงรักษาอุปกรณ์ป้องกันทางเดินหายใจต้องทำตามข้อกำหนดของกฎหมาย สำหรับประเภทอุปกรณ์ป้องกันทางเดินหายใจที่พิจารณาใช้ก็มีสารนี้ด้วย : ใช้หน้ากากป้องกันกลุ่มไอละอองของสาร ตามความเหมาะสม ไม่มีข้อกำหนดพิเศษ เมื่อใช้ตามปกติ และไม่มีการระบายอากาศที่เพียงพอ

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapour warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

ใช้อุปกรณ์ถ่ายเทอากาศที่เหมาะสมเพื่อรักษาระดับปริมาณสารให้ต่ำกว่าระดับที่กำหนดไว้
ในกรณีที่ความเข้มข้นของสารในอากาศมีค่าสูง ให้ใช้อุปกรณ์ป้องกันทางเดินหายใจชนิด "ดูดส่งผ่านอากาศ" และปรับให้มีความดันภายในหน้ากากสูงกว่าภายนอก ซูดส่งผ่านอากาศพร้อมด้วยอากาศสะอาดอาจมีความจำเป็นในสถานการณ์ที่ระดับของออกซิเจนต่ำกว่ามาตรฐาน อุปกรณ์การเตือนแก๊ส/ไอไม่ทำงาน หรือความเข้มข้นของสารในบรรยากาศมีค่าสูงเกินกว่าระดับความสามารถในการป้องกันของหน้ากากกรองอากาศ

Hand Protection : Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include : Nitrile, Viton


การป้องกันมือ : ข้อมูลเฉพาะของถุงมือที่ได้ให้ไว้มีจัดทำขึ้นตามเอกสารตีพิมพ์และข้อมูลจากผู้ผลิตถุงมือ สภาพการทำงานจะมีผลต่อความคงทนของถุงมือเป็นอย่างมาก ให้สอบถามข้อมูลจากผู้ผลิตถุงมือเพื่อขอคำแนะนำสำหรับประเภทของถุงมือที่เหมาะสมและอายุการใช้งานกับงานที่ท่านใช้งาน ให้ตรวจสอบและเปลี่ยนถุงมือที่ขาดหรือเสียหาย ประเภทของถุงมือที่ใช้สำหรับการทำงานกับสารเคมีมีรวมถึง ถุงมือยาง Nitrile, ถุงมือยาง Viton

Eye Protection : If contact is likely, safety glasses with side shields are recommended.
การป้องกันดวงตา : ถ้าต้องสัมผัสกับสาร ควรสวมแว่นตาป้องกันภัยอันตรายด้านข้าง

Skin and Body Protection : See general advice
การป้องกันผิวหนังและร่างกาย : ปฏิบัติตามคำแนะนำทั่วไป

Specific Hygiene Measures : Always observe good personal hygiene measures, such as washing after

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การละลายในน้ำ : ไม่ละลายน้ำ

10. Stability and reactivity (ความเสถียรและการเกิดปฏิกิริยา)

Stability : Material is stable under normal conditions.
Condition to avoid : Excessive heat. High energy sources of ignition.
Materials to avoid : Strong oxidizing agents, chlorate, nitrates, peroxides.
Hazardous decomposition products : CO, CO₂, water vapor, oxide of sulfur / nitrogen / phosphorus / boron
Possibility of hazardous reactions : Hazardous polymerization will not occur.

ความคงตัว : สารนี้คงตัวภายใต้การใช้ปกติ
สภาวะที่ต้องหลีกเลี่ยง : ความร้อนมากเกินไป แหล่งกำเนิดการจุดติดไฟพลังงานสูง
สารที่ต้องหลีกเลี่ยง : สารออกซิไดซ์ที่รุนแรง เช่น คลอเรต, ไนเตรต และเปอร์ออกไซด์
ผลิตภัณฑ์จากการเสื่อมสลายของสารอันตราย : คาร์บอนมอนอกไซด์, คาร์บอนไดออกไซด์, ไอน้ำ, ออกไซด์ของซิลิเฟอร / ไนโตรเจน / ฟอสฟอรัส / โบรอน
มีความเป็นไปได้ที่จะเกิดปฏิกิริยาที่อันตราย : ไม่เกิดโพลิเมอร์ไนเซชัน (polymerization) ที่อันตราย


11. Toxicological information (ข้อมูลด้านพิษวิทยา)

Information on likely routes of exposure
Inhalation : Harmful if inhaled.
Ingestion : May be harmful if swallowed.
Skin Contact : Causes mild skin irritation.
Eye contact : Minimally Toxic. Based on assessment of the components.

ข้อมูลทางที่ได้รับสาร
การสูดดม : เป็นอันตรายเมื่อหายใจเข้าไป
การรับประทาน : อาจเป็นอันตรายเมื่อกลืนกิน
ผิวหนัง : ระคายเคืองต่อผิวหนังเล็กน้อย
ดวงตา : มีความเป็นพิษต่ำมาก บนพื้นฐานของการประเมินส่วนประกอบ

Information on toxicological effects
Acute toxicity
Oral : ATE_{max} 2000 - 5000 mg/kg
May be harmful if swallowed
Dermal : Not classified

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Inhalation :	ATE _{max} 1.0 - 5 mg/L Harmful if inhaled
Skin Corrosion/Irritation :	Causes mild skin irritation
Serious Eye Damage/Eye Irritation :	Not classified
Respiratory sensitization :	Not possible to clarified
Skin sensitization :	May cause an allergic skin reaction
Germ Cell Mutagenicity :	Not possible to clarified
Carcinogenicity :	Not possible to clarified
Reproductive toxicity :	Not possible to clarified
Specific Target Organ Toxicity/Single Exposure :	Not possible to clarified
Specific Target Organ Toxicity - Repeated Exposure :	Not possible to clarified
Aspiration Hazard :	Not possible to clarified

ข้อมูลความเป็นพิษ

ความเป็นพิษเฉียบพลัน	
ทางปาก :	ATE _{max} 2000 - 5000 mg/kg อาจเป็นอันตรายเมื่อกลืนกิน
ผิวหนัง :	ไม่จำแนก
การหายใจ :	ATE _{max} 1.0 - 5 mg/L เป็นอันตรายเมื่อหายใจเข้าไป
การกัดกร่อนและการระคายเคืองต่อผิวหนัง :	ระคายเคืองต่อผิวหนังเล็กน้อย
การทำลายดวงตาอย่างรุนแรงและการระคายเคืองต่อดวงตา :	ไม่จำแนก
การทำไอหรือต่อการกระตุ้นอาการแพ้ของผิวหนัง :	ไม่มีข้อมูล
การทำให้ไอต่อการกระตุ้นอาการแพ้ของผิวหนัง :	อาจทำให้เกิดการแพ้ที่ผิวหนัง
การก่อให้เกิดการกลายพันธุ์ของเซลล์สืบพันธุ์ :	ไม่มีข้อมูล
การก่อมะเร็ง :	ไม่มีข้อมูล
การเป็นพิษต่อระบบสืบพันธุ์ :	ไม่มีข้อมูล
เป็นพิษต่อสัตว์ระยะน้ำหมายอย่างจำเพาะเจาะจงจากการสัมผัสครั้งเดียว :	ไม่มีข้อมูล
เป็นพิษต่อสัตว์ระยะน้ำหมายอย่างจำเพาะเจาะจงจากการสัมผัสซ้ำ :	ไม่มีข้อมูล
ความเป็นอันตรายจากการสำลัก :	ไม่มีข้อมูล

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คำส่งประวัติแยกส่วนของออกทานอลน้ำ	ไม่มีข้อมูล
การเคลื่อนที่	ไม่มีข้อมูล
ผลกระทบอื่นๆ	ไม่มีข้อมูล


13. Disposal considerations (ข้อพิจารณาในการกำจัด)

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
คำแนะนำในการทิ้งที่จัดทำขึ้นสำหรับสารแต่ละประเภท การทิ้งสารนั้นต้องปฏิบัติตามกฎหมายและกฎเกณฑ์ที่เกี่ยวข้องฉบับปัจจุบันและลักษณะของสาร ณ เวลาที่ทิ้ง

Disposal recommendations (คำแนะนำในการทิ้ง)
Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Protect the environment. Dispose of used oil at designated sites. Minimize skin contact.
ผลิตภัณฑ์นี้ควรเผาไหม้ในภาชนะปิดที่ได้รับการควบคุมอุณหภูมิที่อุณหภูมิสูงเพื่อป้องกันการเกิดผลิตภัณฑ์ที่ไม่ต้องการจากการเผาไหม้ เพื่อป้องกันสภาพแวดล้อม ควรกำจัดน้ำมันที่ใช้แล้วที่สถานที่โดยยอมรับการออกแบบ ควรสัมผัสทางผิวหนังให้น้อยที่สุด

Empty Container Warning : Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
คำเตือนเกี่ยวกับภาชนะบรรจุที่ใช้หมดแล้ว : ภาชนะบรรจุที่ใช้หมดแล้ว อาจมีความดันค้างเหลืออยู่ และเป็นอันตรายได้ อย่าพยายามเติมซ้ำ หรือทำความสะอาดโดยไม่มีวิธีปฏิบัติที่เหมาะสม ควรระบายสารออกจากถังไปอย่างหมดเกลี้ยง และเก็บไว้ในที่ปลอดภัยจนกว่าจะปรึกษาผู้เชี่ยวชาญที่จัดตั้งอย่างเหมาะสม ควรให้ผู้รับเหมาที่มีความเชี่ยวชาญหรือได้รับอนุญาตเป็นผู้นำภาชนะเปล่าไปทิ้งในสถานที่ ที่เหมาะสม หรือกำจัดทิ้งตามกฎระเบียบข้อบังคับของรัฐบาล ห้ามอัดความดัน คัด เชื่อม เชื่อมประสาน บัดกรี เจาะ บด เจียรใน หรือปล่อยในภาชนะที่มีความร้อน เปลวไฟ ประกายไฟ ไฟฟ้าสถิต หรือแหล่งจุดระเบิดอื่นๆ ภาชนะอาจระเบิดและทำให้เกิดการบาดเจ็บและเสียชีวิตได้

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12. Ecological information (ข้อมูลด้านนิเวศวิทยา)

The information given is based on data available for the material, the components of the material, and similar materials.

Ecotoxicity

Fish	L(E)C ₅₀ (Fish) 1-10 mg/l
Aquatic Invertebrates	No data available
Toxicity to Aquatic Plants	No data available
Toxicity to soil dwelling organisms	No data available
Sediment Toxicity	No data available
Toxicity to Terrestrial Plants	No data available
Toxicity to Above-Ground Organisms	No data available
Toxicity to microorganisms	No data available

Persistence and Degradability

Biodegradation	No data available
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Bioaccumulative Potential

Bioconcentration Factor (BCF)	No data available
Partition Coefficient n-octanol / water (log K _{ow})	No data available

Mobility:

Other Adverse Effects :

ข้อมูลที่ใช้เป็นจัดทำบนพื้นฐานข้อมูลที่มีอยู่ของสารนี้ ส่วนประกอบของสารนี้ และสารใกล้เคียงอื่นๆ

ความเป็นพิษต่อสิ่งแวดล้อม

ปลา	L(E)C ₅₀ (Fish) 1-10 mg/l
สัตว์น้ำไม่มีกระดูกสันหลัง	ไม่มีข้อมูล
ความเป็นพิษต่อพืชน้ำ	ไม่มีข้อมูล
ความเป็นพิษต่อสิ่งมีชีวิตที่อาศัยอยู่ในดิน	ไม่มีข้อมูล
ความเป็นพิษของตะกอน	ไม่มีข้อมูล
ความเป็นพิษต่อพืชบก	ไม่มีข้อมูล
ความเป็นพิษต่อสิ่งมีชีวิตที่อาศัยอยู่บนผิพื้นดิน	ไม่มีข้อมูล
ความเป็นพิษต่อจุลินทรีย์	ไม่มีข้อมูล


ความคงทนและความสามารถในการสลายตัว

การสลายตัวทางชีวภาพ	ไม่มีข้อมูล
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แนวโน้มในการสะสมทางชีวภาพ

ค่าปัจจัยความเข้มข้นชีวภาพ	ไม่มีข้อมูล
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Additional Information Available from : Quality Analysis Department
Address : 555 Ardnang Rd. Klongtoey, Bangkok 10260 Thailand Tel. +66 2239 7145, Fax : +66 2239 7149

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14. Transport information (ข้อมูลการขนส่ง)

US DOT Information
Proper shipping name : Not regulated as dangerous goods unless this product is shipped at a temperature above the flash point
ชื่อที่ใช้ในการขนส่ง : ไม่จัดเป็นสารอันตรายเมื่อขนส่งที่อุณหภูมิไม่เกินจุดวาบไฟ

International Maritime Dangerous Goods (IMDG) Code
Proper shipping name : Not regulated as dangerous goods unless this product is shipped at a temperature above the flash point
ชื่อที่ใช้ในการขนส่ง : ไม่จัดเป็นสารอันตรายเมื่อขนส่งที่อุณหภูมิไม่เกินจุดวาบไฟ


International Air Transport Association (IATA) and ICAO Information
Proper shipping name : Not regulated as dangerous goods unless this product is shipped at a temperature above the flash point
ชื่อที่ใช้ในการขนส่ง : ไม่จัดเป็นสารอันตรายเมื่อขนส่งที่อุณหภูมิไม่เกินจุดวาบไฟ

15. Regulatory information (ข้อมูลด้านกฎข้อบังคับ)

This material is considered hazardous according to the classification criteria of the Hazard Classification and Communication System for Hazardous Materials BE 2555.
สารนี้ถูกจำแนกความเป็นวัตถุอันตรายตามกฎหมายของประเทศไทย กระทรวงอุตสาหกรรม เนื่องจากระบบการจำแนกและการสื่อสารความเป็นอันตรายของวัตถุอันตราย พ.ศ. 2555

16. Other information (ข้อมูลอื่นๆ)

Issue Date : 13 July 2018
Revision Date : 13 July 2018
Reference : Globally Harmonized System of Classification and Labelling of Chemical (GHS), UNITED NATIONS, New York and Geneva, 2011
วันที่จัดทำเอกสารข้อมูลความปลอดภัย : 13 กรกฎาคม 2561
วันที่แก้ไขเอกสารข้อมูลความปลอดภัย : 13 กรกฎาคม 2561
ข้อมูลอ้างอิง : การจำแนกประเภทและการติดฉลากสารเคมีที่เป็นระบบเดียวกันทั่วโลก
SDS Usage (การใช้เอกสาร SDS)
The information and recommendations contained herein are accurate and reliable as of the date issued. The information and recommendations are offered for the user's consideration and examination. It is the user's
Additional Information Available from : Quality Analysis Department
Address : 555 Ardnang Rd. Klongtoey, Bangkok 10260 Thailand Tel. +66 2239 7145, Fax : +66 2239 7149

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responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted.

ข้อมูลและคำแนะนำที่ระบุไว้ไม่มีผลผูกมัดและเชื่อถือได้ตามข้อมูล ณ วันที่จัดทำเอกสาร ข้อมูลและคำแนะนำนั้นให้ไว้สำหรับให้ผู้ใช้งานได้พิจารณาและตรวจสอบ ถือว่าเป็นความรับผิดชอบของผู้ใช้ที่จะพิจารณาเห็นชอบว่าข้อมูลนั้นเหมาะสมต่องานที่นำไปใช้หรือไม่ ถ้าผู้ใช้ทำการนำผลิตภัณฑ์ไปบรรจุใหม่ ถือเป็นการรับผิดชอบของผู้ใช้เพื่อให้แน่ใจว่ามีข้อมูลด้านสุขภาพ ความปลอดภัยและข้อมูลที่จำเป็นอื่นๆ อยู่พร้อม และ/หรือบนบรรจุภัณฑ์ ควรมีการระบุคำเตือนและวิธีการใช้งานอย่างปลอดภัยให้กับแก่ผู้ทำการจัดการหรือผู้ใช้งานเสมอ ห้ามทำการเปลี่ยนแปลงแก้ไขเอกสารนี้โดยเด็ดขาด ไม่อนุญาตให้จัดทำเอกสารใหม่หรือถ่ายสำเนาเอกสารนี้ทั้งหมดหรือบางส่วนเว้นแต่ในส่วนเนื้อหาที่กำหนดโดยกฎหมาย

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First Aid Kit Checklist

ลำดับ	รายการ	รายละเอียด / ขนาด	Checked
1	Paracetamol (ยาพาราเซตามอล)	500 mg	✓
2	Hyoscine Etylbromide (ยาไฮออสซีน ไฮโดรโบรไมด์)	0.3 mg	✓
3	Standard Dressing (ผ้าพันแผล)	ขนาด 2 นิ้ว	✓
4	Standard Dressing (ผ้าพันแผล)	ขนาด 3 นิ้ว	✓
5	Standard Dressing (ผ้าพันแผล)	ขนาด 4 นิ้ว	✓
6	Scissors (กรรไกร)	Stainless	✓
7	Safety Pins (เข็มกลัด)	ขนาดต่าง ๆ	✓
8	Triangular Bandage (ผ้าสามเหลี่ยม)	90 x 130 ซม.	✓
9	Zinc Oxide (Pensoplast) (เทปกาวยึดผ้าพันแผล)	-	✓
10	Adhesive Plastic Sterile (พลาสติกปิดแผล)	-	✓
11	Eye Dressing (ผ้าปิดตา)	-	✓
12	Cotton Wool (สำลี)	6 กรัม	✓
13	Antiseptic Cream (ครีมฆ่าเชื้อ)	-	✓
14	Povidine (ยาฆ่าเชื้อ)	30 cc	✓
15	First Aid Instruction (หนังสือคู่มือการปฐมพยาบาล)	-	✓
16	Tourniquet (สายรัดห้ามเลือด)	30 ซม.	✓
17	Alcohol Prep (แผ่นชุบแอลกอฮอล์)	-	✓

ISM DRILL & EXERCISE SCHEDULE

Schedule for year : 2025

กำหนดการฝึกประจำปี : 2568

Vessel Name :

Month (เดือน) Title (หัวข้อการฝึก)	Type of vessel			Interval	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	AHTS PSV/AV	CrewB.	Towing		(ม.ค)	(ก.พ)	(มี.ค)	(เม.ย)	(พ.ค)	(มิ.ย)	(ก.ค)	(ส.ค)	(ก.ย)	(ต.ค)	(พ.ย)	(ธ.ค)
1. Fire & Explosion on board (Accom, Bridge, E/R, On cargo deck)	X	X	X	1 M*												
2. Abandon ship	X	X	X	1 M*												
3. Oil spills	X	X	X	1 M*												
4. Noxious Liquids Substances spills (Chemical) (if any)	X			1 M*												
5. Rescue from Enclosed Space	X	X	X	2 M*												
6. Man Overboard & Search & Rescue + Rescue Boat drill Maneuvers in the Water	X	X	X	2 M*												
7. Steering Gear Failure	X	X	X	3 M*												
8. Emergency Contingency Drill and Ship/Shore Exercise + MEDIA response																
Stop Work Authority (SWA)	X	X	X	1 M*												
Personal's Injury,Sickness (Medevac)	X	X	X	3 M*												
Generator Failure (Black out)	X	X	X	3 M*												
Bridge Controls Failure	X	X	X	1 Y*						** SCGL						
Collision + Flooding	X	X	X	1 Y*		** SCPL										
Emergency Breakaway from berth	X	X	X	1 Y*												
Emergency towing	X	X	X	1 Y*				** EVAY						** TCRY		
Main Engine Failure + Grounding + Salvage	X	X	X	1 Y*			** ENCQ									
Gyro Compass Failure	X	X	X	1 Y*				** TCJT								
9. Additional for specific contractual assignment																
Typhoon Evacuation (if any)	X	X	X	3 M*												
DP Failure (if any)	X			1 Y*												
Anchor Handling System Failure (if any)	X		X	3 M*												
Emergency Towing Release (if any)	X		X	2 M*												

Date of announcement (ประกาศ ณ วันที่) : 24th March 2025

Revised. 01

Note ; * **For Drill** : "All vessels" shall conduct " Emergency Contingency Drills " that are displayed by Highlighted Box

** **For Exercise** : "The Designated Vessel" that displayed 4 letter abbreviation, should be conducted "LIVE" table top exercise with Company's ERT.

Prepared By:

(Mr.Wasana Jernsutjarit)

Acting Marine,QSHE Manager

Approved By :

(Mr.Rangsan Phucharoenl)

Deputy Managing Director

Schedule for year : 2025

กำหนดการฝึกประจำปี: 2568

Vessel Name :

Month (เดือน)		Type of vessel														
Title (หัวข้อการฝึก)	Interval	Autis PSS/AUV	Crew Towing	JAN (1.1)	FEB (01.02)	MAR (01.03)	APR (01.04)	MAY (01.05)	JUN (01.06)	JUL (01.07)	AUG (01.08)	SEP (01.09)	OCT (01.10)	NOV (01.11)	DEC (01.12)	
1. Fire & Explosion on board (Accom, Bridge, E/R, On cargo deck)	X	X	X													
2. Abandon ship	X	X	X													
3. Oil spills	X	X	X													
4. Noxious Liquids Substances spills (Chemical) (if any)	X	X	X													
5. Rescue from Enclosed Space	X	X	X													
6. Man Overboard & Search & Rescue	X	X	X													
7. + Rescue Boat drill Maneuvers in the Water	X	X	X													
8. Steering Gear Failure	X	X	X													
9. Emergency Contingency Drill and Ship/Shore Exercise + MEDIA response	X	X	X													
Stop Work Authority (SWA)	X	X	X													
Personal's Injury/Sickness (Medevac)	X	X	X													
Generator Failure (Black-out)	X	X	X													
Bridge Controls Failure	X	X	X													
Collision + Flooding	X	X	X													
Emergency Breakaway from berth	X	X	X													
Emergency towing	X	X	X													
Main Engine Failure + Grounding + Salvage	X	X	X													
Gyro Compass Failure	X	X	X													
10. Additional for specific contractual assignment	X	X	X													
Typhoon Evacuation (if any)	X	X	X													
DP Failure (if any)	X	X	X													
Anchor Handling System Failure (if any)	X	X	X													
Emergency Towing Release (if any)	X	X	X													
When carry out DP Annual Survey																

Date of announcement (ประกาศ ณ วันที่): 24th March 2025

Revised. 01

Note: * For Drill : "All vessels" shall conduct "Emergency Contingency Drills" that are displayed by Highlighted Box
****For Exercise:** "The Designated Vessel" that displayed 4 letter abbreviation, should be conducted "LIVE" table top exercise with Company's ERT.

Prepared By:

Approved By :

Acting Marine, QSHS Manager

Deputy Managing Director

Original : Vessel. Copy: QAS, Retention : 3 years

Page 1 of 1

Date: 15/03/2024

Revision: 10

Ref.: F-11-QAS/08

SHIPBOARD DRILL REPORT

Instruction:

- Note:** When a training drill has been completed, an evaluation of the drill must be duty signed by the Master.
The questions listed should be answered "Yes" or "No." If any of the answers are "No," the reason why must be included in the Comments.
1. _____
2. _____
3. _____
4. _____
- The names of the crew members that did not participate in the drill must be included
General Alarm: ●●●●●●●● 7 SHORT / LONG + VERBAL(PA System) Ref: Appendix 7-4; Emergency Alarm
MOB Alarm: ●●●●●●●● 3 LONG RINGS + VERBAL (PA System) Ref: Appendix 7-4; Emergency Alarm
- Additional Precautions:**
- The personnel shall not be placed in lifeboat, rescue boats or liferafts during drill where they are being raised or lowered

Vessel name	Date	Time	Place/Location
SC Winter	07 Sep 2025	From 1745 To 1800 Hrs.	Arthil Field
Drill Subject			
<input checked="" type="checkbox"/> Oil Spill	<input type="checkbox"/>	<input type="checkbox"/> Collision	<input type="checkbox"/> Main Engine Failure
<input type="checkbox"/> NLS (Chemical) Spill	<input type="checkbox"/>	<input type="checkbox"/> Flooding	<input type="checkbox"/> Gas or Toxic Vapour Release
<input type="checkbox"/> Generator Failure (Black out)	<input type="checkbox"/>	<input type="checkbox"/> Emergency Breakaway from Berth	<input type="checkbox"/> Emergency Towing (Release / Apart)
<input type="checkbox"/> Bridge Control Failure	<input type="checkbox"/>	<input type="checkbox"/> Salvage	<input type="checkbox"/> Passenger Evacuation
<input type="checkbox"/> Gyro Compass Failure	<input type="checkbox"/>	<input type="checkbox"/> Rescue from Enclosed Space	
<input type="checkbox"/> Steering Gear Failure	<input type="checkbox"/>	<input type="checkbox"/> Stop Work Authority (SWA)	
<input type="checkbox"/> DP Failure	<input type="checkbox"/>	<input type="checkbox"/> Anchor Handling System Failure	
<input type="checkbox"/> Typhoon Evacuation	<input type="checkbox"/>	<input type="checkbox"/> Personal's Injury, Sickness or Fatality	
<input type="checkbox"/> Emergency Towing Release	<input type="checkbox"/>	<input type="checkbox"/> Man Overboard and Search & Rescue	
<input type="checkbox"/> Grounding / Standing	<input type="checkbox"/>	<input type="checkbox"/> Other	

1.	Assumed location (ถ้าไม่พบในหลักฐาน):	Oil spill on main deck Port side
2.	Time preparing from start drill signal until ready at position as per Muster list (รวมเวลาเตรียมตัวหลังจากสัญญาณรวมตัวที่ท่าเรือ, 401 หมายเลข):	2 Minute (นาที)
3.	Communication Equipment (อุปกรณ์การสื่อสาร):	UHF , CH (ช่องความถี่): 01
4.	Condition (สภาพความพร้อม):	Good
	Number of crew members partaking in drill (จำนวนผู้ฝึกซ้อมในเรือ):	15 Person (คน)

5. Drill Details

Time (mm)	Drill Details (รายละเอียดการฝึก (กิจกรรม/เหตุการณ์))
1745	This is a drill -Deck crew found oil spill on starboard side at bunkering station during transfer fuel to ED-1. -Deck crew inform to duty office on bridge.
1746	-Duty officer press emergency stop fuel button and inform to master.
1747	-Master raised emergency alarm follow by announce via PA "Oil Spill, Oil Spill, Oil Spill at stbd side bunkering station.
1748	- Crew proceed to muster station and head count.
1749	-Master notify to Rig ED-1 barge master for oil spill on board.
1750	-Crew proceed to bunkering station.
1751	-Emergency party report to command party about oil spill estimated quantity 20 Ltrs.
1752	-Master report to DPA.
1753	-Emergency party collect spilled oil by oil absorbent and saw-dust etc. and clean up the area.
1754	-Emergency party report to command party for oil spill under control & area was clean up
1756	-Master Record the incident in Log book.
1758	-Demonstrated for SOPEP equipment's to all crew. Terminated drill
1800	

Original: Vessel, Copy: QA, Retention: 3 years

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6. Evaluation (ให้ประเมินผล)

Pls. mark		Result of drill	Reason (if answer 'No')
Yes	No		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Did all Personnel Muster correctly and all Stations Report to the Bridge? (คนประจำเรือขึ้นระวางพร้อมกันและแจ้งสถานีรายงาน)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Was Mustering completed in a satisfactory time? (การขึ้นระวางเสร็จสิ้นในเวลาที่พอใจหรือไม่?)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Was all required equipment ready for use and found in working order? (อุปกรณ์ที่จำเป็นพร้อมใช้งานหรือไม่?)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Were all personnel found to be fully familiar with the equipment used? (คนประจำเรือทุกคนคุ้นเคยกับอุปกรณ์หรือไม่?)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Were all communication between emergency parties and the bridge satisfactory? (การสื่อสารระหว่างเรือและศูนย์ควบคุมการเดินเรือดีหรือไม่?)	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Did personnel follow procedure satisfactorily? (คนประจำเรือปฏิบัติตามขั้นตอนหรือไม่?)	

Overall comment/evaluation after drill (ข้อคิดเห็นการประเมินผล/การประเมินผลหลังการฝึก)

All training and reviews maintained as per established procedures.

Note: In case of serious deficiencies or equipment failure, the master should be notified immediately via this report.

หมายเหตุ: ในกรณีที่พบข้อบกพร่องร้ายแรงหรือความล้มเหลวของอุปกรณ์, นายเรือควรแจ้งผู้บังคับการทันทีผ่านรายงานการฝึก

7. Name of participant with signature (ชื่อผู้เข้าร่วมการฝึก)

No.	Name (ชื่อ)	Rank (ตำแหน่ง)	Signature (ลายเซ็น)
1.	Mr. Jaroonsak Jantawong	C/O	
2.	Mr. Pongpitak Watcharasukhum	2/O	
3.	Mr. Chalporn To-Ae	C/E	
4.	Mr. Paopan Kidkong	2/E	
5.	Mr. Morakot Khieokham	3/E	
6.	Mr. Wanchai Boonpong	E/E	
7.	Mr. Trakulsak Pakdeenok	BOSUN	
8.	Mr. Tanakorn Panchakhan	A/B 1	
9.	Mr. Supachai Wongwai	A/B 2	
10.	Mr. Nattapong Chuenchop	A/B 3	
11.	Mr. Suriya Pormpha	A/B 4	
12.	Mr. Nattapong Towjaipang	O/L 1	
13.	Mr. Seksan Aommaruek	O/L 2	
14.	Mr. Panya Buadee	COOK	

Signed by Master

Name: MR. PICHAI PHUNGPENSIK

Instruction:

- When a training drill has been completed, an evaluation of the drill must be duly signed by the Master.
- The Questions listed should be answered "Yes" or "No". If any of the answers are "No", the reason why must be included in the Comments.
- The names of the crew members that did not participate in the drill must be included.
- General Alarm: SHORT, LONG, VERBAL (PA System) Ref: Appendix 7.4: Emergency Alarm
- MOB Alarm: SHORT, LONG, VERBAL (PA System) Ref: Appendix 7.4: Emergency Alarm
- The personnel shall not be placed in lifeboat, rescue boats or liferafts during drill while there are being raised or lowered

Additional Precautions:

- The personnel shall not be placed in lifeboat, rescue boats or liferafts during drill while there are being raised or lowered

Vessel_name	Date	Time	Place/Location
SC Wintar	11-Jul-2025	From 1120 To 1140 Hrs.	Artbit Field
Drill Subject			
<input type="checkbox"/> Oil Spill	<input type="checkbox"/> Collision	<input type="checkbox"/>	<input type="checkbox"/> Main Engine Failure
<input type="checkbox"/> NLS (Chemical) Spill	<input type="checkbox"/> Flooding	<input type="checkbox"/>	<input type="checkbox"/> Gas or Toxic Vapour Release
<input type="checkbox"/> Generator Failure (Black out)	<input type="checkbox"/> Emergency Breakaway from Berth	<input type="checkbox"/>	<input type="checkbox"/> Emergency Towing (Release / Apart)
<input type="checkbox"/> Bridge Control Failure	<input type="checkbox"/> Salvage	<input type="checkbox"/>	<input type="checkbox"/> Passenger Evacuation
<input type="checkbox"/> Gyro Compass Failure	<input type="checkbox"/> Rescue from Enclosed Space	<input type="checkbox"/>	
<input type="checkbox"/> Steering Gear Failure	<input type="checkbox"/> Stop Work Authority (SWA)	<input type="checkbox"/>	
<input type="checkbox"/> DP Failure	<input type="checkbox"/> Anchor Handling System Failure	<input type="checkbox"/>	
<input type="checkbox"/> Typhoon Evacuation	<input checked="" type="checkbox"/> Personal's Injury, Sickness or Fatality	<input type="checkbox"/>	
<input type="checkbox"/> Emergency Towing Release	<input type="checkbox"/> Man Overboard and Search & Rescue	<input type="checkbox"/>	
<input type="checkbox"/> Grounding / Standing	<input type="checkbox"/> Other	<input type="checkbox"/>	
1. Assumed location (กำหนดสมมติฐานการฝึก):		Artbit Field	
2. Time preparing from start drill signal until ready at position as per Muster list (1 นาทีนับจากสัญญาณเริ่มการฝึกจนพร้อมที่จะขึ้นระวาง):		2 Minute (๒ นาที)	
3. Communication Equipment (อุปกรณ์สื่อสาร):		UHF , CH, (วิทยุ): 01	
4. Condition (สถานะการฝึก):		Good	
5. Number of crew members partaking in drill (จำนวนลูกเรือที่เข้าร่วมการฝึก):		19 Person (๑๙ คน)	

5. Drill Details

Time (ม)	Drill Details (รายละเอียดการฝึก)
1120 Hrs.	- Assumed situation while the vessel tied up with drilling rig (Rig ID-1) for cargo operation, the ship's crew (AB) checked the condition of the stern mooring rope; his little finger was pinch with the mooring rope inside the bollard.
1122 Hrs.	- Duty officer report master & sound emergency alarm follow announce by PA "Personal Injury Drill"
1123 Hrs.	- Second officer assess patient's condition and continue administer first aid to patient.
1125 Hrs.	- An preliminary investigation of the incident found that the tip of the little finger was broken due to the tension from mooring rope pinching and an urgent medical evacuation by chopper to Bangkok Hat Yai Hospital
1127 Hrs.	- Master reported to the DPA Mr. Wasana J. informed the initial incident report and alert ERT.
1130 Hrs.	- Master to decide to evacuate casualty to Rig ED1 and contact the accident was reported to marine controls request for transferring casualty. Crew prepare for casualty evacuation by personal basket to offshore installation. Master prepares the vessel for transferring the casualty. Second officer monitor patient's condition. Transfer casualty to offshore installation.
1140 Hrs.	- De-briefing for personal injury administrators first aid. Terminated drill.



6. Evaluation (ให้ประเมินผล)

Pls. mark		Result of drill	Reason (if answer 'No')
Yes	No		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Did all Personnel Muster correctly and all Stations Report to the Bridge? <small>Did all Personnel Muster correctly and all Stations Report to the Bridge?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Was Mustering completed in a satisfactory time? <small>Was Mustering completed in a satisfactory time?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Was all required equipment ready for use and found in working order? <small>Was all required equipment ready for use and found in working order?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Were all personnel found to be fully familiar with the equipment used? <small>Were all personnel found to be fully familiar with the equipment used?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Were all communication between emergency parties and the bridge satisfactory? <small>Were all communication between emergency parties and the bridge satisfactory?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Did personnel follow procedure satisfactorily? <small>Did personnel follow procedure satisfactorily?</small>	
Overall comment/evaluation after drill (ให้ประเมินผล / สรุปผลการประเมินผล)			
All training and reviews maintained as per established procedures.			
Note: In case of serious deficiencies or equipment failure, the master should be notified immediately via this report.			

Name of participant with signature (รายชื่อผู้เข้าร่วมฝึก)			Rank (ตำแหน่ง)	Signature (ลงชื่อ)
No.	Name (ชื่อ)			
1.	MR. NUTTAVOT VACHIRAPONG	C/O		
2.	MR. RATTAKHET NGAMMUANG	Z/O		
3.	MR. VERACHAI RUTCHAVUT	C/E		
4.	MR. SITTHAI KHAORUEANG	Z/E		
5.	MR. KANPIROM THEPSUWAN	3/E		
6.	MR. KAMPHONSAK DEE-O-SOT	E/E		
7.	MR. POL PIMAN	BOSUN		
8.	MR. WEERAWAT ANARAT	A/B 1		
9.	MR. SUPACHAI WONGWAI	A/B 2		
10.	MR. SIRAPOP NIKLANG	A/B 3		
11.	MR. SORANON KLAIVICKAN	A/B 4		
12.	MR. JARAN RUANGYU	O/L 1		
13.	MR. SEKSAN AOMMARUEK	O/L 2		
14.	MR. SUMAT TOSEN	COOK		
15.	MR. KHASHANE CHAIDEE	SDPO		
16.	MR. SUPANUT RATTANAPUPECH	SDPO		
17.	MR. KITITAT JANTANA	SDPO		
18.	MR. PHANUPONG PANITANATO	JDPO		

Signed by Master
[Signature]
Name: CAPT. PICHAI PHUNGSENSUK

Instruction:

- When a training drill has been completed, an evaluation of the drill must be duly signed by the Master.
- The Questions listed should be answered "Yes" or "No". If any of the answers are "No" the reason why must be included in the Comments.
- The names of the crew members that did not participate in the drill must be included.
- Fire Alarm: [Redacted], continuous ringing + verbal (pa system) Ref: Appendix 7.4 : Emergency Alarm

Vessel name	Date	Time	Place/Location
SC Winter	11 Sep 2025	From 1200 hrs to 1220 hrs	Arthit field

- Assumed location of fire (กำหนดตำแหน่งที่เกิดเพลิงไหม้): Fire in engine room
- Time preparing from start drill signal until ready at position as per Muster list (ระยะเวลาจากสัญญาณเริ่มฝึกซ้อมจนกระทั่งพร้อม ณ ตำแหน่ง): 3 Minute (สามนาที)
- Communication Equipment (อุปกรณ์การสื่อสารที่ใช้): UHF, CH (ช่องความถี่); 01.Condition (สภาพของอุปกรณ์สื่อสาร): Good
- Number of crew members partaking in drill (จำนวนลูกเรือที่ร่วมฝึกซ้อม): 15 Person (สิบห้าคน)

4. Drill Details

Time (เวลา)	Drill Details (รายละเอียดการฝึก (พร้อมรูปภาพประกอบ))
1200	This is a drill - Fire alarm sounded follow by announcement via PA system that smoke was detected in the engine room.
1203	- Crew assembled immediately to the Muster Station with Fire Fighting Equipment's on hand. Briefed crew about the scenario.
1204	- Master Inform to DPA an then the vicinity vessels by VHF CH.08 to Arthit field
1206	- Team "1" proceed at the scene and start combating fire
1208	- Team "2" established boundary cooling.
1210	- Team "3" closed fire flaps/dampers to the affected area & stand-by with medical equipment's on hand ready to use. Engine dept. stopped blower, fan, aircon & air shaft isolate power supply to the affected area and adjacent sides.
1212	- Fire under control, Fire Fighting Team stand-by/monitor for possible re-ignition
1215	- All team leader to execute investigation of the scene and to report it to The Command. Each Team Leader to execute roll call and to check crew are wearing appropriate closes and to report them to The Command.
1218	- Train for fire fighting equipment.
1220	Terminated drill



5. Condition Checklist (รายการตรวจสอบสภาพท่าเรือและท่าเรือ)

Checked List (รายการตรวจสอบ)	Condition (สภาพ)	Remark (หมายเหตุ)
Condition of watertight doors, starting how employed (สภาพประตูกันน้ำ, เริ่มใช้งานอย่างไร)	Good	Time conducted for closing (เวลาที่ดำเนินการปิด): 1 Minute (นาที)
Condition of fire doors (สภาพประตูกันไฟ)	Good	Time conducted for closing (เวลาที่ดำเนินการปิด): 0.5 Minute (นาที)
Condition of fire dampers (สภาพประตูกันควัน)	Good	Time conducted for closing (เวลาที่ดำเนินการปิด): 0.5 Minute (นาที)
Condition of Fire-Hoses and Nozzles (สภาพสายฉีดน้ำดับเพลิงและหัวฉีด)	Good	
Condition of Fire pump and/or sprinkler pumps (สภาพปั๊มดับเพลิงและหัวฉีด)	Good	Time start (เริ่มฉีด): 1206 Minute (นาที) Time Stop (หยุดฉีด): 1212 Minute (นาที)
Condition of test run (สภาพการทดสอบเดินปั๊ม)	Good	
Condition of sand and Fire-buckets (ทรายดับเพลิงและถังดับเพลิง)	Good	
Condition of various types Fire-Extinguishers (สภาพถังดับเพลิงชนิดต่าง)	Good	
Fireman Suits (ชุดของลูกเรือดับเพลิง)	Good	
Condition of BA Set (ชุดของชุด BA Set)	Good	Pressure (ค่าแรงดัน): 200 Bar
Condition of wearing equipment (สภาพการสวมใส่อุปกรณ์)	Good	
F.O. Tanks Shut-Off valves (สภาพการปิดถังน้ำมัน)	Good	
Ventilation Fan Emergency stop (สภาพการหยุดพัดลม)	Good	

6. Fire Checklist (รายการตรวจสอบเมื่อเกิดเพลิงไหม้)

A. Initial Actions (สิ่งที่ปฏิบัติทันที)
<input checked="" type="checkbox"/> 1. Sound alarm, muster fire party (แจ้งสัญญาณเตือนภัยและรวมพล)
<input checked="" type="checkbox"/> 2. Starting of a fix pump, using at least the two jets of water to show (การเริ่มเครื่องสูบน้ำให้ดูปริมาณและทิศทางน้ำจากหัวฉีดอย่างน้อย 2 สาย)
<input checked="" type="checkbox"/> 3. Checking of fireman's outfit and other personal rescue equipment (ตรวจสอบชุดของลูกเรือและอุปกรณ์ช่วยชีวิตอื่น)
<input checked="" type="checkbox"/> 4. Checking of relevant communication equipment (ตรวจสอบชุดสื่อสารที่เกี่ยวข้อง)
<input checked="" type="checkbox"/> 5. Checking in operation of water ours, fire doors, fire dampers and main inlet and outlet of ventilation systems in the drill area (ตรวจสอบการปฏิบัติงานประตูน้ำ ประตูไฟ ลิ้นชักประตูกันควันและระบบท่อเข้า-ออกในพื้นที่ฝึกซ้อม)
<input checked="" type="checkbox"/> 6. Checking the necessary arrangements for subsequent abandoning of the ship (ตรวจสอบการเตรียมการสำหรับการทิ้งเรือในกรณีฉุกเฉิน)

B. Initial Report (To company) Format (รายงานเบื้องต้น (เชิงบริษัท))

<input checked="" type="checkbox"/> Incident (เหตุการณ์)	Fire in Engine Room
<input checked="" type="checkbox"/> Date and time when the accident occurred (วันที่และเวลาที่เหตุการณ์เกิดขึ้น)	11 Sep 2025 // 1200 Hrs
<input checked="" type="checkbox"/> Position where incident occurred (ตำแหน่งที่เกิดเหตุการณ์)	Lat 08°-11.0' N, Long 102°-29.5' E
<input checked="" type="checkbox"/> Location where the fire broke out (บริเวณที่เกิดเพลิงไหม้)	Laundry room
<input checked="" type="checkbox"/> In case the fire broke out in a cargo hold, the kind and quantity of cargoes in the cargo hold (ในกรณีที่เพลิงไหม้เกิดในตู้คอนเทนเนอร์ ชนิดและปริมาณสินค้าในตู้)	Nil
<input checked="" type="checkbox"/> Description, and quantity of cargoes stowed in the adjacent cargo holds/tanks (รายละเอียดและปริมาณสินค้าที่เก็บไว้ในตู้คอนเทนเนอร์ข้างเคียง)	Cargo on board
<input checked="" type="checkbox"/> Description, and quantity and location of dangerous goods (รายละเอียด ปริมาณและสถานที่เก็บของอันตราย)	No DG cargo on board
<input checked="" type="checkbox"/> Weather, wind direction and its force (สภาพอากาศ ทิศลม และกำลังลม)	Good / WSW / 10 kt

<input checked="" type="checkbox"/> Present condition of fire (ความพร้อมของเพลิงไหม้)	Uncontrolled
<input checked="" type="checkbox"/> Measure for extinguishing the fire and its protect (มาตรการดับเพลิงและป้องกันไฟ)	By fire main, Portable fire extinguishers foam
<input checked="" type="checkbox"/> Emergency measures for the human life and the cargo (มาตรการฉุกเฉินเพื่อชีวิตและสินค้า)	Evacuation all crew.
<input checked="" type="checkbox"/> Loss of life / injury, if any, their ranks and names (การสูญเสียชีวิตหรือบาดเจ็บ (ถ้ามี) ตำแหน่งและชื่อ)	Nil
<input checked="" type="checkbox"/> Damage to hull and engine (ความเสียหายต่อตัวเรือหรือเครื่องจักรกล)	Nil
<input checked="" type="checkbox"/> Damage to cargo (ความเสียหายต่อสินค้า)	Nil
<input checked="" type="checkbox"/> Others (ถ้ามี)	This is a drill only

7. FFE Checklist (รายละเอียดอุปกรณ์ที่นำมาใช้)

Train all item within 2 months (ฝึกใช้ทุกอุปกรณ์ภายใน 2 เดือน)	
<input checked="" type="checkbox"/> Fireman's outfit and breathing apparatus	<input checked="" type="checkbox"/> Fire hose & nozzle
<input checked="" type="checkbox"/> Emergency escape breathing device (EEBD)	<input checked="" type="checkbox"/> Fixed fire detector
<input checked="" type="checkbox"/> Fixed fire extinguisher system-Foam, CO2 or Halon	<input checked="" type="checkbox"/> Emergency main engine stop
<input checked="" type="checkbox"/> Personal oxygen and hydrocarbon analyser	<input checked="" type="checkbox"/> Portable fire extinguishers
<input checked="" type="checkbox"/> Intentional shore connections	<input type="checkbox"/>
<input checked="" type="checkbox"/> Emergency ventilation stop	<input type="checkbox"/>
<input checked="" type="checkbox"/> Oxygen resuscitator	<input type="checkbox"/>
<input checked="" type="checkbox"/> Emergency fire pump	<input type="checkbox"/>
<input checked="" type="checkbox"/> Fire main pump (GS)	<input type="checkbox"/>

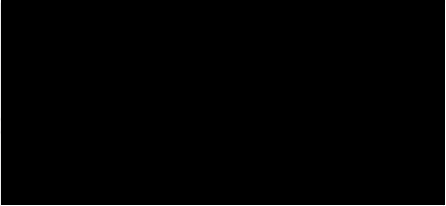
8. Evaluation (ประเมินผลการฝึก)

Pls. mark Yes No	Result of drill	Reason (if answer 'No')
<input checked="" type="checkbox"/>	1. Did all Personnel Muster correctly and all Stations Report to the Bridge? (คนประจำเรือได้ประจำตำแหน่งถูกต้อง และแต่ละฝ่ายได้รายงานไปยังสะพานเดินเรือหรือไม่?)	
<input checked="" type="checkbox"/>	2. Was Mustering completed in a satisfactory time? (เวลาที่ดำเนินการรวมพลเป็นแห่งพลเรือหรือไม่?)	
<input checked="" type="checkbox"/>	3. Was all required equipment ready for use and found in working order? (อุปกรณ์ที่จำเป็นพร้อมใช้งานหรือไม่?)	
<input checked="" type="checkbox"/>	4. Were all personnel found to be fully familiar with the equipment used? (ทุกคนคุ้นเคยในการใช้อุปกรณ์หรือไม่?)	
<input checked="" type="checkbox"/>	5. Were all communication between emergency parties and the bridge satisfactory? (การสื่อสารระหว่างภาคีฉุกเฉินกับสะพานเดินเรือพอใจหรือไม่?)	
<input checked="" type="checkbox"/>	6. Did personnel follow procedure satisfactory? (คนประจำเรือปฏิบัติตามขั้นตอนการปฏิบัติงานอย่างพอใจหรือไม่?)	
Overall comment/evaluation after drill (ข้อคิดเห็นภาพรวม / การประเมินหลังการฝึกซ้อม)		
- All crew understand their duties assigned follow muster list and how to responding action taken in case of emergency. - Debrief and found drill satisfactory		

Note: In case of serious deficiencies or equipment failure, the master should be notified immediately via this report.

Note: ในกรณีที่มีข้อบกพร่องที่สำคัญ หรืออุปกรณ์ไม่อยู่ในสภาพที่ใช้งานได้ นายเรือควรแจ้งหรือจะผ่านรายงานภาคีฝึก เพื่อให้ทางบริษัท ได้รับทราบทันที

9. Name of participate with signature (รายชื่อผู้เข้าร่วมซ้อม)

No.	Name (ชื่อ)	Rank (ตำแหน่ง)	Signature (ลายเซ็น)
1.	Mr. Jaroonsak Jantawong	C/O	
2.	Mr. Pongpitak Watcharasukhum	2/O	
3.	Mr. Chalporn To-Ae	C/E	
4.	Mr. Peopan Kirdkong	2/E	
5.	Mr. Morakot Khieokham	3/E	
6.	Mr. Wanchai Boonpong	E/E	
7.	Mr. Trakulsak Pakdeenok	BOSUN	
8.	Mr. Tanakorn Panchakhan	A/B 1	
9.	Mr. Supachai Wongwai	A/B 2	
10.	Mr. Nattapot Chuenchop	A/B 3	
11.	Mr. Suriya Pormpha	A/B 4	
12.	Mr. Nattapong Towjaipang	O/L 1	
13.	Mr. Seksan Aommaruek	O/L 2	
14.	Mr. Panya Buadee	COOK	

Signed by Master

MV SC WINTER



Name: Capt. Pichai Phungpensuk

Instruction:

- When a training drill has been completed, an evaluation of the drill must be duly signed by the Master.
- The Questions listed should be answered "Yes" or "No". If any of the answers are "No", the reason why must be included in the Comments.
- The names of the crew members that did not participate in the drill must be included.
- General Alarm: 7. SHORTEST LONG: 1. VERBAL (PA System) Ref: Appendix 7.4: Emergency Alarm
- MOB Alarm: 3. LONG RINGS + VERBAL (PA System) Ref: Appendix 7.4: Emergency Alarm
- Additional Precaution:
- The personnel shall not be placed in lifeboats, rescue boats or liferafts during drill while there are being raised or lowered

Vessel name	Date	Time	Place/Location
SC Winter	12-Jul-2025	From 1740 To 1800 Hrs.	Enroute to SKL

Drill Subject	Collision	Main Engine Failure
<input type="checkbox"/> Oil Spill	<input type="checkbox"/> Flooding	<input type="checkbox"/> Gas or Toxic Vapour Release
<input type="checkbox"/> NLS (Chemical) Spill	<input type="checkbox"/> Emergency Breakaway from Berth	<input type="checkbox"/> Emergency Towing (Release / Apert)
<input type="checkbox"/> Generator Failure (Black out)	<input type="checkbox"/> Salvage	<input type="checkbox"/> Passenger Evacuation
<input type="checkbox"/> Bridge Control Failure	<input type="checkbox"/> Rescue from Enclosed Space	
<input type="checkbox"/> Gyro Compass Failure	<input type="checkbox"/> Stop Work Authority (SWA)	
<input type="checkbox"/> Steering Gear Failure	<input type="checkbox"/> Anchor Handling System Failure	
<input type="checkbox"/> DP Failure	<input type="checkbox"/> Personal's Injury, Sickness or Fatality	
<input checked="" type="checkbox"/> Typhoon Evacuation	<input type="checkbox"/> Main Overboard and Search & Rescue	
<input type="checkbox"/> Emergency Towing Release	<input type="checkbox"/> Other	
<input type="checkbox"/> Grounding / Stranding		

1. Assumed location of the vessel (สมมติตำแหน่งของเรือ):	Main Deck
Time preparing from start drill signal until ready at position as per Muster list (เวลาเตรียมตัวจากสัญญาณเริ่มซ้อมจนพร้อม ณ ตำแหน่ง):	2. Minute (นาที)
3. Communication Equipment (อุปกรณ์การสื่อสาร):	UHF , Cb. (วิทยุ): 01
Condition (สภาวะ):	Good
4. Number of crew members partaking in drill (จำนวนลูกเรือที่เข้าร่วม):	19 Person (คน)

5. Drill Details

Time (ชม)	Drill Details (รายละเอียดการซ้อม)
1740 Hrs.	- Assume situation vessel standing by Rig ED-1 and received Weather forecast from OWS that Typhoon move from gulf of Thailand direct to field distant 200 nm wind speed 80 knots.
1742 Hrs.	- Master raises emergency alarm and announce via PA "Typhoon Evacuation".
1744 Hrs.	- Crew proceeds to muster station and head count. Master informed situation that typhoon coming.
1748-1756 Hrs.	- Crew proceed to lashing and secure all loose item in engine room, galley, on deck and in accommodation, closed watertight door, hatch and all invitation.
1758 Hrs.	- Master informed to company and GMC and request for Evacuation to shelter as per Typhoon Evacuation plan
1800 Hrs.	- All crew de-brief on the bridge. And Terminated Drill.



6. Evaluation (ประเมินการฝึก)

Pls. mark		Result of drill		Reason (if answer 'No')
Yes	No			
<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	Did all Personnel Muster correctly and all Stations Report to the Bridge? <small>มีการจัดระเบียบคนขึ้นเรือและรายงานตำแหน่งคนขึ้นเรืออย่างถูกต้องหรือไม่?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	Was Mustering completed in a satisfactory time? <small>การขึ้นเรือและรายงานตำแหน่งคนขึ้นเรือเสร็จสิ้นในเวลาที่พึงพอใจหรือไม่?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	3	Was all required equipment ready for use and found in working order? <small>เครื่องมือและอุปกรณ์ที่จำเป็นมีพร้อมและใช้งานได้หรือไม่?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	4	Were all personnel found to be fully familiar with the equipment used? <small>ทุกคนบนเรือมีความคุ้นเคยกับเครื่องมือและอุปกรณ์ที่จำเป็นหรือไม่?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	5	Were all communication between emergency parties and the bridge satisfactory? <small>การสื่อสารระหว่างเรือและศูนย์ควบคุมการเดินเรือเป็นไปอย่างมีประสิทธิภาพหรือไม่?</small>	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	6	Did personnel follow procedure satisfactory? <small>ทุกคนบนเรือปฏิบัติตามขั้นตอนการฝึกซ้อมอย่างถูกต้องหรือไม่?</small>	

Overall comment/evaluation after drill (ข้อคิดเห็นภาพรวม/การประเมินหลังการฝึก)

- All training and reviews maintained as per established procedures.

Note: In case of serious deficiencies or equipment failure, the master should be notified immediately via this report.

หมายเหตุ: ในกรณีที่พบข้อบกพร่องอย่างร้ายแรงหรือความล้มเหลวของอุปกรณ์, นายเรือควรแจ้งให้ทราบทันทีผ่านรายงานการฝึกซ้อม

7. Name of participant with signature (รายชื่อผู้เข้าฝึกซ้อมพร้อมลายเซ็น)

No.	Name	Rank	Signature
1.	MR. NUTTAVOT VACHIRAPONG	C/O	
2.	MR. RATTAKHET NGAMMUANG	Z/O	
3.	MR. VERACHAI RUTCHAVUT	C/E	
4.	MR. SITTHAI KHAORUEANG	2/E	
5.	MR. KANPIROM THEPSUWAN	3/E	
6.	MR. KAMPHONSAK DEE-O-SOT	E/E	
7.	MR. POL PIMAN	BOSUN	
8.	MR. WEERAWAT ANARAT	A/B 1	
9.	MR. SUPACHAI WONGWAI	A/B 2	
10.	MR. SIRAPOP NILKLANG	A/B 3	
11.	MR. SORANON KLVICKAN	A/B 4	
12.	MR. JARAN RUANGYU	O/L 1	
13.	MR. SEKSAN AGMMARUEK	O/L 2	
14.	MR. SUMAT TOSEN	COOK	
15.	MR. KHASHANE CHAIDEE	SDPO	
16.	MR. SUPANUT RATTANAPUECH	SDPO	
17.	MR. KITTITAT JANTANA	SDPO	
18.	MR. PIANUPONG PANITANATO	JDPO	

Signed by Master

Name: MR. PICHAPHUNGPHENSUK

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INCIDENT INVESTIGATION REPORT			

INCIDENT CLASSIFICATION

☐ NEAR MISS ☐ Injury ☐ Property Damage ☐ Other

Vessel Name: TC Sapphire Report No. _____ Date: 01 Feb 2025
Subject: Towing wire crashed with starboard catch rail guard.

SECTION 1 – Description of Incident (รายละเอียดของเหตุการณ์)

1. Investigation Beginning Date (วันที่เริ่มการสอบสวน) : 19 Feb 2025 1.1 Investigation Completion Date (วันที่สอบสวนเสร็จสิ้น) : 19 Feb 2025

2. Who was Investigated (ผู้ถูกสอบสวน) Capt. Nipon Somsri and Training master Songyot Pariyavattit

3. Investigation Team (ผู้ดำเนินการสอบสวน)	Name (ชื่อ)	Company (บริษัท)	Title (ตำแหน่ง)
3.1 Team Leader (หัวหน้าทีมสอบสวน)	Mr.Natthapong Pleethong	PTTEP	Contract Holder
3.2 Team Member 1 ผู้ร่วมสอบสวน (1)	Mr.Sompone Chinavong	PTTEP	Marine Engineer Assurance
3.3 Team Member 2 ผู้ร่วมสอบสวน (2)	Mr.Thiripraphan Supsaeng	PTTEP	SSHE Engineer
3.4 Team Member 3 ผู้ร่วมสอบสวน (3)	Mr.Teakayu Thanapokinvirakorn	PTTEP	Marine Engineer Assurance
3.5 Team Member 4 ผู้ร่วมสอบสวน (4)	Mr.Yothin Thongking	SCM	Marine Operations Director (Offshore)
3.6 Team Member 4 ผู้ร่วมสอบสวน (5)	Mr.Wasit Koedmalee Parnkul	SCM	Marine Operation and Ship Vetting Manager (Offshore)
3.7 Team Member 4 ผู้ร่วมสอบสวน (6)	Mr.Wasana Jermutjarit	SCM	QSHSE Manager (Offshore)
3.8 Team Member 4 ผู้ร่วมสอบสวน (7)	Mr.Krittawan Kaewnuam	SCM	SHE Division Manager (Offshore)

4. Investigation of Incident (รายละเอียดจากการสอบสวนเหตุการณ์)
On 01 February 2025

During the vessel on anchor handling & tow holding position for barge Rajawali Pacific (AWP-3)

Whether Condition

Wind direction: NE, Speed 5-10 kts.
Sea: 0.2 m. Swell: NE, 0.3 m
Sky: Clear and good visibility

Scenario of incident.

1030 Hrs : Vessel connected tow wire with Rajawali Pacific (RJP) towing bridle (Main towing) and release the wire 250 m. for tow holding position barge during other vessel recovering anchors.

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1300 Hrs : While vessel TC Dragon (TCD) pick up last anchor intend to bring anchor on deck and request to vessel TC Sapphire (TCS) minimum tension and spent more time.
1425 Hrs : Marine Advisor (MA) observed that barge was drifting toward to platform. In response, The TC Sapphire was instructed by MA to increase engine power and change heading hard to starboard to pull the barge safety away from platform.
1428 Hrs : Vessel observed tow wire jump and sit on top of starboard crash rail guard during increase power ahead and make tension found crash rail guard break which cause tow wire stuck up and difficulty for towing
1430 Hrs : Master on bridge informed to MA on barge RJP on this matter with vessel. After that master tried to increase tension to let tow wire clear from obstruction but unfortunately not successful.
1445 Hrs : Master of TC Sapphire discussed with MA to solve the suitable problem by TC Dragon take over towing for a while clear from installation after slow down minimum speed then vessel TC Sapphire shorten up tow wire for towing bridle position come on deck and use barge RJP pick up towing bridle height over catch rail for clear from obstruction and put back on deck.
1608 Hrs : TC Sapphire started paid out tow wire again and set up towing from location AWP-3 for Songkhla.
1624 Hrs : TC Sapphire under towing barge RJP from AWP3 – Songkhla.



Facts and findings from investigation team:

Vessel unsafe condition

- Due to vessel's have schedule to off hire shortly, it necessary to clear all of wet and bulk materials at offshore location. As a result of the vessel's trim by head, maneuvering during turns is challenging.
- The vessel's 60 tons bollard pull makes it unsuitable for operation with stevpris anchors, which weigh more than 12 tons. As a result, the AHTS bollard pull of 80 tons is superior, including towing gears.



Stevpris anchor

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Lack of communication

- During the marine advisor (MA) come to inspection as warranty survey master doesn't sharing the trouble of stern roller to MA and MA not found this defect, which this point is main point must be given importance to inspection.
- Despite completing a pre-checklist inspection by MA, the vessel did not follow up on the inspection report's defects. If the correction cannot be completed within a reasonable time frame, it must be reported to a supervisor.

Period of time

- According to the incident, if any damage or defect is discovered after the inspection warranty survey close to the commencement of operation, it cannot be repaired before the operation begins.

After investigation found that:

Prior to this barge move operation, TC Sapphire had performed anchor handling and towing barge RJW at Bongkot filed and Artit filed, during which the operation towing had become stuck in the gap of the stern roller starboard side once. At that time, the ship was aware that the gap at the stern roller had not been repaired due to vessel doesn't have port call schedule because of continuous bulk and cargoes transfer at offshore, then anchor handling and towing operation with barge Rajawali Pacific (RJP) from Chabang port to offshore location until anchor handling and towing operation with barge RJW again. In the first day after meeting by MA in morning TCS and TCD was started anchor handling operation afternoon and the second day during the operation barge Rajawali move and pick up the anchor by TC Dragon, so TC Sapphire received order from marine advisor (MA) towing the barge target and TC Sapphire trying to maintain the direction to the target. At that time, the stern roller was getting stuck, making it difficult to control the vessel in the direction of the target. The wire rope climbed up the catch rail, which was normal for controlling a vessel while towing, and the vessel still had tension. However, while TC Dragon was pick up the last anchor, MA ordering TC Sapphire to hold position, causing the tension to decrease and TC Sapphire to drift towards the platform, while the towing wire was still on the catch rail. Then MA ordered TC Sapphire to pull the barge away from the platform and go to target for safely the vessel tried to turn in the direction of the target, causing the wire climbing up the catch rail to squeeze the catch rail guard broken.



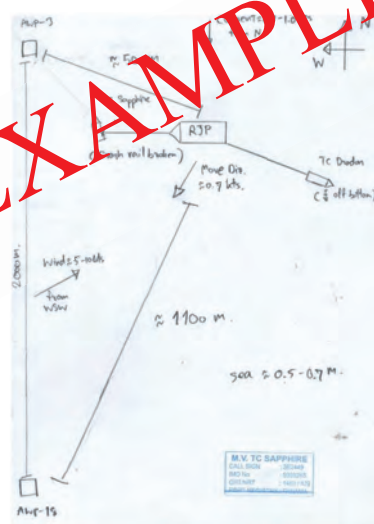
	Date : 01/07/2020	Revision : 4	Ref : F-08-SHE/02
INCIDENT INVESTIGATION REPORT			

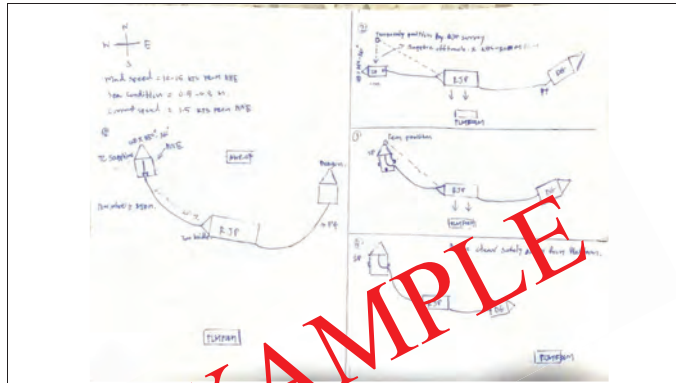
Immediate actions:

- TC Sapphire shorten up tow wire for towing bridle position come on deck and use crane of barge Rajawali pick up towing bridle height over crash rail clear from obstruction and put back on deck.
- Repair and weld damaged parts when the vessel berthed.



5. Pictures / Drawing





6. Permit to Work (ใบอนุญาตทำงาน)	
6.1 Permit Required (ใบอนุญาตจำเป็นหรือไม่)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6.2 Permit Issued? (ใบอนุญาตออกหรือไม่)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6.3 Permit Type (ประเภทของใบอนุญาตทำงาน)	6.4 Permit No. (ใบอนุญาตทำงานหมายเลข)
6.5 Permit Type (ประเภทของใบอนุญาตทำงาน)	6.6 Permit No. (ใบอนุญาตทำงานหมายเลข)

If Permit issued, please attach with the completed incident report. (หากมีการออกใบอนุญาตในการทำงานให้แนบเอกสารมาด้วย)

SECTION 2 – MEDICAL INFORMATION (ข้อมูลทางการแพทย์)	
7. Name of Patient (ชื่อผู้ป่วย)	8. Emergency Contact (เบอร์ติดต่อฉุกเฉิน)
9. Job Position (ตำแหน่งงาน)	10. Company of Employee (บริษัท)
11. BIO Data :	
12. Medical Treatment given at site (การรักษาทันทีที่เกิดเหตุ)	
12.1 Person giving treatment (ผู้ให้การรักษาทันที)	Title (ตำแหน่ง)
12.2 Required to be moved? (ต้องเคลื่อนย้ายผู้ป่วยหรือไม่)	<input type="checkbox"/> Yes <input type="checkbox"/> No
12.3 Did blood or potentially infectious material exposure occur? (มีการสัมผัสของเหลวหรือวัสดุที่อาจเป็นอันตรายหรือไม่)	<input type="checkbox"/> Yes <input type="checkbox"/> No
12.4 Sent to doctor? (ได้ส่งแพทย์หรือไม่)	<input type="checkbox"/> Yes <input type="checkbox"/> No
If yes – Doctor's name and address (ถ้ามีแพทย์ ชื่อและที่อยู่)	

12.5 Sent to hospital? (ได้ส่งโรงพยาบาลหรือไม่)	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes – Hospital's name and address (ถ้ามี ชื่อและที่อยู่ของโรงพยาบาล)
12.6 Medication Prescribed? (ได้มีการจ่ายยาหรือไม่)	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes – Name and dosage (ถ้ามี ชื่อและขนาดยา)
12.7 Body Part Injured (ส่วนที่บาดเจ็บ)		
<input type="checkbox"/> Left Side (ด้านซ้าย)	<input type="checkbox"/> Ears (หู)	<input type="checkbox"/> Back (ด้านหลัง)
<input type="checkbox"/> Right Side (ด้านขวา)	<input type="checkbox"/> Finger, Hand (นิ้ว, มือ)	<input type="checkbox"/> Chest, Trunk (หน้าอก, ลำตัว)
<input type="checkbox"/> Internal (ภายในร่างกาย)	<input type="checkbox"/> Eyes (ตา)	<input type="checkbox"/> Knee, Leg (เข่า, ขา)
<input type="checkbox"/> Face, Head, Neck (หน้า, หัว, คอ)	<input type="checkbox"/> Shoulder (ไหล่)	<input type="checkbox"/> Hip (สะโพก)
<input type="checkbox"/> Foot, Toes, Ankle (เท้า, นิ้วเท้า)	<input type="checkbox"/> Respiratory System (ระบบทางเดินหายใจ)	

SECTION 3 – ASSET DAMAGE INFORMATION (ข้อมูลทรัพย์สิน)
13. Asset Damage Initial Cost Estimate Baht (ทรัพย์สินเสียหาย ประมาณการความเสียหายเบื้องต้น, บาท)
1. Catch rail guard pipe about 2 meters.

SECTION 4 – ROOT CAUSES [WRITTEN DESCRIPTION] (สาเหตุที่แท้จริง (เขียนบรรยายสาเหตุ))
14. Root Causes (สาเหตุที่แท้จริง)
Vessel improperly to operation
- The vessel's characteristics do not match the task requirement. This assignment requires a vessel with a bollard pull at least 80 tons.
Inadequate risk assessment
- Before the operation the vessel was already aware that the ship had trim by head, which would make maneuvering harder, but this was not SWA or communicated to the appropriate parties.
Wear and tear
- The condition of the catch rail guard starboard side pipe was inspected and repaired by welding before to this operation, but it is insufficient; it should be cut and replaced.

SECTION 5 – ROOT CAUSES [CHECK BOXES] (สาเหตุที่แท้จริง (เลือกในช่อง))	
SUBSTANDARD ACTS (การปฏิบัติงานที่ไม่เป็นไปตามมาตรฐาน)	
<input type="checkbox"/> Operating equipment without authority/training (ใช้เครื่องมือ อุปกรณ์ที่ไม่ได้รับอนุญาต/การฝึกอบรม)	<input type="checkbox"/> Failure to follow procedures, policies, practice (ไม่ปฏิบัติตามขั้นตอน นโยบาย ระเบียบปฏิบัติ)
<input type="checkbox"/> Failure to warn (ไม่มีการแจ้งเตือน)	<input type="checkbox"/> Using equipment improperly (ใช้อุปกรณ์ที่ไม่ถูกต้อง)
<input type="checkbox"/> Failure to secure (ไม่รัดกุม ไม่ปลอดภัย)	<input type="checkbox"/> Improper loading (การโหลดไม่ถูกต้อง)
<input type="checkbox"/> Operating at improper speed (ใช้ความเร็วที่ไม่เหมาะสม)	<input type="checkbox"/> Improper placement (การวางไม่ถูกต้อง)
<input type="checkbox"/> Making safety device inoperable (ทำให้อุปกรณ์ความปลอดภัยไม่ทำงาน)	<input type="checkbox"/> Improper lifting (การยกไม่ถูกต้อง)
<input type="checkbox"/> Removing safety device (นำอุปกรณ์ความปลอดภัยออก)	<input type="checkbox"/> Improper position for task (ตำแหน่งการทำงานไม่ถูกต้อง)
<input type="checkbox"/> Using defective equipment (ใช้อุปกรณ์ที่มีข้อบกพร่อง)	<input type="checkbox"/> Horse play (การเล่นสนุกสนาน)
<input type="checkbox"/> Failure to use required PPE (ไม่ใช้เครื่องมือป้องกันส่วนบุคคล)	<input type="checkbox"/> Under the influence of drugs or alcohol (ดื่มยาหรือแอลกอฮอล์)

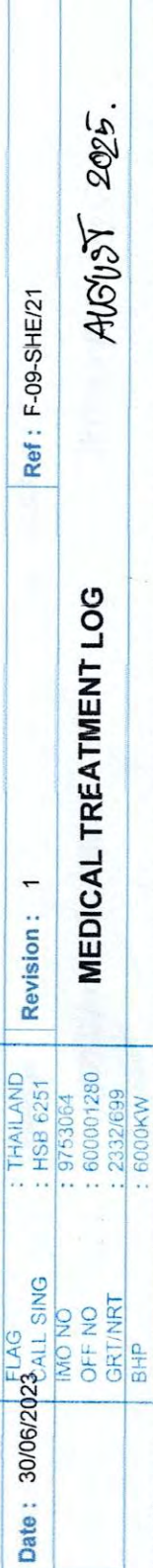
<input type="checkbox"/> Servicing equipment in operation (การซ่อมแซมอุปกรณ์ขณะทำงาน)	<input checked="" type="checkbox"/> Inadequate risk assessment [JSA, Security, etc.] (การประเมินความเสี่ยงไม่เพียงพอ [JSA, Security, etc.])
<input type="checkbox"/> Failure to check and monitor (ไม่มีการตรวจสอบและเฝ้าระวัง)	<input type="checkbox"/> Other (อื่นๆ) _____
SUBSTANDARD CONDITIONS (สถานการณ์ที่ไม่เป็นไปตามมาตรฐาน)	
<input type="checkbox"/> Inadequate guards or barriers (เครื่องป้องกันไม่ถูกต้อง/ไม่เพียงพอ)	<input type="checkbox"/> Noise exposure (การสัมผัสเสียงดัง)
<input type="checkbox"/> Inadequate or improper protective equipment (อุปกรณ์ป้องกันไม่ถูกต้อง/ไม่เหมาะสม)	<input type="checkbox"/> Inadequate instructions or procedures (คำแนะนำหรือขั้นตอนไม่เพียงพอ)
<input type="checkbox"/> Defective tools, equipment, or material (อุปกรณ์ชำรุด/ไม่เหมาะสม)	<input type="checkbox"/> Congestion or restricted action (พื้นที่ทำงานคับแคบ/มีสิ่งกีดขวาง)
<input type="checkbox"/> Poor housekeeping, disorder (ความสะอาด/ระเบียบไม่ดี)	<input type="checkbox"/> Temperature/climate exposures (อุณหภูมิ/สภาพอากาศ)
<input type="checkbox"/> Inadequate warning systems (การแจ้งเตือนไม่เพียงพอ)	<input type="checkbox"/> Inadequate ventilation (การระบายอากาศไม่เพียงพอ)
<input type="checkbox"/> Fire or explosion hazards (อันตรายจากไฟไหม้/ระเบิด)	<input type="checkbox"/> Radiation exposure (การสัมผัสรังสี)
<input type="checkbox"/> Inadequate or excessive illumination (การส่องสว่างไม่เพียงพอ/มากเกินไป)	<input type="checkbox"/> Other (อื่นๆ) _____
<input type="checkbox"/> Hazardous environmental conditions [gases, dust, fumes, etc.] (สภาพแวดล้อมที่เป็นอันตราย [แก๊ส, ฝุ่น, ควัน, ฯลฯ])	
PERSONAL FACTORS (ปัจจัยส่วนบุคคล)	
<input type="checkbox"/> Inadequate physical capability (ความสามารถทางกายภาพไม่เพียงพอ)	<input type="checkbox"/> Mental stress (ความเครียดทางจิตใจ)
<input type="checkbox"/> Inadequate mental capacity (ความสามารถทางจิตใจไม่เพียงพอ)	<input type="checkbox"/> Improper motivation (การจูงใจไม่ถูกต้อง)
<input type="checkbox"/> Lack of knowledge (ขาดความรู้)	<input type="checkbox"/> Communication/language difficulties (ปัญหาการสื่อสาร/ภาษา)
<input type="checkbox"/> Lack of skill (ขาดทักษะ)	<input type="checkbox"/> Physical stress (ความเครียดทางกายภาพ)
<input checked="" type="checkbox"/> Other (อื่นๆ) _____	
<input type="checkbox"/> Other (อื่นๆ) _____	

JOB FACTORS (ปัจจัยในการทำงาน)	
<input type="checkbox"/> Inadequate leadership/supervision (การดูแล/กำกับดูแลไม่เพียงพอ)	<input type="checkbox"/> Inadequate maintenance (การซ่อมบำรุงไม่เพียงพอ)
<input type="checkbox"/> Inadequate engineering/design (การออกแบบ/วิศวกรรมไม่เพียงพอ)	<input type="checkbox"/> Inadequate tools/equipment (เครื่องมือ/อุปกรณ์ไม่เพียงพอ)
<input type="checkbox"/> Inadequate purchasing (การซื้อไม่เหมาะสม)	<input type="checkbox"/> Inadequate work standards (มาตรฐานการทำงานไม่เพียงพอ)
<input checked="" type="checkbox"/> Wear and tear (การสึกหรอ)	<input type="checkbox"/> Abuse and misuse (การใช้ไม่ถูกต้อง/ไม่เหมาะสม)

SECTION 6 – CORRECTIVE ACTIONS TO PREVENT RECURRENCE (การแก้ไขเพื่อป้องกันไม่ให้เกิดเหตุซ้ำ)			
CORRECTIVE AND PREVENTIVE ACTION(S) (ขั้นตอนการแก้ไขและป้องกันไม่ให้เกิดซ้ำ)	RESPONSIBLE PARTY (ผู้รับผิดชอบ)	Due Date (วันครบกำหนด)	Follow up (ผลการติดตาม)
Distribute immediate safety information to all offshore vessels in fleet.	SHE	19 Feb 2025	19 Feb 2025
Remove the towing wire so stuck in the catch rail guard before continue operation.	Master	01 Feb 2025	01 Feb 2025

Replace the new guard rail pipe and inspection all catch rail guard.	Master	02 Feb 2025	02 Feb 2025
Regularly inspect the guard rail pipe condition and keep it in a good condition all time.	Master	02 Feb 2025	02 Feb 2025
Encourage and emphasize the importance of SWA policies. Explains the principles and procedure of stop work.	QSHE	19 Feb 2025	19 Feb 2025
The reason learnt will be communicated to all crew and officers during the pre-sa briefing.	SHE	03 Mar 2025	On process
Incident Report Completed by: (รายงานโดย) Mr. Kittawan Kaewnuam / SHE Division Mgr		Date: (วันที่) 24 February 2025	

SECTION 7 – SUGGESTION/COMMENT FROM DEPARTMENT MANAGER (ข้อเสนอแนะ/ความคิดเห็นจากผู้จัดการฝ่าย)	
<p>- The vessel must comply with all the load line stability requirements.</p> <p>- Even though the vessel has passed the barge move per inspection by MA, after the inspection, both parties should hold a meeting to conclude the inspection result, with the inspector before making a final report.</p> <p>- In anchor handling operations it is often emphasized that the risk assessments used on AHTS vessels for these operations mainly focus on the hazards of anchor handling operations from the perspective of what is to be done on the working deck, while paying very little attention to the hazards actually affecting the vessel. It is therefore recommended that the use of the vessel and towing gear equipment this be taken into account in the risk assessment to be carried out prior to commencement of the operation.</p>	
Sign: (ลงชื่อ) Mr. Wasana Jermutjarit / QSHE Manager	Date: (วันที่) 26 Feb 2025



AUGUST 2025.

เรือสนับสนุน-3.15 ตัวอย่างบันทึกการเจ็บป่วยของพนักงาน



Date : 30/06/2023

Revision : 1

Ref : F-09-SHE/21

SEPTEMBER 2025

MEDICAL TREATMENT LOG

DATE AND TIME OF EXAMINATION	PATIENT NAME	SYMPTOM OR DIAGNOSIS	WHAT IS THE MEDICATION OR TREATMENT PROVIDED	QUANTITY	PHYSICIAN	REMARK
10-SEP-25 / 1200 HRS	MR. NATTAPOT C.	ไข้หวัดใหญ่, ไข้ ปวดศีรษะ	PARACETAMOL (900mg) รับประทาน 1-2 เม็ด ทุก 4 ชม.	1 เม็ด	2/0	- รับประทาน 1 เม็ด ทุก 4 ชม. ไข้ลดลง M.V. SC WINTER
15-SEP-25 / 1200 HRS	MR. NATTAPONG T.	ไข้หวัด, ปวดท้อง	พาราเซตามอล 1 เม็ด รับประทาน 1-2 เม็ด ทุก 4 ชม.	1 เม็ด	2/0	- รับประทาน 1 เม็ด ทุก 4 ชม. ไข้ลดลง M.V. SC WINTER
20-SEP-25 / 1200 HRS	MR. JARONNSAY J.	ไข้หวัด, ปวดท้อง	พาราเซตามอล 400 mg รับประทาน 1 เม็ด	4 เม็ด	2/0	- รับประทาน 1 เม็ด ทุก 4 ชม. ไข้ลดลง M.V. SC WINTER
21-SEP-25 / 1800 HRS	MR. SUPACHAI W.	ไข้หวัด, ปวดท้อง	พาราเซตามอล 500 mg รับประทาน 1 เม็ด	1 เม็ด	2/0	- รับประทาน 1 เม็ด ทุก 4 ชม. ไข้ลดลง M.V. SC WINTER
						MASTER

แท่นเจาะ

ภาคผนวกแท่นเจาะ-1

ข้อกำหนดและนโยบายต่างๆ ของแท่นเจาะ

Contract SSHE Management Plan and Bridging Document

For Contract:

2023.0321
Provision of Offshore Drilling Rig for Arthit Drilling Campaign 2024 – 2027 (ART rig#2)

Contractor:

ENERGY DRILLING (Edrill Vencedor)

Contract Mode:

MODE 2

August 2024

Approval Register	
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Reference Contract Number	2023.0321
Document Owner	Kamolchai Pattanapong
Prepared by	Phuichispol Rukanyathum (Supervisor, SSHE)

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Alex Märoske			
Sittikom Inthanasaw			

แผ่นเจาะ-1.1 ข้อกำหนดด้านความปลอดภัย ความมั่นคง อาชีวอนามัย
และสิ่งแวดล้อมของแผ่นเจาะ



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Tropical Cyclone Plan for Gulf of Thailand

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*This procedure has been reviewed by Arht SSHE, GZS SSHE, GZN SSHE, PSB SSHE, Erawan SSHE, Plalong SSHE, Satun SSHE, Funan SSHE and Tropical Cyclone Advisors.

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Document Approval	Ponlasak Apwatthanalunggam SVP, Safety, Security, Health and Environment Division		26-Mar-2024

This document shall be reviewed every 5 years from the date of approval or revised earlier if necessary.



Revision History		
Rev.	Description of Revision	Effective Date
D	<ul style="list-style-type: none">• Obsolete Tropical Cyclone Plan for Gulf of Thailand (10015-PDR-SSHE-501/07-R18) and changed document owner to Safety Management Department.• Revised Tropical Cyclone Notification, Organization, Tropical Cyclone Team, and Re-manning Priority Chart.• Revised Appendix I: Personnel Recall Guideline.• Added G1's information in Appendix G: Field Design Criteria.	March 2024



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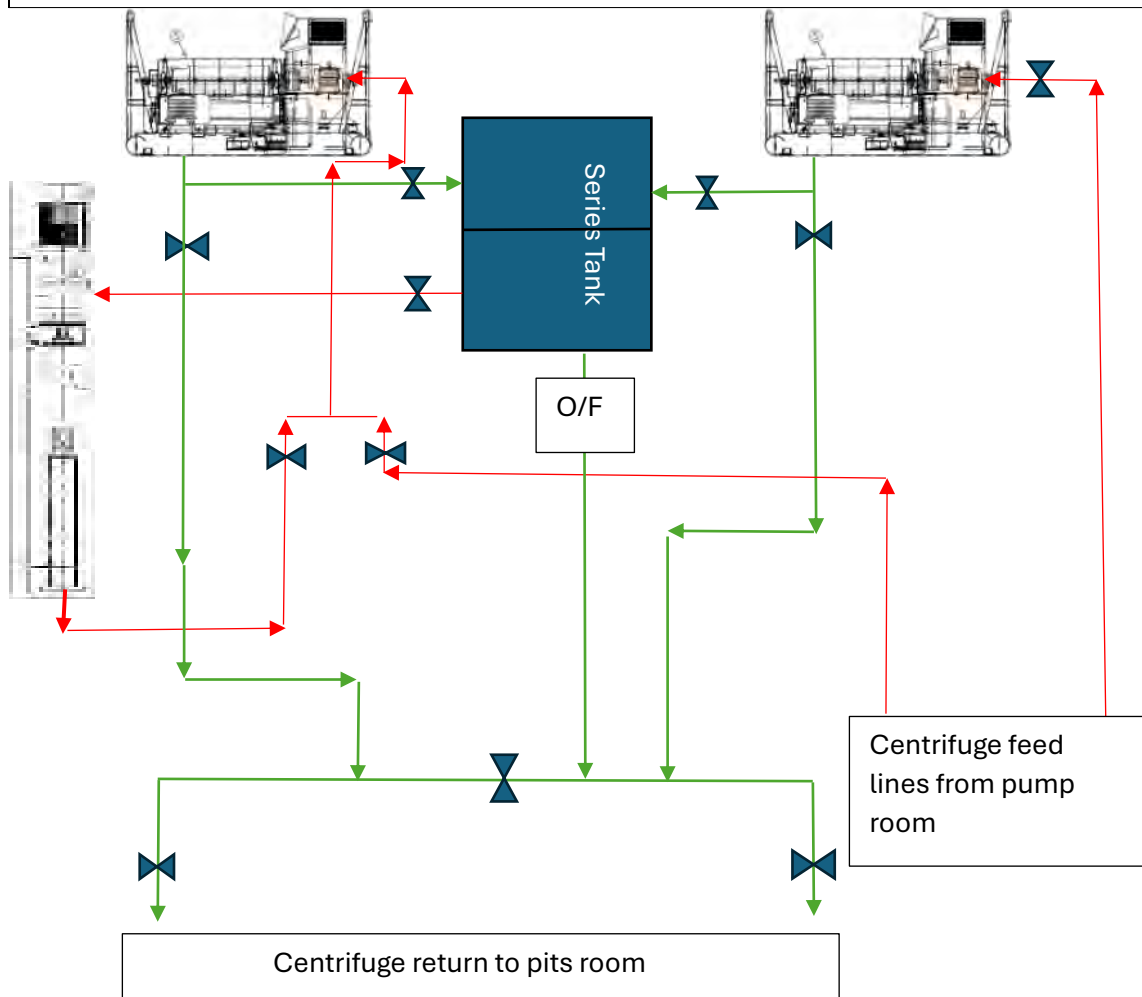
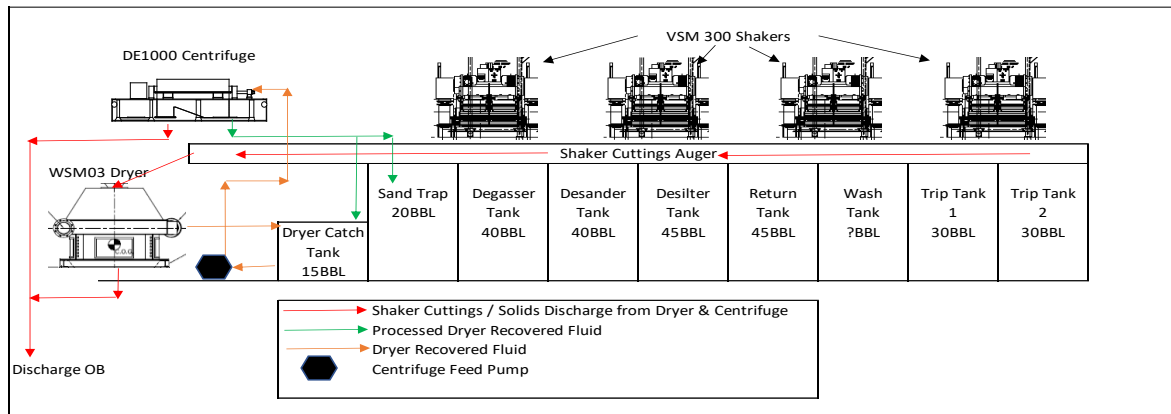
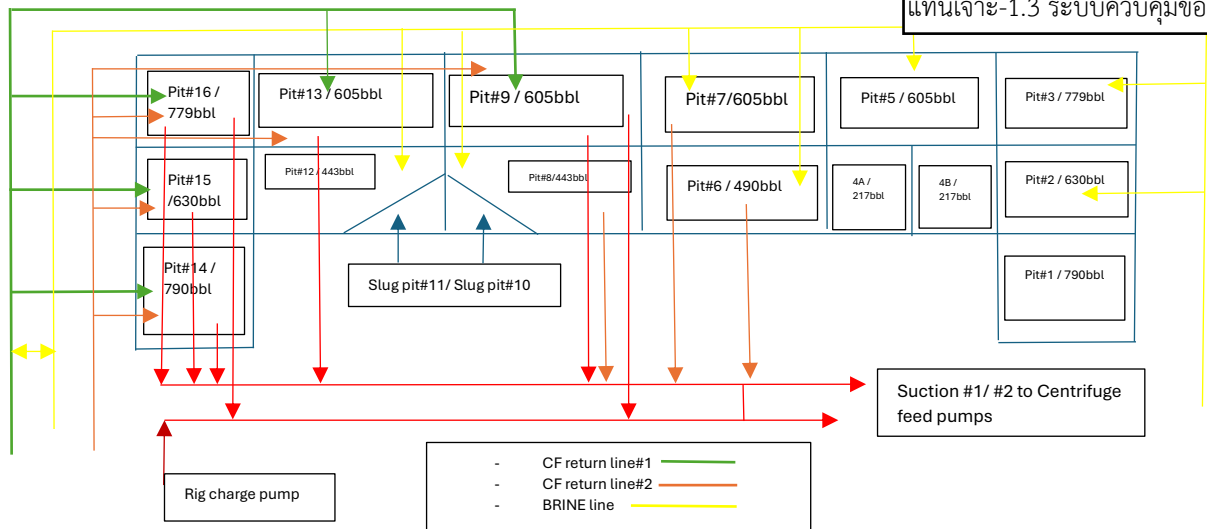
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แท่นเจาะ-1.3 ระบบควบคุมของแท่นเจาะ





Cuttings Treatment & Solids Control Daily Evaluation

Operator:	PTTEP Thailand	Date:	11-Sep-2025	Hole size (in):	8 1/2	Report No :	16
Report For:	Puwadech C./ Kuchayon S.	Well #:	AT-39-F	Prev. Mid Depth (m):	2496	Formation:	Clay
Rig Name:	ED-Vencedor	Description:	Development	Midnight Depth (m):	2496	Drilling Time (hr)	0
Contractor	Energy Drilling	Location:	Gulf of Thailand	Daily meter:	0	Circulating time (hr)	0
				Volume drilled (bbf)	0	ROP	0
				cutting expansion factor	1.20		
				Well gauge ratio	1.10		
Shaker Screen Sizes							
Scalping Deck		Linear Motion Deck			Daily Hrs Run	Equipment	
Shaker No.	Top	Front	Middle	Impact		CFW1 DE1000 FHD S/N CF001739	
VSM-300	3x20	2x170	N/A	2x170	24	CFW2 DE1000 FHD S/N CF001803	
VSM-300	3x20	2x170	N/A	2x170	24	CFW3 DE1000 VFD S/N CF001669	
VSM-300	3x20	2x170	N/A	2x170	24	Dryer WSM03 S/N 11-285	
VSM-300	3x20	2x170	N/A	2x170	24	Centrifuges C/B	
VSM-300	3x20	2x170	N/A	2x170	24	PSI MAX FEED PUMP No.1 S/N 4162	
						PSI MAX FEED PUMP No.2 S/N 4163	
						PSI MAX FEED PUMP No.3 S/N 4161	
						NEMO PUMP Fix speed Series Tank	
						PSI MAX FEED PUMP No.3 S/N 4161	
						10" Auger S/N 13D0037KW3043	
Retorts Data							
Shale Shaker's Cutting		Verti-G Dryer's Cutting		Recovered fluid			
Weight SG	0.00	Weight SG	0.00	Weight SG	0.00		
% Oil	0.00	% Oil	0.00	% Oil	0		
% Water	0	% Water	0	% Water	0		
% Solids	0	% Solids	0	% Solids	0		
Verti 'G' Dryer Centrifuge Retorts							
Fluid in		Fluid out		Solids Discharge			
Weight	0.00	Weight SG	0.0	Weight SG	0.0	Verti-G Parameters	
% Oil	0	% Oil	0	% Oil	0	Screen Size	
% Water	0	% Water	0	% Water	0	Speed (RPM)	
% Solids	0	% Solids	0	% Solids	0	Differential Speed (rpm)	
						Daily Hrs Run	
						Cumm. Hrs run for well	
Active Centrifuge System and VG Centrifuge System(Support For Active and Cutback)							
Parameter	Centrifuge#1	Centrifuge#2	Centrifuges C/B	Dryer Centrifuge#3			
Barite recovery Y / (N)	N	N	N	N	Dryer Recovery Fluid Parameter		
Bowl Speed (RPM)					Weight SG		
Scroll Speed(RPM)					% Oil of Recovery mud		
Hours run					% Water of Recovery mud		
Torque, % maximum					% Solids of Recovery mud		
Flow rate (Liter/m)					%LGS of Recovery mud		
Weight Mud in SG				0.00	%HGS of Recovery mud		
Weight Mud out SG	0.000	0.000	0.000	0.000	% CaCl by weight of Recovery mud		
Solids weight SG	0.00	0.00	0.00	0.000	% Salt of Recovery mud		
Wet solids "dis" (Cubic meter/day)	0.00	0.00	0.00	0.00	Shaker and Verti-G Dryer Wet solid discharge		
% Oil on solids discharge	0.00	0.00	0.00	0.00	Shaker Wet solids "dis" (m ³)		
% Water on solids discharge	0.00	0.00	0.00	0.00	VG dryer Wet solids "dis"(m ³)		
% Solids on solids discharge	0.00	0.00	0.00	0.00			
ASG Solids on solids discharge	0.00	0.00	0.00	0.00	Scomi Machine		
%LGS of solids discharged	0.00	0.00	0.00	0.00	Scomi Machine Break down Hrs Efficiency		
%HGS of solids discharged	0.00	0.00	0.00	0.00	Centrifuge #1 DE-1000		
% Oil of liquid return	0.00	0.00	0.00	0.00	Centrifuge #2 DE-1000		
% Water of liquid return	0.00	0.00	0.00	0.00	Centrifuge #3 DE-1000		
% Solids of liquid return	0	0	0	0.00	Cutting dryer WSM-03		
%LGS of liquid return	0.00	0.00	0.00	0.00			
%HGS of liquid return	0.00	0.00	0.00	0.00			
% CaCl by weight of liquid return	0.00	0.00	0.00	0.00	Scomi Efficiency		
% Salt of liquid return	0.00	0.00	0.00	0.00	Rig Machine Break down Hrs Efficiency		
Oil On Cuttings				Dryer System Daily Mud Recovered M ³			
Location	g/Kg	%	Hole Section		Mud	Base Oil	Shaker #1
Shakers	0.00	0.00					Shaker #2
Verti-G dryer	0.00	0.00					Shaker #3
Dryer Centrifuge#3	0.00	0.00					Shaker #4
Centrifuge#1	0.00	0.00					
Centrifuge#2	0.00	0.00	Daily		-	0.0	Rig Efficiency
Centrifuge C/B	0.00	0.00	Previous cumulative		-	0.0	Overall Efficiency
OOC Daily Avg. Cut Drying System				Total for well			Corr. Solid
Mud recovery meter readings				Cumulative		0	Mud % LGS
							Correction Factor
							Sg of Brine Phase
							Mud Ending Volume
				Additional data from mud report		Scomi Engineer	
				% synthetic		0.0	Day Shift
				% water		0.0	Night Shift
				% Solids		0.0	Next crew change
				CL mg/ltr		0	Off rig
				Mud Wt		0.00	On rig
Comment							
Rig activity	Continue troubleshooting TDS. Commenced finger print operation for MPD. Perform choke drill. Wash and ream down to 2492 mMDD. Continue drill out 9-5/8" float shoe.						
Solid control activity	All solids control equipment ready drilling operation as per program.						

Land Rig S1 Operators Drilling Discharge Environmental Forum
NON AQUEOUS FLUID TOTAL DRILLING DISCHARGE - DAILY REPORT v8.28.06 - PTTEP V2 / 2010

Well Name: AT-39-F										Rig:										ED Vencedor											
PARAMETERS	Day 1		Day 2		Day 3		Day 4		Day 5		Day 6		Day 7		Day 8		Day 9		Day 10		Day 11		Day 12		Day 13		Day 14		Cut Back		
Meters Drilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mud Weight (S.G.)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.49	1.49
Total volume built (m³)	103		3		3		0		0		0		0		0		0		19		0		0		0		0		0		0
LGS kg/m³ reported																															
HGS kg/m³ reported																															
TOTAL DRILLING DISCHARGE																															
Formation Excavated By Drilling, kg	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		0
Solids Discharged, kg																														63,878	
CBFR, %																														3.7	
Base Fluid Discharged, m³	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		3
NAF Discharged, m³	0		0		0		0		0		0		0		0		0		0		0		0		0		0		0		30
NAF Discharged, m³/meter drilled							0																								
Mass Balance Variance, % volume	#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		0%
Mass Balance Variance, % solids	#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		#DIV/0!		-100%
SOLIDS REMOVAL EQUIPMENT ANALYSIS																															
Component	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	Shaker	Centfuge	
LGS Discharged, kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59,078
HGS Discharged, kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,800
Solids Discharged, kg																														63,878	
Cuttings & Solids Discharged, % of Total																														100%	
CBFR, %																														3.7	
Base Fluid Discharged, m³	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
NAF Discharged, m³																														30	
NAF Discharged, % of Total																														100%	

Total Drilling Disposal Summary		
Total meters drilled	0 m	
Formation Excavated By Drilling	0 kg	0.0 MT
Total Solids Discharged	63,878 kg	64 MT
Total Base Fluid Discharged	3 m³	0 MT
Total NAF Discharged	30 m³	
NAF Discharged	#DIV/0! m3 / m drilled	
Dilution rate	#DIV/0! m3 / m drilled	
Wtd Avg CBFR % Shakers	0.0 %	
Wtd Avg CBFR % Centrifuge	0.0 %	
Wtd Avg CBFR, % for well	3.7 %	

Volume Reconciliation		
Minimum LGS		kg/m3
Maximum LGS	0.00	kg/m3
Other Surface Losses	0.00	m3
Spills	0.00	m3
Subsurface Losses	10.00	m3
Subsurface Losses	#DIV/0!	m3 / m drilled
Total Base Fluid used for well	73.00	m3
Total NAF surface losses	0.00	m3
Total Cutback Volume For Well	30.07	m3
% Volume Of Total NAF Discharged	100.0	%

Centrifuge Operating Parameters	
Min Feed Density	0.00 S.G.
Max Feed Density	0.00 S.G.
Min Centrate Density	0.00 S.G.
Max Centrate Density	0.00 S.G.
Min Discharge Density	0.00 S.G.
Max Discharge Density	0.00 S.G.
Min Feed Rate	0 GPM
Max Feed Rate	0 GPM
Min Bowl RPM	2200 RPM
Max Bowl RPM	2500 RPM

Time Breakdown		
Operating Hours	40	hr
Downtime Hours	0	hr

	Dryer/Shaker (Drilling)				Centrifuge (Drilling)				Centrifuge (Cut Back)				Well Solid Control Summary			
	LGS (MT)	HGS (MT)	Base Oil (m3)	OOO (%wt)	LGS (MT)	HGS (MT)	Base Oil (m3)	OOO (%wt)	LGS (MT)	HGS (MT)	Base Oil (m3)	OOO (%wt)	LGS (MT)	HGS (MT)	Base Oil (m3)	OOO (%wt)
AT-39-F	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.08	4.80	3.36	3.74	59.08	4.80	3.36	3.74

Centrifuge LGS Discharge		
CF#1 LGS (MT)	CF#2 LGS (MT)	Total CF LGS (MT)
0.00	59.08	59.08

Land Rig S1 Operators Drilling Discharge Environmental Forum																						
NON AQUEOUS FLUID TOTAL DRILLING DISCHARGE - DAILY REPORT v8.28.06 - PTTEP V2 / 2010																						
WELL & MUD SYSTEM DATA				SOLIDS REMOVAL EQUIPMENT PARAMETERS & MASS BALANCE																		
Operator		PTTEP		OPERATIONS	Time		0.00 - 12.00						12.00 - 24.00									
Well		AT-39-F			Interval Drilled, m		0						0									
Date		9 Sep 25			Circulating Time, hrs		0.0						0.0									
Rig		ED Vencedor			Drilling Time, hrs		0.0						0.0									
Mud Type		SDF		ACTIVE MUD	Average ROP, m/hr																	
Mud Company / Mud System		Baker hudies			Mud Weight, S.G.																	
Base Fluid Type / Name		Oil / Saraline			Base Fluid, %vol																	
					Water, %vol																	
DRILLING PARAMETERS					WPS, mg/l																	
Flow Rate, gpm		0			LGS, kg/m ³																	
Bit Diameter, in		8.500			HGS,kg/m ³																	
Hole Wash Out, % vol		0.000%																				
Average Hole Diameter, in		8.500		SHAKER / DRYER	Shaker Type		VSM-300						VSM-300									
Drilled From, m MD		2,496			Designation		Scalper	PS	PS	PS	PS	PS	Scalper	PS	PS	PS	PS					
Drilled To, m MD		2,496			Flow Distribution		25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%					
Interval Drilled, m		0			Screen Angle / Beach		2/50	N/A	N/A	N/A	N/A	N/A	2/50	N/A	N/A	N/A	N/A					
VOLUME RECONCILIATION					Hours		0	0	0	0	0	0	0	0	0	0	0					
PERIOD		Daily	Interval		Screen Type		S	C	C	C	C	C	S	C	C	C	C					
INITIAL, m ³		0.00	0.00		Screen Size		20x3	170	170	170	170	170	20x3	170	170	170	170					
TRANSFERRED INTO WELL, m ³		389.60	389.60		Screen Size		20x3	170	170	170	170	170	20x3	170	170	170	170					
BUILT, m ³	Base Fluid	73.00	73.00		Screen Size		20x3	170	170	170	170	20x3	170	170	170	170						
	Water		0.00		Screen Size		20x3	170	170	170	170	20x3	170	170	170	170						
	Barite		0.00		Screen Size		20x3	170	170	170	170	20x3	170	170	170	170						
	Chemicals	29.50	29.50		Screen Size		20x3	170	170	170	170	20x3	170	170	170	170						
Total		102.50	102.50		Dryer Type		WSM-03						WSM-03									
SURFACE LOSSES, m ³	Shaker / Dryer	0.00	0.00		Designation		1	2	3	4	1	2	3	4								
	Centrifuge	0.00	0.00		Dryer Hours Hours			N/A	N/A	N/A		N/A	N/A	N/A								
	Pit Cleaning, etc		0.00		Dryer Mud Recovery, S.G.		0.00						0.00									
	Spill		0.00	Dryer Mud Recovery, m ³		0.0						0.0										
Total		0.00	0.00		Discharge Sample Time																	
WATER EVAPORATION, m ³			0.00		Empty Cell, gr																	
SUBSURFACE LOSSES, m ³	Seepage		0.00		Cell + Sample, gr																	
	Observed	0.00	0.00		Retorted Cell, gr																	
	Left In Hole		0.00	Empty Receiver, gr																		
	Left Behind Casing		0.00	Reciever + BF + Water, gr																		
Total		0.00	0.00		Water in Receiver, ml																	
TRANSFERRED OUT OF WELL, m ³			0.00		Sampling Error																	
FINAL, m ³		492.10	492.10		Discharge - CBFR, %wt																	
						Discharge - ASG																
VARIABLE MASS BALANCE PARAMETERS				Mode		ONLINE				OFFLINE				ONLINE				OFFLINE				
Retort Size, ml		50		Centrifuge Type		DE-1000 FHD				DE-1000 FHD				DE-1000FHD				DE-1000 FHD				
Average Shaker Removal Efficiency, %		50%		Designation		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Average Formation Density, sg		2.6		Bowl Speed, rpm x 100																		
Average Formation Porosity, %		10.0%		Scroll Speed, rpm x 100																		
Average Barite Density, sg		4.2		Weir Setting, in																		
Average Base Fluid Density, sg		0.774		Torque, % of maximum																		
TOTAL DRILLING DISCHARGE					Centrifuge Hours																	
Formation Excavated By Drilling, kg		0			Centrifuge Feed, gpm																	
Solids Discharged, kg					Total Centrifuge Hours																	
CBFR, %					Av. Centrifuge Feed, gpm																	
Base Fluid Discharged, m ³		0.00			Mass Balance Sample		Feed	Cent	Feed	Cent	Feed	Cent	Feed	Cent	Feed	Cent						
NAF Discharged, m ³		0.00			Density, S.G.																	
NAF Discharged, m ³ / m drilled					Base Fluid, %vol																	
% vol NAF BV		% cal / actual NAF vol	#DIV/0!		#DIV/0!	Water, %vol																
% solid MBV		% cal / actual solid mass	#DIV/0!	#DIV/0!	Discharge Density, S.G.																	
SOLIDS REMOVAL EQUIPMENT ANALYSIS					Discharge Sample Time																	
Component		Shaker / Dryer	Centrifuge		Empty Cell, gr																	
LGS Discharged, kg		0	0		Cell + Sample, gr																	
HGS Discharged, kg		0	0		Retorted Cell, gr																	
Solids Discharged, kg					Empty Receiver, gr																	
Cuttings & Solids Discharged, % of Total					Reciever + BF + Water, gr																	
CBFR, %					Water in Receiver, ml																	
Base Fluid Discharged, m3		0.00	0.00		Sampling Error																	
NAF Discharged, m ³					Discharge CBFR, %wt																	
NAF Discharged, % of Total					Discharge ASG																	
					Discharge LGS/HGS, kg/m ³		/				/				/							
Solids Control Engineer: Paradon C. / Phitsanu / Kathawut U./ Wasan T.																						



Disclaimer

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This document contains information related to emergency evacuation planning and actions for offshore projects. This Medical Evacuation Response Plan is subject to change in light of experience and feedback and it is the responsibility of all potential users – including but not only any Medical or Physician deployed – to review the plan on arrival on-board and contact C24 if any difficulties seem likely in making use of the plan.

This is not a First Phase Evacuation plan and does not include responsibilities for all necessary activities related to onshore incident management whether patients and casualties are involved (e.g., H/S emergency, notification, man overboard, epidemic quarantine, etc.).

MEDICAL EVACUATION RESPONSE PLAN (MERP)

Client Name: Energy Drilling Management Pte Ltd
Vessel: EDrill Vencedor

Location: AWP-39 Platform, Offshore Thailand
Latitude (N): 07° 54' 40.8" N, Longitude (E): 102° 49' 34.1"E
Operator: PTTEP

Created Date: 24th May 2024
Updated Date: 5 June 2025

Version: 1.22

Author

This document was prepared by the Global MERP team.

Reviewers

This document was issued for review to:

C24	Date
Global MERP Team	24 th May 2024

Correspondence

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Acronyms and Definitions

AP	Authorized Person: The representative identified to act on behalf of a company if a medical emergency involving one of its employees occurs on-site. We recommend that the company nominates several employees to act on its behalf. C24 must be able to always contact one of your company's APs. The AP is always called for financial authorization prior to C24 performing a billable service. Throughout the course of the case, we will provide routine updates to keep the AP fully informed of the status and progress of events. We may also contact him/her for advice on how your company would like a case to be handled.
BDD	Business Development Director: C24 sales staff who liaises with the client for business and account maintenance issues.
Definitive Care Facility	Hospital/Clinic: A medical facility where patients can be admitted for specialized and comprehensive medical care, with the ultimate aim of providing final medical treatment for the patient's condition.
First Phase Evacuation	First Phase Evacuation: The movement of the patient from the vessel will be carried out by Edrill's arrangement and permission granted by PTTEP Medical Team.
In-Transit Care Facility	Hospital/Clinic: A medical facility where patients can be admitted for stabilization prior to onward movement to the nearest level of upgraded care or the definitive medical care facility.
Patient Handover Point	Patient Handover Point: A pre-identified location from where the patient will be entrusted to C24, for future care, treatment, and case monitoring. This pre-identified location is mutually agreed upon by the client and C24, prior to MERP mobilization.
Second Phase Evacuation	Second Phase Evacuation: This plan is developed and managed by C24 and entails the movement of the patient from the patient handover point to the nearest level of upgraded care or the definitive medical care facility.

1. Objectives of this Document

A Medical Evacuation Response Plan (MERP) explains the Second Phase Evacuation plan, i.e., the movement of the ill/injured employee from the patient handover point to the nearest level of upgraded care or the definitive medical care facility. It also includes references to the First Phase Evacuation plan that Energy/Drilling Management has on-site.

This document defines the roles and responsibilities.

- **Energy Drilling Management Pte Ltd** to verify First Phase Evacuation data in the MERP on a regular basis and update C24.
- **C24** to document, verify, retain, and update Second Phase Evacuation data in the MERP.

Disclaimer: This document addresses only medical emergencies. It does not cover other types of emergency planning, such as fires, security breaches or threats, disaster response, environmental issues, etc. Planning for medical emergencies should be integrated with these other types of planning as part of a master global emergency response plan.

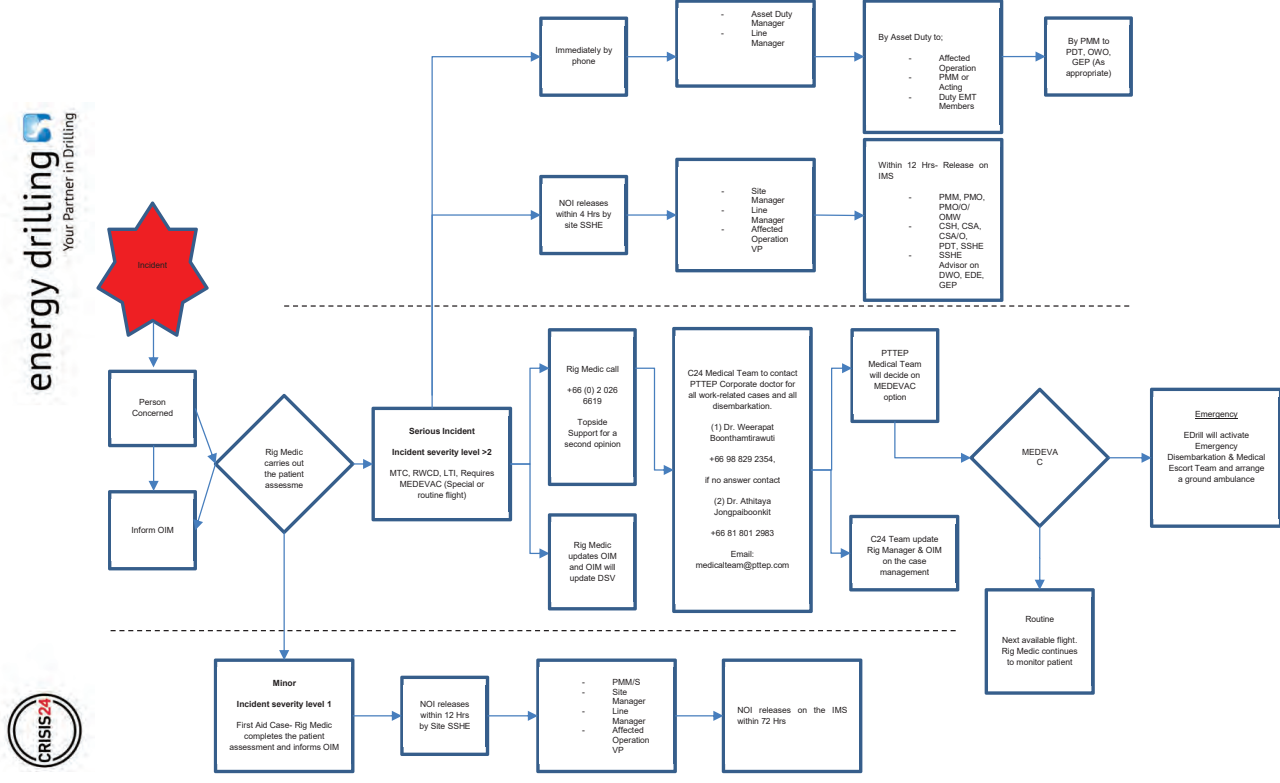
2. Summary of MERP

Edrill Vencedor, a semi-submersible self-erecting tender assisted drilling rig is working at Gulf of Thailand for PTTEP. It is supported by a C24 medic onboard the clinic. For the First Phase of Evacuation, patients will be transferred by to shore by PTTEP's helicopter activated/arranged by personnel on board.

Fly time from Riq location to Sonakhla Airport: 1.25 hrs

Note: For further patient transfer, Edrill Vencedor will activate the Ground Ambulance or request C24 to do so.

For the Second Phase of Evacuation, the patient will be moved by C24 from the patient handover point (In-transit medical facility in Songkhla) to a definitive medical care facility recommended by C24, depending on the medical condition/indication of the patient, logistical criteria, and resources available. The movement will occur via the transport provider identified by C24 as most suitable. Further repatriation can also be organized, if required.





3. Responsibilities for First and Second Phase Evacuations

On-Site C24 Medical Staff- On-Site Response

1. Stabilize and provide initial treatment to the patient according to Clinical Protocols and assess further needs.
2. Contact C24 Global Operations Centre and discuss the case with the Topside Support team; also inform the on-duty site manager of the incident.
3. Provide patient particulars (including name, nationality, passport details, insurance details, etc.) to the C24 Global Operations Centre.
4. Forward the completed Notification of Case (NOC) form and patient case note to Global Operations Centre Topside team copying Regional Medical Director- Dr Craig Stark craig.stark@crisis24.com, Dr Adrian Hyzler: Adrian.Hyzler@crisis24.com, Dr Lajos Szenthe: Lajos.szenthe@crisis24.com and Dr Ron Braverman: Ron.Braverman@crisis24.com, and C24 Head of Operations- Tanya Kissin tanya.kissin@crisis24.com, Patricia Peridy patricia.peridy@crisis24.com, Claudio Rizza Claudio.rizza@crisis24.com and Suzy Battle suzy.battle@crisis24.com
5. Obtain patients consent for C24 to access patient medical records. Forward the completed and signed Release of Medical Information Form (ROMIF).
6. Follow up the first phone call with verbal and written updates including patient movement.

Energy Drilling Management Pte Ltd- First Phase Evacuation

1. Make pre-identified local transport assets and/or local transport providers under company's control available for the First Phase Evacuation.
2. It is the responsibility of Energy Drilling Management Pte Ltd to ensure C24 is in possession of the latest information related to First Phase Evacuation plan.
3. Manage and implement the First Phase Evacuation plan.
4. Prepare patients' travel necessities, including passport, other travel documents, clothes, etc.
5. Energy Drilling Management Pte Ltd to authorize C24 to activate necessary resources for repatriation or evacuation and/or guarantee medical expenses, as required.

C24 – Topside Support & Second Phase Evacuation

1. Support the on-site Medic with peer review, medical advice and guidance on diagnosis and treatment.
2. Crisis24 Topside medical team (Topside) to discuss with on-site Medic to recommend whether the patient should be treated on location or at an in-transit medical care facility.
3. Crisis24 Topside medical team to also recommend patient movement considering Energy Drilling Management Pte Ltd.'s logistics and First Phase Evacuation plan.
4. Contact the designated AP and discuss the case medically, while highlighting any need for a Second Phase Evacuation.
5. Implement and manage the Second Phase Evacuation plan.
6. Organize admission at an appropriate medical facility for Second Phase Evacuation.
7. Organize onwards repatriation, if required and requested, beyond Second Phase Evacuation.
8. Keep APs and Energy Drilling Management Pte Ltd management updated on the case.



4. Key Information

4.1 Crisis24 Global Operations Centre
C24 Global Operations Centre (Topside)
Primary Tel: +66 (0) 2 026 6619 (BKK), Secondary Tel: +44 (0) 207 902 7131 (UK) Email: topside@healthdeliver.asia , goc@goc.crisis24.com

4.2 Authorized Person Details	
AP1 Sasa Lovrenovic, Rig Manager Tel: +66 (0)88 693 7397 E-mail: sasa.lovrenovic@edrill.com	AP2 Alexander Maroske, Head of QHSSE Alex.maroske@edrill.com Mobile +65 9125 5927
AP3 Luc Plouzenec, VP Operations Luc.Plouzenec@edrill.com Tel +65 6222 8370 Mobile +65 8222 1279	OIM eva_oim@edrill.com Tel +66 2026 5711, +65 6491 2501 Sittikom Intahkaew, QHSSE Manager sittikom@edrill.com



4.3 Case Management Instructions

@Medic

- ALL consultations to the clinic that are, or have the possibility to have been work related, medical treatment or escalation to Topside Medical Support, report to the OIM and Rig Manager, with no exceptions. If the presentation has the potential to affect the worker's ability to perform his assigned duties, this shall also be reported to the OIM and Rig Manager, with no exceptions.
 - o Rig Manager sasa.lovrencovic@edrill.com
 - o OIM eve.oim@edrill.com
- For cases beyond First Aid Treatment, call C24 Global Operations Topside team immediately on: **Primary, Tel: +66 (0) 2 026 6819 (BKK)**, or Secondary, Tel: +44 (0) 207 902 7131 (UK) for Topside Medical Support. The medic should meticulously adhere to the Topside Medical Support's directions, rigorously document all actions, uphold patient confidentiality, and regularly refine skills in alignment with IADC standards to ensure optimal patient care and industry compliance.
- Email Notification: Send NOC details to:
 - o BKK Assistance Centre topside@healthdeliver.asia
 - o Global Operations Centre goc@goc.crisis24.com
 - o In copy:
 - Dr. Craig Stark: Craig.Stark@crisis24.com, Dr. Adrian Hyzler: Adrian.Hyzler@crisis24.com, Dr. Laos Szenthe: Laos.szenthe@crisis24.com, and Dr. Ron Braveman: Ron.Braveman@crisis24.com

@Topside Medical Support (HD):

- Call and notify PTTEP Medical Team for ALL escalated cases by the Rig Medic.
 - o Dr. Weerapat Boonthamtraiwit + 66 98 829 2354 (the 1st contact person).
 - o If no answer then tries 2nd contact person, Dr. Athiaya Jongpaiboonkit +66 81 801 2983
 - o Prior to any personnel medevac out of the site for medical reasons, the Rig Medic must communicate with Topside Medical and confirm the best course of action. This should also involve the expert opinion and recommendation from the PTTEP Medical Team.
 - o For non-emergency medevac/referral, Topside shall notify PTTEP Medical Team with 1 hour when Rig Medic has been communicated to support illness or injury person.
 - o For emergency medevac, Topside Medical shall notify PTTEP Medical Team immediately and not exceed 15 minutes when Rig Medic has been communicated to support illness or injury person.
 - o To activate Helicopter for Emergency Medical Evacuation call: Pasavorn Lumpawattana +66 810 8726.
 - o Email case management plan to medicalteam@pttep.com; eve.medic@edrill.com;
 - o goc@goc.crisis24.com; Craig.Stark@crisis24.com; Adrian.Hyzler@crisis24.com, Laos.szenthe@crisis24.com; Ron.Braveman@crisis24.com; lanva.kissin@crisis24.com, patricia.peridy@crisis24.com; Claudio.Rizza@crisis24.com; suzu.battle@crisis24.com
- Summarize case management plan in the following format:
 - o Nature of Incident: [Injury/Illness]
 - o Work-Related: [Yes/No]
 - o Consultation Type: [First Consultation/Follow-up]
 - o Doctor's Diagnosis: [Brief Diagnosis]
 - o Treatment Plan on Rig: [Outline of Treatment Plan]
 - o Disembarkation Plan:
 - Routine Flight: [Time/ Date]
 - Emergency Medical Evacuation
 - Continued Monitoring Required
- For routine disembarkations involving further examination and tests at a hospital, Topside Medical Support should discuss with PTTEP Corporate doctor medicalteam@pttep.com; Craig.Stark@crisis24.com; Adrian.Hyzler@crisis24.com; Laos.szenthe@crisis24.com;



Ron.Braveman@crisis24.com. This step is crucial for ensuring proper patient care and maintaining clear communication with key personnel.

- In the event of an emergency medical evacuation, Topside Medical Support must call PTTEP Corporate doctor and Pasavorn Lumpawattana +66 810 8726 to initiate the activation of an emergency helicopter to transport the patient to shore for further examination and tests at a hospital. Concurrently, Topside Medical Support should also contact Bangkok Hospital Haiyai to arrange Ground Ambulance for patient transfer from Heliport to Hospital.
- Patient handover point: PTTEP Air Traffic Center (PTTEP Songkhla Hangan) Songkhla Airport Mueang Songkhla Songkhla 90000 Thailand
 - o In instances of hospital admission or outpatient visits, the Topside Medical Support must maintain consistent follow-up with the hospital. They are required to provide regular updates to the C24 Global Operations Centre goc@goc.crisis24.com, PTTEP Medical Team medicalteam@pttep.com, Rig Medic eve.medic@edrill.com; Dr. Craig Stark Craig.Stark@crisis24.com; Adrian.Hyzler@crisis24.com; Laos.szenthe@crisis24.com; Ron.Braveman@crisis24.com regarding the patient's status. These updates should cover the patient's diagnosis, treatment plan, expected discharge date, follow-up appointments, travel arrangements, and any post-treatment home care plans. Keeping these key personnel informed ensures coordinated and comprehensive care and logistics support for the patient.

@Crisis24 Global Operations Centre

- Report and communicate ALL Topside Medical Support's consultations to the AP1, AP2, AP3 within 1 hour by phone follow by email notification to AP1, AP2, AP3, OIM Eve.OIM@edrill.com and Sitikom Intakhaew QHSSE Manager sitikom@edrill.com. The communication to the APs must take reference from Topside's report format. This includes proposed routine disembarkations involving further examination and tests at a hospital or Emergency Medical Evacuation.
- Email notification to Komsan Musikachart komsan@edrill.com & Duangjai Manonorn Duangjai@edrill.com within 1 hour if there is an emergency evacuation or routine disembarkation.
- In instances of hospital admission or outpatient visits, the Global Operations Centres' first step is to consult with AP1 (Rig Manager) to decide if Crisis24 should manage the case and provide a Guarantee of Payment (GOP).

Insurance Details:	Ronald Loke (Broker) mobile: +65 92356219 direct: +65 6422 7451
Delegated Authority:	Jacqueline How: +65 9815 8791 / Jacqueline.how@edrill.com
Special Instructions / Comments, if any:	If none of the above can be contacted, C24 is authorized to proceed with medical treatment in a life-threatening situation up to a value of USD 5000.00

4.4 Client Contact Details

EDRill Vencedor Phone number:	+61 4341 23 244, +66 2026 5711
Vessel Call Sign: 3FL T6	
AP1 Sasa Lovrenovic, Rig Manager	OIM: Tel: +66 2026 5711, +65 6491 2501 E-mail: Eve.OIM@edrill.com
4.5 On-site Medic Contact Details	
Name: Sarankorn Janlueang, Songsak Anunak	Tel: +66 2026 5713, +65 6491 2503



5. Location Geography

5.1 Vessel Details	
Vessel Population:	Up to 180 POB
Rig Location and Coordinates:	Location: AWP-39 Platform, Offshore Thailand Latitude (N): 07° 54' 40.8" N, Longitude (E): 102° 49' 34.1E"
Patient Handover Point:	Operator: PTTEP PTTEP Air Traffic Center (PTTEP Songkhla Hangar) Songkhla Airport Mueang Songkhla Songkhla 90000 Thailand

Regional View



TH NUMBER	SG NUMBER	DESCRIPTION
66 2026 5710	65 6491 2500	Conference
66 2026 5711	65 6491 2501	OIM
66 2026 5712	65 6491 2502	Barge Office
66 2026 5713	65 6491 2503	Hospital
66 2026 5714	65 6491 2504	Materials Man
66 2026 5715	65 6491 2505	Radio Room
66 2026 5716	65 6491 2506	Electrical Office
66 2026 5717	65 6491 2507	Mechanical Office
66 2026 5718	65 6491 2508	Ballast Control Room
66 2026 5719	65 6491 2509	STO Office
66 2026 5750	65 6491 2550	Drill Floor
66 2026 5751	65 6491 2551	Spare
Clinic email: eve_medic@edrill.com		
Employer: C24		
Reporting Manager: Francis Chong		
Francis.chong@crisis24.com		



6. First Phase Evacuation Details

First Phase Evacuation

For the First Phase of Evacuation, patients will be transferred by helicopter activated/arranged by Edrill Vencedor to Songkhla, Thailand on case-by-case basis.

Fly time from Rig location to Songkhla Airport: ~1hr 25 min

Note: For further patient transfer, the client will activate the Ground Ambulance or request C24 to do so.

Airport Information		
Name	Hat Yai Intl Airport	Songkhla Navy Airport
Hours of Operation	Yes, with restrictions	Not operational 24 hours (Operates from Sunrise to Sunset)
Airport of entry	Airport of Entry	Not An Airport of Entry
Telephone	+66 7425 1008-12 (Airport)	
	+66 74 251051 (Aerodrome Control Tower)	+66 74 311 085

Notes on In-Transit Care Facilities:

- The in-transit care facility must be mutually pre-agreed upon by C24 and Energy Drilling Management Pte Ltd.
- The in-transit care facility may not be – and in remote areas usually will not be – the medical facility best suited for the patient's definitive treatment.
- C24 may have administrative agreements with these hospitals and providers to assist with the admission of patients and guarantee payments; however, this does not mean that these hospitals/providers have been accredited by C24 as being up to the international standards. C24 is in no position to direct local hospitals/providers regarding the treatment and management of the patient but will make all efforts to secure understanding and cooperation from the local medical team.
- Medical facilities recommended only for initial admission and stabilisation prior to onward transfer for more serious cases may be appropriate for definitive care of less serious cases, but in any case, these only represent the best locally available option. Onward referral to a regional definitive care facility will be recommended on a case-by-case basis by C24 medical team.

7. Second Phase Evacuation Details

Second Phase Evacuation

In this phase the patient will be moved by C24 from the patient handover point (In-transit medical facility in Songkhla) to a definitive medical care facility recommended by C24, depending on the medical condition/indication of the patient, logistical criteria and resources available. The movement will occur via the transport provider identified by C24 as most suitable. Further repatriation can also be organized, if required.

Evacuation Support Logistics

Location: **Songkhla, Thailand**

Ground Ambulance	
Provider Name:	Bangkok Hospital Hatyai
Provider Address:	75 Soi 15, Patchakasem Road, Hatyai, Songkhla, Thailand 90110



Contact Details	+66 74 272 800
Definitive Care Medical Facilities	
Location: Bangkok	
Samitivej Sukhumvit Hospital	
Address: 133 Sukhumvit 49, Klong Tan Nua, Vadhana, Bangkok, Thailand 10110	
Tel: +66 2 667 1214 / 1581 Fax: +66 2 712 9810	
Email: svhinterinsurance@samitivej.co.th	
Bumrungrad International Hospital	
Address: 33 Sukhumvit Road, Soi 3 (Nana Nua), Wattana, Bangkok, Thailand 10110	
Tel: +66 02 667 1000/1234 Fax: +66 2 667 1214 / 1581	

Location: Singapore

Ground Ambulance	
Provider Name:	I.M. Ambulance Service (IMA) Pte Ltd
Provider Address:	6 Tagore Dr #02-03 S787623
Contact Details	+65 6786 3786 mainline info@iman.com.sg
Definitive Care Medical Facilities in Singapore	
Name: Raffles Hospital Pte Ltd/RMG	
Address: 585 North Bridge Rd, Singapore 188770	
Tel: +65 6311 1111 (General); 6311 1555 (A&E) / 1222 (APPTS) / +65 6311 1222 (24 hr. other Appt) / +65 6311 1666 (IPC)	
Fax: +65 6311 2333	
Name: Gleneagles Hospital	
Address: 6A Napier Road, Singapore 258500	
Tel: +65 6473 7222 (Main 24hrs) / +65 6735 5000 (PPAC)	
Fax: +65 6470 5616 / +65 6470 3309	
Name: Mount Elizabeth Hospital Pte Ltd	
Address: 3 Mount Elizabeth, Singapore, 228510	
Tel: +65 6737 2666 (24hrs) / +65 6735 5000 (PPAC 24hrs) / +65 67312122	
Fax: +65 6734 7525 (BZ Office) / +65 6732 8906	

Noteworthy Points to Consider for Evacuations and Repatriations

- Cross-border travel without passport and entry/exit visa and non-compliance to on-arrival COVID measures are not permitted by immigration authorities, and this must be present with the patient (or a caretaker, if incapacitated) at all times. Even in a medical emergency, a country may not allow a patient entry if the country immigration regulations do not grant emergency visas for certain nationalities.
- All emergency responses are on a reasonable effort basis; unavoidable delays may occur for several reasons, including aircraft availability, weather conditions or other factors affecting the safety of a flight, or unscheduled airport closures.
- Patient suffering from an infectious disease may not be allowed to travel by health authorities either



locally, regionally or internationally.

- Second Phase Evacuation to a place where the patient's language is spoken or where he is culturally more comfortable can be arranged upon request, if this is considered medically appropriate. Repatriation following an initial evacuation to a center of medical excellence depends on the patient's fitness to fly, as well as the medical clearance of the patient by the commercial airline's medical department.



Medical Evacuation Response Plan			
By providing my signature to this document, I commit that I have read, understood and will comply with the instructions provided within this document.			
Staff Name	Role / Position	Signature	Date

Revision History						
Version	Rev. Date	Description	Prepared By	Reviewed By	Approved By	Date
1.7	31 st Dec 2024	Update Location	PM Support	Global MERP team	Kenneth Ong, Director IMS	31 st Dec 2024
1.8	9 th Feb 2025	Update Location	PM Support	Global MERP team	Kenneth Ong, Director IMS	9 th Feb 2025
1.9	25 th March 2025	Update C24 contact details and distribution lists	PM Support	Global MERP Team	Tanya Kissin, Head of Operations, APAC	25 th March 2025
1.20	8 April 2025	Update location rig	PM Support	Global MERP Team	Tanya Kissin, Head of Operations, APAC	8 th April 2025
1.21	1 May 2025	Update clinic email address in SOP	PM Support	Global MERP Team	Tanya Kissin, Head of Operations, APAC	1 May 2025
1.22	5 June 2025	Update location	PM Support	Global MERP Team	Tanya Kissin, Head of Operations, APAC	5 June 2025

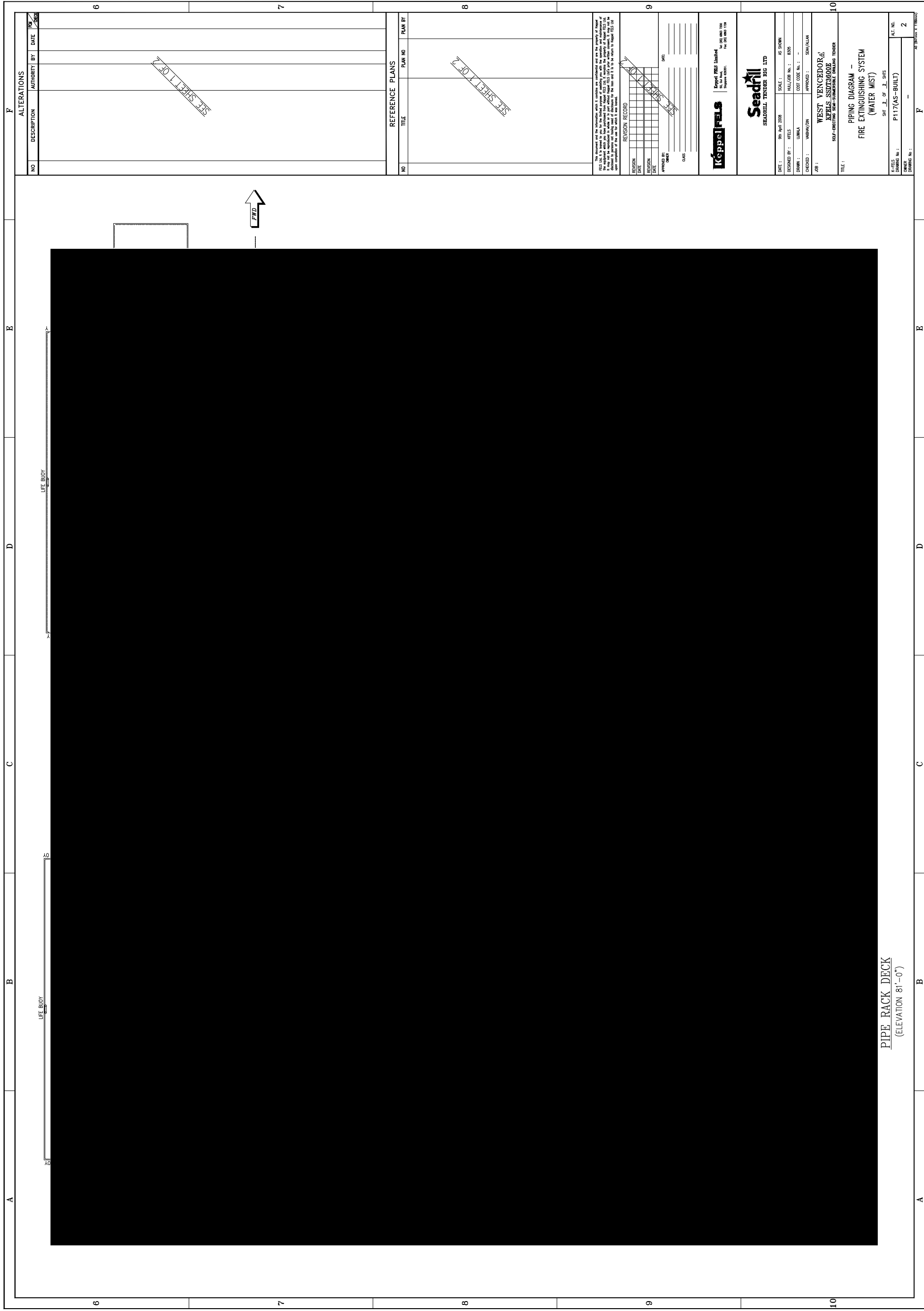
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ภาคผนวกแทนเจาะ-2

ใบรับรองการตรวจสอบแทนเจาะ

INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE

(This Certificate shall be supplemented by a Record of Construction and Equipment)

Issued under the Provisions of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto and as amended, (hereinafter referred to as "the Convention") under the authority of the Government of

Republic of Panama
(Name of state)

by American Bureau of Shipping

Particulars of Ship:			
Name of Ship	Distinctive Number or Letters	Port of Registry	
EDRILL VENCEDOR	3FLT6	Panama	
Gross Tonnage ¹ a) According to footnote 2 b) According to footnote 3	Maximum Deadweight of Ship (metric tons) *	IMO Number	
19830	-	8770065	

Type of Ship¹:

Oil tanker

Ship other than any of the above

THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with Regulation 6 of Annex I of the Convention;
2. That the survey shows that the structure, equipment, systems, fittings, arrangement and material of the ship and the condition thereof are in all respects satisfactory and that the ship complies with the applicable requirements of Annex I of the Convention

This Certificate is valid only when Supplement Form A, issued at Singapore, Singapore - SG, on 27 October 2015 is attached.

This certificate is valid until 24 July 2029 is subject to surveys in accordance with Regulation 6 of Annex I of the Convention.

Completion date of the survey on which this certificate is based: 25 July 2024
Issued at Singapore, Singapore on 25 July 2024
(Place of Issue of Certificate)



Electronically Signed By
Rungruang, Hathamont, Singapore Port
Surveyor, American Bureau of Shipping

1. Decide as appropriate.
2. The above gross tonnage has been determined in accordance with the International Convention on Tonnage Measurement of Ships, 1969.
3. The above deadweight has been determined in accordance with the International Convention on Tonnage Measurement of Ships, 1969.
4. The above tonnage and deadweight are subject to verification in accordance with the International Convention on Tonnage Measurement of Ships, 1969.
5. The date and the month of date corresponds to the anniversary date as defined in Regulation 1.27 of Annex I of the Convention, unless amended in accordance with Regulation 1.27 of Annex I of the Convention.

ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

THIS IS TO CERTIFY that, at a survey required by Regulation 6 of Annex I of the Convention, the ship was found to comply with the relevant requirements of the Convention.

Annual Survey:	Signed:	Electronically Signed By Phujomdao, Anvut, Bangkok Port (Surveyor, American Bureau of Shipping)
	Place:	Offshore, Gulf of Thailand
	Date:	18 July 2025
Annual / Intermediate ¹ Survey:	Signed:	(Surveyor, American Bureau of Shipping)
	Place:	
	Date:	
Annual / Intermediate ¹ Survey:	Signed:	(Surveyor, American Bureau of Shipping)
	Place:	
	Date:	
Annual Survey:	Signed:	(Surveyor, American Bureau of Shipping)
	Place:	
	Date:	



1. Decide as appropriate

ANNUAL / INTERMEDIATE SURVEY IN ACCORDANCE WITH REGULATION 10.8.3

THIS IS TO CERTIFY that, at an annual / intermediate¹ survey in accordance with Regulation 10.8.3 of Annex I of the Convention, the ship was found to comply with the relevant provisions of the Convention.

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN 5 YEARS
WHERE REGULATION 10.3 APPLIES

The ship complies with the relevant provisions of the Convention, and this Certificate shall, in accordance with Regulation 10.3 of Annex I of the Convention, be accepted as valid until _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED
AND REGULATION 10.4 APPLIES

The ship complies with the relevant provisions of the Convention, and this Certificate shall, in accordance with Regulation 10.4 of Annex I of the Convention, be accepted as valid until _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF
SURVEY OR FOR A PERIOD OF GRACE WHERE REGULATION 10.5 OR 10.6¹ APPLIES

This Certificate shall, in accordance with regulation 10.5 /10.6¹ of Annex I of the Convention, be accepted as valid until _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____



¹ Decide as appropriate

ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE
WHERE REGULATION 10.8 APPLIES

In accordance with Regulation 10.8 of Annex I of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____

In accordance with Regulation 10.8 of Annex I of the Convention, the new anniversary date is _____

Signed: _____
(Surveyor, American Bureau of Shipping)
Place: _____
Date: _____





Certificate No.: 0916837-6168705-074

INTERNATIONAL SEWAGE POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto, and as amended by resolution MEPC.115(51), (hereinafter referred to as "the Convention") under the authority of the Government of:

Republic of Panama
(Name of state)

by American Bureau of Shipping

Particulars of Ship:			
Name of ship	Distinctive number or letters	Port of Registry	
EDRILL VENCEDOR	3FLT6	Panama	
Gross tonnage	Number of persons which the ship is certified to carry	IMO Number ¹	
15839	160	8770085	

New Ship / Existing Ship²

Type of ship for the application of regulation 11.3.4

Ship other than a passenger ship

Date on which keel was laid or ship was at a similar stage of construction or where applicable, date on which work for a conversion or an alteration or modification of a major character was commenced

02 June 2018

THIS IS TO CERTIFY:

That the ship is equipped with a Sewage Treatment Plant, ~~Automatic Holding Tank~~, and a discharge pipeline in compliance with regulations 9 and 10 of Annex IV of the Convention as follows:

"(1.1) Description of the sewage treatment plant:

Type of sewage treatment plant: HL-Cont (1080 cubic meters per day)

Name of manufacturer: HAMMAN AG, GERMANY

The sewage treatment plant is certified by the Administration to meet the effluent standards as provided for in resolution MEPC.2(V).

Certificate No.: 0916837-6168705-074

- (2) The ship has been surveyed in accordance with regulation 4 of Annex IV of the Convention.
- (3) That the survey shows that the structure, equipment, systems, fittings, arrangements and material of the ship and the condition thereof are in all respects satisfactory and the ship complies with the applicable requirements of Annex IV of the Convention.

N/A

This certificate is valid until 24 July 2029, subject to surveys in accordance with regulation 4 of Annex IV of the Convention.

Completion date of the survey on which this certificate is based: 25 July 2024
Issued at: Singapore on 25 July 2024.



Electronically Signed By
Runqiang, Nathamont, Singapore Port
(Surveyor, American Bureau of Shipping)

² Insert the date of expiry as specified by the Administration in accordance with regulation 8.1 of Annex IV of the Convention. The day and the month of this date correspond to the anniversary date as per the regulation 1.8 of Annex IV of the Convention.

SPPC

REV 104.00

Endorsement to extend the Certificate if valid for less than 5 years where regulation 8.3 applies.
The ship complies with the relevant provisions of the Convention, and this Certificate shall, in accordance with regulation 8.3 of Annex IV of the Convention, be accepted as valid until _____.

Signed: _____ (Signature of authorized official)
Place: _____
Date: _____
(Seal or Stamp of the authority, as appropriate)

Endorsement where the renewal survey has been completed and regulation 8.4 applies.
The ship complies with the relevant provisions of the Convention, and this Certificate shall, in accordance with regulation 8.4 of Annex IV of the Convention, be accepted as valid until _____.

Signed: _____ (Signature of authorized official)
Place: _____
Date: _____
(Seal or Stamp of the authority, as appropriate)

Endorsement where the renewal survey has been completed and regulation 8.5 or 8.6 applies.
This Certificate shall, in accordance with regulation 8.5 or 8.6 of Annex IV of the Convention, be accepted as valid until _____.

Signed: _____ (Signature of authorized official)
Place: _____
Date: _____
(Seal or Stamp of the authority, as appropriate)



MOBILE OFFSHORE DRILLING UNIT SAFETY CERTIFICATE (1989)
ISSUED UNDER THE PROVISIONS OF THE IMO CODE FOR
THE CONSTRUCTION AND EQUIPMENT OF MOBILE OFFSHORE DRILLING UNITS, 1989 AS AMENDED
UNDER THE AUTHORITY OF THE GOVERNMENT OF

Republic of Panama

By American Bureau of Shipping

Distinctive Identification (Name or Number)	Type (Section 1.3 of the Code)	Port of Registry
EDRILL VENCEDOR	Column Stabilized Unit	Panama
3PLT6		
8770005		

Date on which keel was laid or unit was at a similar stage of construction or on which major conversion was commenced
02 June 2008

THIS IS TO CERTIFY:

1. That the above-mentioned unit has been duly surveyed in accordance with the applicable provisions of the Code for the Construction and Equipment of Mobile Offshore Drilling Units, 1989.
2. That the survey showed that the structure, equipment, fittings, radio station arrangements and materials of the unit and the condition thereof are in all respects satisfactory and that the unit complies with the relevant provisions of the Code.
3. That the life-saving appliances provide for a total number of 160 persons and no more as follows:
Four (4) rigid totally enclosed motor propelled and fire-protected survival craft of aggregate capacity for 320 persons.
Eight (8) survival craft, capable of floating and breaking free in the event of the unit becoming submerged of aggregate capacity for 160 persons.
One (1) rescue boats capable of carrying 10 persons.
320 lifejackets and immersion suits
4. That, in accordance with Section 1.4 of the Code if applicable, the provisions of the Code are modified in respect of the unit in the following manner:

5. That this Unit has been issued with an approval for the continuous survey techniques under paragraph 1.8.4 of the Code in lieu of periodical and intermediate surveys in respect of:
Hull ☐
Machinery ☐

(Signature and Seal of approving authority)
Completion date of the survey on which this certificate is based: 18 December 2008
This Certificate is valid until 24 July 2029

(Date of continuous survey programme approval)

Issued at

Singapore, Singapore
(Place or office of Certificate)

on 25 July 2024
(Date of issue of Certificate)



Electronically Signed By

Rungtong Nanthong, Singapore Port
Surveyor, American Bureau of Shipping
(Name and title of the signing authority, as appropriate)

ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

THIS IS TO CERTIFY that, at a survey under Section 1.6 of the 1989 MODU Code, this unit was found to comply with the relevant provisions of the Code.

Annual Survey:

Signed: _____
(Surveyor, American Bureau of Shipping)

Place: _____
Offshore, Gulf of Thailand

Date: _____
18 July 2025

Annual / Intermediate¹ Survey:

Signed: _____
(Surveyor, American Bureau of Shipping)

Place: _____

Date: _____

Annual / Intermediate¹ Survey:

Signed: _____
(Surveyor, American Bureau of Shipping)

Place: _____

Date: _____

Annual Survey:

Signed: _____
(Surveyor, American Bureau of Shipping)

Place: _____

Date: _____



ANNUAL / INTERMEDIATE SURVEY IN ACCORDANCE WITH
PARAGRAPH 1.6.11.7.3 OF THE CODE

THIS IS TO CERTIFY that, at an annual / intermediate¹ survey in accordance with paragraph 1.6.11.7.3 of the Code, this unit was found to comply with the relevant provisions of the Code.

Signed: _____
(Surveyor, American Bureau of Shipping)

Place: _____

Date: _____

ENDORSEMENT FOR THE DRY-DOCK SURVEY

THIS IS TO CERTIFY that, at a survey under Section 1.6 of the Code, this unit was found to comply with the relevant provisions of the Code.

First Inspection:

Signed: _____
(Surveyor, American Bureau of Shipping)

Place: _____

Date: _____

Second Inspection:

Signed: _____
(Surveyor, American Bureau of Shipping)

Place: _____

Date: _____



ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN
5 YEARS WHERE PARAGRAPH 1.6.11.3 OF THE CODE APPLIES

This unit complies with the relevant provisions of the Code, and this certificate should, in accordance with paragraph 1.6.11.3 of the Code, be accepted as valid until _____

Signed:	_____
	(Surveyor, American Bureau of Shipping)
Place:	_____
Date:	_____

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED
AND PARAGRAPH 1.6.11.4 OF THE CODE APPLIES

This unit complies with the relevant provisions of the Code, and this certificate should, in accordance with paragraph 1.6.11.4 of the Code, be accepted as valid until _____

Signed:	_____
	(Surveyor, American Bureau of Shipping)
Place:	_____
Date:	_____

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING
THE PORT OF SURVEY WHERE PARAGRAPH 1.6.11.5 OF THE CODE APPLIES

This Certificate should, in accordance with paragraph 1.6.11.5 of the Code, be accepted as valid until _____

Signed:	_____
	(Surveyor, American Bureau of Shipping)
Place:	_____
Date:	_____



ENDORSEMENT FOR THE ADVANCEMENT OF THE ANNIVERSARY DATE
WHERE PARAGRAPH 1.6.11.7 OF THE CODE APPLIES

In accordance with paragraph 1.6.11.7 of the Code, the new anniversary date is _____

Signed:	_____
	(Surveyor, American Bureau of Shipping)
Place:	_____
Date:	_____

In accordance with paragraph 1.6.11.7 of the Code, the new anniversary date is _____

Signed:	_____
	(Surveyor, American Bureau of Shipping)
Place:	_____
Date:	_____



ภาคผนวกแทนเจาะ-3

บันทึกต่างๆ ของแทนเจาะ

Work Order details		
ID :01-EM-STR1-MEGGERTST-INSP.EXT	Job Class :Preventive Maintenance	Recurrence :Monthly
Priority :High	Job Type :Megger Test	Repeat Every :6
Criticality :Critical to Operation	Job Grade :Planned Preventative	Department :Electrical
Due Date :01/03/2025	Original Due Date :01/03/2025	Last Done Date :2/27/2025 5:02:31PM
Status :Completed	Created by :pjpeirzak	Created Date: 21/02/2025
Reference :733.01.02	Approved by :wmarks	Approved date :2/27/2025 5:02:31PM

Work Order Description
EQUIPMENT: AC MOTOR W/STARTER PANEL TAG NUMBER: Various FREQUENCY: TITLE: Megger test of AC Motor, Control of Starter Cabinet CRAFT : EL Amended by Jason
Before commencing inform Head of Department / PMS Supervisor that Work is being carried out on this unit. Isolate power to starter and heater supply (if applicable) to motor. Post safety notices at all appropriate points.
A. Inspection
A1. Starter
NOTE: BE AWARE THAT CERTAIN STARTERS MAY STILL HAVE LIVE INTERCONNECTIONS WITH OTHER STARTER, ALARM CIRCUITS ETC.
1. Check all main and auxiliary wiring for perished or cracked insulation, signs of overheating etc. 2. Ensure all fixed and moving main and auxiliary contactors are clean. NOTE: If contacts are of Tinned Copper type, then contacts should be cleaned using non abrasive materials. If Copper is showing through tin , then contacts should be replaced. If contacts are of Silver Alloy type then contacts can be dressed with Krokus Cloth or if they are seriously pitted, then a fine needle file can be used. Silver Alloy contacts can be cleaned to a third of their original size. Replacement is required if they are below one third of their original size. 3. Ensure all components are securely mounted. 4. Visually confirm correct settings of any overloads, timers and protective devices. "paint lock" any adjustments. 5. Ensure cleanliness of cabinet and that door seals, securing system and mechanical door interlocks are in good operational condition. 6. Where starters are remote from main switchboard, check insulation value of feeder cables between switchboard and starter. 7. Fuse holders should be checked for security and fuses should be checked that they are proper rating. 8. Where remote starts/ stop stations are fitted, they should have connections checked, ensuring cable glands are secure.
A2. AC Motor
1. Ensure cleanliness and that all guards and bolts are in place and secure. 2. Clean fan blades and inside fan cover, ensure fan is secured to shaft. 3. Lubricate bearings if not of the "sealed for life" type (MMEP2) according to manufacturer's lubrication chart. Lubrication routine may be a separate scheduled job. 4. Ensure cables are secure in glands and that all earthing straps/wires are secure. 5. Open motor terminal box inspect and check security of all connections. 6. Megger test and record a) Motor and cables from starter to earth. b) All auxiliary external connections from starter to earth. c) Heater (if fitted) and cables from starter to earth. NOTE - In motors that have thermistors present, these cables should not be meggered. Any low values should be investigated and rectified soonest! 7. In Motors that have thermistors, measure and record the ohmic value of each thermistor. 8. Check tightness of motor connections and winding tails. Pay particular attention to the motor tails as these can be loose even if the motor connections are tight.
TESTING.
1. Inform Head of Department / PMS Supervisor that unit is to be tested. 2. Close starter and restore power supply. 3. Run unit and confirm satisfactory operation. 4. Ensure meters are accurate, using check clamp meters if appropriate, and that all auto cut ins and interlocks are working correctly. 5. Ensure that all running, standby and power lights are operating correctly - THIS IS ESSENTIAL FOR SAFETY. 6. When satisfied that all is in order, stop the machine, leave ready to autostart if appropriate, and remove all safety notices.

Work Order details		
ID :312-AC-TRACTION.C001	Job Class :Preventive Maintenance	Recurrence :Monthly
Priority :<None>	Job Type :Inspection of equipment condition	Repeat Every :1
Criticality :Critical to Operation	Job Grade :Planned Preventative	Department :Electrical
Due Date :31/07/2025	Original Due Date :31/07/2025	Last Done Date :7/31/2025 3:15:42PM
Status :Completed	Created by :nironside	Created Date: 31/07/2025
Reference :	Approved by :Mrussell	Approved date :7/31/2025 3:15:42PM

Work Order Description
AC TRACTION MOTOR MONTHLY MAINTENANCE ROUTINE
A. Inspection
Inspect the exterior of the motor, including cables, for damage. Inspect cable glands for tightness. Checked as above and reported as in good condition.
A.1. Covers, Seals, Latches
Clean the outside of the machine and remove the inspection covers. Use clean, dry compressed air and blow the dirt and dust from the interior of the machine. Check exterior covers to be sure felt seals are intact. If seals are missing or covers are damaged, replace seals or covers as necessary. Make sure covers fit properly and are bolted securely. All found to be in good condition and blown out.
A.2. Power Cables
Inspect the power cables and terminals for signs of excessive heating, poor insulation, chafing, or mechanical damage. Verify that all cable connections are tight, and that cables are secured. All in order Check for damaged cable bushings, loose or missing cable cleat hardware, etc. None noted
A.4. Ground Cable
Ensure that the ground cable is bolted securely to the drilling motor and base equipment mounting surface. Tested between device and a recognized earth point at 0.2 Ω
A.5. Mounting Bolts
Check all mounting bolts to assure tightness. Observe for cracking, deformities, looseness, or other obvious damage. All checked and in order.

Failure Reporting					
Conditions :					
Failure caused :					
Failure Description :					
Connected Equipment List					
#	Equipment Code	Equipment Description	Maker No.	Serial No.	Counter Value Quantity
1	312.01.02	DRAWWORKS MOTOR B			1
Connected Spares List					
#	Item Code	Item Description	Manufacturer	Makers No.	Quantity

Failure Reporting					
If components :					
Conditions :all					
Failure caused :No Failure					
Failure Description :No Failure					
Connected Equipment List					
#	Equipment Code	Equipment Description	Maker No.	Serial No.	Counter Value Quantity
1	733.01.01	RIG AIR COMPR # 1		106358	1
Connected Spares List					
#	Item Code	Item Description	Manufacturer	Makers No.	Quantity

ENERGY DRILLING MONTHLY SPILL KIT INSPECTION



Edrill Vencedor :August 2025						
Code S = Satisfactory N/S = Unsatisfactory N/A = Not Applicable						
Notice Any N/S coding requires specific comments on deficiency identified inset to inspection remarks						
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	Inspection NS Specific Remarks	
SK-01	Pipe Deck Level PC 300 Base	1. Anti Spark Shovel	2	S		
		2. Chemical - Resistant Gloves	2	S		
		3. Chemical - Resistant Polyethylene aprons	2	S		
		4. Chemical Coverall Suit	2	S		
		5. Goggles	2	S		
		6. Oil Absorbent (Sands)	1	S		
		7. Oil Pad	100	S		
		8. Oil Pillow	10	S		
		9. Oil Sock	10	S		
		10. Yellow disposal bag with ties	10	S		
		11. Barrier Tape	1	S		
		12. Plugs - 2L,4M,4S	10	S		
		13. Seals for bag	5	S		
Unit No.	Location	Spill Kit Content	Qty Req	Qty Ver	NS Status Remarks	
SK-02	Pipe Deck Level Paint Store	1. Anti Spark Shovel	2	S		
		2. Chemical - Resistant Gloves	2	S		
		3. Chemical - Resistant Polyethylene aprons	2	S		
		4. Chemical Coverall Suit	2	S		
		5. Goggles	2	S		
		6. Oil Absorbent (Sands)	1	S		
		7. Oil Pad	100	S		
		8. Oil Pillow	10	S		
		9. Oil Sock	10	S		
		10. Yellow disposal bag with ties	10	S		
		11. Barrier Tape	1	S		
		12. Plugs - 2L,4M,4S	10	S		
		13. Seals for bag	5	S		
Unit No.	Location	Spill Kit Content	Qty Req	Qty Ver	NS Status Remarks	
SK-03	Pipe Deck Level Small Crane Pedestal Base (No. 2 Small kit bag)	1. Anti Spark Shovel	2	S		
		2. Chemical - Resistant Gloves	2	S		
		3. Chemical - Resistant Polyethylene aprons	2	S		
		4. Chemical Coverall Suit	2	S		
		5. Goggles	2	S		
		6. Oil Absorbent (Sands)	1	S		
		7. Oil Pad	100	S		
		8. Oil Pillow	10	S		
		9. Oil Sock	10	S		
		10. Yellow disposal bag with ties	10	S		
		11. Barrier Tape	1	S		
		12. Plugs - 2L,4M,4S	10	S		
		13. Seals for bag	5	S		

ENERGY DRILLING MONTHLY SPILL KIT INSPECTION



Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-04	Pipe Deck Level Bow Deck Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-05	Main Deck Level Starboard Loading Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-06	Main Deck Level Sack Room Mixing Hopper Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	

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Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-07	Main Deck Level Sack Room Mixing Hopper Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-08	Main Deck Level Mud Pump Room	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-09	Level 01 Under Helideck Floor	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	

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ENERGY DRILLING MONTHLY SPILL KIT INSPECTION



Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-10	DES Package BOP Deck Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-11	DES Package HPU Unit Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Inspector Name		Inspector Signature		Date	
Juthamane Laksanaaut STO		Juthamanee Lakšanaaut		20-Aug-25	

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EVE

PRINT DATE : 26-Aug-2025
Page 1 of 2

Work Order: 4170-WO - 1002728

MAIN GEN # 1 ALTERNATOR - SEMI-ANNUAL ROUTINE

Work Order details		
ID: 65 AC-GENERATOR.C006	Job Class :Preventive Maintenance	Recurrence :Monthly
Priority :High	Job Type :Cleaning and Inspection	Repeat Every :6
Criticality :Critical to Operation	Job Grade :Planned Preventative	Department :Electrical
Due Date :15/06/2025	Original Due Date :01/03/2025	Last Done Date :6/29/2025 6:56:05AM
Status :Completed	Created by :kjames	Created Date :29/06/2025
Reference :651.01.02	Approved by :wmarks	Approved date :6/29/2025 6:56:05AM
Work Order Description		
Carried out inspection of the generator. Found to be in good condition and clean Greased De and NDE bearings with 2 shots of grease		
EQUIPMENT: Main AC Generator FREQUENCY: 60 Monthly TITLE: W&S Monthly Maintenance of Main AC Generator CRAFT: EL		
SPECIAL TOOLS/EQUIPMENT: 1. Manufacturer's technical manual		
DESCRIPTION		
Preliminary 1. Obtain permit to work form prior to performing task. 2. De-energize power source to equipment in accordance with lockout/tagout procedures.		
A. Inspection		
Warning: Do not service the generator or other electrical machinery without de-energizing and tagging the circuits as out of service. Dangerous voltages are present, which could cause serious or fatal shock.		
1. Visually inspect the stator output leads and insulation for cracking or damage.		
2. Check all exposed electrical connections for tightness.		
3. Check transformers, fuses, capacitors, and lighting arrestors for loose mounting or physical damage.		
4. Check all lead wires and electrical connections for proper clearance and spacing.		
5a. For generators equipped with ball or roller bearings, check machine vibration and bearing condition with a spectrum analyzer or shock pulse.		
5b. For generators equipped with sleeve oil bearings, inspect bearing oil for proper levels and clarity.		
A. Maintenance		
1. Clean the inside of the outlet box, air screens, bearing housings, and air baffles with compressed air and electrical solvent if needed.		
NOTE: If components have been repaired or replaced, this is to be reported in details under Work Report.		
Failure Reporting		
Conditions :		
Failure caused :		
Failure Description :		

- ## Failure Reporting

Conditions :

Failure caused :

Failure Description :

Sewage Plant:

Monthly PM's completed:

Series	Work Order No.	Description	Status	Due Date	Criticality	Department
4170-WO	1001901	SEWAGE TREATMENT UNIT - MONTHLY MAINTENANCE ROUTINE	Completed	19/4/2025	Critical to Operation	Mechanical
4170-WO	1002001	SEWAGE TREATMENT UNIT - MONTHLY MAINTENANCE ROUTINE	Completed	19/5/2025	Critical to Operation	Mechanical
4170-WO	1002578	SEWAGE TREATMENT UNIT - MONTHLY MAINTENANCE ROUTINE	Completed	19/6/2025	Critical to Operation	Mechanical
4170-WO	1003221	SEWAGE TREATMENT UNIT - MONTHLY MAINTENANCE ROUTINE	Completed	19/7/2025	Critical to Operation	Mechanical
4170-WO	1003329	SEWAGE TREATMENT UNIT - MONTHLY MAINTENANCE ROUTINE	Completed	19/8/2025	Critical to Operation	Mechanical

When opening the highlighted line above, the information enclosed within the w/o is as follows:

Work Order No.	4179-WO-1803229	Work Instruction	502.SEWAGE-TREATMENT.001
Work Description	SEWAGE TREATMENT UNIT - AEROBIC MAINTENANCE ROUTINE	Due Date	10/ 07/2025
Status	Completed	Reference	502.01.01
Criticality	Critical to Operation	Job Class	Preventive Maintenance
Department	Mechanical	Job Type	Check/control
Job Grade	Planned Preventative	Job Priority	High
Description Attachments Details Failure Reporting Equipment List Spares List			
<p> Greased discharge pump. Checked Macerator pump coupling oil level Test ran discharge pump in manual control. Test ran dosing pump and macerator pump. </p> <p> EQUIPMENT: SEWAGE TREATMENT UNITS FREQUENCY: Monthly TITLE: WO Monthly Maintenance of Sewage Treatment Units DRAFT: ME </p> <p> SPECIAL TOOLS/EQUIPMENT: 1. Manufacturer's technical manual </p> <p> 7/10/2025 </p>			

Engine maintenance below since 1st June, (there are pages and pages of it if I go back the full year:

[illegible]

The above highlighted line information when opened:

Work Order No.4170-WO1003443

Work Instruction65.DG-CAT-J516.R0005

Work DescriptionENGINE #1 - 500 HOURS ROUTINE

Due Date25/ 8/2025

StatusCompleted

Reference

CriticalityCritical to Operation

Job ClassPreventive Maintenance

DepartmentMechanical

Job TypeInspection of equipment cond.

Job GradePlanned Preventative

Job PriorityHigh

DescriptionAttachmentsDetailsFailure ReportingEquipment ListSpares List

Done @ 56,500hrs

Soak filters changed.
Air start lubricator topped up.
Crankshaft oil seals checked.
Vibration dampener checked.
Check turbo chases, free to turn with no excessive play
No oil, water or fuel leaks.
All readings normal.
No excessive noise or vibration

Highlighted w/o when opened:

Work Order No.4170-WO1002032

Work Instruction

Work DescriptionAIR COMPRESSOR #1: 1000hr service

Due Date14/ 7/2025

StatusCompleted

Reference

CriticalityCritical to Operation

Job ClassPreventive Maintenance

DepartmentMechanical

Job TypeExtended Check

Job GradePlanned Preventative

Job PriorityHigh

DescriptionAttachmentsDetailsFailure ReportingEquipment ListSpares List

Done @ 51,000hrs

Cleaned return oil flow sight glasses, orifice plugs and tubing.
replaced oil filter
Cleaned air filters.
SOS taken and sent for analysis

Air compressors and dryers since 1st June:

Work Order No.	Status	Due Date	Department	Search
4170-WO1002488	Completed	24/6/2025	Mechanical	
4170-WO1002544	Completed	1/6/2025	Mechanical	
4170-WO1002545	Completed	1/6/2025	Mechanical	
4170-WO1002787	Completed	1/7/2025	Mechanical	
4170-WO1002788	Completed	1/7/2025	Mechanical	
4170-WO1002903	Completed	11/7/2025	Mechanical	
4170-WO1002903	Completed	11/7/2025	Mechanical	
4170-WO1002936	Completed	15/7/2025	Mechanical	
4170-WO1002989	Completed	15/7/2025	Mechanical	
4170-WO1002998	Completed	16/7/2025	Mechanical	
4170-WO1003046	Completed	22/7/2025	Mechanical	
4170-WO1003173	Completed	2/8/2025	Mechanical	
4170-WO1003193	Completed	4/8/2025	Mechanical	
4170-WO1003195	Completed	1/8/2025	Mechanical	

Scomi

Scomi Oiltools

VERTICAL CUTTING DRYER
Commissioning Checklist

A. GENERAL

Model No.:CSI WSM03 VCD

Date:30 March, 2025

Serial No.:151-285

Customer:PTTEP

Motor Ser. No.:360-79P

Rg:Wetcoater

Commissioning:R

Location:AWP-2N

Maintenance:

Hours Run:185

B. CHECKLIST

N.B. IF APPLICABLE OBTAIN PERMIT TO WORK PRIOR TO OPERATING OR SERVICING MACHINERY

	Standard	Result	Comments
1. Inspect all cover are secure and leaking point	No leak	No leak	
2. Motor pulleys / belt condition	Good condition	Good condition	
3. Examine noise and vibration	Good condition	Good condition	No weird vibration or noise.
4. Gear Oil level when complete stop/ 1st change at 250hrs then every 1500hrs	Full tank	Full	
5. Oil Filter change	Good condition	Good condition	
6. The Oil Pressure at the inlet to the machine is typically	15-50 psi	15 psi	
7. The Maximum Temperature should never be above 175° F while running	<175° F	133° F	While running a temperature 108° F - 115° F
8. Open the cover plate and inspect the Cycle Gear and Main Bearings / Oil sump	Good condition	Good condition	Adjusted belt tension
9. Check the screen is clear clearance	Good condition	Good	Check and adjusted
10. Check wear and tear of rotating part	Good condition	ad condition	
11. Changed new motor oil pump	No arrounding short circuit	No grounding	

6. MONTHLY INSPECTION

Last Inspection17-Jan-25

Next Inspection17-Jun-25

19. Check Gear Oil

Good

Top up 1 liter

20. Change all Filters

Good

N/A

Comment: The dryer was proper operated while 6.1/8" operation on first batch, Adjusted belt tension and cleaned out the solids inside the dryer, ready for next operation

C. ELECTRICAL INSPECTION

REFER TO QR-57 6 MONTHLY INSPECTION

Last Inspection17-Jan-25

Next Inspection17-Jun-25

D. CALIBRATION CHECK LIST

REFER TO

E. FINAL INSPECTION & APPROVAL

SCMI. ENG.: Piyungzak Buayiraksa

Customer:Robbi C.

Signed: Piyungzak Buayiraksa

Signed:

Date:30 March, 2025

Date:30 March, 2025

F. DISTRIBUTION

Service Record and Certification File

G. NOTES

All Non-Conformance's should be note on a Non-Conformance Report (QAF002) and passed to the QSE Representative. This checklist has been effected in accordance with QAP008, Workshop Inspection, Repair and Service.

A. GENERAL

Model No. :	Derrick DE1000PHD	Customer :	PTTEP
Serial No. :	CF1739	Rig :	Vencedor
Panel Ser. No. :	SA2162 N1	Location :	AWP-2N
Commissioning :	X	Maintenance :	
		Hours Run :	234

B. CHECKLIST

N.B. IF APPLICABLE OBTAIN PERMIT TO WORK PRIOR TO OPERATING OR SERVICING MACHINERY

	Standard	Result	Comments
1 Visual check for wear / damage	No worn out	Good	
2 Open bowl cover and inspect chain out solids build up	cleaned	Cleaned	
3 Measure scroll wear	<2.54cm	Good	
4 Grease conveyor bearings / all points	Grease	Cleaned	2 Shot / 24 hrs.
5 Remove finger covers and remove excess grease	Cleaned	Cleaned	
6 Motor pulleys / belt condition (tension belt to 20 lbs @ 10")	<1/2inch	Good	
7 Conveyor trough bearings condition	Good condition	Good	
8 Conveyor solids end bearings condition	Good condition	Good	
9 Pillow block bearing condition	<90°C	Good	38°C - 86°C on first 24 hrs.
10 Excessive noise and vibration	Low / Poor	Low	
11 Oil level / condition	Full	Full	
12 Rotaflo® / Hoses / Tank fittings / Control block etc. for leaks	No leaks	No leak	
13 Control radiator valves clear sufficient air flow	Good Air flow	Good	Working well
14 System pressure / Charge pressure	<45psi	380-450 PSI	As normal sized
15 Bowl pressure	<2600psi	800 PSI	As no load
16 Conveyor pressure	<1500psi	5 PSI	As no load
17 Conveyor RPM	Good condition	Good	Set at 50 rpm
18 Bowl RPM	Good condition	Good	The monitor function properly
19 Complete function test of system	Completed	Completed	No issues
20 Tacho adjustment (0.025" between pick-up / hub)	< 0.025"	N/A	
21 Check Cooling Fan Speed	Secured	Secured	
22 Check out Hinge Load Indicator and Chanee Oil	Good condition	Good	

6 MONTHLY INSPECTION		Last Inspection	Next Inspection
		16-Jun-25	16-Jun-25
		OK	Comments
23	Check Hydraulic Oil	OK	N/A
24	Change all Filters	N/A	N/A

C. ELECTRICAL INSPECTION	
REFER TO QR-57 6 MONTHLY INSPECTION	

D. CALIBRATION CHECK LIST	

E. FINAL INSPECTION & APPROVAL	
SCOMI. ENG. : Payyingsai Buayairaksa	Customer : Robbi C.
Signed : _____	Signed : _____
Date : 30 March, 2025	Date : 30 March, 2025

F. DISTRIBUTION	

G. SERVICE RECORD AND Certification File	

G. NOTES	

All Non-Conformance's should be note on a Non-Conformance Report (QA022) and passed to the QSE Representative. This checklist has been effected in accordance with QA008, Workshop Inspection, Repair and Service.

Event Information		Event Information: Following by 10 Minutes				Registration status		Registration status		Registration status		Registration status	
No.	Location	Start Time	Date	Registration Status	Registration Fee	Comments	Registration status	Registration status	Registration status	Registration status	Registration status	Registration status	Registration status
2023-2024 Season													
01	West Coast - West Coast West Coast	3:30	1 Mar 2024	Mar 24									
02	St Louis - West Coast	3:30	1 Mar 2024	Mar 24									
03	St Louis - West Coast	3:30	1 Mar 2024	Mar 24									
04	West Coast - West Coast West Coast	3:30	1 Mar 2024	Mar 24									
05	West Coast - West Coast West Coast	3:30	1 Mar 2024	Mar 24									
2023-2024 Season - West Coast													
06	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
07	West Coast - West Coast West Coast	4:4	1 Mar 2024	Mar 24		License No 71							
08	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
09	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
10	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
11	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
12	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 72							
13	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
14	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 73							
15	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
16	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 74							
17	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
18	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 75							
19	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
20	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 76							
21	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
22	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 77							
23	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
24	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 78							
25	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
26	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 79							
27	West Coast - West Coast	4:4	1 Mar 2024	Mar 24									
28	West Coast - West Coast	4:4	1 Mar 2024	Mar 24		License No 80							

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DOI: 10.1002/anie.201405444

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FileStock ManagementSalesPurchasingPreventive ServicesReportsAdministrationWindows

14422014/02/1410:00

Work Order No. 4120-WO-1002265

Work Description IGS, CH4 GAS DETECTION SYSTEM - MAINTENANCE ROUTINE

Status Completed

Criticality Critical to Safety

Department Safety

Job Grade Unplanned Corrective

Due Date 3/1/2025

Reference B11.B1.B9

Job Class Preventive Maintenance

Job Type Calibration

Job Priority Medium

Work Instruction B11.GAS-DETECT-SYS.CRM1

Equipment List

Spares List

Check Description - Conduct inspection of spill kit contents and replace as required

1. Absorbent Pads - 1 x bag (20 pads)

2. Neutralizer - 1 x gallon

3. Spill Kit - 1 x gallon

4. Spill Kit - 1 x gallon

5. Absorbent Pads - 1 x bag

6. Absorbent Pads - 1 x bag

7. The contents of the kit

OKEditPrintView Change LogApproval History

FileStock ManagementSalesPurchasingPreventive ServicesReportsAdministrationWindows

14422014/02/1410:00

Work Order No. 4120-WO-1002265

Work Description IGS, CH4 GAS DETECTION SYSTEM - MAINTENANCE ROUTINE

Status Completed

Criticality Critical to Safety

Department Electrical

Job Grade Unplanned Corrective

Due Date 3/1/2025

Reference B11.B1.B9

Job Class Preventive Maintenance

Job Type Calibration

Job Priority Medium

Work Instruction B11.GAS-DETECT-SYS.CRM1

Equipment List

Spares List

Description Attachments Details Failure Reporting Equipment List Spares List

Checks carried out on this system during my last rotation as per work order.

OKEditPrintView Change LogApproval History

ENERGY DRILLING MONTHLY SPILL KIT INSPECTION

energy drilling

energy drilling

Edrill Vencedor :August 2025						
Code S = Satisfactory N/S = Unsatisfactory N/A = Not Applicable						
Notice Any N/S coding requires specific comments on deficiency identified inset to Inspection remarks						
Unit No.	Location	Spill Kit Content		Quantity Required	Quantity Verified	Inspection NS Specific Remarks
SK-01	Pipe Deck Level PC 300 Base	1. Anti Spark Shovel		2	S	
		2. Chemical - Resistant Gloves		2	S	
		3. Chemical - Resistant Polyethylene aprons		2	S	
		4. Chemical Coverall Suit		2	S	
		5. Goggles		2	S	
		6. Oil Absorbent (Sands)		1	S	
		7. Oil Pad		100	S	
		8. Oil Pillow		10	S	
		9. Oil Sock		10	S	
		10. Yellow disposal bag with ties		10	S	
		11. Barrier Tape		1	S	
		12. Plugs - 2L,4M,4S		10	S	
		13. Seals for bag		5	S	
Unit No.	Location	Spill Kit Content		Qty Req	Qty Ver	NS Status Remarks
SK-02	Pipe Deck Level Paint Store	1. Anti Spark Shovel		2	S	
		2. Chemical - Resistant Gloves		2	S	
		3. Chemical - Resistant Polyethylene aprons		2	S	
		4. Chemical Coverall Suit		2	S	
		5. Goggles		2	S	
		6. Oil Absorbent (Sands)		1	S	
		7. Oil Pad		100	S	
		8. Oil Pillow		10	S	
		9. Oil Sock		10	S	
		10. Yellow disposal bag with ties		10	S	
		11. Barrier Tape		1	S	
		12. Plugs - 2L,4M,4S		10	S	
		13. Seals for bag		5	S	
Unit No.	Location	Spill Kit Content		Qty Req	Qty Ver	NS Status Remarks
SK-03	Pipe Deck Level Small Crane Pedestal Base (No. 2 Small kit bag)	1. Anti Spark Shovel		2	S	
		2. Chemical - Resistant Gloves		2	S	
		3. Chemical - Resistant Polyethylene aprons		2	S	
		4. Chemical Coverall Suit		2	S	
		5. Goggles		2	S	
		6. Oil Absorbent (Sands)		1	S	
		7. Oil Pad		100	S	
		8. Oil Pillow		10	S	
		9. Oil Sock		10	S	
		10. Yellow disposal bag with ties		10	S	
		11. Barrier Tape		1	S	
		12. Plugs - 2L,4M,4S		10	S	
		13. Seals for bag		5	S	

E01-App5.1

Energy Drilling Monthly Spill Kit Inspection

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ENERGY DRILLING MONTHLY SPILL KIT INSPECTION

energy drilling

Unit No.	Location	Spill Kit Content		Quantity Required	Quantity Verified	NS Status Remarks
SK-04	Pipe Deck Level Bow Deck Area	1. Anti Spark Shovel		2	S	
		2. Chemical - Resistant Gloves		2	S	
		3. Chemical - Resistant Polyethylene aprons		2	S	
		4. Chemical Coverall Suit		2	S	
		5. Goggles		2	S	
		6. Oil Absorbent (Sands)		1	S	
		7. Oil Pad		100	S	
		8. Oil Pillow		10	S	
		9. Oil Sock		10	S	
		10. Yellow disposal bag with ties		10	S	
		11. Barrier Tape		1	S	
		12. Plugs - 2L,4M,4S		10	S	
		13. Seals for bag		5	S	
Unit No.	Location	Spill Kit Content		Quantity Required	Quantity Verified	NS Status Remarks
SK-05	Main Deck Level Starboard Loading Area	1. Anti Spark Shovel		2	S	
		2. Chemical - Resistant Gloves		2	S	
		3. Chemical - Resistant Polyethylene aprons		2	S	
		4. Chemical Coverall Suit		2	S	
		5. Goggles		2	S	
		6. Oil Absorbent (Sands)		1	S	
		7. Oil Pad		100	S	
		8. Oil Pillow		10	S	
		9. Oil Sock		10	S	
		10. Yellow disposal bag with ties		10	S	
		11. Barrier Tape		1	S	
		12. Plugs - 2L,4M,4S		10	S	
		13. Seals for bag		5	S	
Unit No.	Location	Spill Kit Content		Quantity Required	Quantity Verified	NS Status Remarks
SK-06	Main Deck Level Sack Room Mixing Hopper Area	1. Anti Spark Shovel		2	S	
		2. Chemical - Resistant Gloves		2	S	
		3. Chemical - Resistant Polyethylene aprons		2	S	
		4. Chemical Coverall Suit		2	S	
		5. Goggles		2	S	
		6. Oil Absorbent (Sands)		1	S	
		7. Oil Pad		100	S	
		8. Oil Pillow		10	S	
		9. Oil Sock		10	S	
		10. Yellow disposal bag with ties		10	S	
		11. Barrier Tape		1	S	
		12. Plugs - 2L,4M,4S		10	S	
		13. Seals for bag		5	S	

E01-App5.1

Energy Drilling Monthly Spill Kit Inspection

26-March-20

แท่นเจาะ-3.2 รายการและตัวอย่างรายงานการบำรุงรักษาของอุปกรณ์ระดับเหตุการณ์ทั่วไ

ENERGY DRILLING MONTHLY SPILL KIT INSPECTION

energy drilling

energy drilling

Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-07	Main Deck Level Sack Room Mixing Hopper Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil/Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-08	Main Deck Level Mud Pump Room	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil/Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-09	Level 01 Under Helideck Floor	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil/Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	

E01-App5.1

Energy Drilling Monthly Spill Kit Inspection

26-March-2025 v1.0

ENERGY DRILLING MONTHLY SPILL KIT INSPECTION

energy drilling

Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-10	DES Package BOP Deck Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Unit No.	Location	Spill Kit Content	Quantity Required	Quantity Verified	NS Status Remarks
SK-11	DES Package HPU Unit Area	1. Anti Spark Shovel	2	S	
		2. Chemical - Resistant Gloves	2	S	
		3. Chemical - Resistant Polyethylene aprons	2	S	
		4. Chemical Coverall Suit	2	S	
		5. Goggles	2	S	
		6. Oil Absorbent (Sands)	1	S	
		7. Oil Pad	100	S	
		8. Oil Pillow	10	S	
		9. Oil Sock	10	S	
		10. Yellow disposal bag with ties	10	S	
		11. Barrier Tape	1	S	
		12. Plugs - 2L,4M,4S	10	S	
		13. Seals for bag	5	S	
Inspector Name		Inspector Signature		Date	
Juthamanee Laksanaaut STO		<div></div>		3-Aug-25	

E01-App5.1

Energy Drilling Monthly Spill Kit Inspection

26-March-2025 v1.0

MARINE CARGO MANIFEST

PTTP

PTTP

Tel. :
Fax :

Consignee :

Ref No. :
CMC0328805-EVE-SC

Master
Shipped By

Port of Loading
PSR

Sailing Date
05-Aug-2025


vessel Name
C/1-NET

Port of Discharge
PSR

Sailing Date
05-Aug-2025

No.	POW / Vessel / Packing Dist.	From	Comgrue / Supplier	Description	CCO Type	Qty	Unit	Total Gross Wt (TON)	Dimensions (m)			Total Vol. (CU.M)	Net Weight (CU.M)	Discharge Cargo	Remarks
									L	W	H				
1	804445042-2	W-VNCD08			MARKET		1	CCU	9.30	4.37	2.40	1.46	11.13	18.23	18.23
1.1	9221	W-VNCD08	PTTP-PRL	PTTP-PRL 6KG BARKET CONTAINER BARKET 179 EA, VN 4204141042.2					9.30	4.37	2.40	1.46	11.13	18.23	18.23
2	81318	W-VNCD08			RED RUBBER SHIP		1	CCU	9.50	4.67	2.40	1.46	11.13	18.23	18.23
2.1	9221	W-VNCD08	PTTP-WASTE	PTTP-WASTE 1KG BARKET CONTAINER BARKET 179 EA, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
3	804470053	W-VNCD08			RED RUBBER SHIP		1	CCU	9.50	4.67	2.40	1.46	11.13	18.23	18.23
3.1	9221	W-VNCD08	PTTP-WASTE	PTTP-WASTE 1KG BARKET CONTAINER BARKET 179 EA, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
4	81378	W-VNCD08			MARKET		1	CCU	9.50	4.67	2.40	1.46	11.13	18.23	18.23
4.1	9221	W-VNCD08	PTTP-PRL	PTTP-PRL 6KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
5	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
6	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
7	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
8	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
9	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
10	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
11	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
12	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
13	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
14	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
15	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
16	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
17	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
18	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
19	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
20	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
21	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
22	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
23	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
24	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23
25	9221	W-VNCD08	W-VNCD08	W-VNCD08 1KG BARKET CONTAINER 7 C/1 THIRAP PAPER, VN 4204141042.2					9.50	4.67	2.40	1.46	11.13	18.23	18.23

แผ่นเจาะ-3.3 ตัวอย่างใบกำกับการขนส่งของเสีย

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REVISION HISTORY		
Ed / Rev	Description of Revision	Date
01-00	New Document	Jun 12
02-00	Waste Tracking Register Added as appendix 5.2	Nov 14
03-00	Update document properties	Feb 21
04-00	Minor formatting and proofreading	16-Jan-2025

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5.2 APPENDIX 2 – WASTE AND EMISSIONS TRACKING SPREADSHEET18

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1.0 OBJECTIVES AND SCOPE

To minimize waste and the effect of operations on the environment.

The guidelines established in this procedure are applicable for all personnel and operations under the control of Energy Drilling. This includes Energy Drilling 3rd party Contractors

2.0 DEFINITIONS


Term	Definition
Waste:	a) Any scrap, effluent or unwanted surplus substance or b) Any broken, worn out, contaminated or otherwise spoiled substance.
Waste Stream	The flow of waste material from generation to disposal By identifying the waste stream for each by-product measures can be implemented to reduce, reuse, or recycle.
Biomedical Waste	Biomedical waste include: biological agents, materials contaminated with blood and body fluid such as razors and used wound covers, used medical devices such as needles, syringes, blades, or other clinic items involved with medical examinations or treatments.
Blood Agents	Substances that injure a person by interfering with cell respiration (the exchange of oxygen and carbon dioxide between blood and tissues). Hydrogen cyanide and Cyanogen chloride are chemicals referred to as blood agents. Symptoms: Respiratory distress, headache, unresponsiveness, seizures, coma.
Chain of Custody	Chain of custody refers to keeping track of the movement of materials by documenting and obtaining a signature at each point where it is received, handled,


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Term	Definition
	forwarded and the return of a document to the originator from and to confirm the final receiving or possession point / entity.
Classification	Methods used to identify the risks or hazards associated with materials such as the NFPA, (hazard) classification along with DOT, and IMDG Classifications. The NFPA rating system which has a rating scale from 1 to 4 for each of the following categories: health, fire, reactivity, special. Waste labels shall be completed so they identify the waste and all necessary precautions based on its waste MSDS.
Combustible Liquid	Liquids which have a flash point greater than 60.5°C (141°F) and below 93°C (200°F). U.S. regulations permit a flammable liquid with a flash point between 38°C (100°F) and 60.5°C (141°F) to be reclassified as a combustible liquid
Container	A device designated to hold and protect items or materials placed within its boundaries such as a box, drum, skip, etc. A container can also refer to a large steel unit that fits on a trailer truck with lockable doors designed to hold and protect cargo for land and sea shipments.
Environmental Aspect	Elements of Energy Drillings activities or products or services that can interact with the environment. Examples include diesel usage to run generators or Freon usage to maintain air conditioner units
Environmental Impact	Any change to the environment, whether adverse or beneficial, wholly, or partially resulting from Energy Drillings environmental aspects. Examples include a diesel spill to the environment.

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- 3.0 DOCUMENT REFERENCES**
- "Shipboard Garbage Management Plan" – Regulation 9(2) Annex V of MARPOL 73/78.
 - ISO 14001: Current Edition
 - International Maritime Dangerous Goods Code, (IMDG Code)
 - NFPA Code
 - QHSE S21 HAZCOM Program
- 4.0 PROCEDURE**
- The nature of Energy Drilling operations generally entails a co-existence and synergy with environmental procedures of the client operator, this body directing and controlling bulk waste disposal through contractual guidelines, practical arrangements and resources provided.
- Where this contractual obligation does not exist and in respect to general waste management that still remains within the domain of Energy Drilling, our rigs shall maintain a responsible adherence to sound waste disposal practice as guided by this procedure.
- 4.1 Responsibilities**
- The following personnel have designated roles and responsibilities for waste management:

Position	Responsibility
OIM	<ul style="list-style-type: none">• Ensures all personnel are aware of waste handling requirements• Ensure that all waste on his rig is segregated, labeled & stored according to company procedures• Ensure that personnel are trained in all aspects of waste management relevant to the work their activities cover

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Position	Responsibility
Barge Engineer	<ul style="list-style-type: none"> Assists in the movement of waste to collection points as required Inform the materials man when waste containers or waste skips require shipping Monitors waste handling practices daily and report non-compliances to OIM / Rig Superintendent and Client Drilling Supervisor.
3rd Party personnel:	<ul style="list-style-type: none"> Aid to identify waste as requested and shall comply with the rig waste management plan Comply with Energy Drilling policies, country regulations and responsibilities relating to waste management.
Medic	<ul style="list-style-type: none"> Ensure clinic waste is collected and disposed of correctly
Campboss	<ul style="list-style-type: none"> Ensure all galley waste is segregated and disposed of correctly
Safety Training Officer	<ul style="list-style-type: none"> Responsible for ensuring that personnel have sufficient training to operate within the requirements of this procedure.
Onshore HSE	<ul style="list-style-type: none"> Provides additional guidance or clarification of waste stream as required Develop waste training packages, and assists with waste awareness training as requested.
All Personnel	<ul style="list-style-type: none"> Minimize the production of waste Ensure all wastes are handled, segregated & disposed of in accordance with the rig specific waste management plan.

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4.2 Waste Management Principles

The principles of waste management should be incorporated into the design and management of Energy Drilling facilities and the planning of associated activities. If elimination of waste is not possible, then minimization alternatives should be explored. Responsible waste management may be accomplished through the application of the practices of source reduction, reuse, recycling, recovery, treatment, and responsible disposal. Key elements of these management practices are following.


Minimization	Examples
REDUCE	<ul style="list-style-type: none"> Process modification or design change Material elimination Inventory control and management Material substitution Improved house keeping
REUSE	<ul style="list-style-type: none"> Chemical containers Oil wastes for road spreading Cleaned drill cuttings for road bed material or landfill cover
RECYCLE/RECOVER	<ul style="list-style-type: none"> Recycle scrap material Recycle paper Recycle drilling mud Burn waste lubricating oil for energy recovery Recover oil from tank bottoms, produced water and drilling mud

Source Reduction - The generation of minimal waste through more efficient practices such as:

- material elimination
- inventory control and management
- material substitutions
- process modification

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- improved housekeeping

Reuse - The use of waste material or product in its original form

Recycling/Recovery - The conversion of waste into usable materials and/or extraction of energy or materials from wastes

Treatment - The destruction, detoxification and/or neutralization of residues through processes such as:

- biological methods: tank-based degradation.
- thermal methods: incineration, thermal desorption
- chemical methods: neutralization, stabilization
- physical methods: filtration, centrifugation

Responsible Disposal - Depositing wastes on land or in water using methods appropriate for a given structure. Disposal methods include:

- land filling
- surface discharge
- land spreading or land farming
- underground injection.

4.3 Waste Inventory

Quantification and tracking of waste provide a baseline for the identification of opportunities to improve our practices. This record keeping and reporting shall be managed in accordance with corporate requirements.


4.4 Waste Handling and Transportation

The following shall be complied with while handling, storing, or transporting wastes:

- Use of appropriate Personal Protective Equipment (PPE)
- Reference to the relevant SDS for handling chemicals/solvents.

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- Use of trolleys and carts for transportation of hazardous waste

4.5 Waste Management Planning

The planning of waste management shall be a fundamental part of all operations and this planning stage must classify wastes, identify the type and quantity of wastes present, detect the presence of harmful substances, (referring to materials Safety Data Sheet [SDS] when applicable); and ensure correct labelling and segregation procedures are implemented, with suitable storage provided.

Rig management will assess the following issues regarding waste management: (1) Collection, (2) Storage, (3) Processing and (4) Disposal, with respect to the following types of waste:

- Domestic Waste (e.g., plastic containers, paper, etc. normally generated in and around the living spaces onboard)
- Victual Waste (e.g., food discharged overboard)
- Maintenance / Hazardous and Scheduled Waste (e.g., oily rags, used oil & fuel filters, used oil, scrap metal, wood, glass, paint related products, etc. normally generated while maintaining and operating the rig)

When not governed by contractual direction, these aspects of waste management are generally subject to MARPOL regulations, rig specific procedures and operating country regulations.

4.6 Waste Classification


Waste shall be broadly classified as Hazardous and Non-hazardous

4.6.1 Hazardous Waste

Hazardous wastes are waste substances or materials that must be handled and disposed of in compliance with the local regulations for the disposal of hazardous waste. In general, hazardous wastes are harmful or dangerous to humans or the environment.

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4.6.1.1 Hidden Hazardous Wastes:

It needs to be considered that non-hazardous materials may contain hazardous substances that are not apparent. The waste generator and shipper must review or inspect these materials to ensure that they do not contain any hazardous waste which must be declared on the shipping manifest. The following are typical examples of hidden hazardous wastes:

- Scrap metals may be contaminated by mercury, hydrocarbons, etc. largely depending on the process and location where they have been used and generated.
- Used personnel protective equipment (PPE) may have been used for activities which involve exposure to high concentrations of hazardous substances, such as mercury and hydrocarbons.

4.6.2 Non-Hazardous Waste

Non-Hazardous waste is that waste that requires no additional precautions for handling. It is typically that waste which can be disposed of into landfill without any additional requirements.


4.7 Waste Segregation

Primary to waste segregation is identifying the primary waste streams generated from operations. Once waste streams are identified the waste needs to be segregated to facilitate separation and subsequent disposal. These segregations shall broadly include the following categories as a guide:

- Aerosol Cans
- Industrial batteries
- Domestic Trash
- Drums and Containers
- Expired medications (controlled substances)
- Fluorescent tubes
- Glass

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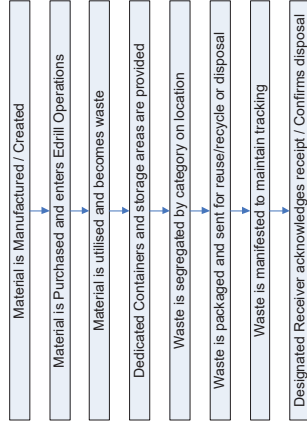
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- Medical waste (biohazard)
- Oily rags and gloves
- Oily water
- Paints and thinners
- Refrigerants
- Scrap Metal
- Sewage
- Consumer Electronics (Computer and Printer Parts and Accessories etc)
- Victual Waste, (any spoiled or unspoiled food waste)
- Fluorescent light tubes
- Hazardous Chemicals


4.8 Primary Waste Streams

Each rig is responsible for managing the waste that is generated from its daily operations. To effectively manage waste the waste stream needs to be managed from creation to disposal. Identifying the waste stream assists with identifying waste segregation, recycling options, minimisation, and substitution options. The frame work for identifying waste streams is illustrated below



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Primary Waste Streams are identified in Appendix 2

4.9 Waste Labelling and Transport

All waste packaged and / or containerized to be sent ashore for disposal must have appropriate placards and labels providing notice and warning of any hazardous content.

Additional classification can be considered using the United Nations (UN), DOT, IATA or IMDG Classification for the substance or materials. All waste containers shall be manifested as either "Hazardous Waste" or "Non Hazardous Waste". The specific requirements for handling shall be outlined in the attached materials safety data sheets (SDS) that should accompany the waste and manifest.

Waste origin, shipping destination and date must be filled in the waste label by the waste generator or shipper.

Waste labels shall be attached so they can be easily seen. Labels shall not be attached in the same area with other markings or labels to avoid confusion.


All Hazardous or special waste needs to be accurately manifested so that the shipper and receiver are aware of what they are transporting or receiving. As a minimum the category and quantity need to be specified.

Where no client or country labeling system is stipulated, the NFPA Hazard rating system which ranges from 1 to 4 for each of the categories:

- Health
- Fire
- Reactivity
- Special Precautions

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The NFPA Diamond shall be utilized as a minimum requirement. Energy Drilling QHSE Procedure PRO-14-101 HAZCOM has guidance for the use of the NFPA Rating System

Additionally, any waste that contains any Dangerous Goods according to classification shall be marked as per the requirements of the IMDG Code and manifested appropriately. PRO-14-101 contains prescriptive guidelines for the labeling of Dangerous Goods for transport.

Waste must be securely contained to prevent it escaping to the environment both during storage and transit. The following points should be considered when selecting a suitable storage vessel

- The type of waste (hazardous or non-hazardous), waste volumes, rate of generation, treatment and disposal methods, expected storage time, corrosive nature of the waste, and methods of transportation and transfer.
- Containers for liquids shall be equipped with a connection that allows easy draining, preferably with a valve.
- Selected containers must be located conveniently to the location where the waste is generated to achieve source segregation.
- Container shall have closures or be covered to prevent spillage and to prevent rain from entering.

4.10 Vessel Documentation

All rigs shall maintain the following logbook related to garbage disposal, as required by IMO MARPOL 73/78 Regulations:

- 'Record of Garbage Discharge' –Annex V, Regulation 9, MARPOL 73/78.
- "Oil Record Book" - MARPOL 73/78, Annex I

The Barge Engineer shall hold responsibility for the maintenance of these documents.

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4.11 Environmental Accounts

Where required by contract or regulatory requirement, rigs shall maintain environmental accounts of their daily / monthly waste generated, in addition to specified chemical usage.

This tracking and maintenance of environmental accounts shall be completed on the provided tracking spreadsheet – Appendix 5.2 and submitted monthly to the Rig Manager and regional environmental coordinator (QHSE group).

Waste Management

5.0 APPENDICES

5.1 Primary Waste Streams

Summary of Primary Waste Streams					
Waste Stream	Material Type	Quantity of Waste	Material Type	Material Type	Material Type
1. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
2. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
3. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
4. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
5. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
6. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
7. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
8. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
9. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids
10. Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids	Drilling Fluids

Summary of Primary Waste Streams

Ref	Waste Stream	Description	Classification of Waste	Generation Source	Handling and Segregation Practices	Reduction Strategy	Final Disposal Route
1	Process water and Light fluids	This includes all light fluids from the accommodation and log skids.	Non-hazardous (inert)	Reg. Operations	Skids considered the smallest. They would be stored in non-leakage containers or sealed and sent to the waste management facility.	Use the existing piping to the tanks.	Offshore
2	Grease	Grease generated from daily operations. Primarily engine oil, hydraulic oil, and lubricants. Grease, stored in light fluids or drums.	Non-hazardous	Maintenance and Cleaning	Grease is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
3	Hazardous Chemicals	All chemicals that are hazardous by classification.	Hazardous	Reg. Operations	Chemicals are stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
4	Medical waste	Medical waste includes materials such as bandages, dressings, syringes, needles, and gloves. Medical waste is stored in drums and sent to the waste management facility.	Hazardous	Reg. Operations	Medical waste is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
5	City Sludge and Slimes	Sludge and slimes generated from the city water treatment system.	Non-hazardous	Reg. Operations	Sludge and slimes are stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
6	City water	Generated from the city water treatment system.	Non-hazardous	Reg. Operations	City water is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
7	Drains and Trenches	This includes waste in drains and trenches.	Hazardous	Reg. Operations	Drains and trenches are stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore

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Summary of Primary Waste Streams

Ref	Waste Stream	Description	Classification of Waste	Generation Source	Handling and Segregation Practices	Reduction Strategy	Final Disposal Route
14	Refugee waste	Waste generated from the refugee camp.	Hazardous	Refugee Camp	Waste is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
15	Stop waste	Waste generated from the stop operation.	Non-hazardous	Stop Operation	Waste is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
16	Sludge	Sludge generated from the city water treatment system.	Non-hazardous	City Water Treatment	Sludge is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
17	Medical Waste	Medical waste generated from the city water treatment system.	Hazardous	City Water Treatment	Medical waste is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore
18	Drains and Trenches	Waste generated from the drains and trenches.	Hazardous	Drains and Trenches	Waste is stored in drums and sent to the waste management facility.	Store in drums and send to the waste management facility.	Offshore

5.2 Appendix 2 – Waste and Emissions Tracking Spreadsheet

Refer to attached xlsx example

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การแจ้งการดำเนินการตามกฎหมายความปลอดภัยในการทำงานทางสื่ออิเล็กทรอนิกส์
"แรงงานสมานฉันท์ มีดวง และปลอดภัย"
รายงานการนำส่งข้อมูล
บริษัทจำกัดเอ็นเอวี่ ดรีลลิ่ง ฟัซึล แอลพีดี.
วันที่รายงานตั้งแต่ 20/2/2568 ถึงวันที่ 20/2/2568

หน้า 1

แบบรายงาน	รายละเอียด	วันที่รายงาน	หมายเลขอ้างอิง
1.แบบรายงานผลการตรวจวัดและวิเคราะห์สภาพการทำงานเกี่ยวกับระดับความรุนแรง ความเสี่ยงของแสงสว่าง และระดับเสียง		20/02/2568	EPSKCO01-00000000021531
บริษัทจำกัดเอ็นเอวี่ ดรีลลิ่ง ฟัซึล แอลพีดี. วันที่รายงาน 20/02/2568			

วันที่พิมพ์รายงาน 20/2/2568



Edrill
Rig : Vencedor
Date : 14 Aug 25

Hygiene inspection

	PERFORMANCE						COMMENT / ACTION	Remark
	0	2	4	6	8	10		
1.CATERING STAFF								
Uniform condition & cleanliness						8		
PPE available & used (shoes, apron, non cut gloves)						8		
Personal appearance and cleanliness						8		
Clean hands, nails & hair. No jewellery worn						8		
Separate uniform for cooking & cleaning staff						8		
TOTAL	40						80.00%	
2.DINING AREA								
General appearance cleanliness				4			Clean the black stains on the floor.	
Table, chairs, bins & appliances condition & cleanliness						8		
Ice maker clean & scoop available						8		
Kettles and drink dispensers condition & cleanliness						8		
Floors and walls surfaces clean (under tables)					6		Clean the black stains on the floor.	
Hand sanitization dispenser available & working					6			
Food storage, utilities & preparation areas clean				4			Please clean all containers around the room	
Food disposal receptacles available & clean					6			
TOTAL	50						82.60%	
3.LOCAL KITCHEN								
General appearance & cleanliness				4			Clean the black stains on the door grooves in the kitchen.	
Warming cabinets condition & regular water change						8		
Plexiglass partition between public and serving hatch					6		Food display glass cabinets should be cleaned regularly to remain clear and free from stains.	
Oven clean and switches working						8		
Deep fryer clean & grease free & oil change schedule						8		
Stove & hot plates clean & grease free					6		clean oil stains in the cooking area	
Exhaust vents working & filters cleaned regularly		2					clean Exhaust vents & filters cleaned in the kitchen	
Electrical appliances and faucets in good condition						8		
Knives and utensils clean & in good condition						8		
Stainless steel tables, drawers & shelving good				4			Clean the shelves and storage cabinets. It is recommended to wipe off any stains or dirt on the wall near the equipment sink.	
Hand wash sink & soap dispenser available				4				
Colour coded cutting boards correctly used (signage)						8		
Suitable facilities for each stage of food preparation						8		
Dishes, plates, cups & glasses are clean and chip free						8		
Food disposal receptacles available & clean				4			Food disposal receptacles are dirty and have stains. The dishwasher has yellow stains around the joints.	
Dish washer machine clean & working				4				
Waste segregation in place						8		
Appropriate drainage system in place				4			The faucet has a continuous drip	
Fire extinguisher and fire blankets in place & available						8		

แผนงาน 3-5 ด้วยโปรแกรมการวัดประเมินผล และสัญลักษณ์ของสถานที่ทำ

แท่นเจาะ-3.5 ตัวอย่างรายงานการตรวจประเมินความปลอดภัย
และสัญลักษณ์ของสถานที่ทำงานและที่พักอาศัย

energy drilling
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CRISIS

Hygiene inspection

Edrill
Rig : Vencedor
Date : 14 Aug 25

		PERFORMANCE										COMMENT / ACTION	Remark
		0	2	4	6	8	10						
Pest control measures in place (traps / sprays)													
Cleaning schedule, frequency and person in charge													
4. LOCAL DRY STORE	TOTAL	134										63.81%	
General cleanliness & tidiness													
Leaking cartons, rusty cans or out of date stock													
Good food quality and rotation of stock													
Food containers properly labelled and dated for First In / First out													
Storage stacking & easy accessibility													
Food stored off floor & separate from chemicals													
Inventory and Arrival inspection sheets available													
Pest control measures in place (traps / sprays)													
6. LOCAL REFRIGERATION ROOM	TOTAL	62										77.60%	
General cleanliness & tidiness													
Correct temperature (1°C to 4°C) - Recorded daily			2									Clean the dust from the air vents, Clean the black stains on the door grooves in the kitchen.	
Food picking & storage arrangement (no open cans)													
Food segregation (raw & cooked; fruit, veg & meats)													
Food coverage - Wrapped or in covered containers													
6. LOCAL FREEZER	TOTAL	36										72.00%	
General cleanliness & tidiness													
Correct temperature (-18°C to -23°C) - Recorded daily													
Food picking & storage arrangement (no overloading)													
Food stored off floor & in proper packaging / containers													
Containers labelled and dated for First In / First out													
Emergency alarm and internal door opener working													
7. WESTERN KITCHEN	TOTAL	0										0.00%	
General appearance & cleanliness													
Warning cabinets condition & regular water change												Clean the dust from the air vents, Clean the black stains on the door grooves in the kitchen.	
Plexiglass partition between public and serving hatch													
Oven clean and switches working												Food display glass cabinets should be cleaned regularly to remain clear and free from stains.	
Deep fryer clean & grease free & oil change schedule.												not have oil change schedule	
Stove & hot plates clean & grease free													
Exhaust vents working & filters cleaned regularly													
Electrical appliances and faucets in good condition												clean Exhaust vents & filters cleaned in the kitchen	













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Hygiene inspection

Edrill
Rtg : Vencedor
Date : 14 Aug 28

		PERFORMANCE						COMMENT / ACTION	Remark
		0	2	4	6	8	10		
Knives and utensils clean & in good condition						8			
Stainless steel tables, drawers & shelving good						4		Clean the shelves and storage cabinets.	
Hand wash sink & soap dispenser available						6			
Colour coded cutting boards correctly used (signage)						8			
Suitable facilities for each stage of food preparation						8			
Dishes, plates, cups & glasses are clean and chip free						6			
Food disposal receptacles available & clean						4		Food disposal receptacles are dirty and have stains.	
Dish washer machine clean & working						4		The dishwasher has yellow stains around the joints.	
Waste segregation in place						8			
Appropriate drainage system in place						6		The faucet has a continuous drip	
Fire extinguisher and fire blankets in place & available						10			
Pest control measures in place (traps / sprays)						8			
Cleaning schedule, frequency and person in charge						8			
8. WESTERN DRY STORE	TOTAL	138						68.71%	
General cleanliness & tidiness						6			
Leaking cartons, rusty cans or out of date stock						8			
Good food quality and rotation of stock						8			
Food containers properly labelled and dated for First In / First out						8			
Storage stacking & easy accessibility						8			
Food stored off floor & separate from chemicals						8			
Inventory and Arrival inspection sheets available						8			
Pest control measures in place (traps / sprays)						8		suggest spraying for insect control	
9. WESTERN REFRIGERATION ROOM	TOTAL	60						75.00%	
General cleanliness & tidiness						4		Clean the black stains on the door grooves in the kitchen.	
Correct temperature (1°C to 4°C) - Recorded daily						10			
Food packing & storage arrangement (no open cans)						8		Some food items are not covered with plastic before refrigeration.	
Food segregation (raw & cooked; fruit, veg & meats)						8			
Food coverage - Wrapped or in covered containers						6		Some food items are not covered with plastic before refrigeration.	
10. WESTERN FREEZER	TOTAL	34						88.00%	
General cleanliness & tidiness						4		Clean the black stains on the door grooves in the kitchen.	
Correct temperature (-18°C to -23°C) - Recorded daily						10			
Food packing & storage arrangement (no overloading)						10			
Food stored off floor & in proper packaging / containers						8			

energy drilling							EVE Hygiene Inspection		Week 33 Date: 14/8/2025	
Your Partner in Drilling										
No.	Comments/Action required	Picture before action	Department	Report date	Status	Close date	Picture after action			
1	Keep the desk organized and arrange your belongings neatly		Service room/ Catering	14-Aug-25	open					
2	Keep things organized and throw away unnecessary items.		Service room/ Catering	14-Aug-25	open					
4	Do not block the air vents with any objects.		Service room/ Catering	14-Aug-25	open					
2	Organize the items in the drawer neatly.		Service room/ Catering	14-Aug-25	open					
3	Send the damaged drawer cabinet for repair. If it cannot be fixed, please arrange for a replacement.		Radio room/ Catering	14-Aug-25	open					
4	Keep things organized and throw away unnecessary items.		Radio room/ Catering	14-Aug-25	open					
5	Set up a holder for mops to ensure tidiness and organization.		Catering	14-Aug-25	open					
7	Remove dust and small debris from the drainage pipe to keep it clear.		Catering	14-Aug-25	open					
6	Please scrub all dirt stains off the floor of the medical room.		hospital / catering	14-Aug-25	open					
9	It is recommended to wipe off any stains or dirt on the sink.		hospital / catering	14-Aug-25	open					
10	Move the novels to the room on the 3rd floor and discard the old documents.		hospital / catering	14-Aug-25	open					
11	Keep things organized and throw away unnecessary items.		control room / catering	14-Aug-25	open					



energy drilling
Your Partner in Drilling

Hygiene inspection

Edrill
Rig : Vencador
Date : 14 Aug 25

	PERFORMANCE										COMMENT / ACTION	Remark	
	0	2	4	6	8	10							
Containers labelled and dated for First In / First out													
Emergency alarm and internal door opener working													
TOTAL											46	76.67%	
11 LIVING QUARTERS INNERBOTTOM DECK													
Passages/ Cabins / Bathrooms													
Area cleanliness, tidiness & lighting													
Walls, floors & ceiling tiles clean & in good condition													
Beds, lockers, curtains, table & chairs in good condition													
Mattresses, sheets, blankets, pillows in good condition													
Toilets, trash cans, showers & shower curtains clean													
Smoke detector & emergency lighting in place													
Life jackets, smoke hoods & station bill in place													
Chemicals, linen and cleaning utensils store properly													
Wipes program in place for all common use areas													
Emergency exits properly marked and obstruction free													
TOTAL											72	85.45%	
12 LAUNDRY													
Area cleanliness & tidiness & lighting													
Laundry room clean and tidy													
Suitable ventilation and vent fixtures clean													
Washer and dryers working & dryer filters cleaned daily													
Storage facilities for clean and dry laundry adequate													
Plumbing and electrical fixtures in good condition													
TOTAL											38	63.33%	

Remark :

0 = Very bad

2 = Bad

4 = Unsatisfactory

6 = Satisfactory

8 = Good

10 = Excellent

AUDIT TOTAL

Total Score 68.27%

MAX SCORE 1040

Remark






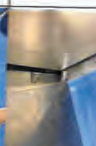





Please see the action status attached.

Please note, to be fair with the catering team the defective equipment, machine, and facilities those the catering team cannot repair are not deducted in the score

Medic

Campus

QIN


EVE Hygiene Inspection							Week 33 Date: 14/8/2025	
energy drilling Your Partner in Drilling								
NID	Comments/Action required	Picture before action	Department	Report date	Status	Close date	Picture after action	
12	lease arrange the documents in an orderly manner		control room / catering	14-Aug-25	open			
13	Please remove/dispose of electronic devices that are no longer in use.		Catering	14-Aug-25	open			
14	Keep things organized and throw away unnecessary items.		M.S.L office	14-Aug-25	open			
15	Clean the black stains on the floor.		Catering	14-Aug-25	open			
16	Clean the shelves and storage cabinets.		Catering	14-Aug-25	open			
17	Clean the black stains on the door grooves in the kitchen.		Catering	14-Aug-25	open			
18	It is recommended to wipe off any stains or dirt on the wall near the equipment sink.		Catering	14-Aug-25	open			
19	Clean the black stains on the floor kitchen		Catering	14-Aug-25	open			
20	Clean the dust from the air vents.		Catering	14-Aug-25	open			
21	Fix the board on the wall.		Catering	14-Aug-25	open			
22	Keep things organized and throw away unnecessary items.		SFO office	14-Aug-25	open			

EVE Hygiene Inspection							Week 33 Date: 14/8/2025	
energy drilling Your Partner in Drilling								
NID	Comments/Action required	Picture before action	Department	Report date	Status	Close date	Picture after action	
EVE Hygiene Inspection								
Closed Actions Week 32								
NID	Comments/Action required	Picture before action	Department	Report date	Status	Close date	Picture after action	
1	It is recommended to store kitchen equipment in a proper place after use		Catering	04-Aug-25	closed	05-Aug-25		
2	It is recommended to store the broom neatly in an appropriate place.		Catering	04-Aug-25	closed	06-Aug-25		
3	It is recommended to wipe off any stains or dirt on the wall near the equipment sink.		Catering	04-Aug-25	closed	06-Aug-25		
4	It is recommended to keep all equipment organized and always ready for use.		Catering	04-Aug-25	closed	06-Aug-25		

JSA Worksheet

Rig: EVE Date: / /

Task Analyzed: งานที่วิเคราะห์:	Lift the Upper Intermediate Mast section from the Installation trolley to the DES (Z/T) ยกท่อนของอินเตอมีเดียต มาสเตอร์ จากรถลากติดตั้งไปยังดีเอส (Z/T 54)	Analysis Done By: วิเคราะห์โดย:	Tourpusher ทาว์ชเชอร์
Occupations: ผู้เกี่ยวข้อง	Tourpusher, Driller, AD, OAC ทาว์ชเชอร์, สตรีมเมอร์, เอด, โอเอซี	Reference Number: หมายเลขอ้างอิง	

SAFETY EQUIPMENT REQUIRED FOR THE JOB									
<input checked="" type="checkbox"/> Hard Hat หมวกกันน็อก	<input checked="" type="checkbox"/> Safety Shoes รองเท้าบู๊ต	<input checked="" type="checkbox"/> Hearing Protection หูฟังกันเสียง	<input checked="" type="checkbox"/> Safety Harness สายรัดนิรภัย	<input checked="" type="checkbox"/> Fall Protection อุปกรณ์ป้องกันการตก	<input checked="" type="checkbox"/> Barricade การกั้นพื้นที่ทำงาน				
<input checked="" type="checkbox"/> Goggles แว่นกันน้ำ	<input checked="" type="checkbox"/> Safety Glasses แว่นนิรภัย	<input type="checkbox"/> Face Shield หน้ากากกันกระเด็น	<input type="checkbox"/> Fire Extinguisher ถังดับเพลิง	<input type="checkbox"/> Lock Out / Tag Out การล็อก / ติดป้ายเตือน	<input checked="" type="checkbox"/> Safety Signs ป้ายเตือน				
<input checked="" type="checkbox"/> Gloves ถุงมือ	<input type="checkbox"/> Respirator Mask หน้ากากป้องกันสารพิษ	<input type="checkbox"/> Dust Mask หน้ากากป้องกันฝุ่น	<input type="checkbox"/> Breathing Apparatus อุปกรณ์ช่วยหายใจ	<input type="checkbox"/> Reflective Vests เสื้อสะท้อนแสง	<input type="checkbox"/> Radio (HLO) วิทยุสื่อสาร				
Task Lead By: ผู้ดำเนินการงาน		OMI:		Approved By:					
Remarks:									
<p>All personnel onboard have the responsibility to use Energy Drilling's stop work authority, no job is so important that I can not be done safely.</p> <p>ทุกคนที่มีหน้าที่ปฏิบัติงานบนเรือมีหน้าที่รับผิดชอบในการใช้มาตรการหยุดงานทันที, ไม่มีงานใดที่เสี่ยงที่จะทำงานจนก่อให้เกิดอันตรายถึงชีวิต</p> <p>It is a suspended due to SWA. Task is not to be restarted until all hazards are controlled and documented on the SWA.</p> <p>การหยุดงานชั่วคราว, SWA เป็นการแจ้งเตือนเพื่อความปลอดภัยของทุกคนที่ปฏิบัติงานบนเรือ</p> <ul style="list-style-type: none">Review SWA must be submitted for updating to STD.หากมีการหยุดงานเนื่องจาก SWA, ห้ามดำเนินการจนกว่าจะได้รับการแจ้งเตือนความปลอดภัยและมีการบันทึกเอกสารทุกคนที่ปฏิบัติงานบนเรือต้องปฏิบัติตามขั้นตอนการหยุดงาน (STD) ทุกรายUse 4 Point Hazard ID & Energy Wheel to identify all potential hazards at every job meeting.ใช้การระบุจุดเสี่ยง 4 จุด และการวงล้อพลังงานในการหาความเสี่ยงที่อาจเกิดขึ้นทุกคนที่ปฏิบัติงานบนเรือต้องปฏิบัติตามขั้นตอนการหยุดงาน <p>5 persons required for 8 TR & AW-139 (2 firefighters, 2 Helideck Assistants (baggage handlers) 1 HLO) (ห้าม 5 คนปฏิบัติงานบนเรือ 8 TR & AW-139) (ต้องมีพนักงานดับเพลิง 2 คน, พนักงานช่วยเหลือบนเรือ 2 คน, พนักงานช่วยเหลือบนเรือ 1 คน)</p> <p>General Comments About the Task:</p>									
<p>Identify Hazard:</p> <p>Check off all types of energy to be controlled</p> <div></div>									

<p>3.</p>	<p>Prepare and connect the Upper Intermediate Mast for lifting (Cont.)</p> <p>เตรียม และต่อส่วนบนของอินเตอร์มีเดียสำหรับการยก (ต่อ)</p>	<p>Confusion / Miscommunication WAH for Roughnecks hooking up the slings / fall from height Struck by slings or shackles (Cont.)</p> <p>ความสับสน / การสื่อสารที่ผิดพลาด งานบนที่สูงสำหรับวินช์เพื่อเกี่ยวสลิง / ตกจากที่สูง วัตถุหล่น (แซ็กเก็ต) ฆนชนเชื่อมต่อสลิง โดนสลิงหรือแซ็กเก็ต (ต่อ)</p> <p>Ensure all tools and Equipment are available. Anticipate potential movement of slings and use tag lines to control movement. Use safety harness tied off at the d-ring to the SRL attached to the mast section Area below mast section - Red Zone. keep all personnel clear. Use caution when loosening shackles, ensure firm grip on pin and nut. Anticipate potential movement of slings and use tag lines to control movement</p> <p>ตรวจสอบให้แน่ใจเครื่องมือและอุปกรณ์ทั้งหมดพร้อมใช้งานตามมาตรฐาน คาดการณ์การเคลื่อนไหวของสลิงที่อาจเกิดขึ้น และใช้แท็กไลน์เพื่อควบคุมการเคลื่อนไหว ใช้สายรัดนิรภัยที่ผูกไว้ที่รینگแนวนตัวกับ เอสอาร์แอล ที่ติดอยู่กับส่วนของมาสต์ พื้นที่ด้านล่างของมาสต์ - พื้นที่สีแดง ไม่บุคลากรจากนอกจากพื้นที่นั้น ใช้ความระมัดระวังในการคลายแซ็กเก็ต ตรวจสอบให้แน่ใจว่านิรพน์และยึดไว้แน่นหนา คาดการณ์การเคลื่อนไหวของสลิงที่อาจเกิดขึ้น และใช้แท็กไลน์เพื่อควบคุมการเคลื่อนไหว</p>
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แท่นเจาะ-3.6 ตัวอย่างเอกสารการวิเคราะห์งานเพื่อความปลอดภัย

#	SIGNIFICANT STEPS OR CRITICAL ACTIVITY ลำดับขั้นตอนการทำงาน	LOSS EXPOSURE (SAFETY – QUALITY – PRODUCTION) อันตรายที่จะได้รับสัมผัส (ความปลอดภัย – คุณภาพ – การผลิต) People do not understand / new crew members. People do not understand who does what task. พนักงานไม่เข้าทำงาน หรือมีพนักงานใหม่ที่ยังไม่รู้ รายละเอียดงาน Confusion / Miscommunication. WAH for Roughchecks hooking up the slings / fall from height. Dropped objects (shackles) while connecting slings. Struck by slings or shackles. ความสับสน / การสื่อสารที่ไม่ผิดพลาด งานแม่เหล็กสำหรับเกี่ยวเชือกสลิง / ตกจากที่สูง วัตถุหล่น (เชือกคล้อง) ขณะเชื่อมติดสลิง โดนสลิงหรือเชือกคล้อง	RECOMMENDED CONTROLS วิธีการป้องกันหรือมาตรการลดความเสี่ยง
1.	Hold pre-job meetings with all involved with the task. จัดประชุมก่อนเริ่มงานกับทุกคนที่เกี่ยวข้องกับงาน		Ensure that JSA is communicated in English & Thai. ตรวจสอบให้แน่ใจว่า JSA มีการสื่อสารเป็นภาษาอังกฤษและภาษาไทย
2.	Prepare and connect the Upper Intermediate Mast for lifting เตรียม และต่อส่วนบนของอินเตอร์มีเดียสำหรับยก		Conduct Pre-job meeting and review JSA. Ensure all crew involved in the job are present for the PUSM. Assign roles and responsibilities, ensure understanding, ask questions to confirm understanding. Discuss path of load and any potential trap hazards / identify escape routes. จัดการประชุมก่อนเริ่มงานและทบทวนเอกสารตรวจสอบให้แน่ใจว่าพนักงานทั้งหมดที่เกี่ยวข้องกับงานเข้าใจ กำหนดบทบาทและความรับผิดชอบ สร้างความเข้าใจ จัดเส้นทางเพื่ออำนวยความสะดวก หรือเกี่ยวกับเส้นทางย้ายและอันตรายอาจเกิดขึ้น / ระบุเส้นทางหลบหนี

4.	<p>Lift the load from the Installation trolley and Slew to the Tender landing area</p> <p>ยกอุปกรณ์จากทrolleyและเลื่อนไปวางที่พื้นดอร์</p>	<p>Damage to equipment</p> <p>Equipment falls from load</p> <p>Personnel trapped between load and a fixed object</p> <p>Misscommunications</p> <p>Load swings</p> <p>Equipment falls</p> <p>Load contacts other Equipment</p>	<p>ความเสียหายต่ออุปกรณ์ อุปกรณ์ตกลงโดนคน บุคคลติดอยู่ระหว่างสิ่งของบรรทุกกับวัตถุคงที่ การสื่อสารผิดพลาด โพลส่ว อุปกรณ์ล้มเหลว โหลดชนสิ่งอื่นอุปกรณ์อื่น</p>	<p>HLCO to monitor load weight</p> <p>Conduct pre-lift inspection prior to any lift</p> <p>Stay clear from the lift path shadow - Red Zone.</p> <p>Use radio for effective communication</p> <p>Snr Supervisor on Platform (Tourpusher/OIM) is in control of load (Signalman)</p> <p>Ensure boom angle is correct before lifting the load</p> <p>HLCO to watch the weather conditions.</p> <ul style="list-style-type: none"> • Stop Work Authority (SWA) • Ensure list on main hoist does not exceed 3 degrees <p>เชนและรีโอตรวจสอบน้ำหนักบรรทุก ดำเนินการตรวจสอบก่อนทำการยกทุกครั้ง อยู่ห่างจากเงาอุปกรณ์ที่ยก - โซนสีแดง ใช้วิทยุเพื่อการสื่อสารที่มีประสิทธิภาพ หัวหน้างานบนแพลตฟอร์ม (ทาว์พัสเซอร์ / โอไอเอ็ม) เป็นผู้ควบคุมการโหลด (ผู้ให้สัญญาณ) ตรวจสอบให้แน่ใจว่ามุมบูมถูกต้องก่อนที่จะยกน้ำหนัก เชนและรีโอสุขภาพอากาศ • อำนาจหยุดงาน (SWA) • ตรวจสอบให้แน่ใจว่าความแรงของลวดไม่เกิน 3 องศา</p>
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5.	Land the load on the Tender and pin into Guides วางโหลลงบนแท่นต่อ และปักพูลดลงบนไกด์	Miscommunication Personnel Struck by load. Damage to Guides. Crushed fingers from hammer head. Personnel Handling การสื่อสารที่ผิดพลาด บุคลากรโดนโหลต สร้างความเสียหายให้กับไกด์ นิ้วหักจากหัวค้อน บุคลากรถูกกระแทกด้วยหัวค้อนที่หลุดออกมา การจัดการด้วยตนเอง	Use Radio for effective communications. Good handover by Banksman as load is slewed around, HLCO will acknowledge that the Rig Manager is now in control of the load. Stay clear from the lift path shadow - Red Zone. Always have an escape path. Area inside Guides is a Red Zone - No entry. Signalman to ensure correct Boom angle Good hand placement when swinging the hammer. Watch for pinch points. Hammer to be in good condition. Maintain good body posture while swinging hammer. Ensure nobody in path of swinging hammer. ใช้วิทยุเพื่อการสื่อสารที่มีประสิทธิภาพ เจ้าหน้าที่รับทราบส่งมอบสินค้าได้ดี HLCO จะรับทราบว่าจะนำรีโมทแมนเจอร์ไปเชื่อมควบคุมกับน้ำหนักบรรทุก อยู่ห่างจากเงาของอุปกรณ์ที่ยก - โซนสีแดง มีทางหนีเสมอ พื้นที่ภายในไกด์คือโซนสีแดง - ห้ามเข้า คำสั่งสัญญาณไม่แน่ใจว่ามุมมองถูกต้อง ด้านหนึ่งมือที่ดีเมื่อเกี่ยวกัน ระวังจุดหนีบ อย่าหนี้อยู่ในสภาพดี รักษาท่าทางอย่างระมัดระวังที่ขณะเกี่ยวกัน ตรวจสอบให้แน่ใจว่าไม่มีใครขวางทางค้อนที่เกี่ยวกัน
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#	SIGNIFICANT STEPS OR CRITICAL ACTIVITY สำคัญขั้นตอนการทำงาน	LOSS EXPOSURE (SAFETY – QUALITY – PRODUCTION) อันตรายที่อาจจะได้รับสัมผัส (ความปลอดภัย – คุณภาพ – การผลิต)	RECOMMENDED CONTROLS วิธีการป้องกันหรือมาตรการลดความเสี่ยง
	Participants: (Print Name) ผู้มีส่วนเกี่ยวข้องในงานนี้ (ชื่อตัวบรรจง)	Position ตำแหน่ง	Position ตำแหน่ง
1		8	
2		9	
3		10	
4		11	
5		12	
<p>Crew Debrief and Review JSA Quality:</p> <p>This section MUST BE COMPLETED after each job and submitted to STO</p> <p>การประเมินทีมปฏิบัติงานเสร็จ และมอบ 98 เอส เอ</p> <p>ส่วนนี้ ต้องเสร็จสิ้น หลังจากปฏิบัติงานเสร็จแล้วเสร็จงาน แล้วส่งมอบให้กับเจ้าหน้าที่ความปลอดภ</p>			
<p>Did the job goes as per the JSA งานเป็นไปตาม 98 เอส เอ หรือไม่</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>		<p>Were there Critical Job Steps / Hazards / Risks / Controls not Identified or discussed in the JSA มีขั้นตอน / อันตราย / ความเสี่ยง / การควบคุม ที่ยังไม่ได้ระบุไว้หรือถ</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	
<p>Action Items: หัวข้อที่ต้องพิจารณา</p>		<p>Can the JSA be Improved? มีอะไรที่ปรับปรุงในเจ เอกสารนี้ได้</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	
<p>Comments บันทึกข้อเสนอเพิ่มเติม:</p>			

#	SIGNIFICANT STEPS OR CRITICAL ACTIVITY สำคัญขั้นตอนการทำงาน	LOSS EXPOSURE (SAFETY – QUALITY – PRODUCTION) อันตรายที่อาจจะได้รับสัมผัส (ความปลอดภัย – คุณภาพ – การผลิต)	RECOMMENDED CONTROLS วิธีการป้องกันหรือมาตรการลดความเสี่ยง
6.	Disconnect the slings from the load ปลดสลิงออกจากโหลต	WAH for Roustabouts unhooking the slings / fall from height Struck by slings or shackles. Hand injuries from wickers. งานเมื่อยี่งูสลับกับพื้นเพื่อปลดสลิง / ตกจากที่สูง โดนสลิงหรือแร็คเก็ต อาการบาดเจ็บที่มือจากแร็คเก็ต	Use safety harness tied off at the d-ring to the SRL attached to the mast section Area below mast section - Red Zone. keep all personnel clear. Anticipate potential movement of slings and use tag lines to control movement. Wear appropriate gloves. ใช้เซฟตี้ฮาร์เนสติดไว้ที่ดริงกับสลอร์หรือลวดที่ติดอยู่กับส่วนเสา พื้นที่ด้านล่างส่วนเสา - โซนสีแดง ให้บุคลากรทุกคนอยู่ในที่โล่ง คาดการณ์การเคลื่อนที่ของสลิงและใช้แท็กไลน์เพื่อควบคุมการเคลื่อนไหว สวมถุงมือที่เหมาะสม
7.	Debrief with all crews involved. ประชุมซักถามกับทีมงานทุกคนที่เกี่ยวข้องหลังจากเสร็จสิ้นงาน	Unplanned events hindered the operation. เหตุการณ์ที่ไม่ได้วางแผนไว้รื้อจัดการการทำงาน	Correct JSA if required. แก้ไขเอกสารหากจำเป็น

energy drilling Rig/ ธิก: EVE

JSA Worksheet การวิเคราะห์งานเพื่อความปลอดภัย

Date วันที่: ____/____/____

Task Analyzed: งานที่วิเคราะห์	Use Personnel Transfer Basket ใช้รถลำเลียงบุคลากร	Analysis Done By: ผู้วิเคราะห์ (ต้องระบุชื่อในวงเล็บ)	Barge Captain บรรจกัปตัน												
Occupations: บุคลากรที่เกี่ยวข้อง	B/Captain, HLCO, Crane Op, Roustabouts บารจกัปตัน, เบลท์คัปตัน, ครานโอเปอเรเตอร์, รอสตาบ	Reference Number: หมายเลขอ้างอิง	JSA-EVE-MAR-016												
<p>SAFETY EQUIPMENT REQUIRED FOR THE JOB อุปกรณ์ที่จำเป็นต้องใช้สำหรับงานนี้</p> <table border="0"> <tr> <td><input type="checkbox"/> Head Hat หมวกกันน็อก</td> <td><input type="checkbox"/> Safety Shoes รองเท้าบู๊ต</td> <td><input type="checkbox"/> Hearing Protection อุปกรณ์ป้องกันการได้ยิน</td> <td><input type="checkbox"/> Safety Harness เข็มขัดนิรภัย</td> </tr> <tr> <td><input type="checkbox"/> Goggles แว่นกันตา</td> <td><input type="checkbox"/> Safety Glasses แว่นตาป้องกัน</td> <td><input type="checkbox"/> Face Shield ที่กั้นหน้า</td> <td><input type="checkbox"/> Fire Extinguisher ถังดับเพลิง</td> </tr> <tr> <td><input type="checkbox"/> Gloves ถุงมือ</td> <td><input type="checkbox"/> Respirator Mask หน้ากากป้องกันฝุ่น</td> <td><input type="checkbox"/> Dust Mask หน้ากากป้องกันฝุ่น</td> <td><input type="checkbox"/> Breathing Apparatus อุปกรณ์สำหรับหายใจ</td> </tr> </table>				<input type="checkbox"/> Head Hat หมวกกันน็อก	<input type="checkbox"/> Safety Shoes รองเท้าบู๊ต	<input type="checkbox"/> Hearing Protection อุปกรณ์ป้องกันการได้ยิน	<input type="checkbox"/> Safety Harness เข็มขัดนิรภัย	<input type="checkbox"/> Goggles แว่นกันตา	<input type="checkbox"/> Safety Glasses แว่นตาป้องกัน	<input type="checkbox"/> Face Shield ที่กั้นหน้า	<input type="checkbox"/> Fire Extinguisher ถังดับเพลิง	<input type="checkbox"/> Gloves ถุงมือ	<input type="checkbox"/> Respirator Mask หน้ากากป้องกันฝุ่น	<input type="checkbox"/> Dust Mask หน้ากากป้องกันฝุ่น	<input type="checkbox"/> Breathing Apparatus อุปกรณ์สำหรับหายใจ
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<p>Task Lead By: ผู้ควบคุมงาน</p>		<p>Approved By: อนุมัติ</p>													
<p>Identify Hazard: การระบุอันตรายที่อาจเกิดขึ้น Check on all types of energy to be controlled ตรวจสอบพลังงานทั้งหมด ที่อาจควบคุมได้</p> <table border="0"> <tr> <td><input type="checkbox"/> Mechanical เครื่องจักร</td> <td><input type="checkbox"/> Electrical ไฟฟ้า</td> <td><input type="checkbox"/> Pressure แรงดันสูง</td> <td><input type="checkbox"/> Temperature อุณหภูมิ</td> </tr> <tr> <td><input type="checkbox"/> Chemical สารเคมี</td> <td><input type="checkbox"/> Biological ชีวภาพ</td> <td><input type="checkbox"/> Radiation กัมมาฟอสส์</td> <td><input type="checkbox"/> Sound เสียงดัง</td> </tr> <tr> <td><input type="checkbox"/> Gravel กรวด</td> <td><input type="checkbox"/> Mud โคลน</td> <td><input type="checkbox"/> Gas แก๊ส</td> <td><input type="checkbox"/> Other (List) อื่นๆ (ระบุ)</td> </tr> </table>				<input type="checkbox"/> Mechanical เครื่องจักร	<input type="checkbox"/> Electrical ไฟฟ้า	<input type="checkbox"/> Pressure แรงดันสูง	<input type="checkbox"/> Temperature อุณหภูมิ	<input type="checkbox"/> Chemical สารเคมี	<input type="checkbox"/> Biological ชีวภาพ	<input type="checkbox"/> Radiation กัมมาฟอสส์	<input type="checkbox"/> Sound เสียงดัง	<input type="checkbox"/> Gravel กรวด	<input type="checkbox"/> Mud โคลน	<input type="checkbox"/> Gas แก๊ส	<input type="checkbox"/> Other (List) อื่นๆ (ระบุ)
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<p>General Comments/About the Task: หมายเหตุเกี่ยวกับงานนี้ Ensure LIFT Plan attached with JSA and reviewed, signed by people involve the task. Banksman must wear banksman vest at the time during operations. ผู้ควบคุมงานต้องแนบแผนการยกกับ JSA และทบทวน, ลงนามโดยผู้เกี่ยวข้อง Banksmen ต้องสวมเสื้อกันกระแทกของ Banksmen ที่เวลาปฏิบัติงาน</p>															

JSA Worksheet การวิเคราะห์งานเพื่อความปลอดภัย Rig / ริก: EVE Date วันที่: ____/____/____

#	SIGNIFICANT STEPS OR CRITICAL ACTIVITY ลำดับขั้นตอนการทำงาน	LOSS EXPOSURE (SAFETY - QUALITY - PRODUCTION) อันตรายที่จะได้รับสัมผัส (ความบาดเจ็บ - คุณภาพ - การผลิต)	RECOMMENDED CONTROLS วิธีการป้องกันหรือการลดความเสี่ยง
1.	Hold pre-job meeting at the job site, both on the tender and the platform. บุคคลที่เกี่ยวข้องในการทำงานเข้าร่วมประชุมก่อนเริ่มงาน	People do not understand. There are new crew members on the crew. Crew change midway through the operation. More than one crew member signals the crane operator. บุคคลไม่เข้าใจงานที่จะทำ พนักงานใหม่เพิ่งเริ่มทำงาน. มีพนักงานใหม่เพียงคนเดียวในการทำงานให้ปลอดภัย บุคคลใหม่เข้ามา ใครเป็นผู้นำคือคนในแต่ขั้นตอนการทำงาน เปลี่ยนตัวบุคคล ระหว่างขั้นตอนทำงาน. มีคนที่สัญญาณมากกว่า 1 คน ขั้นตอนเปลี่ยน ระหว่างการดำเนินงาน	Ask everyone if they understand the task to be performed. Ensure that new crew members are teamed up with either their mentor or experienced personnel. Delegate personnel to each task. Stop Work Authority (unit and hold a further meeting). Establish who is to be the designated signalmen and ensure that the wears a high visibility work vest. ถามทุกคนว่ามีความเข้าใจในการทำงานก่อนที่จะทำงาน ให้แน่ใจว่าพนักงานที่ใหม่ได้มีการดูจากบุคคลที่มีประสบการณ์. แบ่งงานให้แต่ละคนทำ ไม่มีการอนุญาตให้ใช้การหยุดงาน และมีมีการประชุมในอนาคค กำหนดบุคคลที่จะเป็นคนให้สัญญาณ และ ให้แน่ใจว่ามีความเสี่ยงที่มองเห็น
2.	Thoroughly inspect the lift for loose items that can fall. Check that there are no cables or wires that can hang up. ตรวจสอบการยกกว่าอาจจะมีความเสี่ยงของได้อาตมาลงมาได้	Hit by a falling object. Cable or wire hangs up causing damage or becomes drops item. ถูกกระแทกโดยวัตถุ สายเคเบิลและสายลวดไปติดทำให้อุปกรณ์เสียหาย และอาจทำให้วัตถุหล่นลงมา	Tie up or secure cables and wires. Inspect the slings and shackles before every lift. Inspect the lift for loose items that can fall. มัดสายเคเบิลและสายลวด ตรวจสอบสายลวดและเชือกคล้องก่อนที่จะทำการยก

19 August 2025

Template Rev-2019-1

JSA Worksheet การวิเคราะห์งานเพื่อความปลอดภัย Rig / ริก: EVE Date วันที่: ____/____/____

	Establish radio communication between crane operator and person in charge on deck. ติดตั้งวิทยุสื่อสารระหว่างผู้บังคับการยกและผู้รับผิดชอบบนดาดฟ้าเรือ	Interference from another source. Bad reception. Operators do not understand each other. การรบกวนจากแหล่งอื่น การสื่อสารไม่ชัดเจน การต้อนรับไม่ดี ผู้ปฏิบัติงานไม่เข้าใจกัน	Pick a channel that is not in use. Ensure that radios are fully charged before use. Communicate clearly. Do not start the job until clear communication is established. เลือกช่องที่ไม่ได้ใช้งาน ตรวจสอบให้แน่ใจว่าได้สื่อสารให้ชัดเจนก่อนใช้งาน อย่าเริ่มงานจนกว่าจะมีการสื่อสารที่ชัดเจน
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	Set up the crane for lifting down the Rig Floor package. ติดตั้งเครนเพื่อขนานพื้นยก Rig Floor ลง	Lost control of the load No communication with air hoist operators. Crew falls down open walkway. สูญเสียการควบคุมโหลด	Rig up air winches to Rig Floor package for easy guide and use for when landing on tender. Physical check intercoms are switched on and working. Air hoist operators take instructions from the crane op only. Pre rigs move crane inspection, refuel diesel and check oils. Mechanic and Electrician to be in close proximity of the PC400. Lift up and secure walkway ladders before taking tension. Ensure walkway barrier tape/chain in place to bring awareness to the edge and prevent falling. ติดตั้งแอร์วียซ์ กับอีกฟลอปแพคเกจสำหรับการนำทางที่ง่ายเวลานำโหลดลงมาถึงเท็นเดอร์ ตรวจสอบการทำงานของอินเตอร์คอมและให้เปิดการใช้จนกว่ามีความพร้อมหรือรับคำแนะนำจากคนเรือเรเตอร์แค่เพียงผู้เดียว ตรวจสอบเครน, เดิมน้ำมันดีเซล และเชือกน้ำมัน
4.		ไม่มีการสื่อสารจากคนควบคุมแอร์วียซ์ดีเครนหยุดหรือพัง บุคคลตกจากดาดฟ้าเปิดของทางเดิน	

19 August 2025

Template Rev-2019-1

JSA Worksheet การวิเคราะห์งานเพื่อความปลอดภัย Rig / ริก: EVE Date วันที่: ____/____/____

		การตรวจสอบเครนก่อนการเคลื่อนย้าย เดิมน้ำมันดีเซล และตรวจสอบน้ำมัน ช่างยนต์และช่างไฟฟ้าอยู่ใกล้ PC400 ระหว่างการยกของหนัก ยักขึ้นและยึดช่องทางเดินให้แน่นก่อนที่จะผ่อนแรง ตรวจสอบให้แน่ใจว่าเทปใช้กันทางเดินอยู่ในตำแหน่ง เพื่อสร้างความตระหนักถึงข้อบกพร่องและป้องกันการล้ม	Rig floor supervisor to confirm that the Rig Floor Package are clear to lift. Superior หรือผู้ที่รักฟลอปคอนเฟิร์มว่ารักฟลอปแพคเกจเรียบร้อยแล้วพร้อมที่จะยก
	Position crane overload and attach Rig move slings. นำเครนมาอยู่ในตำแหน่งของโหลด และติดตั้งสลิงยก	Crew attaching slings to Rig Floor Package bail. Crew attaching slings to the Rig Floor Package are hit by a sling or shackle. Crew member fall on Rig Floor Package. พนักงานติดตั้งสลิงที่มวลมอเตอร์สลัด พนักงานติดตั้งสลิงที่มวลมอเตอร์สลัดโดนกระแทกจากสลัดและเชือกสลัด ยังมีพนักงานอยู่ที่บนมวลมอเตอร์สลัด	An unexpected increase in weight if grippers not removed. Risk possibility of sheared bolts and undue strain on the skid beams and he has total control of the load. น้ำหนักที่คาดไม่ถึงถึงเพิ่มขึ้นถ้ากริปเปอร์ไม่ถอดออก ยักไม่ได้ และมีความสามารถที่จะทำให้อุปกรณ์ตก ทำให้เครนบูมไม่มั่นคง
5.		Crew to confirm that gripper guides have been removed and agreed point with the pins stored in the dedicated socks. (Dedicated USA) กริปเวอร์ยืนยันว่าได้ถอดกริปเปอร์ไกด์ จากไฮดรอลิกฟิตติ้งแล้ว The floating guides are all an are clear of the lift begin lifting. เมื่อตรวจสอบว่าไม่มีบุคคลใดอยู่ในรักฟลอปแล้ว ให้เริ่มต้นยัก	Rig floor supervisor in constant communication with the crane operator. Inform the crane operator when the Rig Floor Package are clear of the skid beams and he has total control of the load. ให้พนักงานที่ควบคุมบนรักฟลอปได้มีการสื่อสารอย่างชัดเจนและบ่อย ๆ กับเครนโอเปอเรเตอร์ บอกกับเครนโอเปอเรเตอร์ว่ามวลมอเตอร์สลัดที่ปลดออกย้ายจากกสัดน้ำมัน และเขาจะเป็นคนที่ควบคุมโหลด

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PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201365 Task: Crane drops inspection Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:-

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
Has the person in charge of the work (Area Authority or PIC)?			
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the ISA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
Has the person in charge of the work (Area Authority or PIC)?			
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System Bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Recorded any relevant isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
2	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1 Indicated who Permit was issued to?			
2 Signed, dated and entered the time the permit was issued?			
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
(If audit includes work completion)			
1	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
2	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
3	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
4	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including ISA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the worksite in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No
Person Performing Audit:		Napassara C. - ASTO:	OIM:
Note: if NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped			
Was the PTW / Operation suspended: - Yes (give reason) No			
What remedial action was taken before the operation continued:			
Was the Area Authority / Toolpusher informed? - Yes No			
Comments / Corrective Actions:			

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201360 Task: Blind lift crane Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:-

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
Has the person in charge of the work (Area Authority or PIC)?			
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the ISA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
Has the person in charge of the work (Area Authority or PIC)?			
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System Bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Recorded any relevant isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
2	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1 Indicated who Permit was issued to?			
2 Signed, dated and entered the time the permit was issued?			
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
(If audit includes work completion)			
1	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
2	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
3	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
4	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including ISA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the worksite in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No
Person Performing Audit:		Napassara C. - ASTO:	OIM:
Note: if NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped			
Was the PTW / Operation suspended: - Yes (give reason) No			
What remedial action was taken before the operation continued:			
Was the Area Authority / Toolpusher informed? - Yes No			
Comments / Corrective Actions:			

Rig: EVE Permit No: (เลขที่ใบอนุญาต) : CW-201365

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): Case 2.5 - 10

Nature of Work (รายละเอียดของงาน): Crane Drops Inspection

Required Certificates (ใบรับรองที่ต้องการ):

- ☐ Isolation (การตัดแยก ระบบพลังงาน)
☐ Confined Space (การทำงานในพื้นที่แออัด)
☐ Safety System Bypass Certificate (การตัดระบบการพลังงานของอุปกรณ์)

From (Date-Time) จาก (วันที่ / เวลา): 6.9.25 - 19.00

To (Date-Time) ถึง (วันที่ / เวลา): 6.9.25 - 20.00

Requested by (ชื่อผู้ขออนุญาต):

Person Requesting Work (ผู้ปฏิบัติงาน)

Raised by (ชื่อผู้รับผิดชอบในพื้นที่):

Area Authority (ผู้รับผิดชอบในพื้นที่การทำงาน)

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (ชื่อของบุคคลที่เกี่ยวข้องกับงานและได้เตรียมอุปกรณ์ป้องกันส่วนบุคคล ดังต่อไปนี้):

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย) | <input checked="" type="checkbox"/> Standby Watch (ผู้เฝ้าระวัง) | Others / Comments (ข้อสังเกต / หมายเหตุ): |
| <input checked="" type="checkbox"/> Eye Protection (อุปกรณ์ป้องกันตา) | <input checked="" type="checkbox"/> Use Radio (การสื่อสาร) | AA - EVE - MAR - 028 |
| <input checked="" type="checkbox"/> Ear Protection (อุปกรณ์ป้องกันหู) | <input checked="" type="checkbox"/> Standby boat (เรือตรวจตรา) | |
| <input checked="" type="checkbox"/> Gloves (ถุงมือ) | <input checked="" type="checkbox"/> Life Vest (เสื้อชูชีพ) | |
| <input checked="" type="checkbox"/> Fire Watch (ผู้เฝ้าระวังไฟ) | <input checked="" type="checkbox"/> Safety Harness (เข็มขัดนิรภัย) | |
| <input checked="" type="checkbox"/> Gas Test (อุปกรณ์ตรวจสอบก๊าซ) | <input checked="" type="checkbox"/> Erect Barriers (การกั้นเขตพื้นที่) | Sign (ลงชื่อ): |
| <input checked="" type="checkbox"/> BA (ชุดอุปกรณ์เครื่องช่วยหายใจ) | <input checked="" type="checkbox"/> P.A Announcement (เครื่องกระจายเสียงสาธารณะ) | Area Authority (เจ้าหน้าที่ในพื้นที่) Person In Charge (ผู้ปฏิบัติงาน) |

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in this respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: (Area Authority)

Isolation Certificate Number #: (if applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if applicable):

Signature: (Authorized Gas Tester)

AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL (การอนุมัติใบขออนุญาตการทำงาน)

This work is authorized to be carried out in section 1 and follow the precautions in section 2.

Signature: (Area Authority)

Time: 19.00 Date: 6.9.25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work.

Signature: (Person In Charge)

Time: 20.00 Date: 6.9.25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: (Area Authority)

Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: (Position):

Time: Date:

8. PERMIT TERMINATION: (การปิดใบขออนุญาตการทำงาน)

I declare this permit is terminated. งานนี้จึงขอปิดใบขออนุญาตการทำงานนี้เสร็จสมบูรณ์แล้ว

Signature: (OIM)

Time: 06.00 Date: 7.9.25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

Rig: EVE Permit No: (เลขที่ใบอนุญาต) : CW-201360

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): Pipe Deck

Nature of Work (รายละเอียดของงาน): Blind lift crane up Camiduck and Conveyer

Required Certificates (ใบรับรองที่ต้องการ):

- ☐ Isolation (การตัดแยก ระบบพลังงาน)
☐ Confined Space (การทำงานในพื้นที่แออัด)
☐ Safety System Bypass Certificate (การตัดระบบการพลังงานของอุปกรณ์)

From (Date-Time) จาก (วันที่ / เวลา): 6.9.25 - 12.00

To (Date-Time) ถึง (วันที่ / เวลา): 6.9.25 - 24.00

Requested by (ชื่อผู้ขออนุญาต):

Person Requesting Work (ผู้ปฏิบัติงาน)

Raised by (ชื่อผู้รับผิดชอบในพื้นที่):

Area Authority (ผู้รับผิดชอบในพื้นที่การทำงาน)

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (ชื่อของบุคคลที่เกี่ยวข้องกับงานและได้เตรียมอุปกรณ์ป้องกันส่วนบุคคล ดังต่อไปนี้):

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย) | <input checked="" type="checkbox"/> Standby Watch (ผู้เฝ้าระวัง) | Others / Comments (ข้อสังเกต / หมายเหตุ): |
| <input checked="" type="checkbox"/> Eye Protection (อุปกรณ์ป้องกันตา) | <input checked="" type="checkbox"/> Use Radio (การสื่อสาร) | AA - EVE - MAR - 026 |
| <input checked="" type="checkbox"/> Ear Protection (อุปกรณ์ป้องกันหู) | <input checked="" type="checkbox"/> Standby boat (เรือตรวจตรา) | AA - EVE - MAR - 011 |
| <input checked="" type="checkbox"/> Gloves (ถุงมือ) | <input checked="" type="checkbox"/> Life Vest (เสื้อชูชีพ) | AA - EVE - MAR - 009 |
| <input checked="" type="checkbox"/> Fire Watch (ผู้เฝ้าระวังไฟ) | <input checked="" type="checkbox"/> Safety Harness (เข็มขัดนิรภัย) | |
| <input checked="" type="checkbox"/> Gas Test (อุปกรณ์ตรวจสอบก๊าซ) | <input checked="" type="checkbox"/> Erect Barriers (การกั้นเขตพื้นที่) | Sign (ลงชื่อ): |
| <input checked="" type="checkbox"/> BA (ชุดอุปกรณ์เครื่องช่วยหายใจ) | <input checked="" type="checkbox"/> P.A Announcement (เครื่องกระจายเสียงสาธารณะ) | Area Authority (เจ้าหน้าที่ในพื้นที่) Person In Charge (ผู้ปฏิบัติงาน) |

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: (Area Authority)

Isolation Certificate Number #: (if applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if applicable):

Signature: (Authorized Gas Tester)

AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL (การอนุมัติใบขออนุญาตการทำงาน)

This work is authorized to be carried out in section 1 and follow the precautions in section 2.

Signature: (Area Authority)

Time: 12.00 Date: 6.9.25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work.

Signature: (Person In Charge)

Time: 20.00 Date: 6.9.25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: (Area Authority)

Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: (Position):

Time: Date:

8. PERMIT TERMINATION: (การปิดใบขออนุญาตการทำงาน)

I declare this permit is terminated. งานนี้จึงขอปิดใบขออนุญาตการทำงานนี้เสร็จสมบูรณ์แล้ว

Signature: (OIM)

Time: 06.00 Date: 7.9.25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201362 Task: Crane operation between tender to stack Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM -

SECTION 3 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
Has the person in charge of the work (Area Authority or PIC)?			
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Identified his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments the ISA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
Has the person in charge of the work (Area Authority or PIC)?			
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Recorded any relevant Isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
2	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
Indicated who Permit was issued to?			
1	Indicated, dated and entered the time the permit was issued?	Yes	No
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
If audit includes work completion?			
1	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
2	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
3	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
4	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists; ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including ISA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No

Person Performing Audit: N/A

Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped

Was the PTW / Operation suspended: - Yes (give reason) No

What remedial action was taken before the operation continued: N/A

Was the Area Authority / Toolpusher informed? - Yes No

Comments / Corrective Actions: N/A

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: HW0484 Task: Repair handrail and kick plate Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM -

SECTION 3 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
Has the person in charge of the work (Area Authority or PIC)?			
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Identified his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments the ISA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
Has the person in charge of the work (Area Authority or PIC)?			
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Recorded any relevant Isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
2	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
Indicated who Permit was issued to?			
1	Indicated, dated and entered the time the permit was issued?	Yes	No
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
If audit includes work completion?			
1	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
2	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
3	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
4	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists; ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including ISA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No

Person Performing Audit: N/A

Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped

Was the PTW / Operation suspended: - Yes (give reason) No

What remedial action was taken before the operation continued: N/A

Was the Area Authority / Toolpusher informed? - Yes No

Comments / Corrective Actions: N/A

COLD WORK ใบอนุญาตทำงานประเภทงานเย็น

Rig: EVE Permit No. (เลขที่ใบอนุญาต): CW- 201362

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): Pipe clean - Hydro

Nature of Work (รายละเอียดของงาน): Crane operation between tender to stack

From (Date/Time) จาก (วันที่ / เวลา): 6.9.25 16.00 To (Date/Time) ถึง (วันที่ / เวลา): 6.9.25 17.00

Requested by (ผู้ร้องขออนุญาต): Person Requesting Work (ผู้ปฏิบัติงาน)

Raised by (ผู้ยื่นคำขอรับใบพื้นที่): Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน)

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (เราสองคนได้ปรึกษากันที่ข้างล่างในส่วนที่ 1 ได้มีการอธิบายถึงงานและได้ตกลงกันเรื่องวิธีการป้องกันที่สมควรแล้ว ดังต่อไปนี้):

Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย) Standby Watch (ผู้เฝ้าระวัง) Others / Comments (ข้อสังเกต / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา) Use Radio (การใช้วิทยุ) Sign (ลงชื่อ):

Ear Protection (อุปกรณ์ป้องกันหู) Standby boat (เรือตรวจตรา) Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน):

Gloves (ถุงมือป้องกัน) Life Vest (เสื้อชูชีพ) Person In Charge (ผู้ปฏิบัติงาน):

Fire Watch (ผู้เฝ้าระวังไฟ) Safety Harness (เข็มขัดนิรภัย) Sign (ลงชื่อ):

Gas Test (อุปกรณ์ตรวจวัดแก๊ส) Erect Barriers (การกั้นเขตพื้นที่) Sign (ลงชื่อ):

BA (ชุดอุปกรณ์เครื่องช่วยหายใจ) P.A Announcement (การแจ้งข่าวเสียงสาธารณะ) Sign (ลงชื่อ):

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: (Area Authority) Isolation Certificate Number #: (If applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if applicable):

Signature: AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

This Permit is issued on the condition that the work stated in section 1 and follow the precautions in section 2.

Sign: (OIM) Sign: (Area Authority Representative) Time: 1600 Date: 6-9-25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอแจ้งให้ทราบว่า งานที่ได้รับอนุญาตการทำงานนี้ ได้เสร็จสมบูรณ์แล้ว / หรือหยุดชะงักแล้ว และคนใดก็ตามที่อยู่ในความรับผิดชอบของข้าพเจ้า ได้ถูกนำออกจากงานเรียบร้อยแล้ว):

Signature (ลงชื่อ): Person In Charge (ผู้ปฏิบัติงาน) Time: 1600 Date: 6-9-25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน):

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: (Position): Time: Date:

8. PERMIT TERMINATION: (การปิดใบอนุญาตการทำงาน)

I declare that the permit is terminated, ข้าพเจ้าขอแจ้งให้ทราบว่า ใบอนุญาตการทำงานนี้ ได้เสร็จสมบูรณ์แล้ว

Signature: (OIM) Time: 0600 Date: 7-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

HOT WORK ใบอนุญาตทำงานประเภทงานร้อน

Rig: EVE Permit No. (เลขที่ใบอนุญาต): HW- 0484

1. REQUEST (การขออนุญาตทำงาน):

Location of Work (สถานที่ทำงาน): Main deck

Nature of Work (รายละเอียดของงาน): Repair handrail and kick plate at Main deck

From (Date/Time) จาก (วันที่ / เวลา): 5-9-25 18.00 To (Date/Time) ถึง (วันที่ / เวลา): 6-9-25 18.00

Requested by (ผู้ร้องขออนุญาต): Person Requesting Work (ผู้ปฏิบัติงาน)

Raised by (ผู้ยื่นคำขอรับใบพื้นที่): Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน)

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree to the work provided that the following precautions are taken: (เราสองคนได้ปรึกษากันที่ข้างล่างในส่วนที่ 1 ได้มีการอธิบายถึงงานและได้ตกลงกันเรื่องวิธีการป้องกันที่สมควรแล้ว ดังต่อไปนี้):

Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย) Standby Watch (ผู้เฝ้าระวัง) Others / Comments (ข้อสังเกต / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา) Use Radio (การใช้วิทยุ) Sign (ลงชื่อ):

Ear Protection (อุปกรณ์ป้องกันหู) Standby boat (เรือตรวจตรา) Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน):

Wear Gloves (ถุงมือป้องกัน) Life Vest (เสื้อชูชีพ) Person In Charge (ผู้ปฏิบัติงาน):

Fire Watch (ผู้เฝ้าระวังไฟ) Safety Harness (เข็มขัดนิรภัย) Sign (ลงชื่อ):

Gas Test (อุปกรณ์ตรวจวัดแก๊ส) Erect Barriers (การกั้นเขตพื้นที่) Sign (ลงชื่อ):

BA (ชุดอุปกรณ์เครื่องช่วยหายใจ) P.A Announcement (การแจ้งข่าวเสียงสาธารณะ) Sign (ลงชื่อ):

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting the work stated in section 1 above.

Signature: (Area Authority) Isolation Certificate Number #: (If applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if applicable):

Signature: AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

This Permit is issued on the condition that the work stated in section 1 and follow the precautions in section 2.

Sign: (OIM) Sign: (Area Authority Representative) Time: 1800 Date: 5-9-25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอแจ้งให้ทราบว่า งานที่ได้รับอนุญาตการทำงานนี้ ได้เสร็จสมบูรณ์แล้ว / หรือหยุดชะงักแล้ว และคนใดก็ตามที่อยู่ในความรับผิดชอบของข้าพเจ้า ได้ถูกนำออกจากงานเรียบร้อยแล้ว):

Signature (ลงชื่อ): Person In Charge (ผู้ปฏิบัติงาน) Time: 06.00 Date: 6-9-25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน):

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: (Position): Time: Date:

8. PERMIT TERMINATION: (การปิดใบอนุญาตการทำงาน)

I declare that the permit is terminated, ข้าพเจ้าขอแจ้งให้ทราบว่า ใบอนุญาตการทำงานนี้ ได้เสร็จสมบูรณ์แล้ว

Signature: (OIM) Time: 0700 Date: 6-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201355 Task: Machine logging Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
3	Identified the JSA on Permit and are able to produce it at the site?	Yes	No
4	Entered times and dates for the period of authorization?	Yes	No
5	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
6	Documented in comments, the JSA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
3	Identified the JSA on Permit and are able to produce it at the site?	Yes	No
4	Crew are able to describe the hazards identified and discussed during the Pre-job / JSA discussion	Yes	No
5	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
6	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Recorded any relevant Isolation Certificate numbers?	Yes	No
3	Ensured isolation declaration has been made (if applicable)?	Yes	No
4	Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable), Checklists (JSA)	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
3	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1	Indicated who Permit was issued to?	Yes	No
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
1	(If audit includes work completion)	Yes	No
2	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
3	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
4	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
5	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
6	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
7	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
8	All documents together after Termination (3x copies Permit & each certificate (where applicable), Checklists (JSA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including JSA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No
Person Performing Audit:		Napassara C. - ASTO	OIM: [Signature]
Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped			
Was the PTW / Operation suspended: - Yes (give reason) No		N/A	
What remedial action was taken before the operation continued:		N/A	
Was the Area Authority / Toolpusher informed? - Yes No		N/A	
Comments / Corrective Actions:		N/A	

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201356 Task: Repair leaking change pump #3 Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
3	Identified the JSA on Permit and are able to produce it at the site?	Yes	No
4	Entered times and dates for the period of authorization?	Yes	No
5	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
6	Documented in comments, the JSA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
3	Identified the JSA on Permit and are able to produce it at the site?	Yes	No
4	Crew are able to describe the hazards identified and discussed during the Pre-job / JSA discussion	Yes	No
5	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
6	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Recorded any relevant Isolation Certificate numbers?	Yes	No
3	Ensured isolation declaration has been made (if applicable)?	Yes	No
4	Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable), Checklists (JSA)	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
3	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1	Indicated who Permit was issued to?	Yes	No
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
1	(If audit includes work completion)	Yes	No
2	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
3	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
4	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
5	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
6	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
7	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
8	All documents together after Termination (3x copies Permit & each certificate (where applicable), Checklists (JSA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including JSA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No
Person Performing Audit:		Napassara C. - ASTO	OIM: [Signature]
Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped			
Was the PTW / Operation suspended: - Yes (give reason) No		N/A	
What remedial action was taken before the operation continued:		N/A	
Was the Area Authority / Toolpusher informed? - Yes No		N/A	
Comments / Corrective Actions:		N/A	

COLD WORK ในอนุญาตทำงานประเภทงานเย็น

Rig: EVE Permit No. (เลขที่ใบอนุญาต): CW-201355

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): Rig Floor

Nature of Work (รายละเอียดของงาน): Machine logging

From (Date-Time) จาก (วันที่ / เวลา): 06 Sep 25 - 06:00 To (Date-Time) ถึง (วันที่ / เวลา): 06 Sep 25 - 18:00

Requested by (ชื่อผู้ขออนุญาต): [Signature]

Person Requesting Work (ผู้ปฏิบัติงาน): [Signature]

Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน): [Signature]

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (ข้าพเจ้าและบุคคลที่เกี่ยวข้องในหน้าที่ 1 ได้หารือเกี่ยวกับงานและขอเสนอมาตรการป้องกันส่วนบุคคล ดังต่อไปนี้):

Protective Clothing (ชุดป้องกันอันตราย): Standby Watch (ผู้เฝ้าระวัง): Others / Comments (ข้อสังเกต / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา): Use Radio (การใช้วิทยุ): JSA - 123996

Ear Protection (อุปกรณ์ป้องกันหู): Standby boat (เรือตรวจตรา):

Gloves (ถุงมือป้องกัน): Life Vest (เสื้อชูชีพ):

Fire Watch (ผู้เฝ้าระวังไฟ): Safety Harness (เข็มขัดนิรภัย):

Gas Test (อุปกรณ์ตรวจวัดแก๊ส): Erect Barriers (การกั้นเขตพื้นที่): Sign (ธงสี)

BA (ชุดอุปกรณ์เครื่องช่วยหายใจ): P.A Announcement (การประกาศเสียงตามสาย): Sign (ธงสี)

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: [Signature] Isolation Certificate Number #: (if applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if applicable):

Signature: [Signature] AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

This Permit is issued for the work stated in section 1 and follows the precautions in section 2.

Signature: [Signature] (OIM) Sign: [Signature] (Representative) Time: 06:00 Date: 6-9-25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ปฏิบัติงานได้ทั้งหมด / หยุดชะงักแล้ว และทุกคนที่ฉันควบคุมดูแลได้ถอนตัวออกจากงานแล้ว):

Signature (ธงสี): [Signature] Person In Charge (ผู้ปฏิบัติงาน): [Signature] Time (เวลา): 18:00 Date (วันที่): 6-9-25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: [Signature] (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: [Signature] (Position): Time: Date:

8. PERMIT CANCELLATION: (การปิดใบอนุญาตการทำงาน)

I declare that the work carried out for this permit is completed and I request de-isolation.

Signature: [Signature] (OIM) Time: 19:00 Date: 6-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

COLD WORK ในอนุญาตทำงานประเภทงานเย็น

Rig: EVE Permit No. (เลขที่ใบอนุญาต): CW-201356

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): MUO Pump Room

Nature of Work (รายละเอียดของงาน): REPAIR LEAKING CHANGE PUMP #3

From (Date-Time) จาก (วันที่ / เวลา): 07:00 6/9/25 To (Date-Time) ถึง (วันที่ / เวลา): 18:00 6/9/25

Requested by (ชื่อผู้ขออนุญาต): [Signature]

Person Requesting Work (ผู้ปฏิบัติงาน): [Signature]

Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน): [Signature]

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (ข้าพเจ้าและบุคคลที่เกี่ยวข้องในหน้าที่ 1 ได้หารือเกี่ยวกับงานและขอเสนอมาตรการป้องกันส่วนบุคคล ดังต่อไปนี้):

Protective Clothing (ชุดป้องกันอันตราย): Standby Watch (ผู้เฝ้าระวัง): Others / Comments (ข้อสังเกต / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา): Use Radio (การใช้วิทยุ): JSA - EVC - MECH - 002

Ear Protection (อุปกรณ์ป้องกันหู): Standby boat (เรือตรวจตรา): JSA - EVC - MECH - 033

Gloves (ถุงมือป้องกัน): Life Vest (เสื้อชูชีพ): JSA - EVC - MECH - 034

Fire Watch (ผู้เฝ้าระวังไฟ): Safety Harness (เข็มขัดนิรภัย):

Gas Test (อุปกรณ์ตรวจวัดแก๊ส): Erect Barriers (การกั้นเขตพื้นที่): Sign (ธงสี)

BA (ชุดอุปกรณ์เครื่องช่วยหายใจ): P.A Announcement (การประกาศเสียงตามสาย): Sign (ธงสี)

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: [Signature] Isolation Certificate Number #: 00146

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if applicable):

Signature: [Signature] AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

This Permit is issued for the work stated in section 1 and follows the precautions in section 2.

Signature: [Signature] (OIM) Sign: [Signature] (Representative) Time: 07:00 Date: 6/9/25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ปฏิบัติงานได้ทั้งหมด / หยุดชะงักแล้ว และทุกคนที่ฉันควบคุมดูแลได้ถอนตัวออกจากงานแล้ว):

Signature (ธงสี): [Signature] Person In Charge (ผู้ปฏิบัติงาน): [Signature] Time (เวลา): 12:10 Date (วันที่): 6/9/25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: [Signature] (Area Authority) Time: 12:24 Date: 6/9/25

This is to certify that I have carried out the required de-isolation.

Signature: [Signature] (Position): Time: 12:12 Date: 6/9/25

8. PERMIT CANCELLATION: (การปิดใบอนุญาตการทำงาน)

I declare that the work carried out for this permit is completed and I request de-isolation.

Signature: [Signature] (OIM) Time: 13:00 Date: 6-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201363 Task: Blind lift crane operation to sack room Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the ISA or SWH review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
3	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
4	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
5	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
6	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Recorded any relevant isolation Certificate numbers?	Yes	No
3	Ensured isolation declaration has been made (if applicable)?	Yes	No
4	Ensured isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
5	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
3	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1	Indicated who Permit was issued to?	Yes	No
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 TO 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
1	(If audit includes work completion)	Yes	No
2	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
3	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
4	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
5	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
6	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
7	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
8	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including ISA / SWH review, undertaken prior to starting the work?	Yes	No
9	Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No

Person Performing Audit: Napsorn C. - ASTO OIM: [Signature]

Note: if NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped

Was the PTW / Operation suspended: - Yes (give reason) No

What remedial action was taken before the operation continued: N/A

Was the Area Authority / Toolpusher informed? - Yes No

Comments / Corrective Actions: N/A

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: HW0485 Task: Heating sit valve #3 at pump room Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the ISA or SWH review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
3	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
4	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
5	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
6	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Recorded any relevant isolation Certificate numbers?	Yes	No
3	Ensured isolation declaration has been made (if applicable)?	Yes	No
4	Ensured isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
5	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
3	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1	Indicated who Permit was issued to?	Yes	No
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 TO 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
1	(If audit includes work completion)	Yes	No
2	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
3	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
4	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
5	Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No
6	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
7	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
8	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including ISA / SWH review, undertaken prior to starting the work?	Yes	No
9	Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No

Person Performing Audit: Napsorn C. - ASTO OIM: [Signature]

Note: if NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped

Was the PTW / Operation suspended: - Yes (give reason) No

What remedial action was taken before the operation continued: N/A

Was the Area Authority / Toolpusher informed? - Yes No

Comments / Corrective Actions: N/A

COLD WORK ใบอนุญาตทำงานประเภทงานเย็น

Rig: EVE Permit No. (เลขที่ใบอนุญาต): CW- 201353

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): Pipe Deck

Nature of Work (รายละเอียดของงาน): Blind Lift Crane Operation to sack room

From (Date/Time) จาก (วันที่ / เวลา): 6/9/25 00:00 To (Date/Time) ถึง (วันที่ / เวลา): 6/9/25 12:00

Requested by (ผู้ขอใบอนุญาต): [Signature] Person Requesting Work (ผู้ปฏิบัติงาน): [Signature]

Raised by (ผู้ยื่นคำขอใบอนุญาต): [Signature] Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน): [Signature]

2. PRECAUTIONS (การป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken (ซึ่งเราทั้งสองคนได้หารือเกี่ยวกับงานและเห็นพ้องที่จะปฏิบัติตามมาตรการป้องกันที่ระบุไว้ด้านล่างนี้):

Protective Clothing (ชุดป้องกันอันตราย) Standby Watch (ผู้เฝ้าระวัง) Others / Comments (เพิ่มเติม / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา) Use Radio (การใช้วิทยุ) ISA-EVE-MAE-004

Ear Protection (อุปกรณ์ป้องกันหู) Standby boat (เรือเฝ้าระวัง) ISA-EVE-MAE-011

Gloves (ถุงมือป้องกัน) Life Vest (เสื้อชูชีพ) ISA-EVE-MAE-026

Fire Watch (ผู้เฝ้าระวังไฟ) Safety Harness (เข็มขัดนิรภัย) ISA-EVE-MAE-017

Gas Test (อุปกรณ์ตรวจวัดแก๊ส) Erect Barriers (การกั้นเขตพื้นที่) Sign (สติกเกอร์) [Signature]

BA (ชุดอุปกรณ์สื่อสารทางไกล) P.A Announcement (การประกาศเสียงตามสาย) Sign (สติกเกอร์) [Signature]

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: [Signature] Isolation Certificate Number #: (if applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if apply):

Signature: [Signature] AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

This [Signature] has stated work in section 1 and follow the precautions in section 2.

Sign: [Signature] Time: 00:00 Date: 6/9/25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ซึ่งงานที่ดำเนินการภายใต้ใบอนุญาตรับรองนี้เสร็จสิ้นสมบูรณ์ / หยุดชะงักและชายใดก็ตามที่อยู่ในความรับผิดชอบของฉันได้ถูกนำออกจากพื้นที่งานแล้ว):

Signature (สติกเกอร์) [Signature] Person In Charge (ผู้ปฏิบัติงาน) Time (เวลา): 12:00 Date (วันที่): 6/9/25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: [Signature] (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: [Signature] (Position): Time: Date:

8. PERMIT TERMINATION: (การปิดใบอนุญาตการทำงาน)

I declare [Signature] terminated. (ฉันประกาศว่าใบอนุญาตการทำงานฉบับนี้เสร็จสมบูรณ์แล้ว)

Signature: [Signature] (OIM) Time: 1230 Date: 6-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

HOT WORK ใบอนุญาตทำงานประเภทงานร้อน

Rig: EVE Permit No. (เลขที่ใบอนุญาต): HW- 0485

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): pump room

Nature of Work (รายละเอียดของงาน): Heating sit valve #3 at pump room. 03:30

From (Date/Time) จาก (วันที่ / เวลา): 6-9-25 To (Date/Time) ถึง (วันที่ / เวลา): 6-9-25

Requested by (ผู้ขอใบอนุญาต): [Signature] Person Requesting Work (ผู้ปฏิบัติงาน): [Signature]

Raised by (ผู้ยื่นคำขอใบอนุญาต): [Signature] Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน): [Signature]

2. PRECAUTIONS (การป้องกัน):

We, the above named persons in section 1, have discussed the work and agree to the work provided that the following precautions are taken (ซึ่งเราทั้งสองคนได้หารือเกี่ยวกับงานและเห็นพ้องที่จะปฏิบัติตามมาตรการป้องกันที่ระบุไว้ด้านล่างนี้):

Protective Clothing (ชุดป้องกันอันตราย) Standby Watch (ผู้เฝ้าระวัง) Others / Comments (เพิ่มเติม / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา) Use Radio (การใช้วิทยุ) ISA-EVE-MAE-002

Ear Protection (อุปกรณ์ป้องกันหู) Standby boat (เรือเฝ้าระวัง) Fire watch & chock lock

Wear Gloves (สวมถุงมือ) Life Vest (เสื้อชูชีพ)

Fire Watch (ผู้เฝ้าระวังไฟ) Safety Harness (เข็มขัดนิรภัย)

Gas Test (อุปกรณ์ตรวจวัดแก๊ส) Erect Barriers (การกั้นเขตพื้นที่) Sign (สติกเกอร์) [Signature]

BA (ชุดอุปกรณ์สื่อสารทางไกล) P.A Announcement (การประกาศเสียงตามสาย) Sign (สติกเกอร์) [Signature]

3. ISOLATION / SAFETY SYSTEM BYPASS (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting the work stated in section 1 above.

Signature: [Signature] Isolation Certificate Number #: (if applicable)

4. GAS TEST (การตรวจวัดแก๊ส)

% O₂ % H₂S (or ppm) % LEL % CO Entry Certificate Number # (if apply):

Signature: [Signature] AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

This [Signature] to carry out the stated work in section 1 and follow the precautions in section 2.

Sign: [Signature] Time: 3:00 Date: 6-9-25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ซึ่งงานที่ดำเนินการภายใต้ใบอนุญาตรับรองนี้เสร็จสิ้นสมบูรณ์ / หยุดชะงักและชายใดก็ตามที่อยู่ในความรับผิดชอบของฉันได้ถูกนำออกจากพื้นที่งานแล้ว):

Signature (สติกเกอร์) [Signature] Person In Charge (ผู้ปฏิบัติงาน) Time (เวลา): 06:00 Date (วันที่): 6-9-25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: [Signature] (Area Authority) Time: 6:00 Date: 6-9-25

This is to certify that I have carried out the required de-isolation.

Signature: [Signature] (Position): Time: Date:

8. PERMIT TERMINATION: (การปิดใบอนุญาตการทำงาน)

I declare [Signature] terminated. (ฉันประกาศว่าใบอนุญาตการทำงานฉบับนี้เสร็จสมบูรณ์แล้ว)

Signature: [Signature] (OIM) Time: 0630 Date: 6-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201350 Task: High pressure test for MPD Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:-

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the JSA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the JSA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / JSA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
1	Recorded any relevant isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
3	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1	Indicated who Permit was issued to?	Yes	No
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 TO 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
1	(If audit includes work completion)	Yes	No
2	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
3	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
4	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
7	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
8	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (JSA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including JSA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the worksite in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No
Person Performing Audit:		N/A	OIM:
Note: if NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped			
Was the PTW / Operation suspended: - Yes (give reason) - No		N/A	
What remedial action was taken before the operation continued:		N/A	
Was the Area Authority / Toolpusher informed? - Yes No		N/A	
Comments / Corrective Actions:		N/A	

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: HW00485 Task: Replace handrail & kick plate Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:-

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the JSA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the JSA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / JSA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
1	Recorded any relevant isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
1	Has the person in charge of the work (Area Authority or PIC)?	Yes	No
2	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
3	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1	Indicated who Permit was issued to?	Yes	No
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 TO 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
1	(If audit includes work completion)	Yes	No
2	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
3	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
4	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
5	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No
7	Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No
8	All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (JSA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre-job process including JSA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the worksite in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No
Person Performing Audit:		N/A	OIM:
Note: if NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped			
Was the PTW / Operation suspended: - Yes (give reason) - No		N/A	
What remedial action was taken before the operation continued:		N/A	
Was the Area Authority / Toolpusher informed? - Yes No		N/A	
Comments / Corrective Actions:		N/A	

COLD WORK ใบอนุญาตทำงานประเภทงานเย็น

Rig: EVE

Permit No. (เลขที่ใบอนุญาต):

CW - 01350

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): CM Unit - BOP Deck - MPD unit

Required Certificates (ใบรับรองที่ต้องการ):

Nature of Work (รายละเอียดของงาน):

- High Pressure test for MPD

Isolation (การตัดแยก ระบบพลังงาน)

Confined Space (การทำงานในพื้นที่ปิด)

Safety System Bypass Certificate (การตัดระบบการกักกันของอุปกรณ์)

From (Date/Time) จาก (วันที่ / เวลา): 6 Aug 25 09:00 To (Date/Time) ถึง (วันที่ / เวลา): 6 Aug 25 09:00

Requested by (ผู้ขอใบอนุญาต):

Person Requesting Work (ผู้ปฏิบัติงาน)

Raised by (ผู้ยื่นคำขอในทันที):

Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน)

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (ข้าพเจ้าและลูกจ้างที่ปรากฏในส่วนที่ 1 ได้มีการหารือเกี่ยวกับงานและขอรับรองการป้องกันที่ระบุไว้ด้านล่าง):

Protective Clothing (ชุดป้องกันร่างกาย)

Standby Watch (ผู้เฝ้าระวัง)

Others / Comments (ข้อสังเกต / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา)

Use Radio (การใช้วิทยุ)

JSA - CM-1006 - 06

Ear Protection (อุปกรณ์ป้องกันหู)

Standby boat (เรือเฝ้าระวัง)

Gloves (ถุงมือป้องกัน)

Life Vest (เสื้อชูชีพ)

Fire Watch (ผู้เฝ้าระวังไฟ)

Safety Harness (เข็มขัดนิรภัย)

Gas Test (อุปกรณ์ตรวจวัดแก๊ส)

Erect Barriers (การกั้นเขตพื้นที่)

Sign (ลงชื่อ)

BA (ชุดอุปกรณ์เครื่องขยายเสียง)

P.A Announcement (การประกาศเสียงตามสาย)

Sign (ลงชื่อ)

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature (ลงชื่อ):

Isolation Certificate Number # (if applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

% O₂% H₂S (or ppm)

% LEL

% CO

Entry Certificate Number # (if applicable):

AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตการทำงาน)

This is to certify that I have carried out the required de-isolation.

Signature (ลงชื่อ):

Time (เวลา): 08:20 Date: 6-9-25

6. COMPLETION OF WORK (การปฏิบัติงานเสร็จสมบูรณ์)

I declare that the work carried out for this permit is completed and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการได้ดำเนินการเสร็จสมบูรณ์แล้ว):

Signature (ลงชื่อ):

Person In Charge (ผู้ปฏิบัติงาน)

Time (เวลา): 18:30 Date: 6-9-25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature (ลงชื่อ):

(Area Authority)

Date:

This is to certify that I have carried out the required de-isolation.

Signature (ลงชื่อ):

Time (เวลา):

Date:

8. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตการทำงาน)

I declare that the work carried out for this permit is completed and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการได้ดำเนินการเสร็จสมบูรณ์แล้ว):

Signature (ลงชื่อ):

(OIM)

Time (เวลา): 19:00 Date: 6-9-25

COPIES:

WHITE - OIM

PINK - Area Authority

BLUE - Person-In-Charge of Work

HOT WORK ใบอนุญาตทำงานประเภทงานร้อน

Rig: EVE

Permit No. (เลขที่ใบอนุญาต):

HW - 00485

1. REQUEST (การขอใบอนุญาต):

Location of Work (สถานที่ทำงาน): Main deck

Required Certificates (ใบรับรองที่ต้องการ):

Nature of Work (รายละเอียดของงาน):

B. repair hand rail and kick plate

Isolation (การตัดแยก ระบบพลังงาน)

Confined Space (การทำงานในพื้นที่ปิด)

Safety System Bypass Certificate (การตัดระบบการกักกันของอุปกรณ์)

From (Date/Time) จาก (วันที่ / เวลา): 6-9-25 To (Date/Time) ถึง (วันที่ / เวลา): 18:00 6-9-25

Requested by (ผู้ขอใบอนุญาต):

Person Requesting Work (ผู้ปฏิบัติงาน)

Raised by (ผู้ยื่นคำขอในทันที):

Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน)

2. PRECAUTIONS (การป้องกัน):

We, the above named persons in section 1, have discussed the work and agree to the work provided that the following precautions are taken: (ข้าพเจ้าและลูกจ้างที่ปรากฏในส่วนที่ 1 ได้มีการหารือเกี่ยวกับงานและขอรับรองการป้องกันที่ระบุไว้ด้านล่าง):

Protective Clothing (ชุดป้องกันร่างกาย)

Standby Watch (ผู้เฝ้าระวัง)

Others / Comments (ข้อสังเกต / หมายเหตุ):

Eye Protection (อุปกรณ์ป้องกันตา)

Use Radio (การใช้วิทยุ)

JSA - 002

Ear Protection (อุปกรณ์ป้องกันหู)

Standby boat (เรือเฝ้าระวัง)

Wear Gloves (สวมถุงมือ)

Life Vest (เสื้อชูชีพ)

Fire Watch (ผู้เฝ้าระวังไฟ)

Safety Harness (เข็มขัดนิรภัย)

Gas Test (อุปกรณ์ตรวจวัดแก๊ส)

Erect Barriers (การกั้นเขตพื้นที่)

Sign (ลงชื่อ)

BA (ชุดอุปกรณ์เครื่องขยายเสียง)

P.A Announcement (การประกาศเสียงตามสาย)

Sign (ลงชื่อ)

3. ISOLATION / SAFETY SYSTEM BYPASS (การตัดแยกระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting the work stated in section 1 above.

Signature (ลงชื่อ):

Isolation Certificate Number # (if applicable)

4. GAS TEST (การตรวจวัดแก๊ส)

% O₂% H₂S (or ppm)

% LEL

% CO

Entry Certificate Number # (if applicable):

AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตการทำงาน)

This is to certify that I have carried out the required de-isolation.

Signature (ลงชื่อ):

Time (เวลา): 02:00 Date: 6-9-25

6. COMPLETION OF WORK (การปฏิบัติงานเสร็จสมบูรณ์)

I declare that the work carried out for this permit is completed and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการได้ดำเนินการเสร็จสมบูรณ์แล้ว):

Signature (ลงชื่อ):

Person In Charge (ผู้ปฏิบัติงาน)

Time (เวลา): 18:00 Date: 6-9-25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature (ลงชื่อ):

(Area Authority)

Date:

This is to certify that I have carried out the required de-isolation.

Signature (ลงชื่อ):

Time (เวลา):

Date:

8. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตการทำงาน)

I declare that the work carried out for this permit is completed and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการได้ดำเนินการเสร็จสมบูรณ์แล้ว):

Signature (ลงชื่อ):

(OIM)

Time (เวลา): 18:00 Date: 6-9-25

COPIES:

WHITE - OIM

PINK - Area Authority

BLUE - Person-In-Charge of Work

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201358 Task: Radioactive source removal Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
Has the person in charge of the work (Area Authority or PIC)?			
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the ISA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
Has the person in charge of the work (Area Authority or PIC)?			
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Recorded any relevant Isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
2	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1. Indicated who Permit was issued to?			
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
(If audit includes work completion)			
1	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
2	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
3	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
4	Signed, dated and entered the time the De-Isolation was issued? (Area Authority)	Yes	No
5	Signed, dated and entered the time the De-Isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (DIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable), Checklists (ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre job process including ISA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the worksite in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No

Person Performing Audit: Napsara C. - ASTO OIM: [Signature]

Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped

Was the PTW / Operation suspended: - Yes (give reason) No

What remedial action was taken before the operation continued: N/A

Was the Area Authority / Toolpusher informed? - Yes No

Comments / Corrective Actions: N/A

Missing ISA.

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201357 Task: Erec scaffolding support Date: 6 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM:

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
Has the person in charge of the work (Area Authority or PIC)?			
1	Indicated location of work and briefly described the nature of the work authorized?	Yes	No
2	Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No
3	Entered times and dates for the period of authorization?	Yes	No
4	Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No
5	Documented in comments, the ISA or SWI review undertaken?	Yes	No
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
Has the person in charge of the work (Area Authority or PIC)?			
1	Accurately identified the required precautions and hazard controls required for this task?	Yes	No
2	Identified the ISA on Permit and are able to produce it at the site?	Yes	No
3	Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No
4	Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No
5	Have both Area Authority and PIC signed?	Yes	No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Recorded any relevant Isolation Certificate numbers?	Yes	No
2	Ensured isolation declaration has been made (if applicable)?	Yes	No
3	Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No
4	Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
Has the person in charge of the work (Area Authority or PIC)?			
1	Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No
2	Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1. Indicated who Permit was issued to?			
2	Signed, dated and entered the time the permit was issued?	Yes	No
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
(If audit includes work completion)			
1	Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No
2	Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No
3	Was the permit closed prior to expiry of permit as indicated under Section 1	Yes	No
4	Signed, dated and entered the time the De-Isolation was issued? (Area Authority)	Yes	No
5	Signed, dated and entered the time the De-Isolation was completed? (Performing Specialist)	Yes	No
6	Signed, dated and entered the time the Permit was Terminated? (DIM)	Yes	No
7	All documents together after Termination (3x copies Permit & each certificate (where applicable), Checklists (ISA)	Yes	No

Part 2 - AUDIT OF WORK SITE:

1	Permit to Work posted at Work site?	Yes	No
2	Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3	Precautions specified on Permit-to-Work are in place and being complied with?	Yes	No
4	Housekeeping in work area is acceptable?	Yes	No
5	Correct isolations in place?	Yes	No
6	If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7	If written instructions are required, are they available and understood?	Yes	No
8	Was the correct pre job process including ISA / SWI review, undertaken prior to starting the work?	Yes	No
9	Is the worksite in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No

Person Performing Audit: Napsara C. - ASTO OIM: [Signature]

Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped

Was the PTW / Operation suspended: - Yes (give reason) No

What remedial action was taken before the operation continued: N/A

Was the Area Authority / Toolpusher informed? - Yes No

Comments / Corrective Actions: N/A

COLD WORK ใบอนุญาตทำงานประเภทงานเย็น

Rig: EVE Permit No. (เลขที่ใบอนุญาต): CW- 201358

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): R/F	Required Certificates (ใบรับรองที่ต้องการ):
Nature of Work (รายละเอียดของงาน): Radioactive source removal	<input type="checkbox"/> Isolation (การตัดแยก ระบบพลังงาน) <input type="checkbox"/> Confined Space (การทำงานในพื้นที่ปิดอวกาศ) <input type="checkbox"/> Safety System Bypass Certificate (การตัดระบบการกักขังของอุปกรณ์)
From (Date-Time) จาก (วันที่ / เวลา): 6/9/25 11:00	To (Date-Time) ถึง (วันที่ / เวลา): 6/9/25 23:00

Requested by (ชื่อผู้ขอใบอนุญาต): [Signature] Person Requesting Work (ผู้ปฏิบัติงาน): [Signature]
Raised by (ชื่อผู้รับผิดชอบในพื้นที่): [Signature] Area Authority (ผู้รับผิดชอบในพื้นที่การทำงาน): [Signature]

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (ซึ่งเราบุคคลดังกล่าวข้างต้นได้หารือเกี่ยวกับงานและตกลงปฏิบัติตามข้อกำหนดด้านความปลอดภัย ดังต่อไปนี้):

Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย)	Standby Watch (ผู้เฝ้าระวัง)	Others / Comments (สิ่งเพิ่มเติม / อื่นๆ):
Eye Protection (อุปกรณ์ป้องกันตา)	Use Radio (การใช้วิทยุ)	
Ear Protection (อุปกรณ์ป้องกันหู)	Standby boat (เรือตรวจตรา)	
Gloves (ถุงมือป้องกัน)	Life Vest (เสื้อชูชีพ)	
Fire Watch (ผู้เฝ้าระวังไฟ)	Safety Harness (เข็มขัดนิรภัย)	
Gas Test (อุปกรณ์การวัดแก๊ส)	Erect Barriers (การกั้นเขตพื้นที่)	
BA (ชุดอุปกรณ์เครื่องช่วยหายใจ)	P.A Announcement (การแจ้งข่าวประชาสัมพันธ์)	

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: [Signature] Isolation Certificate Number #: (If applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

Signature: [Signature] AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

I declare that the work carried out in section 1 and follow the precautions in section 2.

Signature: [Signature] (OIM) Signature: [Signature] (Client Representative) Time: 11:00 Date: 6-9-25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอแจ้งให้ทราบว่า การปฏิบัติงานที่ได้รับอนุญาตนี้ ได้ดำเนินการเสร็จสิ้นสมบูรณ์แล้ว):

Signature (ลงชื่อ): [Signature] Person In Charge (ผู้ปฏิบัติงาน): [Signature] Time (เวลา): 17:00 Date (วันที่): 6/9/25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: [Signature] (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: [Signature] (Position): Time: Date:

8. PERMIT TO WORK CANCELLATION: (การปิดใบอนุญาตการทำงาน)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอแจ้งให้ทราบว่า การปฏิบัติงานที่ได้รับอนุญาตนี้ ได้ดำเนินการเสร็จสิ้นสมบูรณ์แล้ว):

Signature: [Signature] (OIM) Signature: [Signature] Time: 18:00 Date: 6-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

COLD WORK ใบอนุญาตทำงานประเภทงานเย็น

Rig: EVE Permit No. (เลขที่ใบอนุญาต): CW- 201357

1. REQUEST (การขออนุญาต):

Location of Work (สถานที่ทำงาน): RIG-ROO PLATFORM	Required Certificates (ใบรับรองที่ต้องการ):
Nature of Work (รายละเอียดของงาน): EREC SCAFFOLDING SUPPORT MPD	<input type="checkbox"/> Isolation (การตัดแยก ระบบพลังงาน) <input type="checkbox"/> Confined Space (การทำงานในพื้นที่ปิดอวกาศ) <input type="checkbox"/> Safety System Bypass Certificate (การตัดระบบการกักขังของอุปกรณ์)
From (Date-Time) จาก (วันที่ / เวลา): 6-9-25 08:00	To (Date-Time) ถึง (วันที่ / เวลา): 6-9-25 21:00

Requested by (ชื่อผู้ขอใบอนุญาต): [Signature] Person Requesting Work (ผู้ปฏิบัติงาน): [Signature]
Raised by (ชื่อผู้รับผิดชอบในพื้นที่): [Signature] Area Authority (ผู้รับผิดชอบในพื้นที่การทำงาน): [Signature]

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree provided that the following precautions are taken: (ซึ่งเราบุคคลดังกล่าวข้างต้นได้หารือเกี่ยวกับงานและตกลงปฏิบัติตามข้อกำหนดด้านความปลอดภัย ดังต่อไปนี้):

Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย)	Standby Watch (ผู้เฝ้าระวัง)	Others / Comments (สิ่งเพิ่มเติม / อื่นๆ):
Eye Protection (อุปกรณ์ป้องกันตา)	Use Radio (การใช้วิทยุ)	
Ear Protection (อุปกรณ์ป้องกันหู)	Standby boat (เรือตรวจตรา)	
Gloves (ถุงมือป้องกัน)	Life Vest (เสื้อชูชีพ)	
Fire Watch (ผู้เฝ้าระวังไฟ)	Safety Harness (เข็มขัดนิรภัย)	
Gas Test (อุปกรณ์การวัดแก๊ส)	Erect Barriers (การกั้นเขตพื้นที่)	
BA (ชุดอุปกรณ์เครื่องช่วยหายใจ)	P.A Announcement (การแจ้งข่าวประชาสัมพันธ์)	

3. ISOLATION / SAFETY SYSTEM BYPASS: (การตัดระบบพลังงาน)

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting work stated in section 1 above.

Signature: [Signature] Isolation Certificate Number #: (If applicable)

4. GAS TEST (if applicable): (การตรวจวัดแก๊ส)

Signature: [Signature] AGT (Authorized Gas Tester)

5. PERMIT TO WORK APPROVAL: (การอนุมัติใบอนุญาตการทำงาน)

I declare that the work carried out in section 1 and follow the precautions in section 2.

Signature: [Signature] (OIM) Signature: [Signature] (Client Representative) Time: 08:00 Date: 6-9-25

6. COMPLETION OF WORK: (การปฏิบัติงานเสร็จสิ้นสมบูรณ์)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอแจ้งให้ทราบว่า การปฏิบัติงานที่ได้รับอนุญาตนี้ ได้ดำเนินการเสร็จสิ้นสมบูรณ์แล้ว):

Signature (ลงชื่อ): [Signature] Person In Charge (ผู้ปฏิบัติงาน): [Signature] Time (เวลา): 16:00 Date (วันที่): 6-9-25

7. DE-ISOLATION: (การยกเลิกระบบตัดแยกพลังงาน)

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: [Signature] (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: [Signature] (Position): Time: Date:

8. PERMIT TO WORK CANCELLATION: (การปิดใบอนุญาตการทำงาน)

I declare that the work carried out for this permit is completed / suspended and any men under my charge have been withdrawn from the work. (ข้าพเจ้าขอแจ้งให้ทราบว่า การปฏิบัติงานที่ได้รับอนุญาตนี้ ได้ดำเนินการเสร็จสิ้นสมบูรณ์แล้ว):

Signature: [Signature] (OIM) Signature: [Signature] Time: 18:00 Date: 6-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: HW0491 Task: Repair support life raft at main deck Date: 5 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM

SECTION 1 - REQUEST	PLANNING / PERMIT CATEGORY / WORK DETAIL
1. Indicated location of work and briefly described the nature of the work authorized?	Yes No
2. Inserted his name and position (company if 3 rd party) requesting authorization?	Yes No
3. Entered times and dates for the period of authorization?	Yes No
4. Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes No
5. Documented in comments, the ISA or SWI review undertaken?	Yes No
SECTION 2 - PRECAUTIONS	SAFETY PRECAUTIONS & WORK PREPARATION
1. Has the person in charge of the work (Area Authority or PIC)?	Yes No
2. Accurately identified the required precautions and hazard controls required for this task?	Yes No
3. Identified the ISA on Permit and are able to produce it at the site?	Yes No
4. Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes No
5. Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes No
6. Have both Area Authority and PIC signed?	Yes No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS	MEASURES BEFORE AND DURING WORK
1. Recorded any relevant Isolation Certificate numbers?	Yes No N/A
2. Ensured isolation declaration has been made (if applicable)?	Yes No N/A
3. Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes No N/A
4. Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes No N/A
SECTION 4 - GAS TEST	MEASURES BEFORE AND DURING WORK
1. Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes No N/A
2. Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes No N/A
SECTION 5 - PERMIT TO WORK APPROVAL	CONTROL
1. Indicated who Permit was issued to?	Yes No
2. Signed, dated and entered the time the permit was issued?	Yes No
SECTION 6 to 8 - COMPLETION OF WORK	WORK COMPLETION & SIGN-OFF
1. (If audit includes work completion)	Yes No N/A
2. Is the work area clean, tidy and in a safe condition after completion of the job?	Yes No N/A
3. Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes No N/A
4. Was the permit closed prior to expiry of permit as indicated under Section 1	Yes No N/A
5. Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes No N/A
6. Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes No N/A
7. Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes No N/A
8. All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (ISA)	Yes No N/A

Part 2 - AUDIT OF WORK SITE:

1. Permit to Work posted at Work site?	Yes No
2. Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes No
3. Precautions specified on Permit-to-Work are in place and being complied with?	Yes No
4. Housekeeping in work area is acceptable?	Yes No
5. Correct isolations in place?	Yes No N/A
6. If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes No N/A
7. If written instructions are required, are they available and understood?	Yes No N/A
8. Was the correct pre-job process including ISA / SWI review, undertaken prior to starting the work?	Yes No
9. Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes No N/A
Person Performing Audit:	Napassara C. - ASTO
OIM:	
Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped	
Was the PTW / Operation suspended: - Yes (give reason) No	
What remedial action was taken before the operation continued:	N/A
Was the Area Authority / Toolpusher informed? - Yes No	
Comments / Corrective Actions:	N/A

PERMIT TO WORK AUDIT FORM

Rig: EVE Permit No: CW201376 Task: Blind lift crane operations to sack room Date: 8 Sep 2025

Part 1 - AUDIT OF PERMIT TO WORK FORM

SECTION 1 - REQUEST	PLANNING / PERMIT CATEGORY / WORK DETAIL
1. Indicated location of work and briefly described the nature of the work authorized?	Yes No
2. Inserted his name and position (company if 3 rd party) requesting authorization?	Yes No
3. Entered times and dates for the period of authorization?	Yes No
4. Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes No
5. Documented in comments, the ISA or SWI review undertaken?	Yes No
SECTION 2 - PRECAUTIONS	SAFETY PRECAUTIONS & WORK PREPARATION
1. Has the person in charge of the work (Area Authority or PIC)?	Yes No
2. Accurately identified the required precautions and hazard controls required for this task?	Yes No
3. Identified the ISA on Permit and are able to produce it at the site?	Yes No
4. Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes No
5. Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes No
6. Have both Area Authority and PIC signed?	Yes No
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS	MEASURES BEFORE AND DURING WORK
1. Recorded any relevant Isolation Certificate numbers?	Yes No N/A
2. Ensured isolation declaration has been made (if applicable)?	Yes No N/A
3. Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes No N/A
4. Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes No N/A
SECTION 4 - GAS TEST	MEASURES BEFORE AND DURING WORK
1. Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes No N/A
2. Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes No N/A
SECTION 5 - PERMIT TO WORK APPROVAL	CONTROL
1. Indicated who Permit was issued to?	Yes No
2. Signed, dated and entered the time the permit was issued?	Yes No
SECTION 6 to 8 - COMPLETION OF WORK	WORK COMPLETION & SIGN-OFF
1. (If audit includes work completion)	Yes No N/A
2. Is the work area clean, tidy and in a safe condition after completion of the job?	Yes No N/A
3. Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes No N/A
4. Was the permit closed prior to expiry of permit as indicated under Section 1	Yes No N/A
5. Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes No N/A
6. Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes No N/A
7. Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes No N/A
8. All documents together after Termination (3x copies Permit & each certificate (where applicable); Checklists (ISA)	Yes No N/A

Part 2 - AUDIT OF WORK SITE:

1. Permit to Work posted at Work site?	Yes No
2. Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes No
3. Precautions specified on Permit-to-Work are in place and being complied with?	Yes No
4. Housekeeping in work area is acceptable?	Yes No
5. Correct isolations in place?	Yes No N/A
6. If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes No N/A
7. If written instructions are required, are they available and understood?	Yes No N/A
8. Was the correct pre-job process including ISA / SWI review, undertaken prior to starting the work?	Yes No
9. Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes No N/A
Person Performing Audit:	Napassara C. - ASTO
OIM:	
Note: If NO is recorded in any of the responses - Work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped	
Was the PTW / Operation suspended: - Yes (give reason) No	
What remedial action was taken before the operation continued:	N/A
Was the Area Authority / Toolpusher informed? - Yes No	
Comments / Corrective Actions:	N/A

HOT WORK ใบอนุญาตทำงานประเภทงานร้อน

Rig: EVE Permit No. (เลขที่ใบอนุญาต): HW-0491

1. REQUEST (การขอใบอนุญาตนงาน):

Location of Work (สถานที่ทำงาน): Main deck

Nature of Work (รายละเอียดของงาน): Repair support Life Raft at main deck 2200

From (Date/Time) จาก (วันที่ / เวลา): 7-9-25 To (Date/Time) ถึง (วันที่ / เวลา): 8-9-25 06:00

Requested by (ชื่อผู้ขอใบอนุญาตนงาน):

Person Requesting Work (ผู้ปฏิบัติงานงาน):

Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน):

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree to the work provided that the following precautions are taken (ข้าพเจ้าและบุคคลที่เกี่ยวข้องในภาค 1 ได้มีการหารือเกี่ยวกับงานและขอรับรองการป้องกันที่ระบุไว้ด้านล่างนี้):

Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย): Standby Watch (ผู้เฝ้าระวัง) Others / Comments (สังเกตเพิ่ม / ติง):

Eye Protection (อุปกรณ์ป้องกันตา): Use Radio (การใช้วิทยุ): JSA-EVE-MAR-017

Ear Protection (อุปกรณ์ป้องกันหู): Standby boat (เรือตรวจตรา): JSA-EVE-MAR-004

Gloves (ถุงมือป้องกัน): Life Vest (เสื้อชูชีพ): JSA-EVE-MAR-011

Fire Watch (ผู้เฝ้าระวังไฟ): Safety Harness (เข็มขัดนิรภัย): JSA-EVE-MAR-026

Gas Test (อุปกรณ์ตรวจวัดแก๊ส): Erect Barriers (การกั้นเขตพื้นที่): Sign (สติกเกอร์):

P.A Announcement (การประกาศเสียงสาธารณะ): Sign (สติกเกอร์):

3. ISOLATION / SAFETY SYSTEM BYPASS (การปิดและการเบี่ยงเบนพลังงาน):

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting the work stated in section 1 above.

Signature: (Position): Isolation Certificate Number #: (If applicable):

4. GAS TEST (การตรวจวัดแก๊ส):

Signature: (Position): AGT (Authorized Gas Tester):

5. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตนงาน):

This Permit is issued to the person named in section 1 and they must carry out the stated work in section 1 and follow the precautions in section 2.

Signature: (OIM) Sign: (Client Representative) Time: 21:00 Date: 7-9-25

6. COMPLETION OF WORK (การปฏิบัติงานเสร็จสิ้นงาน):

I declare that the work carried out for this permit is completed, suspended and any men under my charge have been withdrawn from the work (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการนี้เสร็จสิ้นแล้ว และทุกคนที่ฉันมีอำนาจควบคุมอยู่ได้ถูกนำตัวออกจากงานแล้ว):

Signature (สติกเกอร์): Person In Charge (ผู้ปฏิบัติงานงาน) Time (เวลา): 06:00 Date (วันที่): 8-9-25

7. DE-ISOLATION (การยกเลิกการเบี่ยงเบนพลังงาน):

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: (Position): Time: Date:

8. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตนงาน):

I declare that the work carried out for this permit is completed, suspended and any men under my charge have been withdrawn from the work (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการนี้เสร็จสิ้นแล้ว และทุกคนที่ฉันมีอำนาจควบคุมอยู่ได้ถูกนำตัวออกจากงานแล้ว):

Signature: (OIM) Sign: (Client Representative) Time: 06:30 Date: 8-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

COLD WORK ใบอนุญาตทำงานประเภทงานเย็น

Rig: EVE Permit No. (เลขที่ใบอนุญาต): CW-201376

1. REQUEST (การขอใบอนุญาตนงาน):

Location of Work (สถานที่ทำงาน): Pipe Deck

Nature of Work (รายละเอียดของงาน): Blind Lift Crane Operations to Sack Room

From (Date/Time) จาก (วันที่ / เวลา): 8/9/25 00:00 To (Date/Time) ถึง (วันที่ / เวลา): 8/9/25 12:00

Requested by (ชื่อผู้ขอใบอนุญาตนงาน):

Person Requesting Work (ผู้ปฏิบัติงานงาน):

Area Authority (ผู้รับผิดชอบพื้นที่การทำงาน):

2. PRECAUTIONS (วิธีการป้องกัน):

We, the above named persons in section 1, have discussed the work and agree to the work provided that the following precautions are taken: (ข้าพเจ้าและบุคคลที่เกี่ยวข้องในภาค 1 ได้มีการหารือเกี่ยวกับงานและขอรับรองการป้องกันที่ระบุไว้ด้านล่างนี้):

Protective Clothing (ชุดอุปกรณ์ป้องกันร่างกาย): Standby Watch (ผู้เฝ้าระวัง) Others / Comments (สังเกตเพิ่ม / ติง):

Eye Protection (อุปกรณ์ป้องกันตา): Use Radio (การใช้วิทยุ): JSA-EVE-MAR-017

Ear Protection (อุปกรณ์ป้องกันหู): Standby boat (เรือตรวจตรา): JSA-EVE-MAR-004

Gloves (ถุงมือป้องกัน): Life Vest (เสื้อชูชีพ): JSA-EVE-MAR-011

Fire Watch (ผู้เฝ้าระวังไฟ): Safety Harness (เข็มขัดนิรภัย): JSA-EVE-MAR-026

Gas Test (อุปกรณ์ตรวจวัดแก๊ส): Erect Barriers (การกั้นเขตพื้นที่): Sign (สติกเกอร์):

P.A Announcement (การประกาศเสียงสาธารณะ): Sign (สติกเกอร์):

3. ISOLATION / SAFETY SYSTEM BYPASS (การปิดและการเบี่ยงเบนพลังงาน):

I declare the work carried out in the respective certificate safeguards the lives of personnel conducting the work stated in section 1 above.

Signature: (Position): Isolation Certificate Number #: (If applicable):

4. GAS TEST (การตรวจวัดแก๊ส):

Signature: (Position): AGT (Authorized Gas Tester):

5. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตนงาน):

This Permit is issued to the person named in section 1 and they must carry out the stated work in section 1 and follow the precautions in section 2.

Signature: (OIM) Sign: (Client Representative) Time: 00:00 Date: 8/9/25

6. COMPLETION OF WORK (การปฏิบัติงานเสร็จสิ้นงาน):

I declare that the work carried out for this permit is completed, suspended and any men under my charge have been withdrawn from the work (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการนี้เสร็จสิ้นแล้ว และทุกคนที่ฉันมีอำนาจควบคุมอยู่ได้ถูกนำตัวออกจากงานแล้ว):

Signature (สติกเกอร์): Person In Charge (ผู้ปฏิบัติงานงาน) Time (เวลา): 12:30 Date (วันที่): 8/9/25

7. DE-ISOLATION (การยกเลิกการเบี่ยงเบนพลังงาน):

I declare that the work carried out for this Permit is completed and I request de-isolation.

Signature: (Area Authority) Time: Date:

This is to certify that I have carried out the required de-isolation.

Signature: (Position): Time: Date:

8. PERMIT TO WORK APPROVAL (การอนุมัติใบอนุญาตนงาน):

I declare that the work carried out for this permit is completed, suspended and any men under my charge have been withdrawn from the work (ข้าพเจ้าขอรับรองว่างานที่ได้รับอนุญาตให้ดำเนินการนี้เสร็จสิ้นแล้ว และทุกคนที่ฉันมีอำนาจควบคุมอยู่ได้ถูกนำตัวออกจากงานแล้ว):

Signature: (OIM) Sign: (Client Representative) Time: 12:30 Date: 8-9-25

COPIES: WHITE - OIM PINK - Area Authority BLUE - Person-In-Charge of Work

PERMIT TO WORK AUDIT FORM

Rig: <i>FW</i>	Permit No: <i>FW 00187</i>	Date: <i>18 AUG 2015</i>
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Part 1 - AUDIT OF PERMIT TO WORK FORM:

SECTION 1 - REQUEST		PLANNING / PERMIT CATEGORY / WORK DETAIL	
1. Has the person in charge of the work (Area Authority or PIC)?			
2. Indicated location of work and briefly described the nature of the work authorized?	Yes	No	
3. Inserted his name and position (company if 3 rd party) requesting authorization?	Yes	No	
4. Entered times and dates for the period of authorization?	Yes	No	
5. Identified the appropriate certificates required (if applicable), and referenced Certificate #	Yes	No	N/A
6. Documented in comments, the ISA or SWI review undertaken?	Yes	No	
SECTION 2 - PRECAUTIONS		SAFETY PRECAUTIONS & WORK PREPARATION	
1. Has the person in charge of the work (Area Authority or PIC)?			
2. Accurately identified the required precautions and hazard controls required for this task?	Yes	No	
3. Identified the ISA on Permit and are able to produce it at the site?	Yes	No	
4. Crew are able to describe the hazards identified and discussed during the Pre-job / ISA discussion	Yes	No	N/A
5. Have adequate compensating measures been identified and implemented for Safety System bypass / Confined Space Entry / Isolations	Yes	No	N/A
6. Have both Area Authority and PIC signed?	Yes	No	
SECTION 3 - ISOLATION / SAFETY SYSTEM BYPASS		MEASURES BEFORE AND DURING WORK	
1. Has the person in charge of the work (Area Authority or PIC)?			
2. Recorded any relevant isolation Certificate numbers?	Yes	No	N/A
3. Ensured isolation declaration has been made (if applicable)?	Yes	No	N/A
4. Ensured Isolation Certificate completed fully with isolated equipment specified and methods of isolation recorded?	Yes	No	N/A
5. Signed to indicate satisfaction with the Planning of the work and precautions in place (Performing Specialist & AA)?	Yes	No	N/A
SECTION 4 - GAS TEST		MEASURES BEFORE AND DURING WORK	
1. Has the person in charge of the work (Area Authority or PIC)?			
2. Ensured gas testing has been undertaken by Authorized Gas Tester (if required) and results recorded fully?	Yes	No	N/A
3. Did Authorized Gas Tester (if required) sign and indicate time of initial test and verified Entry Certificate?	Yes	No	N/A
SECTION 5 - PERMIT TO WORK APPROVAL		CONTROL	
1. Indicated who Permit was issued to?	Yes	No	
2. Signed, dated and entered the time the permit was issued?	Yes	No	
SECTION 6 to 8 - COMPLETION OF WORK		WORK COMPLETION & SIGN-OFF	
1. If audit includes work completion?			
2. Is the work area clean, tidy and in a safe condition after completion of the job?	Yes	No	N/A
3. Did the PIC close the permit by signing, dating, and indicating time of completion?	Yes	No	N/A
4. Was the permit closed prior to expiry of permit as indicated under Section 1?	Yes	No	N/A
5. Signed, dated and entered the time the De-isolation was issued? (Area Authority)	Yes	No	N/A
6. Signed, dated and entered the time the De-isolation was completed? (Performing Specialist)	Yes	No	N/A
7. Signed, dated and entered the time the Permit was Terminated? (OIM)	Yes	No	N/A
8. All documents together after Termination (3x copies Permit & each certificate (where applicable), Checklists / ISA)	Yes	No	N/A

Part 2 - AUDIT OF WORK SITE:

1. Permit to Work posted at Work site?	Yes	No
2. Persons carrying out work understand the task and accept conditions of Permit-to-Work?	Yes	No
3. Precautions specified on Permit to Work are in place and being complied with?	Yes	No
4. Housekeeping in work area is acceptable?	Yes	No
5. Correct isolations in place?	Yes	No
6. If a Fire Watch or Standby Man required, are they dedicated to the job and understand their duties?	Yes	No
7. If written instructions are required, are they available and understood?	Yes	No
8. Was the correct pre-job process including ISA / SWI reviews, undertaken prior to starting the work?	Yes	No
9. Is the work site in a safe condition after completion of the job (if audit undertaken post job)?	Yes	No

Person Performing Audit	OIM:
Note: If NO is recorded in any or the responses - work shall be suspended until corrected - Audit to be handed to OIM for review and signature if work stopped	
Was the PTW / Operation suspended? - Yes (give reason) / No	
What remedial action was taken before the operation continued: <i>1x ISA = Task LAMING - REJECTED</i>	
Was the Area Authority / Toolboxer informed? - (Yes) No <i>SAFER OPERATION ON SITE</i>	
Comments / Corrective Actions: <i>work will done at time of site visit</i>	
<i>Barry HOFMANN</i>	

PTW AUDIT (BRIEF)

Date / Time: <i>15.6.25</i>	Audited by: <i>[Signature]</i>
วันที่ / เวลา: <i>9.00</i>	ตรวจโดย: <i>[Signature]</i>
Permit #: <i>201177</i>	Worksite: <i>SAFER WORK</i>
หมายเลขใบอนุญาต: <i>201177</i>	สถานที่ทำงาน: <i>SAFER WORK</i>

Checklist to be used when auditing work permits. / แบบตรวจเช็คใบสั่งงานก่อนปฏิบัติงาน
As quality control tool this should cover the job at hand, verify if the Work Permit covers the job correctly, if the hazards have been identified correctly, if the work permit has been completed correctly and that the executing team is well aware of the job and hazards. As a logging tool it enables the correct logging of the found deficiencies and the transfer of found deficiencies into the Corrective Action Register.
เพื่อเป็นการควบคุมคุณภาพงานที่ดำเนินการปฏิบัติงาน, ต้องมีการยืนยันว่าใบอนุญาตทำงานครอบคลุมอย่างถูกต้อง, มีการระบุอันตรายอย่างครบถ้วนแล้ว, การระบุอันตรายอย่างครบถ้วนแล้วและระบุวิธีจัดการและบันทึกข้อบกพร่อง ไม่สามารถบันทึกข้อบกพร่องที่ไม่เหมาะสมลงไปได้ และสิ่งเหล่านี้ต้องนำไปบันทึกในแบบบันทึกการแก้ไขข้อบกพร่อง

#	Description คำอธิบาย	YES / ใช่	NO / ไม่ใช่	N/A / ไม่เกี่ยวข้อง	Remark หมายเหตุ
1	Are all details completed as relevant? การรายละเอียดทั้งหมดของงานตามใบอนุญาตเสร็จสิ้นหรือไม่?	<input checked="" type="checkbox"/>			
2	Work Permit valid for date and time? ใบอนุญาตมีการกาวันที่และเวลาหรือไม่?	<input checked="" type="checkbox"/>			
3	ISA or 4-point check processes followed and documented. Was verbal communication used to verify understanding of the process. มีการปฏิบัติตามขั้นตอนของระบบหรือแบบรายการด้วย 4 จุดและบันทึกไว้ มีการพูดคุยเพื่อยืนยันความเข้าใจในขั้นตอนเหล่านั้นหรือไม่?	<input checked="" type="checkbox"/>			
4	Precautions in section 2 completed as relevant? การป้องกันในส่วนที่ 2 ถูกครอบคลุมอย่างครบถ้วนเหมาะสมหรือไม่?	<input checked="" type="checkbox"/>			
5	Isolation certificate attached and completed as and if required? ใบรับรองการตัดระบบแนบ และครอบคลุมอย่างถูกต้องหรือไม่? ถ้าใช่	<input checked="" type="checkbox"/>			
6	Signatures for isolation of safety systems in place if required? มีการเซ็นชื่อในใบรับรองการตัดระบบปลอดภัยหรือไม่? ถ้าใช่	<input checked="" type="checkbox"/>			
7	Gas testing being conducted if and as required? มีการตรวจวัดแก๊สอย่างเหมาะสมหรือไม่? ถ้าใช่	<input checked="" type="checkbox"/>			
8	Checklists and attachments present as required? มีแบบรายการตรวจสอบและเอกสารแนบอย่างเหมาะสมหรือไม่? ถ้าใช่	<input checked="" type="checkbox"/>			
9	Is the job being carried in accordance with the work permit? งานนั้นดำเนินการตรงตามใบอนุญาตหรือไม่?	<input checked="" type="checkbox"/>			
10	Confirm the buddy system is being adhered to. เพื่อให้แน่ใจมีการใช้ระบบคู่หูในการทำงาน	<input checked="" type="checkbox"/>			
11	Does the Work Permit identify and covers the job and hazards correctly? ใบอนุญาตมีการระบุงานและอันตรายอย่างครอบคลุมหรือไม่?	<input checked="" type="checkbox"/>			

Comments and corrections *ความเห็นและการแก้ไข*
Good Team works

SAFETY DATA SHEET

DUAL SPACER SURFACTANT B

Revision Date: 22-Oct-2018

Revision Number: 32

1. Identification of the hazardous chemical and of the supplier

Product Identifier

Product Name DUAL SPACER SURFACTANT B

Other means of identification

Hazardous Material Number: HM000470

Recommended use of the chemical and restrictions on use

Recommended Use Cement Additive

Supplier details

Halliburton Energy Service (M) Sdn Bhd
10th Floor, G Tower,
199 Jalan Tun Razak,
50400, Kuala Lumpur, Malaysia
Phone Number: +603-9206 6888

Halliburton Energy Service (M) Sdn Bhd
Labuan Base,
Ranca-Ranca Industrial Estate
Labuan FT, LAB 82223 Malaysia
Phone Number: +60 87-596 200 ext Gate B-886086263

Halliburton Energy Service (M) Sdn Bhd
Warehouse 38, Phase 2, Kemaman Supply Base (KSB)
24007, Kemaman
Terengganu, Malaysia
Phone Number : +609-862 8000

For further information, please contact

E-mail Address fdunexchem@halliburton.com

Emergency Phone number

+60 015 4 877 0772
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazard Identification

Classification of the hazardous chemical

Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage/Irritation	Category 2 - H319
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 2 - H411

Label Elements

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แท่นเจาะ-3.8 ตัวอย่างเอกสารข้อมูลความปลอดภัยของสารเคมี

DUAL SPACER SURFACTANT B

Revision Date: 22-Oct-2018

Hazard Pictograms



Signal Word:

Warning

Hazard Statements

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H401 - Toxic to aquatic life
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

Prevention

P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/eye protection/face protection
P302 + P352 - IF ON SKIN: Wash with plenty of water.

Response

P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 + P364 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention
P091 - Collect spillage

Storage

Disposal

None
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Contains

Substances

Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-

CAS Number

9016-45-9

Other hazards which do not result in classification

This substance is considered to be persistent, bioaccumulating and toxic (PBT).
This substance is considered to be very persistent and very bioaccumulating (vPvB).

3. Composition and information on ingredients of the hazardous chemical

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Malaysia
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	> 60%	Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) Aquatic Chronic 2 (H411)

4. First aid measures

Description of first aid measures

Inhalation

If inhaled, move victim to fresh air and seek medical attention.

Eyes

In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

Skin

In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Remove contaminated clothing and laundry before reuse.

Ingestion

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

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DUAL SPACER SURFACTANT B

Revision Date: 22-Oct-2018

Most important symptoms and effects, both acute and delayed

Causes eye irritation. Causes skin irritation. May be harmful if swallowed. May be harmful in contact with skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. Fire-fighting measures

Suitable extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

Physicochemical hazards arising from the chemical

Special exposure hazards in a fire

Decomposition in fire may produce harmful gases.

Special protective equipment and precautions for fire fighters

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation.

See Section 8 for additional information

Environmental precautions

Prevent from entering sewers, waterways, or low areas.

Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and storage

Precautions for safe handling

Wear appropriate respirator when opening containers. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Store away from oxidizers. Store in a cool well ventilated area. Keep container closed when not in use. Product has a shelf life of 24 months.

8. Exposure controls and personal protection

Control parameters

Exposure Limits

Substances	CAS Number	Malaysia OEL	ACGIH TLV-TWA
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydroxy-	9016-45-9	Not applicable	Not applicable

Appropriate engineering controls

Engineering Controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

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DUAL SPACER SURFACTANT B

Revision Date: 22-Oct-2018

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.
Organic vapor respirator.

Hand Protection

Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Skin Protection

Eye Protection

Other Precautions

Environmental Exposure Controls

Rubber apron.

Chemical goggles; also wear a face shield if splashing hazard exists.

None known.

Do not allow material to contaminate ground water system

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State:

Liquid

Odor:

Slight phenolic

Color

Clear colorless to pale yellow

Odor Threshold:

No information available

Property

Remarks/ - Method

pH:

5-7

Freezing Point / Range

-18 °C

Melting Point / Range

No data available

Pour Point / Range

No data available

Boiling Point / Range

> 250 °C / > 482 °F

Flash Point

> 172 °C / 200 °F (PMCC)

Evaporation rate

< 0.01 (BuAc = 1)

Vapor Pressure

< 0.1 mmHg @ 20 °C

Vapor Density

> 1

Specific Gravity

1.02

Water Solubility

Soluble in water

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

Viscosity

No data available

Explosive Properties

No information available

Oxidizing Properties

No information available

Other information

VOC Content (%)

No data available

10. Stability and reactivity

Reactivity

Not expected to be reactive.

Chemical stability

Page 4 / 8

Stable
Possibility of hazardous reactions Will Not Occur
Conditions to avoid None anticipated
Incompatible materials Strong oxidizers. Strong acids. Strong alkalis.
Hazardous decomposition products Toxic fumes. Carbon monoxide and carbon dioxide.

11. Toxicological information

Information on possible routes of exposure Principle Route of Exposure	Eye or skin contact, inhalation.
Symptoms related to exposure Most Important Symptoms/Effects	Causes eye irritation. Causes skin irritation. May be harmful if swallowed. May be harmful in contact with skin.
Numerical measures of toxicity Toxicology data for the components	

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	4290 mg/kg bw (rat) (similar substance)	2500 mg/kg-bw (Mammal) (similar substance)	No data of sufficient quality are available

Immediate, delayed and chronic health effects from exposure Inhalation Eye Contact Skin Contact Ingestion	May cause mild respiratory irritation. Causes eye irritation. May be harmful in contact with skin. Causes skin irritation. May be harmful if swallowed. Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea.
Chronic Effects/Carcinogenicity	May contain ethylene oxide in the headspace of the drum. Ethylene oxide is a cancer and reproductive hazard.

Exposure Levels No data available
Interactive effects Skin disorders. Lung disorders.
Data limitations No data available

Substances	CAS Number	Skin corrosion/irritation
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	Causes skin irritation. (Rabbit)
Substances	CAS Number	Serious eye damage/irritation
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	Causes moderate eye irritation (Rabbit)
Substances	CAS Number	Skin Sensitization
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	Patch test on human volunteers did not demonstrate sensibilization properties

a-(nonylphenyl)-w-hydrox- yl		
Substances	CAS Number	Respiratory Sensitization
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	No information available
Substances	CAS Number	Mutagenic Effects
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	In vivo tests did not show mutagenic effects. (similar substances)
Substances	CAS Number	Carcinogenic Effects
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	Did not show carcinogenic effects in animal experiments (similar substances)
Substances	CAS Number	Reproductive toxicity
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	No data of sufficient quality are available.
Substances	CAS Number	STOT - single exposure
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	No information available
Substances	CAS Number	STOT - repeated exposure
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	No significant toxicity observed in animal studies at concentration requiring classification.
Substances	CAS Number	Aspiration hazard
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	9016-45-9	Not applicable

12. Ecological information

Ecotoxicity					
12.1. Toxicity					
Ecotoxicity effects					
Toxic to aquatic life. Toxic to aquatic life with long lasting effects.					
Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydr oxy-	9016-45-9	EC50 (48 h) 12 mg/L (Selenastrum capricornutum)	LC50 (96 h) 5 mg/L (Danio Rerio) LC50 (96 h) 1.6 mg/L (Pimephales promelas) LOEC (21 d) 0.05 mg/L (Gasterosteus aculeatus)	No information available	No information available

Persistence and degradability Substances Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	CAS Number 9016-45-9	Persistence and Degradability Not readily biodegradable
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Bioaccumulative potential Substances Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	CAS Number 9016-45-9	Bioaccumulation No information available
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Mobility in soil Substances Poly(oxy-1,2-ethandiyl), a-(nonylphenyl)-w-hydrox- yl	CAS Number 9016-45-9	Mobility No information available
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Other adverse effects
Endocrine Disruptor Information

13. Disposal considerations

Disposal methods Disposal methods Contaminated Packaging	Disposal should be made in accordance with federal, state, and local regulations. Follow all applicable national or local regulations.
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14. Transportation information

Transportation Information UN Number UN proper shipping name: Transport Hazard Class(es): Packing Group: Environmental Hazards:	UN3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Ethoxylated Nonylphenol) 9 III Marine Pollutant
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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

Special precautions for user None

HazChem Code +SZ

15. Regulatory information

International Agreements Montreal Protocol - Ozone Depleting Substances: Stockholm Convention - Persistent Organic Pollutants: Rotterdam Convention - Prior Informed Consent: Basel Convention - Hazardous Waste:	Does not apply. Does not apply. Does not apply. Does not apply.
Safety, health, and environmental regulations specific for the hazardous chemical Malaysia Occupation Safety and Health - Prohibition of Use Substances: Malaysia Substances Requiring Medical Surveillance: Malaysia Environmentally Hazardous Substances (EHS):	Does not apply Does not apply One or more components listed.

16. Other information

Revision Date: Revision Note SDS sections updated: 2	22-Oct-2018
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Key literature references and sources for data
www.ChemADVISOR.com/

Key or legend to abbreviations and acronyms used in the safety data sheet
bw – body weight
CAS – Chemical Abstracts Service
EC – European Commission
EC10 – Effective Concentration 10%
EC50 – Effective Concentration 50%
EEC – European Economic Community
EC50 – Effective Concentration growth rate 50%
IBC Code – International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%

LL0 – Lethal Loading 0%
LL50 – Lethal Loading 50%
MARPOL – International Convention for the Prevention of Pollution from Ships
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NOEC – No Observed Effect Concentration
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PBT – Persistent Bioaccumulative and Toxic
PC – Chemical Product category
PEL – Permissible Exposure Limit
ppm – parts per million
PROC – Process category
STEL – Short Term Exposure Limit
h - hour
d - day

Disclaimer Statement
This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet

SAFETY DATA SHEET
HALAD® 413L CEMENT ADDITIVEProduct Trade Name:
Revision Date: 22-Mar-2022

Revision Number: 33

1. Identification**1.1. Product Identifier**

Product Trade Name: HALAD® 413L CEMENT ADDITIVE
Synonyms None
Chemical Family Polymer
Internal ID Code HM000824

1.2 Recommended use and restrictions on use

Application Fluid Loss Additive
Uses advised against No information available

1.3 Manufacturer's Name and Contact Details

Halliburton Group Canada
645 - 7th Ave SW Suite 1800
Calgary, AB, T2P 4G8, Canada
Telephone: 1-403-231-9300

Manufacturer/Supplier
Halliburton Energy Services, Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Telephone: 1-281-871-6107

Prepared By Chemical Stewardship
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number

Emergency Telephone Number 1-866-519-4752 or 1-760-476-3962 (accessible 24 hours a day / 7 days a week)
Global Incident Response Access Code: 334305
Contract Number: 14012

2. Hazard Identification**2.1 Classification of the substance or mixture**

As adopted by the competent authority, this product does not require an SDS or hazard warning label.

Not classified

2.2. Label Elements**Hazard Pictograms**

Signal Word: Not Classified

Hazard Statements Not Hazardous

Precautionary Statements

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Prevention None
Response None
Storage None
Disposal None

2.3 Other hazards which do not result in classification
None known**3. Composition/information on Ingredients**

Substances	CAS Number	PERCENT (w/w)	GHS Classification - Canada	HMIRA Registry Number	Filing Date	Decision Granted Date
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	80 - 100%	Not classified	Not applicable	Not applicable	Not applicable

4. First aid measures**4.1. Description of first aid measures**

Inhalation If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.
Eyes In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin Wash with soap and water. Get medical attention if irritation persists.
Ingestion Under normal conditions, first aid procedures are not required.

4.2 Most important symptoms/effects, acute and delayed

No significant hazards expected.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. Fire-fighting measures**5.1. Extinguishing media****Suitable Extinguishing Media**

All standard fire fighting media

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture

Special exposure hazards in a fire
Decomposition in fire may produce harmful gases.

5.3 Special protective equipment and precautions for fire-fighters

Special protective equipment for firefighters
Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

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Use appropriate protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. See Section 8 for additional information.

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and Storage**7.1. Precautions for safe handling****Handling Precautions**

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Wash hands after use. Launder contaminated clothing before reuse. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information
Store away from oxidizers. Product has a shelf life of 24 months.

8. Exposure Controls/Personal Protection**8.1 Occupational Exposure Limits**

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls Use in a well ventilated area.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional. Not normally needed. But if significant exposures are possible then the following respirator is recommended:
Dust/mist respirator. (N95, P2/P3)

Hand Protection**Skin Protection****Eye Protection****Other Precautions**

Normal work gloves.
Normal work coveralls.
Wear safety glasses or goggles to protect against exposure.
None known.

9. Physical and Chemical Properties**9.1. Information on basic physical and chemical properties**

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Physical State: Liquid
Odor: Sweet

Color Brown-black
Odor No information available
Threshold:

Property**Remarks/ - Method****Values****pH:**

7.5

Freezing Point / Range

No data available

Melting Point / Range

No data available

Pour Point / Range

No data available

Boiling Point / Range

No data available

Flash Point

No data available

Flammability (solid, gas)

No data available

Upper flammability limit

No data available

Lower flammability limit

No data available

Evaporation rate

No data available

Vapor Pressure

No data available

Vapor Density

No data available

Specific Gravity

1.1

Water Solubility

Miscible with water

Solubility in other solvents

No data available

Partition coefficient: n-octanol/water

No data available

Autoignition Temperature

No data available

Decomposition Temperature

No data available

Viscosity

No data available

Explosive Properties

No information available

Oxidizing Properties

No information available

9.2. Other information**VOC Content (%)**

No data available

10. Stability and Reactivity**10.1. Reactivity**

Not expected to be reactive.

10.2. Chemical stability

Stable

10.3. Possibility of hazardous reactions

Will Not Occur

10.4. Conditions to avoid

None anticipated

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Oxides of nitrogen. Carbon monoxide and carbon dioxide.

11. Toxicological Information**11.1 Information on likely routes of exposure**

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics

Page 4 / 9

Acute Toxicity
Inhalation None known.
Eye Contact None known.
Skin Contact None known.
Ingestion None known.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data

Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No data available	No data available	No data available

Substances	CAS Number	Skin corrosion/irritation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Serious eye damage/irritation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Skin Sensitization
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Respiratory Sensitization
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Mutagenic Effects
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Carcinogenic Effects
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Reproductive toxicity
Contains no hazardous substances in	NA	

concentrations above cut-off values according to the competent authority		
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Substances	CAS Number	STOT - single exposure
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	STOT - repeated exposure
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

Substances	CAS Number	Aspiration hazard
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	

12. Ecological Information

12.1. Toxicity

Product Ecotoxicity Data

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available	No information available	No information available	No information available

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

12.3. Bioaccumulative potential

Substances	CAS Number	Bioaccumulation
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

12.4. Mobility in soil

Substances	CAS Number	Mobility
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations

13.1. Waste treatment methods

Disposal methods Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging Follow all applicable national or local regulations.

14. Transport Information

Canadian TDG

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

US DOT

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IMDG/IMO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

IATA/ICAO

UN Number Not restricted
UN proper shipping name: Not restricted
Transport Hazard Class(es): Not applicable
Packing Group: Not applicable
Environmental Hazards: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable
Special Precautions for User None

15. Regulatory Information

Canadian Regulations

Canadian Domestic Substances List (DSL) All components listed on inventory or are exempt.

US Regulations

US TSCA Inventory All components listed on inventory or are exempt.

TSCA Significant New Use Rules - SSa2

Substances	CAS Number	TSCA Significant New Use Rules - SSa2
Contains no hazardous substances in concentrations	NA	Not applicable

above cut-off values according to the competent authority		
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EPA SARA Title III Extremely Hazardous Substances

Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable

EPA SARA (311,312) Hazard Class

None

EPA SARA (313) Chemicals:

Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity

Substances	CAS Number	CERCLA RQ
Contains no hazardous substances in concentrations above cut-off values according to the competent authority	NA	Not applicable

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

16. Other information

Preparation Information

Prepared By Chemical Stewardship
e-mail: fdunexchem@halliburton.com

Revision Date: 22-Mar-2022

Reason for Revision SDS sections updated:
15

Additional information:

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms used in the safety data sheet

bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
EC50 – Effective Concentration growth rate 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit

Page 4 of 10 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 15.03.2022 / v3 Replacing version dated / version: 15.11.2019 / 0001 Valid from: 15.03.2022
FALCHEM RUST CONVERTER WATER BASED
EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). (8) = Inhalable fraction (2017/164/EU). (9) = Respirable fraction (2017/164/EU). (10) = Short -term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage. ** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.
8.2 Exposure controls 8.2.1 Appropriate engineering controls Ensure good ventilation. This can be achieved by local suction or general air extraction. If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn. Applies only if maximum permissible exposure values are listed here. Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques. These are specified by e.g. BS EN 14042. BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".
8.2.2 Individual protection measures, such as personal protective equipment General hygiene measures for the handling of chemicals are applicable. Wash hands before breaks and at end of work. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothing and protective equipment before entering areas in which food is consumed.
Eye/face protection: Tight fitting protective goggles (EN 166) with side protection, with danger of projections.
Skin protection - Hand protection: Chemical resistant protective gloves (EN 374). Recommended Protective nitrile gloves (EN 374) Minimum layer thickness in mm: 0,5 Permeation time (penetration time) in minutes: > 120 The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions. The recommended maximum wearing time is 50% of breakthrough time. Protective hand cream recommended.
Skin protection - Other: Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).
Respiratory protection: If OES or MEL is exceeded. Filter A P2 (EN 14387), code colour brown, white Observe wearing time limitations for respiratory protection equipment.
Thermal hazards: Not applicable
Additional information on hand protection - No tests have been performed. In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents. Selection of materials derived from glove manufacturer's indications. Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account. Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer. In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.
8.2.3 Environmental exposure controls No information available at present.
SECTION 9: Physical and chemical properties

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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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FALCHEM RUST CONVERTER WATER BASED

9.1 Information on basic physical and chemical properties

Physical state: Colour: Liquid

Odour: Beige

Odour threshold: Slightly

pH-value: Not determined

Melting point/freezing point: 1,3

Initial boiling point and boiling range: Not determined

Flash point: Not determined

Evaporation rate: Not determined

Flammability (solid, gas): Lower explosive limit: Upper explosive limit: Not determined

Vapour pressure: Not determined

Vapour density (air = 1): Not determined

Density: 1,04 g/cm3 n.a.

Bulk density: Not determined

Solubility(ies): Not determined

Water solubility: Mixable

Partition coefficient (n-octanol/water): Not determined

Auto-ignition temperature: Not determined

Decomposition temperature: Not determined

Viscosity: 10-16 s (Ford viscosity cup (4 mm))

Explosive properties: Product is not explosive.

Oxidising properties: No

9.2 Other information

Miscibility: Not determined

Fat solubility / solvent: Not determined

Conductivity: Not determined

Surface tension: Not determined

Solvents content: Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

None known

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

Protect from direct sunlight. Protect from frost.

10.5 Incompatible materials

Avoid contact with other chemicals. Solvent

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

FALCHEM RUST CONVERTER WATER BASED

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by dermal route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:					OECD 431 (In Vitro Skin Corrosion - Human Skin Model Test)	Not irritant

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SECTION 13: Disposal considerations
13.1 Waste treatment methods For the substance / mixture / residual amounts EC disposal code no.: The waste codes are recommendations based on the scheduled use of this product. Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU) 20 01 14 Acids Recommendation: Sewage disposal shall be discouraged. Pay attention to local and national official regulations. E.g. suitable incineration plant. E.g. dispose at suitable refuse site.
For contaminated packing material Pay attention to local and national official regulations. Empty container completely. Uncontaminated packaging can be recycled. Dispose of packaging that cannot be cleaned in the same manner as the substance.
SECTION 14: Transport information
General statements 14.1. UN number: n.a. Transport by road/by rail (ADR/RID) 14.2. UN proper shipping name: 14.3. Transport hazard class(es): n.a. 14.4. Packing group: n.a. Classification code: n.a. LQ: n.a. 14.5. Environmental hazards: Not applicable Tunnel restriction code: Transport by sea (IMDG-code) 14.2. UN proper shipping name: 14.3. Transport hazard class(es): n.a. 14.4. Packing group: n.a. Marine Pollutant: n.a. 14.5. Environmental hazards: Not applicable Transport by air (IATA) 14.2. UN proper shipping name: 14.3. Transport hazard class(es): n.a. 14.4. Packing group: n.a. 14.5. Environmental hazards: Not applicable
14.6. Special precautions for user Unless specified otherwise, general measures for safe transport must be followed.
14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code Non-dangerous material according to Transport Regulations.
SECTION 15: Regulatory information
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Observe restrictions: General hygiene measures for the handling of chemicals are applicable.
Directive 2010/75/EU (VOC): 0 %
15.2 Chemical safety assessment A chemical safety assessment is not provided for mixtures.
SECTION 16: Other information

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Revised sections: NA.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):
Not applicable

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Aquatic Chronic — Hazardous to the aquatic environment - chronic
Acute Tox. — Acute toxicity - oral
Acute Tox. — Acute toxicity - dermal
Eye Dam. — Serious eye damage

Any abbreviations and acronyms used in this document:

AC Article Categories
acc., acc. to according, according to
ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)
BMGV Biological monitoring guidance value (EH40, UK)
BOD Biochemical oxygen demand
BSEF Bromine Science and Environment Forum
bw body weight
CAS Chemical Abstracts Service
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC Collaborative International Pesticides Analytical Council
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
COD Chemical oxygen demand
CTFA Cosmetic, Toiletry, and Fragrance Association
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
DT50 Dwell Time - 50% reduction of start concentration
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ERC Environmental Release Categories
ES Exposure scenario

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etc. et cetera
EU European Union
EWC European Waste Catalogue
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
HET-CAM Hen's Egg Test - Chorionallantoic Membrane
HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
IBC (Code) International Bulk Chemical (Code)
IC Inhibitory concentration
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLD International Uniform Chemical, Information Database
LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute of Occupational Safety and Health (United States of America)
NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds

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vPbB very persistent and very bio accumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.

HALLIBURTON

SAFETY DATA SHEET

SEM-8™ EMULSIFIER

Product Trade Name:

Revision Date: 16-Dec-2015 Revision Number: 38

1. Identification

1.1. Product Identifier
Product Trade Name: SEM-8™ EMULSIFIER
Synonyms: None
Chemical Family: Ethoxylated alcohols Sulfate
Internal ID Code: HM003938

1.2 Recommended use and restrictions on use
Application: Emulsifier
Uses Advised Against: No information available

1.3 Manufacturer's Name and Contact Details
Manufacturer/Supplier: Halliburton Energy Services Inc.
P.O. Box 1431
Duncan, Oklahoma 73536-0431
Emergency Telephone: 1-866-519-4752 (US, Canada, Mexico) or 1-760-476-3962

Halliburton Energy Services
645 - 7th Ave SW Suite 2200
Calgary, AB
T2P 4G8
Canada

Prepared By: Chemical Stewardship
Telephone: 1-281-871-6107
e-mail: fdunexchem@halliburton.com

1.4. Emergency telephone number
Emergency Telephone Number: 1-866-519-4752 or 1-760-476-3962

2. Hazard(s) Identification

2.1 Classification in accordance with paragraph (d) of §1910.1200

Skin Corrosion / Irritation	Category 2 - H315
Serious Eye Damage / Eye Irritation	Category 1 - H318
Acute Aquatic Toxicity	Category 2 - H401
Chronic Aquatic Toxicity	Category 3 - H412
Flammable liquids.	Category 3 - H226

2.2. Label Elements

Hazard Pictograms

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Signal Word

Danger

Hazard Statements

H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H318 - Causes serious eye damage
H401 - Toxic to aquatic life
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

Prevention

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P233 - Keep container tightly closed
P240 - Ground/Bond container and receiving equipment
P241 - Use explosion-proof electrical/ventilating/lighting/equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P264 - Wash face, hands and any exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310 - Immediately call a POISON CENTER or doctor/physician
P332 + P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P370 + P378 - In case of fire: Use water spray for extinction

Storage

P403 + P235 - Store in a well-ventilated place. Keep cool

Disposal

P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

2.3 Hazards not otherwise classified

None known

3. Composition/information on Ingredients

Substances	CAS Number	PERCENT (w/w)	GHS Classification - US
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	60 - 100%	Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 2 (H401)

			Aquatic Chronic 3 (H412) Flam. Liq. 3 (H226)
Isopropanol	67-63-0	10 - 30%	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225)
Alcohols, C6-10, ethoxylated	70879-83-3	1 - 5%	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Corr. 1 (H318) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)

The exact percentage (concentration) of the composition has been withheld as proprietary.

4. First-Aid Measures

4.1. Description of first aid measures

Inhalation

If inhaled, move victim to fresh air and seek medical attention.

Eyes

Immediately flush eyes with large amounts of water for at least 30 minutes. Seek prompt medical attention.

Skin

Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.

Ingestion

Do NOT induce vomiting. Give nothing by mouth. Obtain immediate medical attention.

4.2 Most important symptoms/effects, acute and delayed

Causes serious eye damage. Causes skin irritation. May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician

Activated charcoal or gastric lavage may be advisable for significant ingestion.

5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media which must not be used for safety reasons

None known.

5.2 Specific hazards arising from the substance or mixture

Special Exposure Hazards

Use water spray to cool fire exposed surfaces. Closed containers may explode in fire. Decomposition in fire may produce harmful gases. Vapors are heavier than air and may accumulate in low areas. Vapors may travel along the ground to be ignited at distant locations.

5.3 Special protective equipment and precautions for fire-fighters

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove sources of ignition. Use appropriate protective equipment. Wear self-contained breathing apparatus in enclosed areas. Avoid contact with skin, eyes and clothing. Avoid breathing vapors. Ensure adequate ventilation. See Section 8 for additional information

6.2. Environmental precautions

Prevent from entering sewers, waterways, or low areas.

6.3. Methods and material for containment and cleaning up

Isolate spill and stop leak where safe. Remove ignition sources and work with non-sparking tools. Contain spill with sand or other inert materials. Scoop up and remove.

7. Handling and storage

7.1. Precautions for Safe Handling

Handling Precautions

Remove sources of ignition. Avoid contact with eyes, skin, or clothing. Avoid breathing vapors. Ensure adequate ventilation. Wash hands after use. Launder contaminated clothing before reuse. Ground and bond containers when transferring from one container to another. Use appropriate protective equipment.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Information

Store away from oxidizers. Keep from heat, sparks, and open flames. Keep container closed when not in use. Store in a dry location. Store in a cool well ventilated area. Product has a shelf life of 36 months.

8. Exposure Controls/Personal Protection

8.1 Occupational Exposure Limits

Substances	CAS Number	OSHA PEL-TWA	ACGIH TLV-TWA
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	68037-05-8	Not applicable	Not applicable
Isopropanol	67-63-0	TWA: 400 ppm	TWA: 200 ppm STEL: 400 ppm
Alcohols, C6-10, ethoxylated	70879-83-3	Not applicable	Not applicable

8.2 Appropriate engineering controls

Engineering Controls

Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

8.3 Individual protection measures, such as personal protective equipment

Personal Protective Equipment

If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection

If engineering controls and work practices cannot keep exposure below occupational exposure limits or if exposure is unknown, wear a NIOSH certified, European Standard EN 149, AS/NZS 1715:2009, or equivalent respirator when using this product. Selection of and instruction on using all personal protective equipment, including respirators, should be performed by an Industrial Hygienist or other qualified professional.
Organic vapor respirator.

Hand Protection

In high concentrations, supplied air respirator or a self-contained breathing apparatus.
Chemical-resistant protective gloves (EN 374) Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374): Nitrile gloves. (>= 0.35 mm thickness)
This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be

	considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced. Manufacturer's directions for use should be observed because of great diversity of types.
Skin Protection	Rubber apron.
Eye Protection	Chemical goggles; also wear a face shield if splashing hazard exists.
Other Precautions	Eyewash fountains and safety showers must be easily accessible.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical State:	Liquid	Color:	Clear light yellow
Odor:	Alcohol	Odor	No information available
		Threshold:	

Property	Values
Remarks/ - Method	
pH:	7.0-8.5 @ 5%
Freezing Point/Range	-29 °C / -20 °F
Melting Point/Range	No data available
Boiling Point/Range	No data available
Flash Point	33.9 °C / 93 °F Seta closed cup
Flammability (solid, gas)	No data available
upper flammability limit	No data available
lower flammability limit	No data available
Evaporation rate	< 1 (BuAc = 1)
Vapor Pressure	15.7 mmHg @ 20C
Vapor Density	< 1 (Air=1)
Specific Gravity	1.054
Water Solubility	Soluble in water
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive Properties	No information available
Oxidizing Properties	No information available

9.2. Other information

VOC Content (%) No data available

10. Stability and Reactivity

10.1. Reactivity

Not expected to be reactive.

10.2. Chemical Stability

Stable

10.3. Possibility of Hazardous Reactions

Will Not Occur

10.4. Conditions to Avoid

Keep away from heat, sparks and flame.

10.5. Incompatible Materials

Strong oxidizers. Strong alkalis.

10.6. Hazardous Decomposition Products

Oxides of nitrogen. Oxides of sulfur. Carbon monoxide and carbon dioxide.

11. Toxicological Information**11.1 Information on likely routes of exposure**

Principle Route of Exposure Eye or skin contact, inhalation.

11.2 Symptoms related to the physical, chemical and toxicological characteristics**Acute Toxicity****Product Information**

Under certain conditions of use, some of the product ingredients may cause the following:

Inhalation

May cause respiratory irritation. May cause central nervous system depression including headache, dizziness, drowsiness, incoordination, slowed reaction time, slurred speech, giddiness and unconsciousness.

Eye Contact

Causes severe eye irritation which may damage tissue.

Skin Contact

Causes skin irritation. May cause skin defatting with prolonged exposure.

Ingestion

Irritation of the mouth, throat, and stomach. May cause abdominal pain, vomiting, nausea, and diarrhea. May cause central nervous system depression including headache, dizziness, drowsiness, muscular weakness, incoordination, slowed reaction time, fatigue blurred vision, slurred speech, giddiness, tremors and convulsions. May affect the heart and cardiovascular system.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 0.1% are chronic health hazards.

11.3 Toxicity data**Toxicology data for the components**

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	> 2,000 mg/kg (Rat) (similar substance)	> 2,000 mg/kg (Rat) (similar substance) 4000-12000 mg/kg (Rats) (similar substance)	No data available
Isopropanol	87-63-0	4396 mg/kg (Rat) 5840 mg/kg (Rat) 3600 mg/kg (Mouse)	12,800 mg/kg (Rat) 12,870 mg/kg (Rabbit) 6280 mg/kg (Rabbit)	72.6 mg/L (Rat) 4h > 10,000 mg/L (Rat) 6h
Alcohols, C6-10, ethoxylated	70879-83-3	600 mg/kg (Rat) (similar substance) 1600 mg/kg (Rat) (similar substance) > 5000 mg/kg (Rat) (similar substance)	> 5200 mg/kg (rabbit) (similar substance) > 2000 mg/kg (rat) (similar substance) 2500 mg/kg (rabbit) (similar substance)	> saturated concentration (similar substance)

Substances	CAS Number	Skin corrosion/irritation
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Causes moderate skin irritation. (Rabbit) (similar substances)
Isopropanol	87-63-0	Non-irritating to the skin (Rabbit)
Alcohols, C6-10, ethoxylated	70879-83-3	May cause moderate skin irritation. (Rabbit) (similar substances)

Substances	CAS Number	Eye damage/irritation
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Causes severe eye irritation. (Rabbit) (similar substances)
Isopropanol	87-63-0	Causes moderate eye irritation. (Rabbit)
Alcohols, C6-10, ethoxylated	70879-83-3	Causes severe eye irritation. (Rabbit) (similar substances)

Substances	CAS Number	Skin Sensitization
Polyethylene glycol	88037-05-8	Did not cause sensitization on laboratory animals (guinea pig) (similar substances)

(C6-C10) alkyl ether, sulfate ammonium salt		
Isopropanol	87-63-0	Did not cause sensitization on laboratory animals (guinea pig)
Alcohols, C6-10, ethoxylated	70879-83-3	Did not cause sensitization on laboratory animals (similar substances)

Substances	CAS Number	Respiratory Sensitization
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	No information available
Isopropanol	87-63-0	No information available
Alcohols, C6-10, ethoxylated	70879-83-3	No information available

Substances	CAS Number	Mutagenic Effects
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)
Isopropanol	87-63-0	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Alcohols, C6-10, ethoxylated	70879-83-3	In vitro tests did not show mutagenic effects In vivo tests did not show mutagenic effects. (similar substances)

Substances	CAS Number	Carcinogenic Effects
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Did not show carcinogenic effects in animal experiments (similar substances)
Isopropanol	87-63-0	Did not show carcinogenic effects in animal experiments
Alcohols, C6-10, ethoxylated	70879-83-3	Did not show carcinogenic effects in animal experiments (similar substances)

Substances	CAS Number	Reproductive toxicity
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Did not show teratogenic effects in animal experiments. (similar substances)
Isopropanol	87-63-0	No significant toxicity observed in animal studies at concentration requiring classification.
Alcohols, C6-10, ethoxylated	70879-83-3	Animal testing did not show any effects on fertility. Did not show teratogenic effects in animal experiments. (similar substances)

Substances	CAS Number	STOT - single exposure
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Isopropanol	87-63-0	May cause headache, dizziness, and other central nervous system effects.
Alcohols, C6-10, ethoxylated	70879-83-3	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	STOT - repeated exposure
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Isopropanol	87-63-0	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)
Alcohols, C6-10, ethoxylated	70879-83-3	No significant toxicity observed in animal studies at concentration requiring classification. (similar substances)

Substances	CAS Number	Aspiration hazard
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Not applicable
Isopropanol	87-63-0	Not applicable
Alcohols, C6-10, ethoxylated	70879-83-3	Not applicable

12. Ecological Information**12.1. Toxicity****Ecotoxicity Effects****Product Ecotoxicity Data**

No data available

Substance Ecotoxicity Data

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Toxicity to Invertebrates
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	EC50 (72h) 73.52 mg/L (Skeletonehma costatum) EC50 (72h) 32 mg/L (Selenastrum capricornutum) (similar substance) NOEC (72h) 9 mg/L (Selenastrum capricornutum) NOEC (72h) 32 mg/L (Skeletonehma costatum)	LC50 (96h) 1 - 2.5 mg/L (Salmo trutta) (similar substance) LC50 (96h) 7.8 mg/L (Scophthalmus maximus) NOEC (30d) 0.88 mg/L (Pimephales promelas) (similar substance)	No information available	EC50 (48h) 1.17 mg/L (Daphnia magna) (similar substance) LC50 (96h) 232.5 mg/L (Acartia tonsa) NOEC (21d) 0.37 mg/L (Daphnia magna) (similar substance)
Isopropanol	87-63-0	EC50 (72h) > 1000 mg/L (Desmodesmus subspicatus) EC50 (7d) 1800 mg/L (Scenedesmus quadricauda)	LC50 (96h) 9640 mg/L (Pimephales promelas) LC50 (7d) 7060 mg/L (Poecilia reticulata)	TT (16h) 1050 mg/L (Pseudomonas putida)	EC50 (48h) 13,299 mg/L (Daphnia magna) EC50 (24h) > 10,000 mg/L (Daphnia magna)
Alcohols, C6-10, ethoxylated	70879-83-3	EC50 (72h) 0.7 mg/L (Selenastrum capricornutum) (similar substance) EC50 (72h) 1.1 mg/L (Scenedesmus subspicatus) (similar substance)	EC50 (96h) 1.4 mg/L (Pimephales promelas) (similar substance) EC50 (96h) 3 mg/L (Brachydanio rerio) (similar substance) NOEC (30d) 0.28 mg/L (Pimephales promelas) (similar substance) NOEC (16d) 0.16 mg/L (Lepomis macrochirus) (similar substance)	No information available	EC50 (48h) 0.2 mg/L (Daphnia magna) (similar substance) EC50 (48h) 0.39 mg/L (Ceriodaphnia dubia) (similar substance)

12.2. Persistence and degradability

Substances	CAS Number	Persistence and Degradability
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Readily biodegradable (87% @ 28d) (similar substances)
Isopropanol	87-63-0	Readily biodegradable (53% @ 5d)
Alcohols, C6-10, ethoxylated	70879-83-3	Readily biodegradable

12.3. Bioaccumulative potential

Substances	CAS Number	Log Pow
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	No information available
Isopropanol	87-63-0	0.05
Alcohols, C6-10, ethoxylated	70879-83-3	12.7 - 237 L/kg (similar substance)

12.4. Mobility in soil

Substances	CAS Number	Mobility
Polyethylene glycol (C6-C10) alkyl ether, sulfate ammonium salt	88037-05-8	No information available
Isopropanol	87-63-0	KOC = 1.5
Alcohols, C6-10, ethoxylated	70879-83-3	No information available

12.5 Other adverse effects

No information available

13. Disposal Considerations**13.1. Waste treatment methods****Disposal Method**

Disposal should be made in accordance with federal, state, and local regulations. Incineration recommended in approved incinerator according to federal, state, and local regulations. Substance should NOT be deposited into a sewage facility. Follow all applicable national or local regulations. Contaminated packaging may be disposed of by: rendering packaging incapable of containing any substance, or treating packaging to remove residual contents, or treating packaging to make sure the residual contents are no longer hazardous, or by disposing of packaging into commercial waste collection.

Contaminated Packaging**14. Transport Information****US DOT**

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Not applicable
NAERG: NAERG 128

US DOT Bulk

DOT (Bulk) Not applicable

Canadian TDG

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Not applicable

IMDG/IMO

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Not applicable
EMS: EmS F-E, S-E

IATA/ICAO

UN Number: UN1993
UN Proper Shipping Name: Flammable Liquid, N.O.S. (Contains Isopropanol)
Transport Hazard Class(es): 3
Packing Group: III
Environmental Hazards: Not applicable

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable
Special Precautions for Users: None

15. Regulatory Information**US Regulations****US TSCA Inventory**

All components listed on inventory or are exempt.

TSCA Significant New Use Rules - S5A2

SEM-8™ EMULSIFIER		Revision Date: 16-Dec-2015
Substances	CAS Number	TSCA Significant New Use Rules - SSA2
Polyethylene glycol (C8-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Not applicable
Isopropanol	87-63-0	Not applicable
Alcohols, C8-10, ethoxylated	70879-83-3	Not applicable
EPA SARA Title III Extremely Hazardous Substances		
Substances	CAS Number	EPA SARA Title III Extremely Hazardous Substances
Polyethylene glycol (C8-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Not applicable
Isopropanol	87-63-0	Not applicable
Alcohols, C8-10, ethoxylated	70879-83-3	Not applicable

EPA SARA (311,312) Hazard Class
Acute Health Hazard
Fire Hazard

EPA SARA (313) Chemicals			
Substances	CAS Number	Toxic Release Inventory (TRI) - Group I	Toxic Release Inventory (TRI) - Group II
Polyethylene glycol (C8-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Not applicable	Not applicable
Isopropanol	87-63-0	1.0%	Not applicable
Alcohols, C8-10, ethoxylated	70879-83-3	Not applicable	Not applicable

EPA CERCLA/Superfund Reportable Spill Quantity		
Substances	CAS Number	CERCLA RQ
Polyethylene glycol (C8-C10) alkyl ether, sulfate ammonium salt	88037-05-8	Not applicable
Isopropanol	87-63-0	Not applicable
Alcohols, C8-10, ethoxylated	70879-83-3	Not applicable

EPA RCRA Hazardous Waste Classification
If product becomes a waste, it does meet the criteria of a hazardous waste as defined by the US EPA, because of:

Ignitability D001

California Proposition 65 All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law One or more components listed.

NJ Right-to-Know Law One or more components listed.

PA Right-to-Know Law One or more components listed.

NFPA Ratings: Health 2, Flammability 3, Reactivity 0
HMIS Ratings: Health 2, Flammability 3, Physical Hazard 0, PPE: C

Canadian Regulations

Canadian DSL Inventory All components listed on inventory or are exempt.

16. Other Information

Preparation Information
Prepared By Chemical Stewardship
Telephone: 1-281-871-6107

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SEM-8™ EMULSIFIER		Revision Date: 16-Dec-2015
	e-mail: fdunexchem@halliburton.com	
Revision Date:	16-Dec-2015	
Reason for Revision	SDS sections updated:	
	1	

Additional information
For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Stewardship at 1-580-251-4335.

Key or legend to abbreviations and acronyms

bw – body weight
CAS – Chemical Abstracts Service
EC50 – Effective Concentration 50%
ErC50 – Effective Concentration growth rate 50%
LC50 – Lethal Concentration 50%
LD50 – Lethal Dose 50%
LL50 – Lethal Loading 50%
mg/kg – milligram/kilogram
mg/L – milligram/liter
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OEL – Occupational Exposure Limit
PEL – Permissible Exposure Limit
ppm – parts per million
STEL – Short Term Exposure Limit
TWA – Time-Weighted Average
UN – United Nations
h - hour
mg/m³ - milligram/cubic meter
mm - millimeter
mmHg - millimeter mercury
w/w - weight/weight
d - day

Key literature references and sources for data

www.ChemADVISOR.com/
NZ CCID
HERA
OSHA

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

End of Safety Data Sheet

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PRIME SAFETY DATA SHEET (SDS)

PRIME PRODUCTS PTE LTD
REVISION DATE: 18.06.2022
REVISION NO: 03

SULPHURIC ACID [9% w/w]

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION.

Product name: Sulphuric Acid [Not more than 9% w/w]
Other means of identification: Sulfuric Acid; Oil of vitriol; Diluted sulfuric acid.
Recommended use of the chemical and restrictions on use: For Industrial process & treatment application.
Supplier's details: PRIME PRODUCTS PTE LTD
38 Gul Avenue, Singapore 629678
Tel: 65 6863 3200 Fax: 65 6863 0277
Emergency phone number: 65 6863 3200

2. HAZARDS IDENTIFICATION

GHS Classifications
Skin corrosion/irritation (Category 1)
Serious eye damage/ eye irritation (Category 1)

GHS Label elements

Pictograms:



Signal word: DANGER

Hazard statement (s):
H314 Causes severe skin burns and eye damage.

Precautionary statement (s):
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/ physician.
P501 Dispose of contents/ container to an approved waste disposal plant.
Other Hazards: Highly exothermic, dilution should always be performed by adding the acid to the water. DO NOT add water to the acid.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: H2SO4
Molecular weight: 98.08 g/mol
Mixtures of substances (in Water Base):

Component	Identification	Classification	Concentration
Sulfuric Acid	CAS No: 7664-93-9 EC No: 231-639-5	H314	9 %

4. FIRST AID MEASURES

Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation: Move person to fresh air. If not breathing, give proper artificial respiration. Consult a physician.
Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.
Indication of any immediate medical attention and special treatment needed: N/A

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special hazards arising from the substance or mixture: Sulfur Oxide.
Advice for firefighters: Wear self contained breathing apparatus for firefighting if necessary.
Further information: N/A

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Flash back possible over considerable distance container explosion may occur under fire conditions. Keep away from sources of ignition – No smoking.
Storage: Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not store near alkaline substances. Ideally, sulfuric acid should be stored in isolation from all other chemicals in an approved acid or corrosives safety cabinet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limit:		
Value	Control parameters	Basis
PEL (long term)	1 mg/m3	Singapore, Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances
PEL (Short term)	3 mg/m3	Singapore, Workplace Safety and Health Act - First Schedule Permissible Exposure Limits of Toxic Substances

Appropriate engineering control: Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area and to keep employee exposures below the Airborne Exposure Limits.

Personal Protection: Wear appropriate impervious personal protective equipment to prevent skin contact. Use chemical safety goggles and/or a full-face shield where splashing/dusting is possible. Maintain eye wash fountain and quick-drench facilities in work area. If the exposure limit is exceeded, a full face piece respirator with organic vapor cartridge. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless to yellow liquid
Odour: odourless
Odour threshold: N/A
pH: < 1.0
Melting point/Freezing point: N/A
Boiling point: 100°C
Flash point: N/A
Evaporation rate: N/A
Flammability (solid, gas): N/A
Upper/lower flamm. or explosive limits: N/A
Vapour pressure: N/A
Vapour density: N/A
Relative density: 1.059 (@ 9%, 30°C)
Solubility(ies): Easily soluble in water.
Partition coefficient: N/A
Auto ignition temp: N/A
Decomposition temp: N/A
Viscosity: N/A

10. STABILITY AND REACTIVITY

Reactivity: N/A
Chemical stability: N/A
Possibility of hazardous reactions: N/A
Conditions to Avoid: High temperature, organic materials, powdered metals, and other combustible materials.
Incompatible materials: Water and most common metals, organic materials, carbides, chlorates, fulminates, nitrates, picrates, powdered metals, other combustible materials and strong oxidizing agents. Attacks many metals, releasing hydrogen. Acetic acid, acetone cyanohydrin, acetone and nitric acid and styrene monomer, vinyl acetate, nitric acid and toluene.
Hazardous Decomposition Products: Hydrogen gas and hazardous fumes of SOx

11. TOXICOLOGICAL INFORMATION

Routes of entry: skin absorption, skin & eye contact, inhalation

Acute toxicity:
Oral Rat LD₅₀ 2140 mg/kg
Inhalation Rat LC₅₀ 347 ppm/4 hr

Carcinogenicity: IARC – Group 1: Carcinogenic to humans (Sulfuric acid)

Skin corrosion/irritation: N/A

Serious eye damage/eye irritation: N/A

Respiratory/skin sensitization: N/A

Specific target organ toxicity: single exposure – N/A

Germ cell mutagenicity: N/A

Reproductive toxicity: N/A

Aspiration hazard: N/A

Repeated exposure: N/A

MATERIAL SAFETY DATA SHEET

MAGNAVIS® PREPARED BATH 7HF

Potential health effects:

- Inhalation : May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
- Ingestion : May be harmful if swallowed. Causes burns
- Skin : May be harmful if absorbed through skin. Causes skin burns.
- Eyes : Causes eye burns.

Signs and Symptoms of Exposure: burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

12. ECOLOGICAL INFORMATION

Toxicity: Fish LC₅₀ Gambusia affinis (Mosquito fish) : 42 mg/l (96 hr)

Persistence and degradability: N/A **Mobility in soil:** N/A

Bio accumulative potential: N/A **Other adverse effects:** Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to an approved waste facility. Processing, use or contamination of this product may change the waste management options. Dispose of container and unused contents in accordance with local requirements.

14. TRANSPORT INFORMATION

Transport	ADR/RID (Land)	IMDG (Sea)	IATA-DSR (Air)
Proper Shipping Name	SULFURIC ACID, with not more than 51% acid.		Sulfuric Acid, with not more than 51% acid.
UN Number		UN 2796	
Hazard Class		8	
Packing Group		II	
Environmental Hazard/ Marine Pollutant	—	No	-
Transport Hazard Label			

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question.

IN SINGAPORE

NEA License: Hazardous substances License NOT REQUIRED for importing, store, selling and transporting the product in question.

Maritime and Port Authority of Singapore (MPA):

Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations.

National Environment Agency (NEA):

Import & sale of hazardous substances: Environmental Protection and Management (Hazardous Substances) Regulations

Transport approval for hazardous substances: Environmental Protection and Management (Hazardous Substances) Regulations

Disposal of chemicals waste: Environmental Public Health (Toxic Industrial Waste) Regulations.

Singapore Civil Defense Force (SCDF):

Transportation of hazardous chemicals: Road transportation of Hazardous Materials (HAZMAT) Regulations.

Ministry of Manpower (MOM):

Hazardous Substances: Workplace Safety and Health Act, WSH (General Provision) Regulations.

Hazardous Substances: Workplace Safety and Health Act, WSH (Risk Management) Regulations.

16. OTHER INFORMATION

*N/A stand for no data available; no information found

Disclaimer:

The above information has been compiled based on technical data from various sources that Prime Products believe to be reliable. It is intended for use as a guide by persons having technical skill and at their own discretion and risk. Prime Products assumes no liability in connection with any use of this information.

1. IDENTIFICATION

COMPANY : ITW INDIA PRIVATE LIMITED

ADDRESS : PLOT NO 51, 52, 207 & 208, PHASE - 2, IDA
TSIC, PASHANMYLARAM,
SANGAREDDY - 502 307, TELANGANA
INDIA.

TELEPHONE : 91 - 8455 - 224710

FAX : 91 - 8455 - 224709

PRODUCT USE : Magnetic Particle Inspection

PACKAGES : 420 ml aerosol

NFPA Rating : Health 1, Flammability 4, Reactivity 0.

Revision Date : April 1, 2020.

2. HAZARDOUS INGREDIENTS

Ingredient	Wt/Wt%	CAS#	TLV	PEL	LD 50	LC 50
White Mineral Oil (Petroleum)	60-100	64742-47-8 or 8042-47-5	5 mg/m3	5 mg/m3	NA	NA
Liquefied Petroleum Gases (Propellant)	30	68476-86-8	NA	1000ppm	NA	NA

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Extremely flammable aerosol.
Bland oily liquid which may irritate the skin.

POTENTIAL HEALTH EFFECTS

Skin Contact : Can irritate by removing natural skin oils on long or repeated exposures

Eyes : Irritating

Inhalation : Vapors may cause dizziness or nausea

Ingestion : Not significant in small(mouthful)quantities

Medical conditions known to be aggravated by exposure to product: None

4. FIRST AID

Skin Contact : Wash off with soap water .Use soothing lotion

Eyes : Rinse carefully under upper and lower eyelids using plenty of water

Inhalation : Remove to fresh air if dizzy or nauseated

Ingestion : Do not induce vomiting. Accidental ingestion of a small mouthful quantity is not expected to cause significant harm

NOTE: In all severe cases, contact physician immediately.

5. FIRE HAZARD

Conditions of flammability : Ignition can occur if used near flames, arcs or other ignition sources

Flash point (Bulk) : Not applicable

Flammable limits in air : 1 to 6%

Extinguishing media : Carbon dioxide, Foam

Special fire fighting procedures : Keep containers cool with water spray. Donot spray water on burning 7HF.It will float and spread the fire.

Hazardous combustion products : Smoke, soot, oxides or carbon.

Unusual fire hazards : Aerosol cans may burst over 54 deg C and spray contents to fire

6. ACCIDENTAL RELEASE MEASURES

Mop up or Sweep up with absorbent (For disposal see Section 13)

7. HANDLING AND STORAGE

Avoid eye contact. Avoid repeated or prolonged skin contact. Avoid breathing spray mist.

Keep away from sources of ignition .Storage level 3 aerosols as per NFPA 30B

MSDS/7-HF/3 dated 04/2020

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SDS Sulfuric Acid Page 3 of 3

ITW India Private Limited, Plot no 51, 52, 207 & 208, Phase -2, IDA, TSIC, Pashanmylaram, Sangareddy Dist-502307, Telangana State, India
Telephone: +91 8455 224710, Facsimile: +91 8455 224709, E-mail: magnaflexinfo@magnaflexindia.com, Website: www.in.magnaflex.com

Regd. Office: ITW India Private Limited, Level 1, Lotus Plaza, 732/1, Metrolife Gurgaon Road, Sector - 14, Gurgaon - 122 001, Haryana, India.
Telephone: +91 124 4294381, Facsimile: +91 124 4294389, E-mail: info@ida@itw.com

Corporate Identity Number (CIN): U32301HR1979PTC030843

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Controls : Use where ventilation will carry spray mist away from occupied areas

Personal protection : Wear safety glasses to protect eyes. Wear nitrile rubber / neoprene gloves if hand exposure is unavoidable.

9. PHYSICAL PROPERTIES

Initial boiling point (bulk) : 235 deg C Vapor pressure : Aerosol: 65 psi @ 24 deg C

VOC Content : 795 g/L Vapor density : 2

Density/sp. gravity : 0.82 Evaporation rate : Not Applicable

Water solubility : 0 Appearance : Black, oily liquid

pH : Neutral Odor : Mild oily odor

10. STABILITY AND REACTIVITY

Stability : Stable

Incompatibility : None

Hazardous decomposition products : Soot, oxides of carbon if heated to combustion temperatures

Reactivity : None

11. TOXICOLOGICAL INFORMATION

Carcinogenicity : Contains no known or suspected carcinogens listed with OSHA, IARC, NTP or ACGIH

Threshold limit value : 5 mg/m3 for oily mist

WHMIS Information (Canada) : According to available information, the ingredients have not been found to show reproductive toxicity, Teratogenicity, Mutagenicity, Skin sensitization, or Synergistic toxic effects with other material.

12. ECOLOGICAL INFORMATION

No data is available on 7HF. It floats on water and can be skimmed off. Isobutane is not an ozone depleter.

13. DISPOSAL

All Disposal practices must be in compliance with all local laws and regulations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

14. TRANSPORTATION

IATA : List of Dangerous goods

Proper shipping name : Aerosols, flammable

Hazard class or division : 2.1

Identification No. : UN 1950

Packing Group : N/A

IMDG : General Index

Aerosols

2.1

UN 1950

N/A

15. REGULATORY INFORMATION

TSCA : All ingredients are listed in TSCA inventory.

CERCLA : Not reportable

SARA TITLE III, Section 313 : No reportable ingredients

California Proposition 65 : Warning : This material may contain trace amounts of chemicals known to the state of California to cause cancer and/or birth defects and/or reproductive harm

WHMIS Class (Canada) : Aerosol : A-B-5

Note: This MSDS has been prepared to meet WHMIS (Canada) requirements with the exception of using 16 headings.

16. OTHER INFORMATION

Revision Statement : Reviewed and Updated the address

MSDS/7-HF/3 dated 04/2020

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ITW India Private Limited, Plot no 51, 52, 207 & 208, Phase -2, IDA, TSIC, Pashanmylaram, Sangareddy Dist-502307, Telangana State, India
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Regd. Office: ITW India Private Limited, Level 1, Lotus Plaza, 732/1, Metrolife Gurgaon Road, Sector - 14, Gurgaon - 122 001, Haryana, India.
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Corporate Identity Number (CIN): U32301HR1979PTC030843



SAFETY DATA SHEET

Section 1: Identification of the chemical and of the supplier

Product identifier : CO Contact Cleaner

Other means of identification

Product code : 2016M

Recommended use of the chemical and restrictions on use

Recommended use : Not available.

Recommended restrictions : None known.

Details of principal suppliers

Manufacturer

Company name : CRC Industries, Inc.

Address : 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information : 215-674-4300

Technical Assistance : 800-521-3168

Customer Service : 800-272-4820

24-Hour Emergency (CHEMTREC) : 800-424-9300 (US)
703-627-3867 (International)

Website : www.crcindustries.com

Section 2: Hazard Identification

Physical hazards : Flammable aerosols Category 1
Gases under pressure Compressed gas

Health hazards : Skin corrosion or irritation Category 2
Specific target organ toxicity - single exposure Category 3 narcotic effects

Environmental hazards : Aspiration hazard Category 1
Hazardous to the aquatic environment - chronic hazard Category 2

Label elements



Signal word

Danger

Hazard statement : Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container. Do not pierce or burn, even after use. Avoid breathing mist or vapor. Avoid breathing gas. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wash thoroughly after handling. Avoid release to the environment.

Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell. Collect spillage.

Storage

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition and information of the ingredients of the hazardous chemical

Mixtures

Material name: CO Contact Cleaner

SDS 10/2016

Hazardous components			
Chemical name	Common name and synonyms	CAS number	%
Naphtha (petroleum), hydrotreated light		64742-49-0	>= 60
n-Hexane		110-54-3	3 - 5
2,2-Dimethylbutane		75-83-2	< 0.2
2-Methylpentane		107-83-6	< 0.2
Non-hazardous components			
Chemical name	Common name and synonyms	CAS number	%
Carbon dioxide		124-38-9	5 - 10

Section 4: First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach contents don't get into the lungs.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Section 5: Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
HAZCHEM code	None
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Avoid breathing gas. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Personal precautions, protective equipment and emergency procedures	
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

Material name: CO Contact Cleaner

SDS MALAYSIA

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flames, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewer, basements or confined areas.

Section 7: Handling and storage

Precautions for safe handling	Pressurized container. Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing mist or vapor. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Secure cylinders in an upright position at all times, close all valves when not in use. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

Section 8: Exposure controls and personal protection

Occupational exposure limits				
Malaysia: OELs (Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations)				
Components	Type	Value		
2,2-Dimethylbutane (CAS 75-83-2)	TWA	1760 mg/m3		
2-Methylpentane (CAS 107-83-5)	TWA	500 ppm 1760 mg/m3		
Carbon dioxide (CAS 124-38-9)	TWA	500 ppm 9000 mg/m3		
n-Hexane (CAS 110-54-3)	TWA	5000 ppm 176 mg/m3 50 ppm		
US, ACGIH Threshold Limit Values				
Components	Type	Value		
2,2-Dimethylbutane (CAS 75-83-2)	STEL	1000 ppm		
2-Methylpentane (CAS 107-83-5)	TWA STEL	500 ppm 1000 ppm		
Carbon dioxide (CAS 124-38-9)	TWA STEL	500 ppm 30000 ppm		
n-Hexane (CAS 110-54-3)	TWA	5000 ppm 50 ppm		
Biological limit values				
ACGIH Biological Exposure Indices Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedione, without hydrolysis	Urine	-
* - For sampling details, please see the source document.				
Exposure guidelines				
Malaysia OELs: Skin designation				
n-Hexane (CAS 110-54-3)				
US ACGIH Threshold Limit Values: Skin designation				
n-Hexane (CAS 110-54-3)				

Material name: CO Contact Cleaner

SDS MALAYSIA

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be tailored to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear protective gloves such as: Nitrile, Polyvinyl chloride (PVC), Viton®.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	Chemical respirator with organic vapor cartridge and full facepiece.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9: Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Aerosol.
Color	Clear. Colorless.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	123 °F (50.8 °C) estimated.
Flash point	< 0 °F (< -17.8 °C) Test Closed Cup.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.1 % estimated
Flammability limit - upper (%)	7.3 % estimated
Explosive limit - lower (%)	1.1 %
Explosive limit - upper (%)	7.3 %
Vapor pressure	3558.3 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.71 estimated
Solubility(ies)	
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	489.2 °F (254 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.

Section 10: Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

Material name: CO Contact Cleaner

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Section 11: Toxicological information

Information on likely routes of exposure			
Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting.		
Skin contact	Causes skin irritation.		
Eye contact	Direct contact with eyes may cause temporary irritation.		
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonitis.		
Symptoms related to the physical, chemical and toxicological characteristics		May cause drowsiness and dizziness. Headache. Nausea, vomiting. Aspiration may cause pulmonary edema and pneumonitis. Skin irritation. May cause redness and pain.	
Information on toxicological effects			
Acute toxicity	May be fatal if swallowed and enters airways. Narcotic effects.		
Product	Species	Test Results	
CO Contact Cleaner			
Acute			
Dermal			
LD50	Rabbit	2119 mg/kg estimated	
Inhalation			
LC50	Rat	21193 ppm, 4 hours estimated	
		21 mg/l, 4 hours estimated	
Oral			
LD50	Rat	15895 mg/kg estimated	
* Estimates for product may be based on additional component data not shown.			
Skin corrosion/irritation	Causes skin irritation.		
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.		
Respiratory sensitization	Not available.		
Skin sensitization	This product is not expected to cause skin sensitization.		
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.		
Carcinogenicity			
IARC Monographs. Overall Evaluation of Carcinogenicity			
Not available.			
US NTP Report on Carcinogens: Anticipated carcinogen			
Not available.			
US NTP Report on Carcinogens: Known carcinogen			
Not available.			
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.		
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.		
Specific target organ toxicity - repeated exposure	Not classified.		
Aspiration hazard	May be fatal if swallowed and enters airways.		

Section 12: Ecological information

Section 12: Ecological information			
Ecotoxicity		Toxic to aquatic life with long lasting effects.	
Product		Species	Test Results
CO Contact Cleaner			
Aquatic			
Fish	LC50	Fish	1219.6779 mol, 96 hours estimated

Material name: CO Contact Cleaner

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Components	Species	Test Results
n-Hexane (CAS 110-54-3)		
Aquatic		
Fish	LCSO	Fathead minnow (Pimephales promelas) 2,101 - 2,951 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

2,2-Dimethylbutane 3.62

2-Methylpentane 3.74

n-Hexane 3.9

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 13: Disposal information

Disposal of waste from residues / unused products Collected and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers.

Section 14: Transportation information

ADR
UN number UN1950
UN proper shipping name AEROSOLS, flammable, Limited Quantity
Transport hazard class(es) 2.1
Class 2.1
Subsidiary risk -
Label(s) 2.1
Hazard No. (ADR) Not available.
Tunnel restriction code D
Packing group Not applicable.
Environmental hazards No.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

RID
UN number UN1950
UN proper shipping name AEROSOLS, flammable, Limited Quantity
Transport hazard class(es) 2.1
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Environmental hazards No.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA
UN number UN1950
UN proper shipping name Aerosols, flammable, Limited Quantity
Transport hazard class(es) 2.1
Class 2.1
Subsidiary risk -
Packing group Not applicable.
Environmental hazards No.
ERG Code 108.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed.
Cargo aircraft only Allowed.

Material name: CO Contact Cleaner

SDS MALAYSIA

IMDG

UN number UN1950
UN proper shipping name AEROSOLS, LIMITED QUANTITY
Transport hazard class(es) 2
Class 2
Subsidiary risk -
Packing group Not applicable.
Environmental hazards No.
Marine pollutant Not applicable.
EMS Not available.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.
ADR: IATA; IMDG; RID



HAZCHEM code None

Section 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Active Ingredients of Pesticide Product (Pesticide Act 1974, First Schedule, as amended through October 1, 2004)

Not regulated.
CWC (Chemical Weapons Convention) Act 2005, Schedules 1-3, as amended through CWC Regulations 2007, October 5, 2007

Not regulated.
Medical Surveillance Chemicals, Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000: Schedule 2

n-Hexane (CAS 110-54-3)
Ozone Depleting Substances (ODS) (Environmental Quality (Prohibition on the Use of CFC and Other Gases as Propellants and Blowing Agents) Order 1993, Dec. 31, 1993)

Not regulated.
Prohibited Use of Substances [Occupational Safety and Health (Prohibition of Use of Substance) Order 1999]
n-Hexane (CAS 110-54-3)

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto protocol

Carbon dioxide (CAS 124-38-6)

Listed

Basel Convention

Not applicable.

Section 16: Other information

Issue date 03-20-2015

Revision date 06-26-2015

Version # 02

List of abbreviations Not available.

References Not available.

Material name: CO Contact Cleaner

SDS MALAYSIA

Disclaimer

CRC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information

Composition / Information on Ingredients, Ingredients
Section 5: Fire-fighting measures: Suitable extinguishing media
Physical & Chemical Properties: Multiple Properties
Transport information: Material Transportation Information
GHS: Classification

energy drilling
Your Partner in Drilling

EDRILL VENCEDOR PTE LTD
3 ANSON ROAD #14-03, SPRINGLEAF TOWER
SINGAPORE 079509
TEL: +65 6222 8366 FAX: +65 6323 2265

PURCHASE ORDER No.:
4170-PO-160000778

DO 0640

SUPPLIER ID: VHI0360
SUPPLIER NAME: AZAREL INTERNATIONAL PTE LTD
ATTENTION: MR. NIGEL LIM
ADDRESS: 30 KAKI BUKIT ROAD 3, #01-10
EMPIRE TECHCENTRE
SINGAPORE 417819

SHIP TO: EDRILL VENCEDOR PTE LTD
ATTENTION: MOHO FAIZAL
ADDRESS: c/o CRYSTAL OFFSHORE PTE LTD
Lot: YTV2, 15A Tuas South Street 15,
Singapore 638810

TEL: 65 67422888

TEL: +65 8699 4679

FAX: 65 6742 2628

FAX:

EMAIL: NIGEL@AZAREL.COM.SG

EMAIL: faizal.ah@edrill.com

SUBJECT: 460041 Electrical Consumable

RIG: VENCEDOR

ISSUE DATE 4 Apr 2024

SHIPPING TERMS: DDP-SINGAPORE

QUOTE REF.: QT24-23667 / 01 APRIL 2024

DELIVERY BY: 8 Apr 2024

ACCOUNT NO.: 49951 Yard Expenses

PAYMENT TERMS: 30 DAYS AFTER RECEIPT OF YOUR INVOICE.

NOTES:

MR 4170-24-00427 Electrical Consumable

AZAREL INTERNATIONAL

QUOTE REF: QT24-23667

1) Verbatim LED tube 18W T8 6500K 100-240V 4ft

QTY: 200 EACH

UNIT PRICE: SGD 6.00

2) OFFER: YY black nylon cable tie 450x7.6mm., 100pcs/pkg

QTY: 4 PKTS

UNIT PRICE: SGD 16.00

3) OFFER: YY black nylon releasable cable tie 200x7.6mm, 100pcs/pkg

QTY: 5 PKTS

UNIT PRICE: SGD 22.80

4) OFFER: Fengfan FZGSP 200x4.6mm, black insulated SS316 roller ball cable tie, 100pcs/pkg

QTY: 6 PKTS

UNIT PRICE: SGD 40.00

5) OFFER: CRC 2016 CO contact cleaner 350gm/can

QTY: 24 CANS

UNIT PRICE: SGD 15.00

TOTAL PO AMOUNT: SGD 1,978.00

Material name: CO Contact Cleaner

SDS MALAYSIA

Page 1 of 2

PURCHASE ORDER No.:
4170-PO-160000778

#	ART NO.	DESCRIPTION	DEL.DAYS	QTY.	UNIT	UNIT PRICE	%	AMOUNT
1	45951A	YARD EXPENSES	2	1	LOT	1,978.00	0.00	1,978.00
ADDITIONAL INFO:								
ACCOUNT NO.:		45951						
MAKER:		-						
MAKERS NO.:		-						
CERTIFICATE:		NO						
MSDS:		NO						
TECH ACC.:		45951 Yard Expenses						
PR. NO.:		-						

CURRENCY: SGD

ISSUED BY: Celeste Tan
E-MAIL: Celeste.Tan@edrill.com
PHONE: +65 6222 8366APPROVED BY: Pirdaus Farid
APPROVAL DATE: 4 Apr 2024

SUBTOTAL	1,978.00
DISCOUNT 0.00 %	0
TOTAL AMOUNT EXCL. VAT	1,978.00

PROFORMA INVOICE / PACKING LIST

30 KAKI BUKIT ROAD 3, #01-10
EMPIRE TECHNO CENTRE
SINGAPORE 417819
T: 67422988 F: 67422628CO. REG NO: 201437040W
S.S.T. REG. NO: 201437040W

Date: 05-Apr-24

M/S:

EDRILL VENCEDOR PTE LTD
3 ANSON ROAD #14-03
SPRINGLEAF TOWER
SINGAPORE 079909

PRICE: EXWORKS

PO number: 4170-PO-160000778
Shipment:

INVOICE NUMBER

P/24-0127

SHIP TO:

C/O CRYSTAL OFFSHORE PTE LTD
LOT YTV2, 15A TUAS SOUTH STREET 35,
SINGAPORE 638910
ATTN: 86994679 (FAIZAL)

S/N	DESCRIPTION	Country Origin	QTY	UOM	U.PRICE	AMOUNT
RIG: VENCEDOR						
1	VERBATIM LED TUBE 182 T8 6500K 100-240V	CHINA	200	PCS	\$ 6.00	\$ 1,200.00
2	YY BLACK NYLON CABLETIE 450X7.6MM 100PCS/PKT	TAIWAN	4	PCS	\$ 16.00	\$ 64.00
3	YY BLACK NYLON RELEASABLE CABLE TIE 200X7.6MM 100PCS/PKT	TAIWAN	5	PCS	\$ 22.80	\$ 114.00
4	FZGSP 4.6 X 200MM S/S 316 CABLE TIE BLACK INSULATED COATED (100PCS/PKT)	CHINA	6	PCS	\$ 40.00	\$ 240.00
5	CRC 2036 CO CONTACT CLEANER 350GM/CAN	CHINA	24	PCS	\$ 15.00	\$ 360.00

DIM: 136 X 80 X 62CM
WEIGHT: 93 KG
PALLET 1 OF 1

TOTAL \$ 1,978.00

PRICE IN SINGAPORE DOLLARS

Azarel International Pte Ltd

NIGEL



SAFETY DATA SHEET

1. Identification

Product identifier	CO@ Contact Cleaner - 14 oz
Other means of identification	
Product Code	No. 02016 (Item# 1003172)
Recommended use	Precision electronics cleaner
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louie Dr. Warminster, PA 18974 US
Telephone	
General Information	215-874-4300
Technical Assistance	800-521-3188
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-5300 (US)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Gases under pressure	Liquefied gas
Health hazards	Not classified.	
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word: Warning
Hazard statement: Contains gas under pressure; may explode if heated.

Precautionary statement

Prevention	Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 49 °C/120 °F. Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying.
Response	Wash hands after handling.
Storage	Protect from sunlight. Store in a well-ventilated place. Exposure to high temperature may cause can to burst.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information

When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.

3. Composition/information on ingredients

Mixtures	Chemical name	Common name and synonyms	CAS number	%
	1,1,1,2-tetrafluoroethane	HFC-134A	811-97-2	40 - 50

Chemical name	Common name and synonyms	CAS number	%
methyl nonafluorobutyl ether		163702-07-6	20 - 30
methyl nonafluoroisobutyl ether		163702-08-7	20 - 30

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. For product usage instructions, see the product label.
Conditions for safe storage, including any incompatibilities	Level 1 Aerosol. Store in a well-ventilated place. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits

US, Workplace Environmental Exposure Level (WEEL) Guides	Type	Value
Components		
1,1,1,2-tetrafluoroethane (CAS 811-97-2)	TWA	4240 mg/m3
		1000 ppm
methyl nonafluorobutyl ether (CAS 163702-07-6)	TWA	750 ppm
methyl nonafluoroisobutyl ether (CAS 163702-08-7)	TWA	750 ppm

Conditions to avoid	Heat, flames and sparks. When exposed to extreme heat or hot surfaces, vapors may decompose to harmful or fatal corrosive gases such as hydrogen fluoride.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Hydrogen fluoride.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.
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Information on toxicological effects

Acute toxicity	Not classified.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	
Respiratory sensitization	This product is not expected to cause respiratory sensitization.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1003)

Not listed.
US, National Toxicology Program (NTP) Report on Carcinogens

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Partition coefficient n-octanol / water (log Kow)	1,1,1,2-tetrafluoroethane 1.274
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Consult authorities before disposal. Do not allow this material to drain into sewer/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national regulations.
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Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosure, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear protective gloves such as: Neoprene, Nitrile, Polyvinyl alcohol (PVA).
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Aerosol.
Color	Clear, Colorless.
Odor	Ethereal and sweetish odor.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-112 °F (-80 °C) estimated
Initial boiling point and boiling range	141.8 °F (61 °C) estimated
Flash point	None.
Evaporation rate	Very fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Vapor pressure	3445.1 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	1.55
Solubility(ies)	
Solubility (water)	< 140 ppm
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.

Material name: CQ8 Contact Cleaner - 14 oz
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Hazardous waste code	Not regulated.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	
UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Label(s)	2.2
Packing group	Not applicable.
Special precautions for user	Not available.
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None
IATA	
UN number	UN1950
UN proper shipping name	Aerosols, non-flammable, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
ERG Code	2L
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.
IMDG	
UN number	UN1950
UN proper shipping name	AEROSOLS, Limited Quantity
Transport hazard class(es)	
Class	2.2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	F-D, S-U
Special precautions for user	Not available.

DOT, IMDG



Material name: CQ8 Contact Cleaner - 14 oz
No. 02016 (Item# 1003172) Version #: 01 Issue date: 01-14-2020

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IATA

**15. Regulatory Information**

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

Food and Drug Administration (FDA)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Classified hazard categories

Gas under pressure

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

Yes

SARA 313 (TRI reporting)

Not regulated.

US state regulations

US, New Jersey Worker and Community Right-to-Know Act

Not listed.

US, Massachusetts RTK - Substance List

Not listed.

US, Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US, Rhode Island RTK

Not listed.

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 2015 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR

51.100(a))

0 %

Consumer products

(40 CFR 59, Subpt. C)

Not regulated

State

Consumer products

VOC content (CA)

This product is regulated as an Electronic Cleaner. This product is compliant in all 50 states.

VOC content (OTC)

0 %

International Inventories

Country(s) or region

Australia

Australian Inventory of Chemical Substances (AICS)

On inventory (yes/no)*

Yes

Canada

Domestic Substances List (DSL)

Yes

Canada

Non-Domestic Substances List (NDSL)

No

China

Inventory of Existing Chemical Substances in China (IECSC)

Yes

Europe

European Inventory of Existing Commercial Chemical Substances (EINECS)

No

Europe

European List of Notified Chemical Substances (ELINCS)

No

Japan

Inventory of Existing and New Chemical Substances (ENCS)

No

Korea

Existing Chemicals List (ECL)

No

New Zealand

New Zealand Inventory

Yes

Philippines

Philippine Inventory of Chemicals and Chemical Substances (PICCS)

Yes

Taiwan

Taiwan Chemical Substance Inventory (TCSI)

Yes

United States & Puerto Rico

Toxic Substances Control Act (TSCA) Inventory

Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(ies)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

16. Other information, including date of preparation or last revision

Issue date

01-14-2020

Prepared by

Dustin Kern

Version #

01

Further information

CRC # 508C/1008115

Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc.,

Revision information

Product and Company Identification: Product Codes

Hazard(s) Identification: Prevention

Composition / Information on Ingredients: Ingredients

Composition/Information on Ingredients: Component information

Handling and storage: Precautions for safe handling

Disposal considerations: Contaminated packaging

Transport information: Material Transportation Information

Regulatory information: California Proposition 65

Other information, including date of preparation or last revision: Further information

GHS: Classification

Material name: COB Contact Cleaner - 14 oz

No. 02016 (Item# 1003172) Version #: 01 Issue date: 01-14-2020

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MATERIAL SAFETY DATA SHEET

X-CIDE® 102

**1. Product and Company Identification**

Material name

X-CIDE® 102

Applications

Biocide

Supplier

Baker Hughes Drilling Fluids
2001 Rankin Rd.
Houston, TX 77073
Emergency telephone number 713-439-8900

2. Composition / Information on Ingredients

Components	CAS #	Percent
GLUTARALDEHYDE	111-30-8	10 - 30
Non-hazardous and other components below reportable levels		60 - 80

3. Hazards Identification

Emergency overview	CORROSIVE Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact.
Potential health effects	
Routes of exposure	Inhalation. Skin contact. Eye contact.
Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	May cause burns. May cause sensitization by skin contact. Corrosive after repeated contact with skin and mucous membranes.
Inhalation	Can cause severe respiratory irritation. Inhaled corrosive substances can lead to a toxic edema of the lungs.
Ingestion	Do not ingest. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.
Target organs	Eyes. Respiratory system. Skin.
Chronic effects	May cause delayed lung damage. Repeated exposure may lead to respiratory sensitization reactions, producing an asthma-like condition.

4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention immediately.
Skin contact	Remove and isolate contaminated clothing and shoes. Wash off with soap and plenty of water. Immediately flush skin with running water for at least 20 minutes. Get medical attention if irritation develops or persists.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist.
Ingestion	Have victim rinse mouth thoroughly with water. Do not induce vomiting without medical advice. If material is ingested, immediately contact a physician or poison control center.
General advice	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Hazardous combustion products	Carbon monoxide and carbon dioxide.
Extinguishing media	
Suitable extinguishing media	Dry chemical, foam, carbon dioxide.
Protection of firefighters	
Protective equipment for firefighters	Move containers from fire area if you can do it without risk. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Cool containers with flooding quantities of water until well after fire is out. Water runoff can cause environmental damage.

Material name: X-CIDE® 102

Material ID: 1443 Revision date: 21-APR-2021 Print date: 21-APR-2021

MSDS US

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BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS						
4. First aid measures						
Notes to physician	: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.					
Specific treatments	: No specific treatment.					
Protection of first-aiders	: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.					
See toxicological information (Section 11)						
5. Firefighting measures						
<u>Extinguishing media</u>						
Suitable extinguishing media	: Use an extinguishing agent suitable for the surrounding fire.					
Unsuitable extinguishing media	: None known.					
Specific hazards arising from the chemical	: In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.					
Special protective actions for fire-fighters	: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.					
Special protective equipment for fire-fighters	: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.					
Hazardous thermal decomposition products	: nitrogen oxides,halogenated compounds					
Hazchem code	: 2R					
6. Accidental release measures						
<u>Personal precautions, protective equipment and emergency procedures</u>						
For non-emergency personnel	: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spill material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.					
For emergency responders	: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".					
Environmental precautions	: Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.					
<u>Methods and material for containment and cleaning up</u>						
Small spill	: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.					
Date of issue/Date of revision	: 31 January 2017	Date of previous issue	: 7 February 2011	Version	: 3	3/10

BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS	
8. Exposure controls/personal protection	
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn,

BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS						
6. Accidental release measures						
Large spill	: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.					
7. Handling and storage						
Precautions for safe handling						
Protective measures	: Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.					
Advice on general occupational hygiene	: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.					
Conditions for safe storage, including any incompatibilities	: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.					
8. Exposure controls/personal protection						
The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.						
Control parameters						
Occupational exposure limits						
<table border="1"><thead><tr><th>Ingredient name</th><th>Exposure limits</th></tr></thead><tbody><tr><td>ammonium chloride</td><td>Safe Work Australia (Australia, 1/2014). STEL: 20 mg/m³ 15 minutes. Form: Fume TWA: 10 mg/m³ 8 hours. Form: Fume</td></tr></tbody></table>	Ingredient name	Exposure limits	ammonium chloride	Safe Work Australia (Australia, 1/2014). STEL: 20 mg/m³ 15 minutes. Form: Fume TWA: 10 mg/m³ 8 hours. Form: Fume		
Ingredient name	Exposure limits					
ammonium chloride	Safe Work Australia (Australia, 1/2014). STEL: 20 mg/m³ 15 minutes. Form: Fume TWA: 10 mg/m³ 8 hours. Form: Fume					
Appropriate engineering controls	: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.					
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.					
Individual protection measures						
Hygiene measures	: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.					
Date of issue/Date of revision	: 31 January 2017	Date of previous issue	: 7 February 2011	Version	: 3	4/10

BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS						
8 . Exposure controls/personal protection						
Eye/face protection	: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.					
Skin protection						
Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.					
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.					
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.					
Respiratory protection	: Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.					
9 . Physical and chemical properties						
Appearance						
Physical state	: Liquid.					
Colour	: Colourless.					
Odour	: Ammonia.					
Odour threshold	: Not available.					
pH	: 10.4					
Melting point	: -60°C (-76°F)					
Boiling point	: 30 to 100°C (86 to 212°F)					
Flash point	: Not available.					
Evaporation rate	: Not available.					
Flammability (solid, gas)	: Not available.					
Lower and upper explosive (flammable) limits	: Lower: 15% Upper: 30%					
Vapour pressure	: Not available.					
Vapour density	: Not available.					
Relative density	: 0.91 (20°C)					
Solubility	: Easily soluble in the following materials: cold water and hot water.					
Partition coefficient: n-octanol/water	: Not available.					
Auto-ignition temperature	: Not available.					
Decomposition temperature	: Not available.					
Viscosity	: Not available.					
Date of issue/Date of revision	: 31 January 2017	Date of previous issue	: 7 February 2011	Version	: 3	5/10

BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS					
10 . Stability and reactivity					
Reactivity	: No specific test data related to reactivity available for this product or its ingredients.				
Chemical stability	: The product is stable.				
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.				
Conditions to avoid	: No specific data.				
Incompatible materials	: Not available.				
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.				
11 . Toxicological information					
Information on toxicological effects					
Acute toxicity					
Product/ingredient name	Result	Species	Dose	Exposure	
ammonia	LD50 Oral	Rat	350 mg/kg	-	
ammonium chloride	LD50 Oral	Rat	1650 mg/kg	-	
Conclusion/Summary : No known significant effects or critical hazards.					
Irritation/Corrosion					
Product/ingredient name	Result	Species	Score	Exposure	Observation
ammonia	Eyes - Severe irritant	Rabbit	-	250	-
	Eyes - Severe irritant	Rabbit	-	Micrograms	-
			-	0.5 minutes	-
			-	1 milligrams	-
ammonium chloride	Eyes - Mild irritant	Rabbit	-	24 hours 500	-
	Eyes - Severe irritant	Rabbit	-	milligrams	-
			-	100 milligrams	-
Conclusion/Summary					
Skin	: Causes pain and burns in contact with skin. May cause permanent skin damage.				
Eyes	: Risk of serious damage to eyes. May cause eye burns and permanent eye injury.				
Respiratory	: May cause respiratory irritation. Inhalation of the spray or mist may produce severe irritation of respiratory tract, characterised by coughing, choking or shortness of breath.				
Sensitisation					
Conclusion/Summary					
Skin	: No known significant effects or critical hazards.				
Respiratory	: No known significant effects or critical hazards.				
Mutagenicity					
Conclusion/Summary : No known significant effects or critical hazards.					
Carcinogenicity					
Conclusion/Summary : No known significant effects or critical hazards.					
Reproductive toxicity					
Conclusion/Summary : No known significant effects or critical hazards.					
Teratogenicity					
Conclusion/Summary : Not available.					
Specific target organ toxicity (single exposure)					
Name	Category		Route of exposure		Target organs
Not available.					
Specific target organ toxicity (repeated exposure)					
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BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS			
11 . Toxicological information			
Name	Category	Route of exposure	Target organs
Not available.			
Aspiration hazard			
Name	Result		
Not available.			

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes severe burns.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : pain, watering, redness
Inhalation : No specific data.
Skin contact : pain or irritation, redness, blistering may occur
Ingestion : stomach pains

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

12 . Ecological information

Toxicity : Very toxic to aquatic organisms.

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BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS			
12 . Ecological information			
Product/ingredient name	Result	Species	Exposure
ammonia ammonium chloride	Acute LC50 37 ppm Fresh water	Fish - Gambusia affinis - Adult	96 hours
	Acute EC50 0.07 mg/l Marine water	Algae - Hormosira banksii - Gamete	72 hours
	Acute EC50 0.1 mg/l Fresh water	Crustaceans - Cypris subglobosa	48 hours
	Acute LC50 390 µg/l Fresh water	Daphnia - Daphnia magna - Young	48 hours
	Acute LC50 80 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours
	Chronic NOEC 0.6 mg/l Marine water	Algae - Entomoneis punctulata - Exponential growth phase	72 hours
	Chronic NOEC 330 µg/l Fresh water	Crustaceans - Crangonyx sp. - Juvenile (Fledgling, Hatchling, Weanling)	21 days
	Chronic NOEC 19.66 mg/l Fresh water Chronic NOEC 0.006 mg/l Fresh water	Daphnia - Daphnia magna Fish - Ictalurus punctatus - Fry	21 days 30 days

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP_{ow}	BCF	Potential
ammonium chloride	-3.2	-	low








Other adverse effects : No known significant effects or critical hazards.

13 . Disposal considerations

Disposal methods : Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Avoid dispersal of spill material and runoff and contact with soil, waterways, drains and sewers.

14 . Transport information

International transport regulations

Regulatory information	UN number	Proper shipping name	Transport hazard class(es)	PG*	Label
ADR/RID	UN2672	AMMONIA SOLUTION	8	III	 
ADG	UN2672	AMMONIA SOLUTION	8	III	 
IMDG	UN2672	AMMONIA SOLUTION	8	III	 
IATA	UN2672	AMMONIA SOLUTION	8	III	

PG* : Packing group

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BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS		
14 . Transport information		
Regulatory information	Environmental hazards	Additional information
ADR/RID Class	Yes.	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Hazchem code 2R
ADG Class	No.	Hazchem code 2R
IMDG Class	Yes.	Emergency schedules (EmS) F-A, S-B
IATA Class	No.	-

Additional information*: A* in the Hazchem code indicates that Alcohol Resistant Foam is the preferred extinguishing medium. If not available, use the extinguishing medium indicated by the number in the Hazchem code.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of Marpol and the IBC Code : Not available.

15 . Regulatory information

Standard Uniform Schedule of Medicine and Poisons

6

Model Work Health and Safety Regulations - Scheduled Substances

Australia inventory (AICS) : All components are listed or exempted.
References : **National Code of Practice for the Control of Workplace Hazardous Substances.**
National Code of Practice for the Labelling of Workplace Substances.
National Code of Practice for the Preparation of Material Safety Data Sheets.
Approved Criteria for Classifying Hazardous Substances.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

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BUFFER SOLUTION STRONG / AMMONIA BUFFER HARDNESS	
16 . Other information	
History	
Date of printing	: 31 January 2017.
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Key to abbreviations	: ADG = Australian Dangerous Goods ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) NOHSC = National Occupational Health and Safety Commission SUSMP = Standard Uniform Schedule of Medicine and Poisons UN = United Nations

Procedure used to derive the classification

Classification	Justification
Skin Corr. 1B, H314 Aquatic Acute 1, H400	Calculation method Calculation method

References : Not available.

 Indicates information that has changed from previously issued version.

Disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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Potassium Chloride (KCl)

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27/4 4838/-8). g+4-838,-/8).

K 1Ä7##\$\$+1

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1+7Ä-1EÄ)3Ä/Ä4 838,-/8).4
W3"ÄZ 8ÄX
=C<UÄ17ÄE-Ä)3Ä/OO(1P8" J 1Ä22)B" 4),1
5ÄML/414 J 1Ä22)B" 4),1
1+7Ä-1EÄ)3Ä/Ä4 838,-/8).4
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Shell GTL Saraline 185V
Version 1.0
Effective Date 15.02.2022

Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING


Material Name : Shell GTL Saraline 185V
Recommended Use / Restrictions of Use : Synthetic drilling base fluid.

Supplier : Shell Eastern Trading (PTE) Ltd
Shell House
83 Clemenceau Avenue
Singapore 239920
Singapore

Telephone : +65-6384 8000
Emergency Telephone Number : +44 (0) 151 350 4595

2. HAZARDS IDENTIFICATION

GHS Classification : Aspiration hazard, 1
Flammable liquids, Category 4

GHS Label Elements Symbol(s) : 

Signal Words : Danger

Hazard Statement : PHYSICAL HAZARDS:
H227: Combustible liquid.

HEALTH HAZARDS:
H304: May be fatal if swallowed and enters airways.

ENVIRONMENTAL HAZARDS:
Not classified as environmental hazard according to CLP criteria.

GHS Precautionary Statements
Prevention : P280: Wear protective gloves/protective clothing/eye protection/face protection.
Response : P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P331: Do NOT induce vomiting.

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Storage : P403+P235: Store in a well-ventilated place. Keep cool.

Disposal: : P501: Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Other Hazards which do not result in classification : May ignite on surfaces at temperatures above auto-ignition temperature. Vapour in the headspace of tanks and containers may ignite and explode at temperatures exceeding auto-ignition temperature, where vapour concentrations are within the flammability range. This material is a static accumulator. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.

Additional Information : This product is intended for use in closed systems only.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture Description : A complex combination of hydrocarbons obtained from a feedstock derived from the catalytic hydrogenation of carbon monoxide (the Fischer - Tropch Process), optionally followed by one or more of the following processes: hydrotreatment, hydroisomerisation, hydrocracking. It consists predominantly of branched and linear aliphatic hydrocarons having carbon numbers in the range of C8 to C26 and boiling in the range of approximately 120C to 380C (248F to 716F).

CAS No. : 848301-67-7

Classification of components according to GHS

Chemical Identity	Synonyms	CAS	Hazard Class (category)	Hazard Statement	Conc.
Distillates (Fischer-Tropsch) C8-26 - Branched and Linear	Distillates (Fischer-Tropsch) C8-26 - Branched and Linear	848301-67-7	Asp. Tox., 1; Flam. Liq., 4;	H304; H227;	%

Additional Information : Refer to Ch 16 for full text of H phrases.

4. FIRST AID MEASURES

Inhalation : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin Contact : Remove contaminated clothing. Immediately flush skin with large amounts of water for at least 15 minutes, and follow by

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washing with soap and water if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

Eye Contact : Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

Ingestion : If swallowed, do not induce vomiting; transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101° F (38.3°C), shortness of breath, chest congestion or continued coughing or wheezing.

Most Important Symptoms/Effects, Acute & Delayed : If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. The onset of respiratory symptoms may be delayed for several hours after exposure. Defatting dermatitis signs and symptoms may include a burning sensation and/or a dried/cracked appearance.

Immediate medical attention, special treatment : Treat symptomatically.

5. FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Specific hazards arising from Chemicals : Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. Flammable vapours may be present even at temperatures below the flash point.

Suitable Extinguishing Media : Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media : Do not use water in a jet.

Protective Equipment & Precautions for Fire Fighters : Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

Additional Advice : Keep adjacent containers cool by spraying with water.

6. ACCIDENTAL RELEASE MEASURES

Observe the relevant local and international regulations. Evacuate the area of all non-essential personnel. Ventilate contaminated area thoroughly. Avoid contact with spilled or released

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material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal.

- Personal Precautions, Protective Equipment and Emergency Procedures**
- Do not breathe fumes, vapour. Do not operate electrical equipment.
 - Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Methods and Material for Containment and Cleaning Up**
- For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. Shovel into a suitable clearly marked container for disposal or reclamation in accordance with local regulations.
- Additional Advice**
- Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Maritime spillages should be dealt with using a Shipboard Oil Pollution Emergency Plan (SOPEP), as required by MARPOL Annex 1 Regulation 26.

7. HANDLING AND STORAGE

- General Precautions**
- Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Air-dry contaminated clothing in a well-ventilated area before laundering. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Prevent spillages. Use local exhaust ventilation if there is risk of inhalation of

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- containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<= 1 m/s until fill pipe submerged to twice its diameter, then <= 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Refer to guidance under Handling section.
- Recommended Materials**
- For containers, or container linings use mild steel, stainless steel. Aluminium may also be used for applications where it does not present an unnecessary fire hazard. Examples of suitable materials are: high density polyethylene (HDPE) and Viton (FKM), which have been specifically tested for compatibility with this product. For container linings, use amine-adduct cured epoxy paint. For seals and gaskets use: graphite, PTFE, Viton A, Viton B.
- Unsuitable Materials**
- Some synthetic materials may be unsuitable for containers or container linings depending on the material specification and intended use. Examples of materials to avoid are: natural rubber (NR), nitrile rubber (NBR), ethylene propylene rubber (EPDM), polymethyl methacrylate (PMMA), polystyrene, polyvinyl chloride (PVC), polyisobutylene. However, some may be suitable for glove materials.
- Container Advice**
- Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.
- Other Advice**
- Ensure that all local regulations regarding handling and storage facilities are followed. See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on Static Electricity). CENELEC CLC/TR 50404 (Electrostatics – Code of practice for the avoidance of hazards due to static electricity).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

Occupational Exposure Limits

None established.

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- vapours, mists or aerosols. Never siphon by mouth. Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse. For comprehensive advice on handling, product transfer, storage and tank cleaning refer to the product supplier. Maintenance and Fuelling Activities - Avoid inhalation of vapours and contact with skin.
- Precautions for Safe Handling**
- Avoid inhaling vapour and/or mists. Avoid prolonged or repeated contact with skin. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Bulk storage tanks should be diked (bunded). When using do not eat or drink. The vapour is heavier than air, spreads along the ground and distant ignition is possible.
- Conditions for Safe Storage**
- Drum and small container storage: Drums should be stacked to a maximum of 3 high. Use properly labelled and closeable containers. Tank storage: Tanks must be specifically designed for use with this product. Bulk storage tanks should be diked (bunded). Locate tanks away from heat and other sources of ignition. Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable. Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.
- Product Transfer**
- Avoid splash filling. Wait 2 minutes after tank filling (for tanks such as those on road tanker vehicles) before opening hatches or manholes. Wait 30 minutes after tank filling (for large storage tanks) before opening hatches or manholes. Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling. Contamination resulting from product transfer may give rise to light hydrocarbon vapour in the headspace of tanks that have previously contained gasoline. This vapour may explode if there is a source of ignition. Partly filled containers present a greater hazard than those that are full, therefore handling, transfer and sampling activities need special care. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and

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- Additional Information**
- In the absence of a national exposure limit, the American Conference of Governmental Industrial Hygienists (ACGIH) recommends the following values for Diesel Fuel: TWA - 100 mg/m3 Critical effects based on Skin and Irritation.
- Biological Exposure Index (BEI)**
- No biological limit allocated.
- Appropriate Engineering Controls**
- The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate ventilation to control airborne concentrations. Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing and maintenance of equipment used to control exposure, e.g. personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break-in or maintenance. Retain drain downs in sealed storage pending disposal or for subsequent recycle.
- Individual Protection Measures**
- Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
- Respiratory Protection**
- If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined spaces) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)]. All respiratory protection equipment and use must be in accordance with local regulations.
- Hand Protection**
- Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. Suitability and

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durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognise that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may be acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Select gloves tested to a relevant standard (e.g. Europe EN374, US F739). When prolonged or frequent repeated contact occurs, Nitrile gloves may be suitable. (Breakthrough time of > 240 minutes.) For incidental contact/splash protection Neoprene, PVC gloves may be suitable.

Eye Protection : If a local risk assessment deems it so, then chemical splash goggles may not be required and safety glasses may provide adequate eye protection. Approved to EU Standard EN166.

Protective Clothing : Chemical resistant gloves/gauntlets, boots, and apron (where risk of splashing).

Thermal Hazards :

Monitoring Methods : Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

Environmental Exposure Controls : Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Information on accidental release measures are to be found in section 6.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Colourless. Liquid.
Odour	: Data not available
Odour threshold	: Data not available
pH	: Not applicable.
Initial Boiling Point and Boiling Range	: 200 - 320 °C / 392 - 608 °F
Pour point	: -21 °C / -6 °F
Flash point	: ca. > 85 °C / > 185 °F
Upper / lower Flammability or Explosion limits	: 1.0 - 6.0 %(V)
Auto-ignition temperature	: ca. 210 °C / 410 °F
Vapour pressure	: < 0.001 kPa at 25 °C / 77 °F

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Exposure	
Acute Oral Toxicity	: Low toxicity: LD50 > 5000 mg/kg , Rat
Acute Dermal Toxicity	: Expected to be of low toxicity: LD50 >2000 mg/kg , Rabbit
Acute Inhalation Toxicity	: Expected to be of low toxicity if inhaled.
Skin corrosion/irritation	: Expected to be non-irritating to skin.
Serious eye damage/irritation	: Expected to be non-irritating to eyes.
Respiratory Irritation	: Not expected to be a respiratory irritant.
Respiratory or skin sensitisation	: Not expected to be a sensitizer.
Aspiration Hazard	: Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.
Germ cell mutagenicity	: Not mutagenic.
Carcinogenicity	: Not expected to be carcinogenic.
Distillates (Fischer-Tropsch) C8-26 - Branched and Linear	: GHS / CLP: No carcinogenicity classification
Reproductive and Developmental Toxicity	: Does not impair fertility. Not a developmental toxicant.
Specific target organ toxicity - single exposure	: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.
Specific target organ toxicity - repeated exposure	: Repeated exposure may cause skin dryness or cracking.
Additional Information	: Classifications by other authorities under varying regulatory frameworks may exist.

12. ECOLOGICAL INFORMATION

Basis for Assessment	: Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Acute Toxicity	: LL/EL50 expressed as the nominal amount of product required

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Relative Density	: Data not available
Density	: ca. 0.78 g/cm3 at 15 °C / 59 °F
Water solubility	: Insoluble.
Solubility in other solvents	: Data not available
n-octanol/water partition coefficient (log Pow)	: > 6.5
Dynamic viscosity	: Data not available
Kinematic viscosity	: 2.6 mm2/s at 40 °C / 104 °F
Vapour density (air=1)	: Data not available
Electrical conductivity	: Low conductivity: < 100 pS/m. The conductivity of this material makes it a static accumulator,. A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m,. Whether a liquid is nonconductive or semi-conductive, the precautions are the same,. A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.
Evaporation rate (nBuAc=1)	: Data not available
Decomposition Temperature	: Data not available
Flammability	: Combustible liquid.

10. STABILITY AND REACTIVITY

Chemical stability	: No hazardous reaction is expected when handled and stored according to provisions.
Possibility of Hazardous Reactions	:
Conditions to Avoid	: Avoid heat, sparks, open flames and other ignition sources.
Incompatible Materials	: Strong oxidising agents.
Hazardous Decomposition Products	: Hazardous decomposition products are not expected to form during normal storage. Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

11. TOXICOLOGICAL INFORMATION

Information on Toxicological effects	
Basis for Assessment	: Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).
Likely Routes of	:

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Fish	: to prepare aqueous test extract.
Aquatic crustacea	: Practically non toxic: LL/EL/IL50 > 100 mg/l
Algae/aquatic plants	: Practically non toxic: LL/EL/IL50 > 100 mg/l
Microorganisms	: Practically non toxic: LL/EL/IL50 > 100 mg/l
Chronic Toxicity	: Fish
Aquatic crustacea	: NOEC/NOEL > 100 mg/l
Mobility	: NOEC/NOEL expected to be > 10 - <= 100 mg/l
Persistence/degradability	: Partly evaporates from water or soil surfaces, but a significant proportion will remain after one day. Large volumes may penetrate soil and could contaminate groundwater. Floats on water.
Bioaccumulative Potential	: Readily biodegradable.
Other Adverse Effects	: Contains constituents with the potential to bioaccumulate.
	: Films formed on water may affect oxygen transfer and damage organisms.

13. DISPOSAL CONSIDERATIONS

Material Disposal	: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.
Container Disposal	: Send to drum recoverer or metal reclaimer. Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard if heated above the flash point. Do not puncture, cut or weld uncleaned drums. Do not pollute the soil, water or environment with the waste container. Comply with any local recovery or waste disposal regulations.
Local Legislation	: Disposal should be in accordance with applicable regional, national, and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be in compliance.

14. TRANSPORT INFORMATION

Land (as per ADR classification): Not regulated	
Other	: This material is not classified as dangerous under ADR regulations.

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IMDG

This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)

This material is either not classified as dangerous under IATA regulations or needs to follow country specific requirements.

Additional Information : MARPOL Annex 1 rules apply for bulk shipments by sea.
For bulk shipping this product has been classified under Annex I (Groups 6-19 Gasoil).

This material is not regulated under ADR per section 2.2.3.1.1 (Note 1) and subsection 32.2.5 of Part III of the Manual of Tests and Criteria

15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Local Regulations

Workplace Safety and Health Act & Workplace Safety and Health (General Provision) Regulations : This product is subject to the SDS, Labelling, PEL and other requirements in the Act/ Regulations.

Environmental Protection and Management Act and Environmental Protection and Management (Hazardous Substances) Regulations : This product is not subject to the requirement in the Act/Regulations.

Maritime and Port Authority of Singapore (Dangerous Goods, Petroleum and Explosives) Regulations : This product is not subject to the requirement in the Act/Regulations.

Fire Safety Act and Fire Safety (Petroleum & Flammable Materials) Regulations : This product is not subject to the requirement in the Act/Regulations.

Chemical Inventory Status

EINECS : Listed.
TSCA : Listed.
JEX (JP) : Listed.
DSL : Listed.
AICS : Listed.

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INV (CN) : Listed.
KECI (KR) : Listed.
PICCS (PH) : Listed.
NZIOC : Listed.
Classification triggering components : Contains Distillates (Fischer - Tropisch), C8-26 - branched and linear.

Other Information : Environmental Protection and Management Act. Workplace Safety and Health Act 2006.

16. OTHER INFORMATION

Hazard Statement

H227 Combustible liquid.
H304 May be fatal if swallowed and enters airways.

Additional Information : This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters.

SDS Version Number : 1.0

SDS Effective Date : 15.02.2013

SDS Revisions : A vertical bar (|) in the left margin indicates an amendment from the previous version.

Uses and Restrictions : This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier.

SDS Distribution : The information in this document should be made available to all who may handle the product.

Key Literature References : The quoted data are from, but not limited to, one or more sources of information (e.g. toxicological data from Shell Health Services, material suppliers' data, CONCAWE, EU IUCLID date base, EC 1272 regulation, etc).

Disclaimer : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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EDRILL VENCEDOR First Aid Box

Item No.	Item	Quantity	Curent Stock	Contract	EXP.
1	First aid booklet	1	1	Y	
2	Pocket-mask Laerdal	1	1	Y	
3	Tough cut scissors 17cm	1	1	Y	
4	Vinyl gloves	4 pairs	4 pairs	Y	
5	Tourniquet	1	1	Y	
6	Disposable sterile wound dressing, small	1	1	Y	5/1/2028
7	Disposable sterile wound dressing, medium	1	1	Y	5/1/2028
8	Alcohol-free wipes	20	20	Y	
9	Gauze swabs-7.5x7.5cm.(pack of five)	5	0	Y	
10	Gauze swabs-7.5x7.5cm.(pack of 100)/10cmx10cm (pack of 100)	1	1	Y	
11	Micropore tape -2.5cmx5m./1.25	2	2	Y	31/04/2028
12	Elastoplast adhesive bandage -10cm x 4.5m	1	1	Y	
13	Conform bangdage -12cm x 10m	1	1	Y	
14	Conform bangdage -10cm x 4.0m	1	2	Y	
15	Conform bangdage -20cm x 15m	1	1	Y	
16	Triangular bangdage -calico	2	2	Y	
17	Water gel burn dressing -5x15cm /2"x40"	1	1	Y	31/03/2027
18	Water gel burn dressing -10x15cm / 4"x4"	2	2	Y	31/05/2028
19	Water gel burn dressing -10x40cm/8"x8"	1	1	Y	31/06/2028
20	Betadine 30 / 0.5% chlorhexidine irrigation 25ml	1	1	Y	15/09/2028
21	70% alcohol 60 ml	1	1	Y	15/07/2027
22	Normal Saline Dressing 100 ml	1	1	Y	31/07/2029
23	Paracetamol 500mg	30	30	Y	31/03/2026
24	Dimenhydranate	10	10	Y	10/2/2028
25	ORS	5	5	Y	31/04/2026
26	Tensoplast	20	20	Y	31/04/2028
27	12 Safety pin	1	1	Y	

EDRILL VENCEDOR

Emergency Response Bag

Item No.	Item	Quantity	Curent Stock	Contract	Exp.
Immobilization sets					
1	Adjustable C-spine splint	1	1	Y	
2	Upper limb splints (Aluform/box)	1	1	Y	
Diagnosis					
3	Disposable gloves	2	2	Y	
4	Aneroid Spyhgmomanometer & std. cuff	1	1	Y	
5	Digital thermometer	1	1	Y	
6	Stethoscope	1	1	Y	
7	Flashlight	1	1	Y	
8	Blood glucose strips with lancets	1 box	1 box	Y	
9	Head Lamp, LED fine focus	1	1	Y	
10	Goggles, safety spectacles	1	1	Y	
11	Pulse oximeter, portable	1	1	Y	
AirWay Management & Breathing/Oxygen					
12	Oropharyngeal airway #3	N/A	1	Y	4/13/2028
13	Oropharyngeal airway #4	N/A	1	Y	4/13/2028
14	Endotracheal tube Size 6	N/A	1	Y	Jan-27
15	Endotracheal tube Size 7	N/A	1	Y	Aug-28
16	Endotracheal tube Size 7.5	N/A	1	Y	Dec-27
17	Endotracheal tube Size 8	N/A	1	Y	Oct-28
18	Endotracheal tube Size 8.5	N/A	1	Y	Jul-26
19	Endotracheal tube Size 9	N/A	1	Y	Dec-27
20	Nasopharyngeal Airway 6mm	N/A	1	Y	Jul-28
21	Nasopharyngeal Airway 7mm	N/A	1	Y	Aug-28
22	Nasopharyngeal Airway 8mm	N/A	1	Y	Aug-28
23	Laryngoscope	N/A	1	Y	
24	Oral Blade Size 2,3,4	N/A	1,1,1	Y	
25	Battery	N/A	2	Y	
26	ETT Tube Holder	N/A	1	Y	
27	Stylet	N/A	1	Y	
28	Laryngeal Mask Airway Size 3	1	1	Y	Jun-25
29	Laryngeal Mask Airway Size 4	1	1	Y	Sep-26
30	Laryngeal Mask Airway Size 5	1	1	Y	May-26
31	Pocket-mask Laerdal	1	1	Y	
32	Nasal cannula, adult	2	2	Y	Jul-28
33	Bag Valve Mask	1	1	Y	
34	Oxygen extension tubing 2m	2	2	Y	
35	Oxygen T-piece	1	1	Y	
36	Oxygen face-mask partial rebreathing	2	2	Y	
37	Tongue depressor, wood	5	5	Y	
38	Suction (manual) with catheters rigid/flexible	1	1	Y	
39	Glove, latex sterile size 7	5	5	Y	

40	Glove, latex sterile size 8	5	5	Y	
Disposable for injections/IV					
41	Syringe - 5ml	5	5	Y	
42	Syringe - 10ml	5	5	Y	
43	IM needles	6	6	Y	
44	SC needles	6	6	Y	
45	Alcohol pads	20	20	Y	
46	IV administration sets	3	3	Y	
47	IV catheters 14/16/18	2 each	2 each	Y	
48	IV securing tape	6	6	Y	
49	Stopcock, 3 way	2	2	Y	
50	Razor	1	1	Y	
51	Sharp container (small)	1	1	Y	
ACLS medicines					
52	Adenosine inj	2	2	Y	31/11/2025
53	Adrenalin Ampoules (1:1000)	5	5	Y	3/29/2026
54	Amiodarone inj	2	2	Y	4/30/2026
55	Atropine Sulphate Ampoules (1mg)	3	3	Y	12/31/2025
56	50% Glucose inj 50 ml	1	1	Y	1/31/2027
57	Dopamine inj 800 mg pre-mix	1	1	Y	2/21/2026
58	Flumazenil Ampoules 40 mg	1	1	Y	1/31/2026
59	Lidocaine 100mg/1ml	2	2	Y	7/31/2026
60	Magnesium Sulphate Ampoules 5 mg	2	2	Y	7/31/2027
61	Sodium Bicarbonate Ampoules 50ml	2	2	Y	5/31/2026
62	Nitroglycerine Spray	1	1	Y	1/31/2026
Other Emergency Medicines					
63	Chorpheniramine inj	2	2	Y	5/31/2026
64	Colloids 500 ml	1	1	Y	12/31/2028
65	Diclofenac inj (IM)	2	2	Y	8/18/2026
66	Diazepam inj 10mg/2ml	2	2	Y	5/2/2027
67	Dimenhydrinate inj	2	2	Y	3/13/2027
68	Haloperidol inj 5mg/ml	2	2	Y	6/30/2026
69	Hydrocortisone inj	2	2	Y	12/31/2025
70	Hyoscin butyl bromide inj	2	2	Y	1/31/2026
71	Lactated Ringer 1000 ml	1	1	Y	12/31/2026
72	Metoclopramide 10mg/2ml	2	2	Y	5/31/2026
73	Manitol 25%, 50 ml	1	1	Y	5/31/2026
Dressings					
74	Bandage, conforming 10cm	24	24	Y	
75	Bandage, crepe, 10 cm	4	4	Y	
76	Bandage, elastic adhesive, 7.5cm	1	1	Y	
77	Bandage, emergency 12cm (6")	2	2	Y	
78	Bandage, triangular, sling type	1	1	Y	
79	Burn dressing, multipack	1	1	Y	
80	Cold packs	1	1	Y	
81	Dressing, Compression	4	4	Y	
82	Dressing, Iv Cannula(Tegaderm)	6	6	Y	

83	Dressing set, disposable	5	5	Y	
84	Eye pads, sterile	4	4	Y	
85	Eys shield, plastic	1	1	Y	
86	Gauze, approx 10cm x 10cm, sterile	20	20	Y	
87	Gauze, paraffin	10	10	Y	
88	Plaster, Permeable adhesive tape, 2.5cm roll	2	2	Y	
89	Safety pins, rustless	12	12	Y	
90	Trauma pad, first aid	4	4	Y	
91	Pressure infuser bag, 1000mlDressing	1	1	Y	
92	Forcep, artery, curved approx 12.5cm	1	1	Y	
93	Forcep, artery, straight approx 12.5cm	1	1	Y	
94	Forcep, Magills, adult	1	1	Y	
95	Forcep, Mosquito curved	1	1	Y	
96	Foecep, Mosquito straight	1	1	Y	
97	Scissors, S/S, straight, approx 12.5cm	2	2	Y	
98	Scissors, Tuff cutMulti-trauma dressings	1	1	Y	
99	SWAT-T Tourniquets	1	1	Y	
100	Survival blanket	2	2	Y	

Medicines

Aug-25

	Brand Name	Begin of the month	Begin of the month	Unit	Expiry	Expiry	Daily Consumption																															Date Delivered	Received	Used qty monthly	Stock remained	Comments
							1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
ACLS / EMERGENCY /CARDIAC MEDICINES																																										
Adenosine 6mg/2ml		6		Amp	Nov-25																											18-Apr	6	0	6							
Magnesium Sulfate 2.47g/5ml		10		Amp	Jul-27																											18-Apr	10	0	10							
Amiodarone 150/3ml	Cordarone	12		Vial	Apr-25																											18-Apr	12	0	12	EXP						
Furosemide 40mg		112		Tab	Jun-26																											18-Apr	112	0	112							
Flumazenil 0.5mg	Anexate	5		Amp	Aug-28																											18-Apr	5	0	5							
Sodium Bicarbonate 8.4% 20ml		4		Amp	May-26																											18-Apr	4	0	4							
Clopidogrel Bisulfate 75mg		120		Tab	22/5/2025																											18-Apr	120	0	120	EXP						
Enoxaparin Sodium 60mg		10		Tube	30/4/2025																											18-Apr	10	0	10	EXP						
Metoclopramide HCl 5mg/ml		48		Amp	May-26																											18-Apr	48	0	48							
GTN Spray 0.4mg		5		Tube	Jan-26																											18-Apr	5	0	5							
Isoosorbide Dinitrate 5mg	ISDN	20		Tab	Mar-27																											18-Apr	20	0	20							
Atropine Sulphate 1mg/ml		10		Amp	Dec-25																											18-Apr	10	0	10							
Imovane 7.5mg	Zopiclone	40		Tab	May-26																											18-Apr	40	0	40							
Hydrocortisone 100mg		40		Vial	Dec-25																											18-Apr	40	0	40							
Hydrocortisone 25mg		20		Tab	Dec-27																											6-Aug	20	0	20							
Adrenaline 1mg/ml		60		Amp	Mar-26																											18-Apr	60	0	60							
Glucose 50%/20ml		10		Amp	Oct-26																											18-Apr	10	0	10							
Dexamethasone 4mg/ml	Codex Cin N	9		Amp	Jul-27																											27-Sep	9	0	9							
Lidocaine 2% 200mg/10ml		20		Vial	Jul-26																											18-Apr	20	0	20							
Lidocaine Gel		5		Tube	Sep-25																											18-Apr	5	0	5							
Lidoc																																										

[illegible]



Hyoscine N-Butylbromide 10mg		95	Tab	Apr-26		6	9									18-Apr	95	15	80	
Hyoscine N-Butylbromide 20mg/m		38	Amp	Jan-26												18-Apr	38	2	36	
EYE, EARS, NOSE AND THROAT																				
Nasal Spray 50ml	Sterimar	5	Bott	Jun-26												18-Apr	5	0	5	
2% ISOPTO Carpine 15ml		4	Each	Jul-27												18-Apr	4	0	4	
Naphcon A 15ml	alcon	10	Bott	Aug-25												18-Apr	10	0	10	EXP
Tetracaine Hydrochloride 1%		40	Bott	Aug-25												18-Apr	40	0	40	EXP
Fluorescein Sodium Ophthalmic Strip		200	Each	Jul-28												18-Apr	200	0	200	
Neomycin Sulphat 5ml		20	Tube	Aug-25												18-Apr	20	0	20	EXP
Lindane lotion 100ml		10	Bott	Jul-25												18-Apr	10	0	10	
Tobramycin 0.3% 5ml	Tobrex	10	Bott	Mar-25												18-Apr	10	0	10	
Phenazone	Ear Drops	10	Bott	Apr-28												18-Apr	10	0	10	
EYE Lotion	OPSAR	12	Bott	May-28												18-Apr	12	1	11	
Antiseptic Mouth wash C-20 180 ml Lot.2		0	Bott	Oct-26												1-Apr	0	0	0	
Antiseptic Mouth wash C-20 180 ml Lot.3		23	Bott	Feb-27												28-Jul	23	2	21	
Eye Ear drop	Cadexcin-N	6	Bott	Nov-25												29-Jul	6	1	5	
Eye Mo Moist 10mls	Eye drops	5	Bott	Jul-26												18-Apr	5	0	5	
Chlor Oph Eye drop		24	Bott	Jun-26												1-Apr	24	0	24	
Chloramphenicol 1%		21	Tube	Jan-26												18-Apr	21	1	20	
Tear Natural eye drop		28	Vial	Oct-25												27-Sep	28	0	28	
Fusidic Acid 5g	Fucithalmic	10	Tube	Mar-26												18-Apr	10	0	10	
Lozenges	Mybacin(OTC)	22	Sachet	Oct-27												11-Jan	22	5	17	
Lozenges	Mabacin Lot.2	140	Sachet	Jan-27												11-Jan	140	0	140	
Lozenges	Strepsils Orange+ VitC	21	Sachet	Jan-27												15-Jul	21	3	18	
Lozenges lot.2	Strepsils Orange+ VitC	24	Sachet	Jan-28												28-Jul	24	2	22	
Lozenges	Strepsils Maxiplusz	24	Sachet	Dec-27												15-Jul	24	0	24	
Lozenges lot.2	Strepsils Maxiplusz	24	Sachet	Mar-28												28-Jul	24	0	24	
Crunchy pear Lozenges		56	Tab	16/9/27												11-Jan	56	56	0	
Maxitrol 5ml		10	Tube	Oct-25												18-Apr	10	0	10	
Hydraulic temporary Restorative Dental 30g		3		Jun-25												18-Apr	3	0	3	พ่นเจล EXP
Neomycin Sulphat 5ml	Earwel	18	Tube	Nov-25												18-Apr	18	0	18	
Clove oil	Essence	2	Bott	Sep-28												18-Apr	2	0	2	
Ciprofloxacin eye	CIPLOX	10	Bott	Jul-26												18-Apr	10	0	10	
Vaseline Lip Care		1	Tube	May-26												18-Apr	1	0	1	

Update Date: 28 July 2025
Medic : Sarankorn J.

Medic : Sarankorn J.

2025 OTF/OTF1 CONTRACTOR SSHE Plan (Mode 2)
Company: Energy Drilling - EVE Contract no. 2023.0321

Legend:

-  To be put in the SSHE Plan as Action by the contractor.
-  To be put in the SSHE Plan as Supporting PTTEP.

 To be put in the SSHE Plan as Supporting PTTEP.











Element	Description	Frequency / Minimum Requirements	Action Participation	Deliverables / Evidence	2025											
1.0	Leadership and Commitment <i>Theme - Policies are known and implemented; strategic objectives are clearly stated and understood.</i>															
1.1	Carry out a top management SSHE internal visit to demonstrate visible leadership and commitment. <i>(Arrange by Contractor management to visit offshore Drilling rig/unit.)</i>	4 times / year	<div><div></div></div>	Attendee records			C							P		
1.2	Conduct regular Contractor SSHE meeting to review contractor SSHE Plan progress and performance. And communicate the minutes of the meeting or report to the contractor's employee including the offshore crews.	Monthly	<div><div></div></div>	MoM	C	C	C	C	C	C	C	C	C	P	P	P
1.3	OIM to demonstrate leadership by actively participating in the Induction Briefing for arriving crew, GSM, Pre-Tour Meetings, Hazard Hunts, Hygiene Inspections, and other key safety activities.	Monthly	<div><div></div></div>	Attendee records	C	C	C	C	C	C	C	C	C	P	P	P
2.0	Policy and Strategic Objectives <i>Theme - Policies are known and implemented; strategic objectives are clearly stated and understood.</i>															
2.1	Develop and finalize the 2025 OTF Contractor SSHE Plan and signed by the PTTEP Contract holder. Then, communicate to all.	1 Time(s)	<div><div></div></div>	2025 SSHE Plan	C											
2.2	Develop and finalize the 2025 OTF Contractor SSHE Improvement plan and signed by the PTTEP Contract holder. Then, communicate to all.	1 Time(s)	<div><div></div></div>	2025 Contractor SSHE Improvement Plan		C										
2.3	Review and endorse the 2026 Contractor SSHE plan in alignment with the PTTEP SSHE strategic direction and plan. <i>(For the 2025 Contractor SSHE Plan)</i>	1 Time(s)	<div><div></div></div>	2026 SSHE Plan											P	
3.0	Organization, Resources and Documentation <i>Theme - SSHE Roles & Responsibilities are known, accepted and implemented by all persons. SSHE legislation is updated, communicated & implemented.</i>															
3.1	Achieve compulsory SSHE trainings as required by law, DMF, PTTEP SSHE MS, and Task Specific <i>(If training cannot be done to achieve 100%, a training plan must be in place and tracked.)</i>	100% completion (or with Training plan if not achieve 100%)	<div><div></div></div>	Training Record	C	C	C	C	C	C	C	C	C	P	P	P
3.2	Monitor and track Contractor SSE status for the new hires with effectiveness and submit it to the PTTEP SSHE team on a monthly basis. **Additional incident lesson learned topic in the SSE program	100% completion	<div><div></div></div>	SSE Report	C	C	C	C	C	C	C	C	C	P	P	P
4.0	Evaluation and Risk Management <i>Theme - SSHE risks are identified and evaluated for activities, products and services. Risk reduction measures were developed. SSHE cases updated</i>															

2025 OTF/OTF1 CONTRACTOR SSHE Plan (Mode 2)

Company: Energy Drilling - EVE Contract no. 2023.0321

 To be put in the SSHE Plan as Action by the contractor.

 To be put in the SSHE Plan as Supporting PTTEP.

Element	Description	Frequency / Minimum Requirements	Action Participation	Deliverables / Evidence	2025											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
4.1	Review the onsite JSA or onsite SWI/Procedure/Standard, and verify the key gap emerging from the incident investigation / lesson learn.	As planned		Report	C	C	C	C	C	C	C	C	P	P	P	P
4.2	Monitor and track a Safety Critical Equipment & Barriers (as per Rig Safety Case)	Monthly		Report	C	C	C	C	C	C	C	C	P	P	P	P
5.0	Planning and Operational control Theme - Control of work activities, including planning for changes and emergency response implemented															
5.1	Conduct the onsite Emergency Drills & Exercise include Tier 2 specific scenario.	weekly / monthly		Exercise/drill report	C	C	C	C	C	C	C	C	C	P	P	P
5.2	Reinforce Contractor/Sub-contractor to comply Drugs and Alcohol policy.Conduct pre-screening prior mobilize to Jetty / Heliport.	Every crew change		Report	C	C	C	C	C	C	C	C	P	P	P	P
5.3	Conduct SWA drill as per the specific scenario based on previous incident/lesson learned/SOC analysis/hazard hunt.	Monthly		Report	C	C	C	C	C	C	C	C	P	P	P	P
6.0	Implementation and Monitoring Theme - SSHE Plans implemented & monitored. Strengthen staff SSHE Awareness through SSHE Campaign. Enforcement SSHE Learning from experiences to prevent accident from reoccurring															
6.1	Monitor, review, and update the SSHE performance & KPI, SSHE plan, Leading indicator, BBS/SOC analysis and SSHE Improvement plan of contractor. (Submit the report to PTTEP Contract Holder & OTF SSHE within the 8th of the month.)	Monthly		%Completion	C	C	C	C	C	C	C	C	C	P	P	P
6.2	Conduct a 2025 Half-year contractor SSHE Performance & KPI review including reviewing the incident analysis, SSHE improvement plan, and leading indicators.	2 Times / Year		MoM						C						P
7.0	Audit and review Theme - Perform management system audits via internal & external parties (ISO14001& ISO45001). Management review of SSHE MS for continuing effectiveness and continuous improvement															
7.1	Carry out / Conduct the contractor's internal site inspection such as TOSCA, RM audit etc.	Monthly		Report	C	C	C	C	C	C	C	C	C	P	P	P
7.2	Edrill corporate to conduct the QHSSE audit.	Annually		Report												P
7.3	Conduct sub-contractor audit (Kobchock, Crisis24)	Annually		Report												P

2025 OTF/OTF1 CONTRACTOR SSHE Plan (Mode 2)

Company: Energy Drilling - EVE Contract no. 2023.0321

Legend:

To be put in the SSHE Plan as Action by the contractor.

To be put in the SSHE Plan as Supporting PTTEP.

Element	Description	Frequency / Minimum Requirements	Action Participation	Deliverables / Evidence	2025											
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Plan	P		Plan	12	12	12	11	11	13	11	11	12	11	11	16
	Complete	C		Actual	12	12	12	11	11	13	11	11	0	0	0	0
	Delay/Postpone	D		Total Plan	12	24	36	47	58	71	82	93	105	116	127	143
				Total Actual	12	24	36	47	58	71	82	93	93	93	93	93
				% Plan	8.39	16.8	25.2	32.9	40.6	49.7	57.3	65	73.4	81.1	88.8	100
				% Actual	8.39	16.8	25.2	32.9	40.6	49.7	57.3	65	65	65	65	65
				% Overall	65											

Signature:

Contractor:

Contractor:

Sittikorn Intahkaew - QHSSE Manager
(Contractor Focal point)

Sasa Lovrenovic - EVE Rig Manager
(Contractor Management)

OTF:

OTF1 VP:

Anil Chuttani
(PTTEP Contract Holder)

(Nitipong Kongpat)

Date:

Date:

Date:

แผ่นเจาะ-3.11 ตัวอย่างรายงานการฝึกซ้อมตอบสนองต่อเหตุฉุกเฉิน

RIG STATUS REPORT - SUMMARY

Rig:	Edrill Vencedor	Location:	Under Tow "Open-Sea"
Storm Name	TS EX24 (OWS99N24) (Exercise)	Storm Phase (1,2 etc)	Red
Date:	29 Sep 2024	Time:	01:00 hrs
POB Total	97	Remarks	
S group (1st)	3	Edrill Inmarsat phone # 870-776-924-867.	
A group (2nd)	63	Edrill Rignet phone # +66-2026-5715 (Radio room).	
B group (3rd)	24	PTTEP Rignet phone # +66-2537-4514 (DSV).	
C group (4th)	7		
R group (last)			
Vessel(s) at rig	<ul style="list-style-type: none"> Rig Vencedor under towing to southern shelter, Malaysia ETA 30 Sep 24, 2300 hrs. 		
TC89 & Evay			
Vessel(s) in transit	NOTE:		
Nil			
Tow / anchor vessels	<ul style="list-style-type: none"> Rig Barge master/ Rig mover/ PTTEP MA keep regularly update towing status to Bongkot Log Marine Superintendent. Update local weather status every 3 hours. Control communication on rig for security reason, prevent miscommunication from social media from rig. No concern on MGO and food/water on rig during tow. Waiting for further instruction from Emergency Response Team. 		
TC89 & Evay			
Personnel evacuated			
Nil			
Personnel on board	97		
Current Operation	Towing Vencedor to Malaysia shelter, in progress. ETA 30 Sep 24, 2300 hrs		
Forward Plan	Towing Vencedor to Malaysia shelter. Wait for further instruction from ER team.		
Hours until rig is secured	-	Time/date secured	-
Special Considerations or critical issues			
Notes	1) Food on board enough for 2 weeks. 2) Portable water on board = 663 M3. 3) Diesel on board = 366 M3.		

DRILL / EVENT:	Choke Drill prior to drilling out cement	CLIENT:	PTTEP
DATE:	02/09/2025	<input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REAL EVENT	
PLATFORM:	AWP- 39 Slot J		
ON TOUR CREWS:	Eric Van De Ligt		
TIME:	15:30hrs		
LOCATION / SCENE:	Drill floor (Shut in procedures)		
SCENARIO:	Space out shut in and circulate through remote choke		
OBJECTIVES:	To give the drill crews the most realistic type of well control training, and a feel for the equipment and procedures that they would use to kill a well. Possible learning from a Choke Drill: • Practice bumping the float. • Measure of pressure drop in drill string that would give an elevated SIDPP and possible mitigation. • Practice holding casing pressure constant when Bringing Pumps Up to Speed. • Practice analyzing actual BHP when change from CP to DPP gauge (accounting for overbalance). • Correct marking of DPP gauge for ICP (do not include safety factor). • Measure of initial lag time. • Measure of pressure creep due to fluid compression and expansion of compressible fluids. • Establish minimum practical pressure change to establish minimum Safety Factor. • Practice holding constant BHP with pump rate changes. • Practice stopping and starting the pump holding BHP constant.		
PREPARATIONS:			
EQUIPMENT USED:			
Procedure:	Run in the hole, stopping above the top of cement. • At this point begin choke drill or • Dress off / drill cement to above shoe and pressure test casing. • If bumping the float is not desired, leave 1/4 to 1/3 test pressure on casing and start the choke drill without bumping the float (Step 5). should also be recorded. This drill will help reinforce their role and ensure that monitoring alarms are functioning and set appropriately. Bumping the Float • Close the annular BOP if not already closed, and pressure up the annulus to +/- 200 psi 1/4 to 1/3 casing test. Do not exceed a reasonable pressure percent of the casing pressure test. Do not put pressure on the drill pipe.		

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energy drilling

		<ul style="list-style-type: none"> Pump slowly to open the float. As the drill pipe pressure slowly increases there will be a lull period, when the drill pipe pressure no longer increases and then increases more slowly. Record this pressure as the SIDPP. (The rate you pump at will need to be slow to be able to observe this lull effectively and lessen the over pressure due to fluid friction) Bring the pump up to a pre-determined kill rate holding the Casing Pressure constant by operating the choke. Note at what position the choke first opens. If the choke opens immediately, the choke is worn with little or no wear area or miss adjusted. If a large opening is required, note so that it can be referred to in a real situation. Record the time taken for the drill pipe pressure to respond after making choke adjustments. This is the lag time. Practice adjusting pump speed, stopping and starting the pumps while keeping casing pressure constant with choke adjustments. Bleed off pressure before opening the BOP and check the BOP & choke Manifold line up is correct before continuing. Perform a drill debrief with everyone involved.
--	--	---

SEQUENCE OF EVENTS:

NO.	TIME	EVENT
1	15:30	Space out and shut in
2	13:35	Close MPR's and open HCR
3	15:40	Using mud pump apply 300psi. to annulus and drill string
4	15:41	Maintain casing pressure constant while bringing pumps to kill rate
5	15:44	Maintain DP pressure constant while at full kill rate
6	15:47	Verify all gauges are reading the same (Test good)
7	15:50	Slowly reduce pump rate back to 0 while maintaining casing pressure constant
8	15:55	Bleed off trapped pressure through choke manifold and open BOP
9	16:00	Hold debrief meeting
10	16:05	Drill out shoe track
11		
12		
13		

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energy drilling

14		
LESSONS LEARNED FROM THIS DRILL/EVENT:		
Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan	
DEBRIEF		
POSITIVE ASPECTS:	Good communication throughout drill	
NEGATIVE ASPECTS:	Nothing to report	
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED	
REQUIRED ACTIONS FOR IMPROVEMENT:		
NO.	ACTION	WHO
1	N/A	N/A
2	N/A	N/A
PHOTO		

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Driller/Name

Eric

2/ 09 / 2025

Touropusher/Name

Dun

02/09/ 2025

OIM/Name

W

02/ 09 / 2025

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EVE - EMERGENCY RESPONSE DRILL DEBRIEF / CRITIQUE

DRILL / EVENT:	Fire Muster Drills	CLIENT:	PTTEP
DATE:	30 March 2025	<input checked="" type="checkbox"/> DRILL	<input type="checkbox"/> REAL EVENT
PLATFORM:	AWP-5		
ON TOUR CREWS:	Sr. Crew B & C, Jr. Crew A & C		
TIME:	09.34 hrs.		
LOCATION / SCENE:	Mud pump room		
SCENARIO:	Fire at Mud pump room		
OBJECTIVES:	<ul style="list-style-type: none">- To assess the crew's ability to respond effectively to a fire in the Purifier Room.- To verify proper use of firefighting equipment and emergency communication.- To evaluate personnel accountability and adherence to emergency protocols.- To ensure that all employees are prepared to always deal with emergency situations.		
PREPARATIONS:	Drill discussed with OIM, BC, STO Observers Assigned: <ul style="list-style-type: none">• OIM – Control Room• Barge Captain – Control Room• STO – Control Room		
EQUIPMENT USED:	Radios, PA System, Firefighting equipment and life jacker		

SEQUENCE OF EVENTS:		
NO.	TIME	EVENT
1	09:34	Activate the simulated fire alarm. Announce the start of the drill over the communication system, fire at Mud pump room.
2	09:35	Arthit field and Rig Manager notified.
3	09:35	SB Vessel notified.
4	09:36	Well secure and VFD room reported for headcount to control room.
5	09:37	Fire team 1 reported for headcount to control room.
6	09:37	Stretcher team reported for headcount to control room.
7	09:38	Ventilation shut down and fire pump running.
8	09:38	Accommodation clear.
9	09:39	Fire team 2 reported for headcount to control room.
10	09:39	Lifeboat 1 and Lifeboat 2 reported headcount to the control room.

Page 1 of 3

11	09:40	Platform reported for headcount to control room.
12	09:41	Pump room reported for headcount to control room.
13	09:41	Full master points.
14	09:45	Fire out (The fire was brought under control)

LESSONS LEARNED FROM THIS DRILL/EVENT:

Drill Execution	<input checked="" type="checkbox"/> As Planned	<input type="checkbox"/> Changed from Plan
DEBRIEF	OIM, BC, STO, ASTO, Muster Checkers, Radio Operators, Driller, DSV, and Campboss	
POSITIVE ASPECTS:	<ul style="list-style-type: none">• Personnel demonstrate improved familiarity with emergency procedures, leading to quicker and more effective responses during the drill.• Clear communication channels and protocols are established, ensuring that all team members are informed and coordinated during an emergency.• The muster checker conducted a clear head count.• Good job to the team for responding effectively in their roles.• Good communication with the boat alongside and the deployment of the boat prior to the drill exercise.• Quick response at the muster point.• Crew members wore the correct life jackets.• The fire team quickly donned their fire suits, and the On-Scene Commander briefed the team on the situation	
NEGATIVE ASPECTS:	<ol style="list-style-type: none">1. Designated for Master checker to use PA Channel 1 instead radio to prevent confusion and delays in response between the emergency team and the control room.2. Emergency light on Pipe Deck (under Hi-Line way) no working.	
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED	
REQUIRED ACTIONS FOR IMPROVEMENT:		
NO.	ACTION	WHO
1	Designated for Master checker to use PA Channel 1 instead radio to prevent confusion and delays in response between the emergency team and the control room.	Materialman
2	Emergency light on Pipe Deck (under Hi-Line way) no working.	Electrician



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Arocha Boonluea
STO

30 March 2025

Brian Crowley
Barge Captain

30 March 2025

Mathew Russell
OIM

30 March 2025

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EVE - EMERGENCY RESPONSE DRILL DEBRIEF / CRITIQUE

DRILL / EVENT:	Hydrocarbon release & Abandon Drill	CLIENT:	PTTEP
DATE:	22 January 2025	<input checked="" type="checkbox"/> DRILL	<input type="checkbox"/> REAL EVENT
PLATFORM:	AWP-2N		
ON TOUR CREWS:	Sr. Crew A & B, Jr. Crew A & B		
TIME:	09.30 hrs.		
LOCATION / SCENE:	Platform		
SCENARIO:	Simulate Hydrocarbon release on the platform & simulate platform abandonment at the Platform		
OBJECTIVES:	<ul style="list-style-type: none"> - Ensure that all personnel understand their roles and responsibilities during emergency. - Verify that evacuation routes are clear, well-marked, and accessible. - Test the functionality of alarms, communication systems, and emergency notifications. - Ensure that communication between the command team, fire team, and other personnel is clear and effective. - Create realistic Hydrocarbon release on the platform & simulate platform abandonment scenarios to challenge the response plan and test the readiness of personnel. - Document compliance with safety regulations and internal policies 		
PREPARATIONS:	Drill discussed with OIM, TP, BC, STO Observers Assigned: <ul style="list-style-type: none"> • OIM – Control Room • Tourpusher – Platform • Barge Captain – Control Room • STO – Control Room 		
EQUIPMENT USED:	Radios, PA System		

SEQUENCE OF EVENTS:

NO.	TIME	EVENT
1	09.38	Hydrocarbon release on the platform.
2	09.39	Activate the simulated Hydrocarbon alarm. Announce the start of the drill over the communication system.
3	09.40	Evacuate Platform reported the headcount number to Control room.
4	09.43	Accommodation Clear.
5	09.44	The stretcher team reported the headcount number to the Control room.
6	09.44	Fire Team 1 reported the headcount number to the Control room.
7	09.45	Fire Team 2 reported the headcount number to the Control room.
8	09.45	Lifeboat 1 reported the headcount number to the Control room.

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9	09.45	Lifeboat 2 reported the headcount number to Control room.
10	09.45	Full headcount (6 minutes)
11	09.45	Fire team 2 to Bow monitor
12	09.46	Fire team 1 continue function test.
13	09.49	Muster completed

LESSONS LEARNED FROM THIS DRILL/EVENT:

Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan
DEBRIEF	OIM, BC, STO, ASTO, Muster Checkers, Radio Operators, Driller, DSV, and Campboss
POSITIVE ASPECTS:	<ul style="list-style-type: none"> • Personnel demonstrate improved familiarity with emergency procedures, leading to quicker and more effective responses during the drill. • Communication of all team members are informed and coordinated during an emergency correctly. • The muster checker effectively communicated and accurately reported the headcount • DES team had well secure in good time. • Personnel went straight to muster area. • Fire team did a great job with training provided. • Stretcher team communicate clear.
NEGATIVE ASPECTS:	<ul style="list-style-type: none"> • Found pallet put obstruction at master point area.
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED

REQUIRED ACTIONS FOR IMPROVEMENT:

NO.	ACTION	WHO
1	Found pallet put obstruction at master point area.	Marine

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Picture of Drill

PIC 1: The firefighter is wearing the fire suit in preparation to respond to the situation.



PIC 2: Crew members muster for headcount.



PIC 3: Drill over and debrief



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Arocha Boonluea
STO

22 January 2025

Brian Clowley
Barge Captain

22 January 2025

Will Marks
OIM

22 January 2025

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EVE - EMERGENCY RESPONSE DRILL DEBRIEF / CRITIQUE

DRILL / EVENT:	Muster, Fire and Stretcher team Drills	CLIENT:	PTTEP
DATE:	1 July 2025	<input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REAL EVENT	
PLATFORM:	AWP-39		
ON TOUR CREWS:	Sr. Crew A & B, Jr. Crew A & B		
TIME:	09.18 hrs.		
LOCATION / SCENE:	Galley		
SCENARIO:	Fire in the Galley		
OBJECTIVES:	<ul style="list-style-type: none">- Evaluate the effectiveness and efficiency of the current fire response and evacuation procedures of fire team and stretcher team.- Ensure that all personnel understand their roles and responsibilities during a fire emergency.- Verify that evacuation routes are clear, well-marked, and accessible.- Test the functionality of alarms, communication systems, and emergency notifications.- Ensure that communication between the command team, fire team, and other personnel is clear and effective.- Check that all fire safety equipment (e.g., extinguishers, hoses, alarms) is in working order.- Create realistic fire scenarios to challenge the response plan and test the readiness of personnel.- Document compliance with safety regulations and internal policies.		
PREPARATIONS:	Discussed the drill with OIM, BC, STO and Medic. Observers Assigned: <ul style="list-style-type: none">• OIM – Control Room• Barge Captain – Control Room• STO – Control Room• Medic – Galley		
EQUIPMENT USED:	Radios, PA System, Firefighting equipment and life jacker		

SEQUENCE OF EVENTS:		
NO.	TIME	EVENT
1	09:18	Activate the simulated fire alarm. Announce the start of the drill over the communication system, fire in the Galley.
2	09:19	Pump room, VFD room and MWD shack reported for headcount to control room.
3	09:20	Client, Rig manager and SB Vessel notified.
4	09:20	Rig Floor reported for headcount to control room.
5	09:21	Well secure and VFD room reported for headcount to control room.
6	09:21	Fire team 1 reported for headcount to control room.
7	09:21	Stretcher team reported for headcount to control room.

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8	09:22	Fire team 1 reaches the incident area at the Galley.
9	09:22	Lifeboat 1/3 reported a headcount to the control room.
10	09:23	Lifeboat 2/4 reported a headcount to the control room.
11	09:24	Accommodation clear.
12	09:25	Stretcher team reaches the incident area at the Galley.
13	09:26	Full master points.
14	09:33	Fire out (The fire was brought under control)

LESSONS LEARNED FROM THIS DRILL/EVENT:		
Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan	
DEBRIEF	OIM, BCO, STO, ASTO, Muster Checkers, Radio Operators, Barge, DSV, Medic and Campboss	
POSITIVE ASPECTS:	<ul style="list-style-type: none">• Personnel demonstrate improved familiarity with emergency procedures, leading to quicker and more effective responses during the drill.• Clear communication channels and protocols are established, ensuring that all team members are informed and coordinated during an emergency.• The muster checker conducted a clear head count.• Good job to the team for responding effectively in their roles.• Good communication with the boat alongside and the deployment of the boat prior to the drill exercise.• Quick response at the muster point.• Crew members wore the correct life jackets.• The fire team quickly donned their fire suits, and the On-Scene Commander briefed the team on the situation• It has been mandated to begin conducting debriefs with small groups. A mini-debrief shall be conducted immediately after the drill at the muster point near the T-card box. The muster checker shall lead the debrief session by checking and confirming whether all crew members wore proper evacuation PPE, such as life jackets, correctly.	
NEGATIVE ASPECTS:	<ol style="list-style-type: none">1. A basket was found obstructing the doorway of the kitchen walkway in the Galley, which could cause delays in emergency response.2. Fire Alarm sound at the mud pump room is too low, making it difficult to hear. In a real emergency situation, it might not be audible, this may result in delayed response during an emergency situation.	
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED	
REQUIRED ACTIONS FOR IMPROVEMENT:		
NO.	ACTION	WHO
1	Moved the basket to an appropriate location for ensuring readiness for emergency situations.	Campboss

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2	Inspected and corrective action taken. To restore the alarm sound to normal and clear operation, ensuring readiness for emergency situations.	Electrician
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Arocha Boonluea
STO

1 July 2025

Brian Crowley
Barge Captain

1 July 2025

William Moura Marks
OIM

1 July 2025

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EVE - EMERGENCY RESPONSE DRILL DEBRIEF / CRITIQUE

DRILL / EVENT:	Non-ignited Hydrocarbon leak (Gas) and Muster Drills	CLIENT:	PTTEP
DATE:	17 February 2025	<input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REAL EVENT	
PLATFORM:	AWP-5		
ON TOUR CREWS:	Sr. Crew C & D, Jr. Crew A & C		
TIME:	09.30 hrs.		
LOCATION / SCENE:	Wellhead at Platform		
SCENARIO:	A crew member reports an automatic gas detector alarm activates.		
OBJECTIVES:	<ul style="list-style-type: none">- Ensure Early Detection & Response: Assess how quickly the crew can recognize and report a gas leak.- Assess Muster & Evacuation Readiness: Confirm that personnel can master efficiently and are accounted for. emergency team preparedness and SCBA deployment.- Ensure smooth coordination between the OIM, control room, and emergency response teams.		
PREPARATIONS:	Drill discussed with OIM, BC, STO Observers Assigned: <ul style="list-style-type: none">• OIM – Control Room• Barge Captain – Control Room• STO – Control Room		
EQUIPMENT USED:	Radios, PA System, Firefighting equipment and life jacker		

SEQUENCE OF EVENTS:		
NO.	TIME	EVENT
1	09:30	Shallow gas alarm. Announce the start of the drill over the communication system.
2	09:32	Pumping kill mud
3	09:34	Fire Team 1 was responsible for the bow deck
4	09:35	Accommodation clear
5	09:36	The mud return line was disconnect
6	09:37	Simulate checking the lifeboat coxswain
7	09:39	Anchor and breakaway ready
8	09:48	Full muster

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LESSONS LEARNED FROM THIS DRILL/EVENT:		
Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan	
DEBRIEF	OIM, BC, STO, ASTO, Muster Checkers, Radio Operators, Driller, DSV, and Campboss	
POSITIVE ASPECTS:	<ul style="list-style-type: none"> Personnel demonstrate improved familiarity with emergency procedures, leading to quicker and more effective responses during the drill. Clear communication channels and protocols are established, ensuring that all team members are informed and coordinated during an emergency. The muster checker conducted a clear head count. 	
NEGATIVE ASPECTS:	<ol style="list-style-type: none"> Equipment obstructing at muster point. A seaman is missing from the stretcher team. The welder shop did not stop pressurizing. Crew rushing during emergency drill 	
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED	
REQUIRED ACTIONS FOR IMPROVEMENT:		
NO.	ACTION	WHO
1	Housekeeping and clear equipment at muster point	Marine
2	Remind the crew of their responsibilities during emergency drills	STO
3	Remind welder ensure equipment in welding shop was stopped during emergency drill.	STO
4	Emphasize the crew during the pre-tour meeting to avoid rushing or panicking during emergency drills.	STO

Juthamane Laksanaaut
STO

17 February 2025

Ooi Beng Sun
Barge Captain

17 February 2025

Mat Russell
OIM

17 February 2025

EVE - EMERGENCY RESPONSE DRILL DEBRIEF / CRITIQUE

DRILL / EVENT:	Spill response drill at Sack room	CLIENT:	PTTEP
DATE:	17 August 2025	<input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REAL EVENT	
PLATFORM:	AWP-39		
ON TOUR CREWS:	Spill response team		
TIME:	09.30 hrs.		
LOCATION / SCENE:	Sack room		
SCENARIO:	During the transfer of bulk chemical to the hopper mixing area, a forklift accidentally struck the bulk container, resulting in a chemical spill.		
OBJECTIVES:	To test the crew's ability to respond effectively to a spill, including containment, reporting, and clean-up procedures.		
PREPARATIONS:	Spill kit available for drill		
EQUIPMENT USED:	Spill kit (Tyvek suit, rubber glove, goggle, face mask, absorbent pad/pillow/sock) barrier tap, PA		

SEQUENCE OF EVENTS:		
NO.	TIME	EVENT
1	09.30	During the transfer of bulk chemical to the hopper mixing area, a forklift accidentally struck the bulk container, resulting in a chemical spill. He informed the STO of the situation and called the spill response team to the location.
2	09.32	STO called the spill response team to the location.
3	09.33	The crew using appropriate barriers at the area
4	09.33	The crew got the spill kit from a container located nearby the scene.
5	09.34	The crew donned Tyvek suit, rubber glove from the spill kit
6	09.36	The crew uses spill kits and absorbent materials to contain the spill and prevent it from spreading to other areas.
7	09.37	After containment, the crew proceeds with the clean-up process, ensuring that all contaminated materials are collected and stored in designated containers for proper disposal
8	09.38	Drill completed

LESSONS LEARNED FROM THIS DRILL/EVENT:

Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan
DEBRIEF	STO and Spill response team
POSITIVE ASPECTS:	<ul style="list-style-type: none"> The spill team responded quickly to situation. Crew understood on how to use the spill kit
NEGATIVE ASPECTS:	NA
DEBRIEF COMMENTS / RECOMMENDATIONS	<ul style="list-style-type: none"> Continue the drill according to matrix Next drill, change to new location so that crews are aware of spill in their own area
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED
REQUIRED ACTIONS FOR IMPROVEMENT:	

Pictures for Drill

PIC1 STO informed the BCO of the situation and called the spill response team to the location.



PIC2. The crew using appropriate barriers at the area



PIC3. The crew donned Tyvek suit, rubber glove and uses absorbent materials for cleaning.



PIC4. Drill over and debrief

Juthamane Laksanaaut
STO

17 August 2025

Ooi Beng Sun
Barge Captain

17 August 2025

Will Marks
OIM

17 August 2025

DISTRIBUTION:	1. Rig Office	2. Area Office	3. Head Office	4. Client
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DISTRIBUTION:	1. Rig Office	2. Area Office	3. Head Office	4. Client
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DISTRIBUTION:	1. Rig Office	2. Area Office	3. Head Office	4. Client
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DISTRIBUTION:	1. Rig Office	2. Area Office	3. Head Office	4. Client
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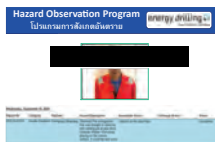


Unit	Client	Work Location	Chairman	OIM	Date	POB
EVE	PTTEP	AWP-2N	Arocha B. & Naken C.	Will Marks	22 September 24	100
Main Topic:						
Typhoon Season & social media posting habits					Page	7 of 8

2. Veerapong Uthainang / Roughneck

Hazard description: Observed Fire extinguisher that was brought to stand by with welding job at pipe deck (Outside Welder Workshop) placing on the uneven surface. It could fall and some problem happen.

Immediate action: I placed on the good floor.



OIM: Emphasize how to check fire extinguisher and emphasize about maintain housekeeping in bedroom, mention about continue job follow safety rule at all times and make sure understand clear and correct.

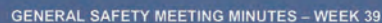
Will M.- OIM

DSV: Thank you to the crew for working safely this week. Mention about update plan of Rig and to ensure safety if typhoon happen, it's crucial to secure all equipment and tools properly to prevent hazards so may be dropped objects. Maintaining safety standards always is essential. Thank you for documenting hazards on the BBS card; these insights can significantly improve for safety practices better. Thank you for your participation in the General Safety Meeting (GSM).

Puwadech C. - DSV



DISTRIBUTION:	1. Riq Office	2. Area Office	3. Head Office	4. Client
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Unit	Client	Work Location	Chairman	OIM	Date	POB
EVE	PTTEP	AWP-2N	Arocha B. & Naken C.	Will Marks	22 September 24	100
Main Topic:						
Typhoon Season & social media posting habits					Page	8 of 8

Aro

EVE

Will

EVE

Puwadech Chatpornthanadul

PTTEP DSV

DISTRIBUTION: 1. Rig Office 2. Area Office 3. Head Office 4. Client

energy drilling

Your Partner in Drilling

WEEKLY GENERAL SAFETY MEETING ATTENDANCE RECORD

Topic

Typhoon Season

Date: 22 September 2024

Incident Sharing

Incident about Typhoon & splinter from a piece of metal from DP while POCN (SP)

Trainer

Arocha B./ Naken C./ Piyanut N. SSHE Sup.

NO.	NAME	POSITION	COMPANY	signature
1	PUWADECH CHATPORNTANADUL	DSV	PTTEP	
2	PICHAYUT DEJTARADON	NDSV	PTTEP	
3	PIYANUT NAHOM	SSHE	PTTEP	
4	WILL MARKS	OIM	ENERGY DRILLING	
5	BRYAN MCCLAREN	TOURPUSHER	ENERGY DRILLING	
6	DUNG QUACH DUC	TOURPUSHER	ENERGY DRILLING	
7	KELLY MCDANIEL	DRILLER	ENERGY DRILLING	
8	ERIC VAN DE LIGT	DRILLER	ENERGY DRILLING	
9	NANTHASIT KLAVIKARN	ASSISTANT DRILLER	ENERGY DRILLING	
10	NIMIT CHUAYCHAROEN	ASSISTANT DRILLER	ENERGY DRILLING	
11	ADUL JEHMUSA	OAC ASSISTANT DRILLER	ENERGY DRILLING	
12	SAMART AE-RAHEEM	OAC ASSISTANT DRILLER	ENERGY DRILLING	
13	YONGYUT CHOTMAWEE	SENIOR PUMPMAN	ENERGY DRILLING	
14	THAMMASAK BUJALO	SENIOR PUMPMAN	ENERGY DRILLING	
15	BILLY HOLMES	SENIOR MECHANIC	ENERGY DRILLING	
16	SUTHA PRHOSUWAN	ASSISTANT MECHANIC	ENERGY DRILLING	
17	WATTANAPONG NUANGNAM	ASSISTANT MECHANIC	ENERGY DRILLING	
18	PETER PIEPZRAK	SENIOR ELECTRICIAN	ENERGY DRILLING	
19	KOMKRIK KULNIL	ASSISTANT ELECTRICIAN	ENERGY DRILLING	
20	SOMPORN KAEWKHAM	ASSISTANT ELECTRICIAN	ENERGY DRILLING	
21	BRIAN CROWLEY ANTHONY	BARGE ENGINEER	ENERGY DRILLING	
22	TENSAN ANAK MEDAIS	ASSISTANT BARGE ENGINEER	ENERGY DRILLING	
23	LINUS LEE FOOK CHOY	BALLAST CONTROL OPERATOR	ENERGY DRILLING	
24	ADRIE SUPIT	BALLAST CONTROL OPERATOR	ENERGY DRILLING	
25	CHOKCHAI RAKPECH	CRANE OPERATOR	ENERGY DRILLING	
26	SOMPONG PUDIAD	CRANE OPERATOR	ENERGY DRILLING	
27	DUANGSUREE KASETSUNTORN	MATERIALMAN	ENERGY DRILLING	
28	NATTAPAPONG SRISUWAN	PTTEP MATERIALMAN	ENERGY DRILLING	
29	AROCHA BOONLUEA	SAFETY TRAINING OFFICER	ENERGY DRILLING	
30	JUAN PEDRO KUYLER	SAFETY TRAINING OFFICER	ENERGY DRILLING	
31	NAKEN CHAISALEE	ASSISTANT SAFETY TRAINING OFFICER	ENERGY DRILLING	
32	NAY LIN AUNG	SENIOR ELECTRICIAN	ENERGY DRILLING	
33	PRAWAT SUPAWATRAI	SENIOR WELDER	ENERGY DRILLING	
34	NAVY THAMMALAK JIRAPHAN	CAMPBOSS	ENERGY DRILLING	
35	SONGSAK ANUNAK	MEDIC	CRISIS 24	

energy drilling 

Your Partner in Drilling

WEEKLY GENERAL SAFETY MEETING ATTENDANCE RECORD

Topic	Typhoon Season		Date: 22 September 2024	
Incident Sharing	Incident about Typhoon			
Trainer	Arocha B./ Naken C./ Piyaniut N. SSHE Sup..			
NO.	NAME	POSITION	COMPANY	SIGNATURE
38	THADA TANIKUN	RADIO OPERATOR	ADISORN SKL	
37	THAPAKORN JANDORN	RADIO OPERATOR	ADISORN SKL	
38	TAYAKORN CHAIUREKUM	STOREMAN	ADISORN SKL	
39	SOMPHAT PHAIROJ	WELDER (EXTRA)	ADISORN SKL	
40	RACHIN JUNTARANEE	JUNIOR WELDER	ADISORN SKL	
41	AUTTAPON BUNMANEE	JUNIOR PUMPMAN	ADISORN SKL	
42	PRATHUEANG MUDLIMEEN	MOTORMAN	ADISORN SKL	
43	TEERARAT AIEMWIBOON	DERRICKMAN	ADISORN SKL	
44	CHEERASAK PHUTSUK	DERRICKMAN (OAC)	ADISORN SKL	
45	PAKPRAWAT KHOLUECHA	ROUGHNECK	ADISORN SKL	
46	ANANT JEHMUSA	ROUGHNECK	ADISORN SKL	
47	PHAIBOON CHEWAPAN	ROUGHNECK	ADISORN SKL	
48	RATANAPONG DANPRASERTKUL	ROUGHNECK	ADISORN SKL	
49	ASSARI SINGHAD	ROUGHNECK (OAC)	ADISORN SKL	
50	SAMAN NAENGOM	ROUGHNECK (OAC)	ADISORN SKL	
51	PARINYA MAKCHUEA	RIG CLEANER	ADISORN SKL	
52	WEERACHAI JAEMUSA	RIG CLEANER	ADISORN SKL	
53	PAKORN HATKHACHE	ROUSTABOUT	ADISORN SKL	
54	ABDULWAHAB NIDE	ROUSTABOUT	ADISORN SKL	
55	TANAWAT NARUEPAI	ROUSTABOUT	ADISORN SKL	
56	WATCHARAPONG BINMAD	ROUSTABOUT	ADISORN SKL	
57	NARUNAT KANGSULI	ROUSTABOUT	ADISORN SKL	
58	KRITTAPHON KHAMKAO	ROUSTABOUT	ADISORN SKL	
59	NATTHAPOL NIHEEM	SEAMAN	ADISORN SKL	
60	SULFA CHUNSOH	SEAMAN	ADISORN SKL	
61	HASAN PATCHAINEE	JUNIOR PUMPMAN	ADISORN SKL	
62	WISSANU SAENGJAN	MOTORMAN	ADISORN SKL	
63	PRATHUEANG MAKAJAO	DERRICKMAN	ADISORN SKL	
64	TUNGNGOEN TONGTOTKIT	DERRICKMAN (OAC)	ADISORN SKL	
65	KITPITONG TIPANG	ROUGHNECK	ADISORN SKL	
66	WANCHAI LIAMCHUI	ROUGHNECK	ADISORN SKL	
67	PINIT PANWO	ROUGHNECK	ADISORN SKL	
68	JIRAYU JENJOE	ROUGHNECK	ADISORN SKL	
69	KITTITHAT YOTKET	ROUGHNECK (OAC)	ADISORN SKL	
70	TAWAT DUANGKAEW	ROUGHNECK (OAC)	ADISORN SKL	

Arocha Boonluea
STOBrian Crowley
Barge CaptainWilliam Marks
OIM

9 May 2025

9 May 2025

9 May 2025

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EVE - Trip Drill Report (Kick while tripping)

DRILL / EVENT:	Trip Drill inside casing shoe (Flow check)	CLIENT:	PTTEP
DATE:	03/09/2025	<input checked="" type="checkbox"/> DRILL	<input type="checkbox"/> REAL EVENT
PLATFORM:	AWP- 39 Slot J		
ON TOUR CREWS:	KELLY McDANIEL		
TIME:	04:45		
LOCATION / SCENE:	Rig floor Trip Drill While pulling out of hole (Repair TDS Encoder)		
SCENARIO:	Well flow on flow check. - Perform hard shut in		
OBJECTIVES:	The purpose of this drill is to familiarize the crew with the procedure that will be implemented in the event a kick occurs while tripping pipe. - Note: This drill should be conducted in cased hole.		
PREPARATIONS:	None		
EQUIPMENT USED:	TIW Valve, Wrench, Remote choke panel		
Procedure:	<ul style="list-style-type: none">- A kick is simulated by raising the float in the trip tank. If this is not practical, the drill may be initiated by simply announcing "Well Flowing" to the driller.- The Driller must respond by sounding the alarm and having his crew install the correct FOSV.- The crew should make up and close the FOSV, and shut-in the well using the Annular BOP or applicable pipe rams.- The time taken to secure the well should be recorded.- Debrief the drill with everyone involved. Other personnel involved: The mud loggers also play an important role in monitoring the well and their response to the drill should also be recorded. This drill will help reinforce their role and ensure that monitoring alarms are functioning and set appropriately.		
SEQUENCE OF EVENTS:			
NO.	TIME	EVENT	
1	04:45	Flow check @ 9 5/8" casing shoe	
2	04:46	Simulated Gain observed on Trip Tank	
3	04:47	Sound Alarm	
4	04:48	Crews install FOSV and close valve	

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5	04:49	Driller closes Annular preventer and opens HCR to Hard shut in procedure
6	04:50	Notify OIM and Company man and make announcement on PA
7	04:55	Monitor SICP and SIDPP
8	04:56	Open remote Choke TIW, Annular preventer and Close HCR
9	04:57	Hold debrief meeting with all personnel

LESSONS LEARNED FROM THIS DRILL/EVENT:

Drill Execution ☒ As Planned ☐ Changed from Plan

DEBRIEF Yes

POSITIVE ASPECTS: Well secure in 58 seconds

NEGATIVE ASPECTS: None

OBJECTIVES ACHIEVED? ☒ ACHIEVED ☐ NOT ACHIEVED

REQUIRED ACTIONS FOR IMPROVEMENT:

NO.	ACTION	WHO
1	N/A	
2	N/A	

PHOTO

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Driller/Name

03 / 09 / 2025

Tourpusher/Name

03/ 09 / 2025

OIM/Name

03/ 09 / 2025

Page 3 of 3

EVE - EMERGENCY RESPONSE DRILL DEBRIEF / CRITIQUE

DRILL / EVENT:	Shallow gas and Break away Drills (Nighttime)	CLIENT:	PTTEP
DATE:	15 June 2025	<input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REAL EVENT	
PLATFORM:	AWP- 39		
ON TOUR CREWS:	Sr. Crew A & D, Jr. Crew A & C		
TIME:	21.00 hrs.		
LOCATION / SCENE:	Muster station		
SCENARIO:	While drilling the rig experiences an unexpected increase in gas readings from the mud logger. Shortly after, mud returns erratic, and a gas bubble is observed at the shale shaker.		
OBJECTIVES:	<ul style="list-style-type: none"> - Verify crew awareness of shallow gas hazards and early warning signs. - Practice proper use of the diverter system to safely divert gas away from the rig. - Ensure correct execution of emergency procedures (shut down pumps, flow check, secure the well). - Test communication between the bridge, drill floor, and the OIM. - Reinforce the importance of non-essential personnel mustering during well-controlled events. 		
PREPARATIONS:	Drill discussed with OIM, BC, STO Observers Assigned: <ul style="list-style-type: none"> • OIM – Control Room • Barge Captain – Control Room • STO – Control Room 		
EQUIPMENT USED:	Radios, PA System, Firefighting equipment and life jacker		

SEQUENCE OF EVENTS:

NO.	TIME	EVENT
1	20.56	Activate the simulated fire alarm. Announce the start of the drill over the communication system.
2	20.57	Started pumping kill mud as part of well control operation
3	20.58	Fire Team 1 preparing equipment and area for drill line cutting operation.
4	20.59	Accommodation clear
5	21.01	The well has been secured in preparation for platform abandonment.
6	21.01	Fire Team 1 inspected the PTB in preparation for the raise.
7	21.03	DSV notified the Production team
8	21.03	Fire Team 2 informed the control room that the PTB is ready to be raised.
9	21.03	Full muster
10	21.04	The platform is prepared for abandonment, and Fire Team 2 has completed raising the PTB.
11	21.05	Anchor winch ready to pull

Page 1 of 3

12	21.06	Bow deck ship release
13	21.07	The anchor is being pulled out and moved away from the platform.
14	21.09	Drill completed

LESSONS LEARNED FROM THIS DRILL/EVENT:

Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan
DEBRIEF	OIM, BC, STO, ASTO, Muster Checkers, Radio Operators, Driller, DSV, and Campboss
POSITIVE ASPECTS:	<ul style="list-style-type: none"> • Personnel demonstrate improved familiarity with emergency procedures, leading to quicker and more effective responses during the drill. • Clear communication channels and protocols are established, ensuring that all team members are informed and coordinated during an emergency. • The muster checker conducted a clear head count. • Good job to the team for responding effectively in their roles. • Quick response at the muster point.
NEGATIVE ASPECTS:	1. One fire man experienced confusion regarding their responsibilities during the night shift. Action: Provide the team with a clear explanation of their responsibilities during the night shift. 2. The coxswain is responsible for verifying that the lifeboat is prepared and ready for deployment.
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED

Picture of Drill

PIC1: The fire team prepared to respond to the situation.



PIC2: The fire team is responding at the bow deck for the breakaway



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PIC3. Muster station

Juthamanee Laksanaaut
STOOoi Ben Sun
Barge CaptainWill Marks
OIM

18 June 2025

18 June 2025

18 June 2025

EVE - Trip Drill Report (Kick while tripping)

DRILL / EVENT:	Trip Drill inside casing shoe (Flow check)	CLIENT:	PTTEP
DATE:	18/08 / 2025	<input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REAL EVENT	
PLATFORM:	AWP- 39 Slot E		
ON TOUR CREWS:	Trent Driller, Junior Crew A		
TIME:	02:12		
LOCATION / SCENE:	Rig floor Trip Drill While pulling out of hole		
SCENARIO:	Well flow while tripping out of hole – secure well		
OBJECTIVES:	The purpose of this drill is to familiarize the crew with the procedure that will be implemented in the event a kick occurs while tripping pipe. - Note: This drill should be conducted in cased hole.		
PREPARATIONS:	None		
EQUIPMENT USED:	TIW Valve, Wrench, Remote choke panel		
Procedure:	<ul style="list-style-type: none"> • A kick is simulated by raising the float in the trip tank. If this is not practical, the drill may be initiated by simply announcing "Well Flowing" to the driller. • The Driller must respond by sounding the alarm and having his crew install the correct FOSV. • The crew should make up and close the FOSV, and shut-in the well using the Annular BOP or applicable pipe rams. • The time taken to secure the well should be recorded. • Debrief the drill with everyone involved. Other personnel involved: The mud loggers also play an important role in monitoring the well and their response to the drill should also be recorded. This drill will help reinforce their role and ensure that monitoring alarms are functioning and set appropriately.		

SEQUENCE OF EVENTS:

NO.	TIME	EVENT
1	2:12	Driller lets off one long continuous blast on air horn – signaling the well is flowing
2	2:13	Crew installs opened FOSV (TIW) into stump and screws in same. Once screwed in, closes valve with wrench.
3	2:13	Driller simulates closing upper rams, and opening HCR choke. AD goes to remote choke panel to observe pressures
4	2:15	Debrief crew

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5	2:17	Crew opens FOSV (TIW) with wrench. Unscrews FOSV and put back in appropriate storage with air tugger still connected.
6		
7		
8		
9		
10		
11		
12		
13		
14		

LESSONS LEARNED FROM THIS DRILL/EVENT:		
Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan	
DEBRIEF	Yes	
POSITIVE ASPECTS:	Well secure in 50 seconds	
NEGATIVE ASPECTS:	None	
OBJECTIVES ACHIEVED?	<input type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED	
REQUIRED ACTIONS FOR IMPROVEMENT:		
NO.	ACTION	WHO
1	One designated signal man for tugger operator, especially when derrick full of DP	
2	N/A	
PHOTO		

Driller/Trent Lindsay

16/08 / 2025

Touppusher/Kent Sangster

16/08 / 2025

OIM/Will Marks

16/ 08/ 2025

EVE - Trip Drill Report (Kick while tripping)

DRILL / EVENT:	Trip Drill inside casing shoe (Flow check)		CLIENT:	PTTEP
DATE:	03/09/2025		<input checked="" type="checkbox"/> DRILL	<input type="checkbox"/> REAL EVENT
PLATFORM:	AWP- 39 Slot J			
ON TOUR CREWS:	KELLY MCDANIEL			
TIME:	04:45			
LOCATION / SCENE:	Rig floor Trip Drill While pulling out of hole (Repair TDS Encoder)			
SCENARIO:	Well flow on flow check. -- Perform hard shut in			
OBJECTIVES:	The purpose of this drill is to familiarize the crew with the procedure that will be implemented in the event a kick occurs while tripping pipe. - Note: This drill should be conducted in cased hole.			
PREPARATIONS:	None			
EQUIPMENT USED:	TIW Valve, Wrench, Remote choke panel			
Procedure:	- A kick is simulated by raising the float in the trip tank. If this is not practical, the drill may be initiated by simply announcing "Well Flowing" to the driller. - The Driller must respond by sounding the alarm and having his crew install the correct FOSV. - The crew should make up and close the FOSV, and shut-in the well using the Annular BOP or applicable pipe rams. - The time taken to secure the well should be recorded. - Debrief the drill with everyone involved. Other personnel involved: The mud loggers also play an important role in monitoring the well and their response to the drill should also be recorded. This drill will help reinforce their role and ensure that monitoring alarms are functioning and set appropriately.			
SEQUENCE OF EVENTS:				
NO.	TIME	EVENT		
1	04:45	Flow check @ 9 5/8" casing shoe		
2	04:46	Simulated Gain observed on Trip Tank		
3	04:47	Sound Alarm		
4	04:48	Crews install FOSV and close valve		

5	04:49	Driller closes Annular preventer and opens HCR to Hard shut in procedure
6	04:50	Notify OIM and Company man and make announcement on PA
7	04:55	Monitor SICP and SIDPP
8	04:56	Open remote Choke TIW, Annular preventer and Close HCR
9	04:57	Hold debrief meeting with all personnel

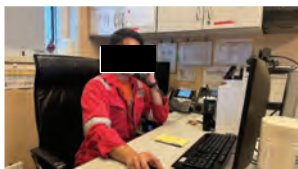
LESSONS LEARNED FROM THIS DRILL/EVENT:		
Drill Execution	<input checked="" type="checkbox"/> As Planned <input type="checkbox"/> Changed from Plan	
DEBRIEF	Yes	
POSITIVE ASPECTS:	Well secure in 58 seconds	
NEGATIVE ASPECTS:	None	
OBJECTIVES ACHIEVED?	<input checked="" type="checkbox"/> ACHIEVED <input type="checkbox"/> NOT ACHIEVED	
REQUIRED ACTIONS FOR IMPROVEMENT:		
NO.	ACTION	WHO
1	N/A	
2	N/A	
PHOTO		

MERP Drill

Date: 25 February 2025
Time: 10.00 – 10.30 hrs.

Subject	MERP Drill																								
Methods	Tabletop drill																								
Location	Hospital																								
Medical Equipment	None																								
Descriptions	Objective: <div>1. To check communication between the parties involved according to Emergency Evacuation Response Plan (MERP).</div> <div>2. To practice: Clear of communication and response time of all parties involved as per MERP.</div> MERP: Location AWP5 Platform, Offshore Thailand Version 1.8 <div>Situation</div> <table><tr><th colspan="3">SEQUENCE OF EVENTS:</th></tr><tr><th>NO.</th><th>TIME</th><th>EVENT</th></tr><tr><td>1</td><td>10:09</td><td>Medic calling to Topside Support Center (AC), Bangkok for notification of emergency case to Coordinator doctor (CD). Tel 02 026 6619.</td></tr><tr><td>2</td><td>10:10</td><td>CD Response with clear communication and communication has been clear by Doctor, Medic and STO.</td></tr><tr><td>2</td><td>10:15</td><td>AC and CD have notification of case from medic and request "Emergency Disembarkation" then calling to Authorization person (AP1) as MERP (Jeffrey Paladeau, Rig Manager) +66 6511 96 652 for authorizing to report to PTTEP doctor.</td></tr><tr><td>3</td><td>10:17</td><td>AC and CD coordinate with PTTEP doctor for Emergency Disembarkation (1.Dr.Weerapat Boonthamtirawuti +66 98 829 2354, 2. Dr.Athitaya Jongpaiboonkit +66 81 801 2983)</td></tr><tr><td>4</td><td>10:20</td><td>All participants involve on board confirm information of Emergency Disembarkation.</td></tr><tr><td>5</td><td>10:25</td><td>Medic onboard prepared IP before disembarkation.</td></tr></table> <div>: Drill is over and get feedback with team.</div> Debrief: All communication was clear by all parties involved.	SEQUENCE OF EVENTS:			NO.	TIME	EVENT	1	10:09	Medic calling to Topside Support Center (AC), Bangkok for notification of emergency case to Coordinator doctor (CD). Tel 02 026 6619.	2	10:10	CD Response with clear communication and communication has been clear by Doctor, Medic and STO.	2	10:15	AC and CD have notification of case from medic and request "Emergency Disembarkation" then calling to Authorization person (AP1) as MERP (Jeffrey Paladeau, Rig Manager) +66 6511 96 652 for authorizing to report to PTTEP doctor.	3	10:17	AC and CD coordinate with PTTEP doctor for Emergency Disembarkation (1.Dr.Weerapat Boonthamtirawuti +66 98 829 2354, 2. Dr.Athitaya Jongpaiboonkit +66 81 801 2983)	4	10:20	All participants involve on board confirm information of Emergency Disembarkation.	5	10:25	Medic onboard prepared IP before disembarkation.
	SEQUENCE OF EVENTS:																								
	NO.	TIME	EVENT																						
	1	10:09	Medic calling to Topside Support Center (AC), Bangkok for notification of emergency case to Coordinator doctor (CD). Tel 02 026 6619.																						
	2	10:10	CD Response with clear communication and communication has been clear by Doctor, Medic and STO.																						
	2	10:15	AC and CD have notification of case from medic and request "Emergency Disembarkation" then calling to Authorization person (AP1) as MERP (Jeffrey Paladeau, Rig Manager) +66 6511 96 652 for authorizing to report to PTTEP doctor.																						
	3	10:17	AC and CD coordinate with PTTEP doctor for Emergency Disembarkation (1.Dr.Weerapat Boonthamtirawuti +66 98 829 2354, 2. Dr.Athitaya Jongpaiboonkit +66 81 801 2983)																						
	4	10:20	All participants involve on board confirm information of Emergency Disembarkation.																						
	5	10:25	Medic onboard prepared IP before disembarkation.																						
		<div>Observed by Juthamanee Laksanaut: STO 25 February 2025</div> <div>Conducted by Medic Sarankorn Janluang: Rig Medic 25 February 2025</div>																							

Appendix



Medic calling to Topside Support Center (AC), Bangkok for notification of emergency case to Coordinator doctor (CD). Tel 02 026 6619.



MERP: Location AWP5 Platform, Offshore Thailand Version 1.8

AC and CD have notification of case from medic and request "Emergency Disembarkation" then calling to Authorization person (AP1) as MERP (Sasa Laveronic, Rig Manager) +66 6511 96 652 for authorizing to report to PTTEP doctor.



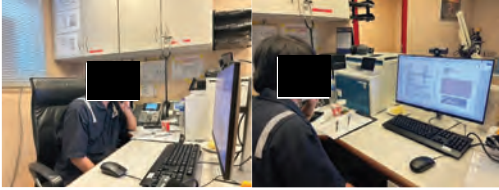
AC and CD coordinate with PTTEP doctor for Emergency Disembarkation
(1.Dr.Weerapat Boonthamtirawuti +66 98 829 2354. 2. Dr.Athitava Jongpaiboonkit +66 81 801

MERP Drill

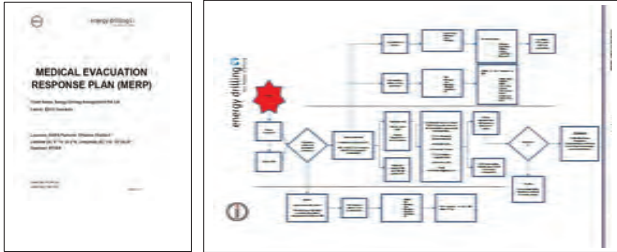
Date: 14 May 2025
Time: 15.00 – 16.00 hrs.

Subject	MERP Drill		
Methods	Tabletop drill		
Location	Hospital		
Medical Equipment	None		
Descriptions	Objective: <div>1. To check communication between the parties involved according to Emergency Evacuation Response Plan (MERP).</div> <div>2. To practice: Clear of communication and response time of all parties involved as per MERP.</div> MERP: Location AWP4 Platform, Offshore Thailand Version 1.21		
	Situation		
	SEQUENCE OF EVENTS:		
	NO.	TIME	EVENT
	1	15:00	Medic calling to Topside Support Center (AC), Bangkok for notification of emergency case to Coordinator doctor (CD). Tel 02 026 6619.
	2	15:02	CD Response with clear communication and communication has been clear by Doctor, Medic and STO.
	2	15:07	AC and CD have notification of case from medic and request "Emergency Disembarkation" then calling to Authorization person (AP1) as MERP (Sasa Lovrenovic, Rig Manager) +66 (0) 886937397 for authorizing to report to PTTEP doctor.
	3	15:10	AC and CD coordinate with PTTEP doctor for Emergency Disembarkation (1.Dr.Weerapat Boonthamtirawuti +66 98 829 2354, 2. Dr.Athitaya Jongpaiboonkit +66 81 801 2983)
	4	15:15	All participants involve on board confirm information of Emergency Disembarkation.
	5	16:00	Medic onboard prepared IP before disembarkation.
: Drill is over and get feedback with team.			
Debrief: All communication was clear by all parties involved.			
<div>Observed by Arocha Boonlua: STO 14 May 2025</div> <div>Conducted by Medic Songsak Anunak: Rig Medic 14 May 2025</div>			

Appendix




Medic calling to Topside Support Center (AC), Bangkok for notification of emergency case to Coordinator doctor (CD). Tel 02 026 6619.



MERP: Location AWP4 Platform, Offshore Thailand Version 1.21

AC and CD have notification of case from medic and request "Emergency Disembarkation" then calling to Authorization person (AP1) as MERP (Sasa Laveronic, Rig Manager) +66 6511 96 652 for authorizing to report to PTTEP doctor.


AC and CD coordinate with PTTEP doctor for Emergency Disembarkation
(1.Dr.Weerapat Boonthamtirawuti +66 98 829 2354, 2. Dr.Athitaya Jongpaiboonkit +66 81 801)

	Risk Rating Dark Green	ENERGY DRILLING QHSE Procedure	Page 1 of 12
QHSE Inspections			
Doc ID: PRO-14-008	Effective Date: 7/2/2012	Revision: 2.0	

REVISION HISTORY		
Ed / Rev	Description of Revision	Date
01-00	New Document	Jun 12
01-01	Inclusion of HSE committee Member on Condition Inspections team.	Dec 16
02-00	Minor formatting and proofreading – Revision to all Non-Conformities being recorded and tracked to closure via Rig Corrective Action Register inset.	23-Jan-2025

Role	Name	Date Printed
Document Author:	Garrett Teh	[Date Printed]
Document Owner:	Alex Maroske	[Date Printed]
Document Approver:	Luc Plouzenec	[Date Printed]

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1.0 OBJECTIVES AND SCOPE

The purpose of this procedure is to ensure that Health, Safety, and Environmental (HSE) inspections are appropriately carried out, and that any unsatisfactory conditions are uncovered, recorded, and rectified.

Inspections conducted at all company work sites shall include all equipment, systems, structures, and processes. Special attention shall be given to safety equipment and safety systems.

As a contractor on fixed installations, the inspections shall include the drilling area, equipment and storage areas as defined in the drilling contract.

This procedure does not include other area specific inspection forms that will vary from rig to rig i.e., DROPS program or DES inspection checklists.

2.0 DEFINITIONS

Term	Definition
Hazard	A hazard is defined as anything with the potential to cause harm to people, damage to the environment, or result in the loss of asset and or reputation.
Unsafe Condition	A condition in which something exists that varies from a normal accepted safe condition and, if not corrected, could cause injury, death, or property damage.
Hazard Class "A" (Major)	A condition or practice likely to cause permanent disability, loss of life or body part, and/or extensive loss of structure, equipment, or material, extensive loss of process and/or significant environmental harm.
Hazard Class "B" (Serious):	A condition or practice likely to cause serious injury / illness, resulting in temporary disability, or property damage, and/or process loss and/or environmental harm

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แผ่นเจาะ-3.12 รายการและตัวอย่างรายงานการบำรุงรักษาของอุปกรณ์ช่วยชีวิต


QHSE Inspections			
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Term	Definition
	that is disruptive but less severe than in Class A. Any condition classified Class B shall be addressed and closed out within 7 days.
Hazard Class "C" (Minor):	A condition or practice likely to cause minor, non-disabling injury / illness, and/or non-disruptive property damage, process loss or minor environment harm. Any condition classified Class C shall be addressed and closed out within 28 days.

3.0 DOCUMENT REFERENCES

Nil

4.0 PROCEDURE

4.1 Condition Inspection Activity

The Condition Inspection Report will monitor and record the condition of the Tender and DES. This report has been implemented to ensure that all systems and equipment are maintained at the highest standard and with no compromise to safety.


4.1.1 Condition Inspection Description

The inspection team, consisting of all Heads of Departments, shall be responsible for carrying out weekly inspections covering pre-defined areas of the Tender and Drilling Package. The Tender and DES shall be divided into 12 weekly areas:

- 1) DES / MCC / Access Ramp
- 2) Pipe Deck / Bow Deck / Welding Area

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- 3) Anchor Winches / Column Pump Room
- 4) Mud Pump room / Pit room
- 5) Production Deck and Stairways
- 6) Pipe Deck / Bow Deck / Welding Area (repeat)
- 7) Accommodation / Galley
- 8) Sack room / Mixing Area
- 9) DES/MCC/Access Ramp
- 10) Pipe Deck / Bow Deck / Welding Area (repeat)
- 11) Warehouse / Texas Deck / Helideck
- 12) Engine Room / Main Electrical Generation Room

Each area shall be inspected in relation to the 14 subsections as described in the Condition Inspection Report form.

- 1) Walkways & Escape Routes
- 2) Lighting
- 3) Pipework
- 4) Housekeeping
- 5) Paint work / Steel work
- 6) Safety Equipment
- 7) Fastenings
- 8) Environment
- 9) Machinery
- 10) Hazardous Goods / Areas
- 11) Drainage

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4.1.4 Condition Inspection Findings Accountability

All identified deficiencies shall be recorded on the Condition Inspection sheet immediately as a direct record of evidence, with a subsequent cross reference entered against each item indicating the formal record kept on the rigs Corrective Actions Register (item / row number) spreadsheet.

The long-term accountability record for identified deficiencies shall not be maintained on the Condition Inspection Report form. [The recording of each deficiency on the rigs Corrective Actions Register, shall be the process followed to accurately maintain accountability for control and close-out of items.](#)

The initial recording of an inspection's findings upon the Condition Inspection report allows that report (for that area) to be used as a baseline for the subsequent inspection of the area (providing personnel with a reference of previously identified problems and allowing a verification of status).

4.2 Hazard Hunt Activity

This activity is additional to Condition Inspection tours and any other required Senior Supervisor walkabouts of their work areas.

It shall be undertaken as an ongoing special initiative monthly at a minimum. Some operations may at own discretion undertake this activity more frequently in response to their own needs and objectives.


4.2.1 Hazard Hunt Objectives

The objective of the Hazard Hunt activity is to provide a tool for the following purposes:

- Random area inspections (additional to Condition Inspections)
- Opportunity for inclusion of general crew, client, and 3rd Party personnel in focused and lead hazard hunt tours of a nominated work area

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- 12) Serviceable Equipment
- 13) Communications
- 14) Cabling

4.1.2 Condition Inspection Frequency

Each week, the inspection team will inspect one of the 12 areas and document their findings on the Condition Inspection Report.

Over a period of 12 weeks all areas of the unit and installation will have been thoroughly inspected a minimum of one time.

All items identified for corrective action shall be recorded on that inspection sheet and carried over to be included on the subsequent CIR sheet for that area, enabling verification of completed items (at time of next inspection) and the tracking (accountability) of incomplete matters. This does not preclude responsibilities under 5.1.4.


4.1.3 Condition Inspection Participation

The condition inspection activity shall be undertaken as a group comprising the following nominated participants:

- OIM
- Tourpusher
- Barge Engineer
- Electrician
- Mechanic
- Safety Training Officer
- At least one member of the HSE Committee – This person is to sign the attendance with 'HSE Committee Employee Representative' after his name.
- Other participants may be added to this group at OIM discretion.

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- Training and development of SSE crew members - Hazard Identification skills
- Training and development of junior crew members – Hazard Identification skills
- Training and development of crew members demonstrating inadequate HazObs participation (ladders) & Hazard Identification skills
- Leadership development opportunity for HazObs program leaders.

4.2.2 Hazard Hunt Management

This activity shall always be led by the OIM or another nominated senior supervisor.

It shall be a planned activity and subject to a pre-job meeting regarding the area to be visited, work activities underway and any special precautions required (including PPE and Red Zones).

4.2.3 Hazard Hunt Process

The OIM shall select appropriate hazard hunt activity participants based upon the activity objectives in respect to participation.

4.2.4 Hazard Hunt Inspection Description

The inspection team shall carry out an inspection of one of the 12 pre-defined areas of the Tender and Drilling Package. The area inspected is at OIM discretion and no order or frequency is required. Areas that are not the usual working areas for crew participants should be a guiding principle in the decision regarding the area selected. The areas specified comprise of:

- 1) DES / MCC / Access Ramp
- 2) Pipe Deck / Bow Deck / Welding Area
- 3) Anchor Winches / Column Pump Room
- 4) Pumproom / Pit Room
- 5) Production Deck and Stairways

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FAST RESCUE BOAT WEEKLY INSPECTION

[illegible]

EDRILL VENCEDOR LIFEBOAT WEEKLY INSPECTION

No.s	Inspection	Lifeboat 1	Lifeboat 2	Lifeboat 3	Lifeboat 4	Remarks	
1	Check fuel oil level. (at least 80% full)	✓	✓	✓	✓	OK	
2	Check batteries for engine start up. (2 each)	✓	✓	✓	✓	OK	
3	Check batteries for lighting system.	✓	✓	✓	✓	OK	
4	Check all isolating valves in correct position.	✓	✓	✓	✓	OK	
5	Check ahead & astern operation.	✓	✓	✓	✓	OK	
6	Check suction valve for canopy spray free to operate.	✓	✓	✓	✓	OK	
7	Check steering gear moving freely.	✓	✓	✓	✓	OK	
8	Run engine for approximately 3 minutes.	✓	✓	✓	✓	OK	
9	Check all hatches for water tight integrity & check hatches' doors smooth operation.	✓	✓	✓	✓	OK	
10	Function test bilge pump.	✓	✓	✓	✓	OK	
11	Handrails in good condition.	✓	✓	✓	✓	OK	
12	Check that the electrical plug is connected to the boat and supply is turned on	✓	✓	✓	✓	OK	
13	Check main battery switches are turned OFF	✓	✓	✓	✓	OK	
14	Drain the bilge. Check plug for fit	✓	✓	✓	✓	OK	
15	Hoist wire last changed out.	July-24	July-24	July-24	July-24	End-to-end change Jan-27	
16	45 ltr compressed air bottle hydrostatic test	April-24	April-24	April-24	April-24	New bottles installed 4/2024	
26	Compressed air bottles pressure.	200 psi	200 psi	200 psi	200 psi	Port	
		200 psi	200 psi	200 psi	200 psi	Centre	
		200 psi	200 psi	200 psi	200 psi	Starboard	
Comments: Lifeboat #1-Replaced emergency battery					Seaman:		Fatin
					Seaman:		Son
					Electrician:		Somporn
					Motorman:		Timmy
					Barge Master:		Ooi Beng Sun
					Date:		12 October 2025

No	Description	Qty	Expiry Date	Lifeboat 1	Lifeboat 2	Lifeboat 3	Lifeboat 4
1	OAR	2	-	✓	✓	✓	✓
2	ROWLOCK	4	-	✓	✓	✓	✓
3	BOAT HOOK	2	-	✗	✗	✗	✓
4	BUOYANT BAILER	1	-	✓	✓	✓	✓
5	BUCKET	2	-	✓	✓	✓	✓
6	COMPASS	1	-	✓	✓	✓	✓
7	SEA-ANCHOR	1	-	✓	✓	✓	✓
8	TOWING LINE (35 meter)	2	-	✓	✗	✓	✓
9	HATCHET	2	-	✓	✓	✓	✓
10	WATER SATCHET (500 ml/pkts) (3 ltr/person)	480	Feb-29	480	480	480	480
11	DIPPER WITH LANYARD	1	-	✓	✓	✓	✓
12	GRADUATED CUP	3	-	✓	✓	✓	✓
13	FOOD RATION (10,000 kJ/pkg) (10,000 kJ/per)	80	Dec-28	80	80	80	80
14	WATERPROOF TORCH (4 ea Batteries & Spare Bulbs)	1	-	✓	✓	✓	✓
15	SIGNAL MIRROR (HELIOGRAPH)	1	-	✓	✓	✓	✓
16	WHISTLE	1	-	✓	✓	✓	✓
17	FIRST AID KIT	1	Jul-27	✓	✓	✓	✓
18	JACK-KNIFE	1	-	✓	✓	✓	✓
19	CAN OPENER	3	-	✓	✓	✓	✓
20	RESCUE COITS WITH LINES	2	-	✓	✓	✓	✓

21	MANUAL PUMP = Bilge Pump	1	-	✓	✓	✓	✓
22	FIRE EXTINGUISHER	1	-	✓	✓	✓	✓
23	SEARCH LIGHT	1	-	✓	✓	✓	✓
24	RADAR REFLECTOR	1	-	✓	✓	✓	✓
25	LIFE- SAVING SIGNALS SHEET	1	-	✓	✓	✓	✓
26	DRAIN PLUG	1	-	✓	✓	✓	✓
27	BOARDING LADDER	1	-	✓	✓	✓	✓
28	EMERGENCY TILLER	1	-	✓	✓	✓	✓
29	SEAT BELTS	80	-	80	80	80	80
30	5 LITRE CONTAINER	2	-	✓	✓	✓	✓
31	SURVIVAL MANUAL	1	-	✓	✓	✓	✓
32	SEA-SICK TABLETS (6 per person)	480	Jan-28	✓	✓	✓	✓
33	SEA-SICK BAGS	80	-	✓	✓	✓	✓
34	THERMAL PROTECTIVE AID	8	-	✓	✓	✓	✓
35	SET OF FISHING TACKLES	1	-	✓	✓	✓	✓
36	NON RECHARGEABLE BATTERY FOR GMDSS RADIO	1	Oct-29	✓	✓	✓	✓
37	SMOKE FLOAT	2	Mar-27	✓	✓	✓	✓
38	ROCKET PARACHUTE	4	Feb-28	✓	✓	✓	✓
39	HAND HELD FLARES	6	Mar-27	✓	✓	✓	✓
40	SART (Search & Rescue Radar Transponder)	1	Feb-29	✓	✓	✓	✓
41	TOOLBOX EQUIPMENTS	1	-	✓	✓	✓	✓
	8" PLIER	1	-	✓	✓	✓	✓
	BALL PEEN HAMMER	1	-	✓	✓	✓	✓
	SCREWDRIVER	8	-	✓	✓	✓	✓
	6" ADJUSTABLE SPANNER	1	-	✓	✓	✓	✓
	8" ADJUSTABLE SPANNER	1	-	✓	✓	✓	✓
	SPANNER Various Sizes	8	-	✓	✓	✓	✓
	ALLEN KEY	10	-	✓	✓	✓	✓

EDRILL VENCEDOR LIFE BUOY MONTHLY INSPECTION

Life Buoy with Self Igniting Light			
Qty	Location	Jaxing Rongsheng RSQD-1 (battery expiry)	Remarks
1	Main Deck Starboard Side (Sack Room)	'D' batteries installed June 25	Changed out to new. Ok
1	Main Deck Starboard Side (Ware House)	Dec-28	ok
1	Main Deck Port Side (Sack Room)	Dec-28	ok
1	Main Deck Port Side Aft	Dec-28	ok
1	Pipe Deck Starboard Fwd	Dec-28	ok
1	Pipe Deck Starboard (Crane)	Dec-28	ok
1	Pipe Deck Starboard Mid	Dec-28	ok
1	Pipe Deck Starboard Aft	Dec-28	ok
1	Pipe Deck Port Fwd	Dec-28	ok
1	Pipe Deck Port Mid	Dec-28	ok
1	Pipe Deck Port Mid	Dec-28	ok
1	Pipe Deck Port Aft	Dec-28	ok

Life Buoy with 150 ft Life Line			
Qty	Location		Remarks
1	Main Deck Starboard (Loading Station)		ok
1	Main Deck Port Side (Loading Station)		ok
2	Main Deck Forward		ok
2	Main Deck Aft		ok
1	Pipe Deck Starboard Life Boats		ok
1	Pipe Deck Port Life Boats		ok

Life Buoy with Smoke Signal (MOB)			
Qty	Location	Ikaros Smoke Signal Expiry Date	Remarks
1	Main Deck - Starboard Fwd	Nov-27	Lifering box Repaired ok
1	Main Deck - Anchor 1&2 Winches	Dec-27	ok
1	Main Deck - Anchor 3&4 Winches	Dec-27	ok
1	Main Deck - Starboard Aft	Dec-27	ok
1	Main Deck - Port Fwd	Dec-27	ok
1	Main Deck - Anchor 7&8 Winches	Dec-27	ok
1	Main Deck - Port Aft	Dec-27	ok
1	Pipe Deck - Starboard Life Boats	Dec-27	ok
1	Pipe Deck - Port Life Boats	Dec-27	ok

Check Check lifeline in good condition
Check box in good condition
Check IMO sign in place
Check lifebuoy for cracks
Check lifebuoy reflective tape
Check securing pin in place (for MOB)
Check markings on lifebuo is legible (Edrill Vencedor & Panama)
Check lifebuoy cleanliness

Inspected By: Kritsada/Samarn
Barge Captain: Ooi Beng Sun
Date: 10/10/2025

ENERGY DRILLING PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION

EVE - October 2025													
CODING: S = SATISFACTORY N/S = NOT SATISFACTORY N/A = NOT APPLICABLE													
Station No.	Location	FE No.	Type CO2/Dry P/ Foam / Water	Size	Date Next Hydro Test Due	Gauge Pressure Weight	Hydrant Valve	Nozzle Hose	Safety Labels Inspection Tag	Handle Pin Tamper Seal	Physical State Corrosion Frame Wheels	Cabinet Bracket	N/S Code Specific Inspection Comments
1	Helideck Port Side		Dry Powder	6.8 kg	Mar-29	S	S	S	S	S	S	S	
2	Helideck Port Side		Dry Powder	6.8 kg	Mar-29	S	S	S	S	S	S	S	
3	Helideck Port Side		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
4	Helideck Port Side Forward (Trolley Unit)		Dry Chemical	50 kg	Mar-29	S	S	S	S	S	S	S	
5	Helideck Port Side		CO2 Trolley	22.5 kg	Mar-29	S	S	S	S	S	S	S	
6	Helideck Port Side		CO2 Trolley	22.5 kg	Mar-29	S	S	S	S	S	S	S	
7	Helideck Starboard Side Forward (Trolley Unit)		Dry Chemical	50 kg	Mar-29	S	S	S	S	S	S	S	
8	Helideck Starboard Side		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
9	Helideck Starboard Side		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
10	Helideck Starboard Side		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
11	Helideck Starboard Side Aft		Dry Chemical	50 kg	Mar-29	S	S	S	S	S	S	S	
12	Helideck Starboard Side Aft		Dry Chemical	50 kg	Mar-29	S	S	S	S	S	S	S	
13	D-1 Level - Radio Room		CO2	2 kg	Mar-29	S	S	S	S	S	S	S	
14	D-1 Level - Quarter's Passage Way Port Fwd (Radio Room)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
15	D-1 Level - Passage Way Port Fwd (Radio Room)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
16	D-1 Level - Passage Way Starboard Fwd (TP Office)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
17	D-1 Level - Passage Way Starboard Fwd (TP Office)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
18	D-1 Level - Ballast Control Room		CO2	2.0 kg	Mar-29	S	S	S	S	S	S	S	
19	D-1 Level - Passage Way Starboard Aft (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
20	D-1 Level - Passage Way Mid Aft		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
21	D-1 Level - Passage Way Port Aft (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
22	D-1 Level - Quarter's AHU Room		CO2	6.8 kg	Mar-29	S	S	S	S	S	S	S	
23	D-1 Level Aft Service Space to Helideck		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
24	D-1 Level Aft (Service Space to Helideck)		Dry Powder	6.8 kg	Mar-29	S	S	S	S	S	S	S	
25	D-1 Level Aft (Service Space to Helideck)		CO2	6.8 kg	Mar-29	S	S	S	S	S	S	S	
26	D-1 Level - Quarter's - Passage Way Port Fwd (Exit Door)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
27	D-1 Level Deck - Passage Way Port Forward (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	

S11-App-01

Edrill Portable Fire Extinguisher Monthly Inspection

21-March-2025 v1.0

ENERGY DRILLING PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION

PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION													
CODING: S = SATISFACTORY N/S = NOT SATISFACTORY N/A = NOT APPLICABLE													
Station No.	Location	Serial Number	Type CO2/Dry P/ Foam / Water	Size	Date Next Hydro Test Due	Pressure Weight	Gauge	Nozzle Hose	Instruction / Content Labels Inspection Tag	Handle Pin Tamper Seal	Physical State Corrosion Frame Wheels	Cabinet Bracket	N/S Code Specific Inspection Comments
28	D-1 Level - Quarter's Passage Way Starboard Fwd (Exit Door)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
29	D-1 Level Deck - Passage Way Starboard Aft (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
30	D-1 Level Deck - Passage Way Starboard Aft (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
31	D-1 Level Deck - Passage Way Mid Aft		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
32	D-1 Level Deck - Passage Way Port Aft (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
33	D-1 Level - Accommodations AHU Room		Dry Powder	6.8 kg	Mar-29	S	S	S	S	S	S	S	
34	Pipe Deck - Passage Way Port Forward (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
35	Pipe Deck - Passage Way Port Aft (Prayer Room)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
36	Pipe Deck - Crew Recreation Room		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
37	Pipe Deck - Passage Way Starboard Aft (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
38	Pipe Deck - Passage Way Starboard Fwd (Exit Door)		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
39	Pipe Deck - Dry Store (Starboard Side)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
40	Pipe Deck - Dry Store (Port Side)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
41	Pipe Deck - Western Gallery		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
42	Pipe Deck - Local Gallery		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
43	Pipe Deck - AHU Room		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
44	Pipe Deck - AHU room		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
45	Pipe Deck - Welding Shop		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
46	Pipe Deck - Port Forward		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
47	Pipe Deck - Midship Forward		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
48	Pipe Deck - Forward Stairway		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
49	Pipe Deck Forward - Paint Store		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
50	Pipe Deck - Starboard Side Forward		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
51	Starboard Engine #2-20 Operator Cabin		Dry Powder	2 kg	Mar-29	S	S	S	S	S	S	S	
53	Bow Deck - Port Crane Motor Room		CO2	2 kg	Mar-29	S	S	S	S	S	S	S	

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ENERGY DRILLING PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION

PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION													
CODING: S = SATISFACTORY N/S = NOT SATISFACTORY N/A = NOT APPLICABLE													
Station No.	Location	Serial Number	Type CO2/Dry P/ Foam / Water	Size	Date Next Hydro Test Due	Pressure Weight	Gauge	Nozzle Hose	Instruction / Content Labels Inspection Tag	Handle Pin Tamper Seal	Physical State Corrosion Frame Wheels	Cabinet Bracket	N/S Code Specific Inspection Comments
54	Port Side PC-300 Crane Operator Cabin		Dry Powder	2 kg	Mar-29	S	S	S	S	S	S	S	
55	Main Deck - Laundry Room Entrance		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
56	Main Deck - Passage Way Mid Aft		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
57	Main Deck - Passage Way Starboard Aft		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
58	Main Deck - Passage Way Starboard Forward		Water	9.0 liter	Mar-29	S	S	S	S	S	S	S	
59	Main Deck - AHU Room (Accommodation Starboard Side)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
60	Main Deck - Battery Room		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
61	Main Deck - Emergency Generator Switchboard Room		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
62	Emergency Generator Room Port Side		AFFF	9.0 liter	Mar-29	S	S	S	S	S	S	S	
63	Main Deck - Emergency Generator Room (Wheat Units)		AFFF	45 liter	Mar-29	S	S	S	S	S	S	S	
64	Main Deck - Emergency Generator Room Port Side		AFFF	9.0 liter	Mar-29	S	S	S	S	S	S	S	
65	Main Deck - Service Equipment Room		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
66	Main Deck - Passage Way to Changing Rm - Port Side		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
67	Main Deck - Transformer Room		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
68	Main Deck - Electrical Workshop		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
69	Main Deck - ER Switchboard Room Middle		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
70	Main Deck - ER Switchboard Room Port Side		CO2	6.7 kg	Mar-29	S	S	S	S	S	S	S	
71	Main Deck - Maintenance Work Shop		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
72	Main Deck - Ware House (Starboard Side)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
73	Main Deck - Ware House (Midside)		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
74	Main Deck - Warehouse - Port Side		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
75	Main Deck - Air Compressor Room		Dry Powder	6.0 kg	Mar-29	S	S	S	S	S	S	S	
76	Main Deck - Engine Room - Main Generator #1 (Wheel Units)		AFFF	45 liter	Mar-29	S	S	S	S	S	S	S	
77	Main Deck Engine Room - Generator #1 (Port Side)		AFFF	9.0 liter	Mar-29	S	S	S	S	S	S	S	
78	Main Deck Engine Room - Generator #1 (Port Side)		AFFF	9.0 liter	Mar-29	S	S	S	S	S	S	S	
79	Main Deck Engine Room - Mid Aft		AFFF	9.0 liter	Mar-29	S	S	S	S	S	S	S	

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ENERGY DRILLING PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION



PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION													
CODING: S = SATISFACTORY N/S = NOT SATISFACTORY N/A = NOT APPLICABLE													
Station No.	Location	Serial Number	Type CO2/L E / foam / Water	Size	Date Next Hydro Test Due	Pressure	Gauge	Nozzle Hose	Instruction / Content Labels Inspection Tag	Handle Pin Tamper Seal	Physical State / Corrosion Frame / Wheels	Cabinet Bracket	N/S Code Specific Inspection Comments
80	Main Deck - Engine Room - Generator #5 (Starboard Side)		APFF	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
81	Engine Room - Generator #6 (Chief Sides)		APFF	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
82	Main Deck - Engine Room - Mid Forward		APFF	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
83	Main Deck - Engine Room - Purifier Room (Wheel Unit)		Foam	45 Liter	Mar-29	S	S	S	S	S	S	S	
84	Main Deck - Diesel Purifier Room		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
85	Sack Room Level - Forefill		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
86	Main Deck - Sack Room Port Side		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
87	Main Deck - Sack Room Starboard Side		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
88	Mud Pit Area #4 Port Side		APFF	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
89	Mud Pit Area #5 Starboard Side		APFF	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
90	Main Deck - Company Store		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
91	Main Deck - Mud Pump Room - Forward		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
92	Main Deck - Mud Pump Room - Forward Switchboard Room		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
93	Lifeboat # 1 - Port Side Pipe Deck		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
94	Lifeboat # 3 - Port Side Pipe Deck		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
95	Lifeboat # 4 - Starboard Side Pipe Deck		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
96	Lifeboat # 5 - Port Side Pipe Deck		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
97	Pontoon Deck - Port Aft (Star Canal)		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
98	Pontoon Deck - Port Aft		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
99	Port Aft Column		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
100	Pontoon Deck - Starboard Aft		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
101	Pontoon Deck - Starboard Aft		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
102	Starboard Side Aft Column		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
103	Main Deck Level - Starboard Side		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
104	Pontoon - Pump Room Port Side		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
105	Pontoon - Pump Room - Starboard Side		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	

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ENERGY DRILLING PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION



PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION													
CODING: S = SATISFACTORY N/S = NOT SATISFACTORY N/A = NOT APPLICABLE													
Station No.	Location	Serial Number	Type CO2/L E / foam / Water	Size	Date Next Hydro Test Due	Pressure	Gauge	Nozzle Hose	Instruction / Content Labels Inspection Tag	Handle Pin Tamper Seal	Physical State / Corrosion Frame / Wheels	Cabinet Bracket	N/S Code Specific Inspection Comments
106	Pontoon - Pump Room - Starboard Side		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
107	Pontoon Forward Column		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
108	Pontoon Forward Column		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
109	Pontoon Deck - Port Fwd		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
110	Pontoon Deck - Port Fwd		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
111	Pontoon Deck - Port Forward Column		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
112	Pontoon Deck - Port Forward Column		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
113	Pontoon Deck - Starboard Side Forward Column		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
114	Pontoon Deck - Starboard Aft		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
115	DE5 - MCC room		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
116	DE5 - MCC room		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
117	DE5 - MCC room		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
118	DE5 - Dag Room		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
119	DE5 - Drill Room		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
120	DE5 - Scoopway unit - inside room		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
121	DE5 - Scoopway unit - in front room		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
122	DE5 - Scoopway unit - in front room		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
123	DE5 - Under Scoopway unit		CO2	6.7 Kg	Mar-29	S	S	S	S	S	S	S	
124	DE5 - Shaler area		Dry Powder	6.0 Kg	Mar-29	S	S	S	S	S	S	S	
SPARE PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION													
CODING: S = SATISFACTORY N/S = NOT SATISFACTORY N/A = NOT APPLICABLE													
Station No.	Location	Serial Number	Type CO2/L E / foam / Water	Size	Date Next Hydro Test Due	Pressure	Gauge	Nozzle Hose	Instruction / Content Labels Inspection Tag	Handle Pin Tamper Seal	Physical State / Corrosion Frame / Wheels	Cabinet Bracket	N/S Code Specific Inspection Comments
S-1	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-2	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-3	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-4	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-5	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-6	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-7	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-8	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-9	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	

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S-10	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-11	Main Deck Level - Safety Store		Dry Powder	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-12	Main Deck Level - Safety Store		CO2	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-13	Main Deck Level - Safety Store		CO2	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-14	Main Deck Level - Safety Store		CO2	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-15	Main Deck Level - Safety Store		CO2	2.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-16	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	

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S-17	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-18	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-19	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-20	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-21	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-22	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-23	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-24	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-25	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-26	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-27	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-28	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-29	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-30	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-31	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-32	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-33	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-34	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-35	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-36	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-37	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-38	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-39	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-40	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-41	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-42	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
SPARE PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION													
CODING: S = SATISFACTORY N/S = NOT SATISFACTORY N/A = NOT APPLICABLE													
Station	Location	Serial Number	Type CO2/L E / foam / Water	Size	Date Next Hydro Test Due	Pressure	Gauge	Nozzle Hose	Instruction / Content Labels Inspection Tag	Handle Pin Tamper Seal	Physical State / Corrosion Frame / Wheels	Cabinet Bracket	N/S Code Specific Inspection Comments
S-43	Main Deck Level - Safety Store		CO2	5.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-44	Main Deck Level - Safety Store		Dry Powder	12.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-45	Main Deck Level - Safety Store		Dry Powder	12.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-46	Main Deck Level - Safety Store		Dry Powder	12.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-47	Main Deck Level - Safety Store		Dry Powder	12.0 Kg	Mar-29	S	S	S	S	S	S	S	
S-48	Main Deck Level - Safety Store		Water	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
S-49	Main Deck Level - Safety Store		Water	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
S-50	Main Deck Level - Safety Store		Water	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
S-51	Main Deck Level - Safety Store		Water	9.0 Liter	Mar-29	S	S	S	S	S	S	S	
S-52	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-53	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-54	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	
S-55	Main Deck Level - Safety Store		CO2	6.8 Kg	Mar-29	S	S	S	S	S	S	S	

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ENERGY DRILLING PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION



Inspector Name : FATIN HEMBUDING and HARUT JANSOR Seaman	Inspector Signature:	Sarge Engineer Name: OOI BENI SUN	Sarge Engineer Signature	Date: 10 October 2025

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EVE

PRINT DATE : 1P-Oct-202P
a g f e 1 o 51

Work Order: 4170-WO - 100407P

LIFE BOAT # 4 DAVIT/WINCH - MONTHLY INSPECTION

Work Order detgils		
ID :501.DAVIT-LIFEBOAT.C001	Job Class :Preventive Maintenance	Recurrence :Monthly
Priority :Medium	Job Type :Lubricate	Repeat Every :1
Criticality :Critical to Safety	Job Grade :Planned Preventative	Department :Marine
Due Date :05/10/2025	Original Due Date :05/10/2025	Last Done Date :4/10/2025 5:55:09pm
Status :Completed	Created by :osun	Created Date: 20/09/2025
Reference :501.04	Approved by :wmarks	Approved date :4/10/2025 5:55:09pm

Work Order Description
MARINE: LIFEBOAT DAVITS FREQUENCY: Monthly TITLE: Monthly Inspection of Lifeboat Davits CRAFT: MARINE

SPECIAL TOOLS/EQUIPMENT:

1. Manufacturer's technical manual

DESCRIPTION

Preliminary
1. Obtain permit to work form prior to performing task.

A. Inspection

1. Grease davit as required
Lifeboat davit sheaves all greased with EP22. Check falls for lubrication, dope as required
Lifeboat falls greased with ROCOL3. Check oil level in davit gear box
Lifeboat davit gear box oil level checked ok4. Check release cord pulleys for free running and not tangled
Release cord in good condition and in place5. Ensure any exposed threads are greased
Exposed threads greased.

Failure Reportinf

Conditions :

Failure caused :

Failure Description :

Connected Equipment List					
#	Equipment Code	Equipment Description	Maker No.	Serial No.	Counter Value Quantity
1	501.04.03	LIFEBOAT # 4 DAVIT		138DL-1377	1

Connected Spgres List				
#	Item Code	Item Description	Manufacturer	Makers No. Quantity

EVE

PRINT DATE : 15-Oct-2025
Page 1 of 1

Work Order: 4170-WO - 1004074

LIFE BOAT # 3 DAVIT/WINCH - MONTHLY INSPECTION

Work Order details		
ID :501.DAVIT-LIFEBOAT.C001	Job Class :Preventive Maintenance	Recurrence :Monthly
Priority :Medium	Job Type :Lubricate	Repeat Every :1
Criticality :Critical to Safety	Job Grade :Planned Preventative	Department :Marine
Due Date :05/10/2025	Original Due Date :05/10/2025	Last Done Date :4/10/2025 5:53:05pm
Status :Completed	Created by :osun	Created Date: 20/09/2025
Reference :501.03	Approved by :wmarks	Approved date :4/10/2025 5:53:05pm

Work Order Description
MARINE: LIFEBOAT DAVITS FREQUENCY: Monthly TITLE: Monthly Inspection of Lifeboat Davits CRAFT: MARINE

SPECIAL TOOLS/EQUIPMENT:

1. Manufacturer's technical manual

DESCRIPTION

Preliminary
1. Obtain permit to work form prior to performing task.

A. Inspection

1. Grease davit as required
Lifeboat davit sheaves greased with EP22. Check falls for lubrication, dope as required
Lifeboat falls lubricated with ROCOL3. Check oil level in davit gear box
Lifeboat davit gear box oil checked ok4. Check release cord pulleys for free running and not tangled
Release cord in good condition and in place5. Ensure any exposed threads are greased
Exposed threads greased

Failure Reporting

Conditions :

Failure caused :

Failure Description :

Connected Equipment List					
#	Equipment Code	Equipment Description	Maker No.	Serial No.	Counter Value Quantity
1	501.03.03	LIFEBOAT # 3 DAVIT		138DL-1376	1

Connected Spares List				
#	Item Code	Item Description	Manufacturer	Makers No. Quantity

EVE

PRINT DATE : 15-Oct-2025
Page 1 of 2

Work Order: 4170-WO - 1004076

LIFE RAFTS - MONTHLY MAINTENANCE ROUTINE

Work Order details		
ID :502.LIFERAFT-SCE-E2.3.C001	Job Class :Preventive Maintenance	Recurrence :Monthly
Priority :<None>	Job Type :Check/control	Repeat Every :1
Criticality :Critical to SOLAS	Job Grade :Planned Preventative	Department :Marine
Due Date :25/09/2025	Original Due Date :25/09/2025	Last Done Date :3/10/2025 9:11:54am
Status :Completed	Created by :osun	Created Date: 20/09/2025
Reference :502.01	Approved by :wmarks	Approved date :3/10/2025 9:11:54am

Work Order Description
EQUIPMENT: Liferafs FREQUENCY: Monthly TITLE: Wt- Monthly Check of Liferafs CRAFT: ME/BO

A. LIFERAFT, GENERAL

1. Check for visible damage or loose parts. Identify correct numbers, location and validity date, if applicable.
Checked OKThe life rafts are to be within current inspection and certification period, access to life rafts shall be unobstructed, and correct numbers and location as identified.
Checked OK

A.1. LIFERAFT, MONTHLY MAINTENANCE ROUTINE

1. Check lashings, painter and general condition of the container.... [OK]
2. Check the hydrostatic release and lubricate as necessary..... [OK Exp: July 2026]
3. Check that markings of container are clearly visible..... [OK]
4. Check that launching procedure poster is posted close to launching area. [OK]NOTE:
Liferaft racks have all been changed out with new. Painted deck area.

Failure Reporting

Conditions :

Failure caused :

Failure Description :

Connected Equipment List						
#	Equipment Code	Equipment Description	Maker No.	Serial No.	Counter Value	Quantity
1	501.01.01	LIFEBOAT # 1		852563		1
2	501.02.01	LIFEBOAT # 2		852564		1
3	501.03.01	LIFEBOAT # 3		852565		1
4	502.01.01	LIFERAFT # 1		11745821		1
5	502.01.01	LIFERAFT # 1		11745821		1
6	502.01.02	LIFERAFT # 2		11745822		1
7	502.01.03	LIFERAFT # 3		11745823		1
8	502.01.04	LIFERAFT # 4		11745824		1
9	502.01.05	LIFERAFT # 5		11745825		1
10	502.01.06	LIFERAFT # 6		11745826		1
11	502.01.07	LIFERAFT # 7		11745827		1
12	502.01.08	LIFERAFT # 8		11745828		1
13	502.01.09	LIFERAFT # 9		11745829		1
14	502.01.10	LIFERAFT # 10		11745830		1
15	502.01.11	LIFERAFT # 11		11745831		1
16	502.01.12	LIFERAFT # 12		11745832		1
17	502.01.13	LIFERAFT # 13		11745834		1
18	502.01.14	LIFERAFT # 14		11754946		1
Connected Spares List						
#	Item Code	Item Description	Manufacturer	Makers No.	Quantity	

EVE

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sgf e 1 o21


Work Order: 4170-WO - 100416P


LIFEJACKET LOCKERS - QUARTERLY INSPECTION

Work Order deails		
ID: 503 LIFEJKT-LOCKER.C003a	Job Class :Preventive Maintenance	Recurrence :Monthly
Priority :High	Job Type :Check/control	Repeat Every :3
Criticality :Critical to Safety	Job Grade :Planned Preventative	Department :Marine
Due Date :25/09/2025	Original Due Date :25/09/2025	Last Done Date :12/10/2025 6:14:45am
Status :Completed	Created by :osun	Created Date: 29/09/2025
Reference :503.01.07	Approved by :wmarks	Approved date :12/10/2025 6:14:45am

Work Order DesSripdon		
MARINE: Life Jacket Lockers FREQUENCY: Quarterly TITLE: Wt- Quarterly Inspection of Life Jacket Lockers CRAFT: MARINE		
SPECIAL TOOLS/EQUIPMENT: 1. Manufacturer's technical manual		
DESCRIPTION Preliminary 1. Obtain permit to work form prior to performing task.		
A.1. LIFEJACKET LOCKERS. 3 MONTHLY INSPECTIONS/MAINTENANCE PROGRAM: 1. Check for correct quantities in lifejacket boxes. LKlifejacket missing in Rm 204 (x1), Main Dk port aft box (x2), Main Deck Stbd Aft (x1) 2. Check lifejacket lights batteries are not time expired. May-28 3. Visual check of lifejacket condition.		
NOTE: Currently sourcing life jackets		

Fgiture Repordnf						
Conditions :						
Failure caused :						
Failure Description :						
ConneSad EquipmcnLisc						
#	Equipment Code	Equipment Description	Maker No.	Serial No.	Counter Value	Quantity
1	503.01.07	LIFEJACKET				1
ConneSad Spgres Lisc						
#	Item Code	Item Description	Manufacturer	Makers No.	Quantity	

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REVISION HISTORY		
Ed / Rev	Description of Revision	Date
01-00	New Document	Jun 12
02-00	Minor formatting and proofreading ~ Sec 4.2.4 Embarkation ladder insertion -Sec 4.2.8 Firefighting PPE update inset.	20-Jan-2025

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The type, configuration and location of this equipment are generally dictated by Flag registration requirements and Marine Survey obligations.

4.1 General

All lifesaving equipment supplied must be in accordance with local regulatory and Safety of Life at Sea (SOLAS 2024) requirements.

All rigs shall be equipped with the necessary lifesaving equipment, which is regularly inspected and maintained in a constant state of readiness.

Safety Equipment must be kept in its designated location so that it can be located immediately in any emergency.

Life Saving Equipment and Fire stations must not be blocked by storage of material, equipment, or debris.

Safety Equipment must only be used for its intended emergency purpose e.g. fire hoses and nozzles shall not be used for washing down or tank filling.

Missing or defective safety equipment must be reported to the OIM or a Supervisor immediately.

All inspection and maintenance performed on lifesaving equipment must be documented.

All lifesaving equipment shall always be kept clean and protected against corrosion, dust, grease, oil, chemical attack, and other agents.

4.2 Equipment Guidelines


4.2.1 Lifeboats

The following applies to lifeboats and their use:

- Launching instructions must be displayed near the lifeboat loading area and inside the lifeboat.

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1.0 OBJECTIVES AND SCOPE

The purpose of this guide is to provide information and directives related to inspection, maintenance, and use of lifesaving equipment on company rigs, to maximize its availability and help ensure that it is safely deployed for drills and emergency use.

The guidelines established in this procedure are applicable for all personnel and operations under the control of Energy Drilling.

2.0 DEFINITIONS

Term	Definition
Nil	

3.0 DOCUMENT REFERENCES


- SOLAS 2024
- ABS Survey requirements
- BS EN 3-7:2004 Portable Fire Extinguishers
- Life Saving Appliances Code 2023 (IMO)
- NFPA

4.0 PROCEDURE

Every company rig maintains a compliment of emergency firefighting, life-saving, and safety equipment.

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- When the lifeboat is in the stowed position, it must be in ready-to-go condition with safety pendants NOT fitted.
- Ensure safety pendants are attached when personnel are working on the lifeboat or winches and during rig abandonment drills.
- Do not use crew members for load testing under any circumstances; perform load testing with sack material or water bags only.
- Maintain lifeboats in a continuous state of readiness. Visually inspect them weekly and conduct a monthly checklist inspection.
- The lifeboat release mechanism must be of the "on-load" type.
- Every month, check all safety pins and other safety devices used to avoid accidental release of the boat when performing preventive maintenance, for condition and correct positioning.
- Paint the release lever red and mark it "DANGER – LEVER DROPS BOAT" or similar.

Note that QHSE A25 specifically addresses all SOLAS matters associated with Lifeboat use, Drills, Wet-Testing, and servicing requirements.


4.2.2 Inflatable Life Rafts

The following applies to life rafts and their use:

- All life rafts must be installed in an elevated position with clear unimpeded descent to water, for ease of launch and use.
- Display launching instructions near the life raft station.
- All personnel must be familiar with the launching procedures.
- Installed inflatable life rafts are attached to the rig with a hydrostatic release and inflated automatically in case of vessel sinking.
- Manual release of the life raft does not require more than one person for operation; when the hydrostatic release cannot be manually operated, a quick-release device must be installed.
- An approved servicing contractor shall service inflatable life rafts every 12 months.
- Mark the life raft container with:

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- o Rig's name
- o Manufacturer name
- o Serial number
- o Number of people who can embark
- o Length of the painter line
- o Validity date
- Maintain life rafts in a continuous state of readiness.
- Visually inspect them weekly and conduct a checklist inspection monthly.
- Additional life rafts supplied by the client may be required for evacuation means based off maximum compliment of personnel assigned to work on their platform.


4.2.3 Life Jackets

The following applies to life jackets and their use:

- Life jackets shall be available on each offshore rig. The number of life jackets must not be less than 200% of the maximum allowable persons on board.
- Each life jacket is fitted with a whistle firmly secured by a cord, a light and retro-reflective material.
- Each Lifejacket is marked with the vessel name.
- Stow life jackets inside each bedroom (one per bed) and stow spare units in closed and labelled containers located near the lifeboat muster stations.
- Post life jacket donning instructions in conspicuous places.
- Don life jackets properly and return them to their respective stowage places after use.
- Inspect life jackets at least once a year or more frequently if necessary.
- Additional life jackets supplied by the client shall be required for evacuation means based off maximum compliment of personnel assigned to work on their platform.

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4.2.6 Line Throwing Device

Each rig shall provide line-throwing device/s that satisfies Life Saving Appliance Code requirements (refer IMO LSA Code Part 7.1.1).

4.2.7 Radio Life Saving Appliances

Two portable VHF units shall be available on the rig so that they can be placed quickly into any lifeboat or life raft.

4.2.8 Fire Fighting Equipment

Rig firefighting equipment shall be supplied, fitted, inspected and subject to third party testing, as required under Survey, SOLAS regulations and Section 5.3.1 and 5.3.2 of this procedure.

Follow these precautions when using firefighting equipment:

- Do not use firefighting equipment except in an emergency or drill.
- Return each item of firefighting equipment to its designated location per the Vessel Survey Plan; report missing or deficient equipment to the appropriate supervisor; clearly mark any used extinguishers for recharging.
- Be familiar with fixed fire-protection systems:


Some accommodation and work areas use automatic deluge sprinkler systems activated by heat sensors in the sprinkler head. Activation of one head activates all sprinkler heads in that area; do not attempt to activate these systems manually.

Fixed fire-extinguishing systems, including sprinklers and water sprays generally operate automatically while water monitors and hydrants are operated manually.

Foam systems may be installed on the Helideck and are normally manually initiated.

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4.2.4 Embarkation Ladders

- Embarkation ladder is the ladder provided at survival craft embarkation stations to permit safe access to survival craft after launching.
- An embarkation ladder in a single length being from the deck to the waterline in the lightest seagoing condition under all conditions of trim of up to 10° and a list of up to 20° either way shall be provided at each embarkation station or at every two adjacent embarkation stations for survival craft launched down the side of the ship.
- Dedicated pad eye securement means shall be installed to affix the ladder rated to 5000 lbs. (2.2 tons) and the ladder shall be protected when not in use from climatic conditions.
- Other means of embarkation enabling descent to the water in a controlled manner may be permitted for the life rafts. (e.g. Escape Chutes design.)


4.2.5 Life Buoys

The following applies to life buoys and their use:

- Each offshore rig has at least eight life buoys.
- At least four life buoys have a flashing water-operated light, of which at least two have buoyant smoke signals.
- In addition, at least two life buoys are fitted with a buoyant lifeline of approximately 100 feet (30 meters), or twice the distance from the stowage location to the waterline, whichever is the greater.
- A life buoy must never be permanently tied or attached to the rig in any way so that it might be easily and quickly thrown over the side.
- If a person falls overboard, throw a life buoy near him/her, not at him/her; even if the person cannot reach it, it marks the approximate position and assists in rescue operations.

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A HI Fog (or similar) system is generally located at the Engine room, Mud Pits and Paint Locker, and is manually initiated.

- Portable fire extinguishers are provided throughout the rig so they are accessible from any worksite or accommodation.
- Use the correct type of extinguisher for each classification of fire. The type of portable fire extinguisher provided for each location is determined by the classification of fire most likely to occur in that area.
- The helicopter landing area is typically provided with firefighting equipment in accordance with the CAP 437 and should include the following:
 - o One or more dry powder extinguishers, having a total capacity not less than 45 kilograms, kept at locations easily accessible from the helicopter landing area
 - o One or more CO2 extinguishers with applicators having a total capacity of not less than 18 kilograms).
 - o A low-expansion foam-application system capable of delivering foam solution onto the landing area at a rate of 6.0 litres per square meter per minute, with sufficient volume of foam compound to be continuously applied for a period of not less than 5 minutes
 - o Foam monitors positioned at various locations on the Helideck; the helicopter landing officer directs the Helideck crew as to which monitor to use depending on weather conditions and wind direction


4.2.9 Fire Fighting PPE

Rig firefighting personal protective equipment (PPE) shall be inspected, maintained and subject to any applicable third-party testing, recertification as required under Surveys, OEM Criteria, SOLAS 2024 and LSA Code 2023 regulations.

- All applicable fire response PPE and associated equipment in designated lockers shall be in good working condition and stowed in a constant state of readiness to don and or use in event of an emergency.

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- The applicable fire response PPE and associated equipment in designated lockers shall always be restricted from being removed and used for any alternate purposes.
- Breathing apparatus shall be well maintained, kept clean, masks disinfected, securing straps to mask and BA harness fully opened to allow ease of donning and the air cylinders fully charged.
- Spare BA Cylinders shall be readily available and be fully charged.
- Firefighting bunker suits, associated PPE, gloves, helmets, boots, etc. shall be kept clean, free of damage and always in good working condition.
- Upon completion of Emergency Response drills all equipment used from fire lockers and at work sites shall be directly restored to its correct state of full readiness. (e.g. BA cylinders refilled, hoses stowed properly, etc.)


4.2.10 Fire Classes

The classification of fires and recommended extinguishing method are:

- Class A – Ordinary Solid Combustibles - Fires from paper and wood. Water is the best extinguishing medium for this type of fire.
- Class B - Flammable Liquids - Fires from petroleum, fuel oil, grease, paint, solvents, etc. Dry powder, CO2 or foam are preferred for this type of fire. Water is an effective cooling medium for the protection of surrounding equipment.
- Class C – Flammable Gases - Fires caused by combustible gases or vapor. CO2 or Dry Powder extinguishers should be used to inhibit the chemical chain reaction of the fire.
- Class D - Combustible Metals - Fires involving combustible metals such as magnesium, titanium, zirconium, sodium, and potassium. Dry powder extinguishers are preferred for this type of fire, working by smothering and heat absorption.

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requirements that dictate extinguisher color coding (which may differ from above) for that location.

4.2.12 Fire Evacuation - Smoke Hoods

Every cabin shall contain a smoke hood for each possible occupant to aid emergency evacuation from the accommodation module. These smoke hoods shall be readily accessible and instruction and demonstration in the use of smoke hoods shall be incorporated into the induction briefing for new employees and visitors.

4.3 Inspections

All emergency firefighting, life-saving and safety equipment shall be subject to monthly general condition inspection, annual survey inspection; and 5 yearly inspections (hydrostatic & control valves).

The Barge Engineer shall be directly responsible for the competent conduct or facilitation of these inspections.

This inspection shall be documented and form part of the auditable documentation maintained in relation to company audit requirements, client inspections and survey responsibilities.

In respect to Fixed and portable Fire Fighting Equipment, these inspections shall be undertaken in accordance with the FFE Inspection Checklist as provided at Appendix 1.


Third Party accredited inspection companies shall conduct the annual and 5-yearly FFE inspection.

4.3.1 Portable Fire Extinguisher Inspection

All portable fire extinguishers shall be subject to monthly inspections by competent rig personnel. This inspection shall ensure that all fire extinguishers are in place and in good condition. This inspection shall be marked on the affixed inspection tag attached to the extinguisher.

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- Class E - Energized Electrical Equipment - Dry powder and carbon dioxide are effective extinguishing agents for Class "E" fires because of their comparatively nonconductive (electrical) properties. Water must NOT be used as an extinguishing agent because of the danger of electrocution. If the electricity is shut off, it becomes a Class A Fire with all classes of extinguishers appropriate.
- Class F – Cooking Fat and Oil - Fires involving cooking fats and oils burn hotter than other typical combustible liquids, rendering a standard class B extinguisher ineffective. Such fires should be extinguished with a wet chemical extinguisher. Extinguishers of this type are designed to extinguish cooking fats and oils through saponification. The extinguishing agent rapidly converts the burning substance to a non-combustible soap. This process is endothermic, meaning it absorbs energy (in this case, thermal energy) from its surroundings, decreasing the temperature and eliminating the fire.

4.2.11 Fire Extinguisher Color Code

Fire extinguishers shall be red RAL 3000, with a band or circle of a second color covering at least 5% of the surface area of the extinguisher that indicates the extinguishing agent contained.


Type	BS EN 3 Color Code	Fire Class			
Water	Signal Red	A			
Foam	Red with a Cream panel above the operating instructions	A	B		Sometimes E
Dry Powder	Red with a Blue panel above the operating instructions	A	B	Sometimes C	E
Carbon Dioxide CO ₂	Red with a Black panel above the operating instructions		B		E
Wet Chemical	Red with a Canary Yellow panel above the operating instructions	A			F
Class D Powder	Red with a Blue panel above the operating instructions			D	

Note: BS EN 3:1996 enacted the change from solid colors (entire extinguisher body color coded) to the current banded configuration.

While this convention is set as a fleet standard, it is also accepted that some regional operations are bound by local legislative and regulatory

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As per NFPA guidance portable CO2 extinguishers shall be weighed monthly to verify contents intact.

All portable fire extinguishers shall be subject to annual inspections by a qualified third-party fire equipment inspector. This inspection shall ensure that all fire extinguishers are in place (per Fire plan), charged and in sound operational condition. The inspection shall be subject to documented certification showing individual acquittal of each portable unit as recorded on the rig Fire Equipment register.

4.3.2 Fixed Fire Extinguishing Equipment Inspection

All fixed fire extinguishing equipment shall be subject to monthly inspections by competent rig personnel. This inspection shall ensure that all units are in good condition. This inspection shall be marked on the affixed inspection tag attached to the fixed unit.

All fixed fire extinguishing equipment shall be subject to annual inspections by a qualified third-party fire equipment inspector. This inspection shall ensure that all units are in sound operational condition. The inspection shall be subject to documented certification showing individual acquittal of all fixed units as recorded on the rig Fire Equipment register.

4.3.3 5 Year Fire Equipment Inspections

Additional to the stipulated monthly and annual inspections, the following inspections shall also be undertaken, either as integral to the annual inspection undertaken at that interval or as a stand-alone activity:


5 years -

- Hydrostatic testing of all SCBA cylinders
- Hydrostatic testing of all CO2 cylinders
- All other extinguishers emptied and inspected
- Control valves of fixed firefighting systems internally inspected

4.4 Responsibilities

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4.4.1 OIM

The OIM shall be responsible for ensuring:

- The direction and control of this procedure.
- Ensuring safety equipment is ready for immediate use and regular training in the use of this equipment will form part of emergency drills.
- Monitoring, auditing, and review are undertaken regularly.

4.4.2 Barge Engineer

The Barge Engineer shall be responsible for ensuring:

- The competent conduct and documentation of monthly inspections.
- The facilitation of annual inspection by qualified third party personnel.
- That safety equipment is ready for immediate use and that regular training in the use of this equipment forms part of emergency drills.

4.4.3 Supervisor

The Supervisor shall be responsible for ensuring that:

- The emergency procedures and methods for use of emergency equipment are fully understood and competently demonstrated by employees under their control.
- Information is effectively communicated between all parties.


4.4.4 Employee

Employees shall be responsible for ensuring that:

- They understand and respond to all emergency procedures and drills in a professional and realistic manner on all occasions.

Role	Name	Date Printed
Document Author:	Alex Maroske	[Date Printed]
Document Owner:	Alex Maroske	
Document Approver:	Luc Plouzenne	

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	Risk Rating Light Green	ENERGY DRILLING QHSE Procedure	Page 16 of 19
Emergency Safety Equipment			
Doc ID: PRO-14-094	Effective Date: 8/29/2014	Revision: 2.0	

5.0 APPENDICES


5.1 S11 App5.1 v1.0 Monthly Fire Extinguisher Inspection Template example

EDRILL "RIG NAME" PORTABLE FIRE EXTINGUISHER MONTHLY INSPECTION											
June 2025											
Station No.	Location	Serial Number	Type (CO2/ABC)	Size (Gallons/Liters)	Pressure	Gauge	Nozzle	Safety Label (Inspected Tag)	Handle (No. Taps)	Physical State (Corrosion, Leaks)	Notes/Comments
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											

S11-App5.1 EDRILL Portable Fire Extinguisher Monthly Inspection 21 March 2025 v1.0

Role	Name	Date Printed
Document Author:	Alex Maroske	[Date Printed]
Document Owner:	Alex Maroske	
Document Approver:	Luc Plouzenne	

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	Risk Rating Light Green	ENERGY DRILLING QHSE Procedure	Page 17 of 19
Emergency Safety Equipment			
Doc ID: PRO-14-094	Effective Date: 8/29/2014	Revision: 2.0	

5.2 S11 App5.2 v1.0 Fire Hose Station Monthly Inspection Template example

EDRILL "RIG NAME" FIRE HOSE STATION MONTHLY INSPECTION									
May 2025									
Station No.	Location	Hose Size	Hose Condition	Hose Fittings Condition	Hydrant Handle	Fire Branch	Nozzle Condition	Cabinet Wrench	Notes/Comments
FS-01									
FS-02									
FS-03									
FS-04									
FS-05									
FS-06									
FS-07									
FS-08									
FS-09									
FS-10									
FS-11									
FS-12									
FS-13									
FS-14									
FS-15									
FS-16									
FS-17									
FS-18									
FS-19									
FS-20									

S11-App5.2 EDRILL Fire Hose Station Monthly Inspection 21 March 2025 v1.0

5.3 S11-App5.3 v1.0 Edrill Monthly Accommodation Safety Equipment Inspection Template example

EDRILL "RIG NAME" ACCOMMODATION SAFETY EQUIPMENT INSPECTION											
MONTH: May 2025											
NOTES: Any item identified N/S "Not Satisfactory" requires specific comments of deficiency identified issue.											
ROOM NUMBER	W	S	R	L	QTY	EXP DATE	SI	T	B	INSPECTION COMMENT	
RM 001											
RM 002											
RM 003											
RM 004											
RM 005											
RM 006											
RM 007											
RM 008											
RM 009											
RM 010											
RM 011											
RM 012											
RM 013											
RM 014											
RM 015											
RM 016											
RM 017											
RM 018											
RM 019											
RM 020											
RM 021											
RM 022											
RM 023											
RM 024											
RM 025											
RM 026											
RM 027											
RM 028											
RM 029											
RM 030											
RM 031											
RM 032											
RM 033											
RM 034											
RM 035											
RM 036											
RM 037											
RM 038											
RM 039											

S11-App5.3 EDRILL Monthly Accommodation Safety Equipment Inspection 27 March 2025 v1.0


5.4 Appendix 1 - Fire Fighting Systems Inspection Checklist


Role	Name	Date Printed
Document Author:	Alex Maroske	[Date Printed]
Document Owner:	Alex Maroske	
Document Approver:	Luc Plouzenne	

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	Risk Rating Light Green	ENERGY DRILLING QHSE Procedure	Page 19 of 19
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**INSPECTION OF
RIG FIRE FIGHTING SYSTEMS**

Monthly	
Inspection Item	✓
1. All firemen's outfits and associated equipment (including SCBA tanks & crash box)	
2. Fire extinguishers (correct location, proper condition and Dry Powder unexpired)	
3. Fire Hydrants, hose and nozzles in place and in good condition	
4. All fixed fire system stop valves in proper open or closed position	
5. All fixed fire extinguishing gas systems are at correct pressure and free from leaks	
6. All fire pumps are operated	
Annual	
1. Check all fire extinguishers for charging pressure (where applicable), condition and supervisory (this is to include signing hydrostatic test certificates for those extinguishers that require them)	
2. Check that all extinguishers are in place as per the Rig Fire Plan	
3. Test fixed fire detection systems for proper operation, as appropriate	
4. Test all fire dampers for operation	
5. Check and witness the operation of the Heliodor foam-water fire system (incl. sighting of float level from test certificate)	
6. All accessible components of fixed fire-fighting systems are visually inspected for proper condition	
7. All fire pumps are flow tested for proper pressure and flow	
8. All hydrants are tested for operation	
9. All fire hoses are hydrostatically tested	
10. Inspect the control valves of the fixed fire systems	
11. Check the alarm control panel and determine if it is fault-free (check zones)	
12. Blow air through all piping on fixed fire systems	
13. Carry out any other items that are required as per an ABS Fire Systems inspection	
Five-Year Service	
1. Hydrostatic testing for all SCBA cylinders	
2. Hydrostatic testing for all CO2 cylinders	
3. All other extinguishers emptied and inspected	
4. Internal inspection of control valves of fixed fire-fighting systems	

Role	Name	Date Printed
Document Author:	Alex Maroske	[Date Printed]
Document Owner:	Alex Maroske	
Document Approver:	Luc Plouzenec	

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แผ่นเจาะ-3.13 ตัวอย่างรายงานการเกิดอุบัติเหตุและบันทึกสถิติการเกิดอุบัติเหตุ

[illegible]

Incident Investigation Report - Final

Report No.: EVE / 2025 / 09
Loc. / Year / No.

1. Date of incident 11-August-2025	2. Time of incident 07:30	3. Date of report 18-August-2025	4. Installation EVE	5. Location of incident Rig Floor Rotary Area
6. Type of Incident:				
LOST TIME ACCIDENT (LTA)				
ACIDENT WITHOUT LOST TIME (MT or FA)				
PROPERTY LOSS / DAMAGE				
X			FIRE INCIDENT	
			NEAR MISS INCIDENT (including HPO or NM)	
			ENVIRONMENTAL POLLUTION (Spill)	
			OTHER (e.g. Occupational Illness)	

7. a) Evaluation of loss potential / Hazardous classification: b) Probable recurrence risk if no action taken:

Major X Serious Minor High Medium Low

8. Describe clearly what happened: (Refer to key words in box 24)

On 11th August 2025 at 07:30 hours, during rig-down operations of the cement head assembly on the EDrill Vencedor, lifting activities were being conducted on the rig floor. The lifting sling in use, intended to secure and manoeuvre the cement head, was observed to have sustained significant structural damage. The damage consisted of severe unlaying and bird caging of wire strands, with multiple broken wires and pronounced fraying along one leg, located approximately one-third of its length from the eye termination. This condition is consistent with torsional stress and overloading beyond the sling's formal rejection criteria.

The defect was identified in real time during active operations by the Cement Rep and Tourpusher and an immediate stop-work notification incorporated. Multiple personnel were present on the rig floor at the time, including Baker Hughes Cementing Field Operator x 1, Cementer x 1 and rig crew members 6 x Floor hands, 1 x Tourpusher and 1 x Driller were all engaged in various aspects of the cement head rig-down process.

Witness statements collected from the Tourpusher, Driller, 6 x Roughnecks, and 2 x Baker Hughes employed Cementing representatives confirm that during the hoist the quick-release clamp snagged on the adapter; a stop-work call was immediately made; however, the drawworks response did not arrest the load in time to prevent overload. Damage to one sling leg was first observed immediately after the snag. Harsh weather / squall conditions being encountered at time of this undesired event was also highlighted by several witnesses.

The operation was halted, and both the DSV and OIM were notified. No personnel injuries occurred, and no additional equipment damage was reported. Following the stop-work, the sling was removed from service, quarantined, tagged for further inspection, and retained for evidence control.

Undesired Event Timeline:

- 07:00 - Online Cement job completed, crew began rig down of cement head.
- 07:15 - Cement Rep bled off pressure to zero and disconnected all hoses, valves.
- 07:30 - Drill Crew and Cementing Reps began process to remove cement head:
 - TDS and sling assembly were utilized to perform the lift sequence due to desire to have a straight pull.
 - When raising the cement head with TDS, the Cement Head quick release clamp has 'caught up' whilst passing upward over the adapter.
 - Drawworks operator was unable to react quick enough and as a result the sling was overloaded causing damage.
- 07:31 Operation stopped, OIM and DSV alerted to undesired event.

Sling Specification:

- 2 Leg 18mm x 2 meters
- WLL = 5.8 Ton
- Last Certified 24-Apr-2025 by K2 Energy
- Sling was fit for service prior to incident
- Cement head weight = 500kg

16. Property loss / damage / fire / pollution / prod.	2-Leg Sling Damaged	19. Nature of spill:	n/a
17. Property lost or damaged:	Lifting Sling	20. Amount of spill:	n/a
18. Nature of loss or damage:	2 Leg Sling suffered damage – no longer usable- quarantined and destroyed.		
21. Cost estimate in US\$: \$250	Equip / Mat: Sling	Production:	Labour:
22. Type of work being carried out at the time of incident:	Cement Head Rig Down Operations		
23. Person in control of activity at time of occurrence:	Tourpusher, Driller, Baker Cement Services Rep		
24. Type of contact:	6. Slips, trips & falls 2. Struck by 3. Caught on 4. Caught in 5. Caught between	1. Electricity 2. Heat 3. Radiation 4. Chemicals 5. Fire	6. Equipment/structure 7. Lifting equipment
25. Immediate causes:			
Substandard Practices		Substandard Conditions	
A. Operating without authority	X	A. Inadequate guards or barriers	X
B. Failure to notify/make safe		B. Inadequate or improper protective equipment	
C. Operating or working at improper speed		C. Defective tools, equipment or materials	
D. Defeating or removing a safety device		D. Congested or restricted action	
E. Condition of equipment		E. Inadequate warning systems	
F. Use of equipment	X	F. Fire and explosion hazards	
G. Failure to use PPE properly		G. Substandard housekeeping	
H. Improper loading		H. Hazardous gases, dust, fumes, vapours	
J. Improper placement		J. Excessive noise	
K. Improper lifting	X	K. Radiation exposures	
L. Improper position for task		L. High or low temperature exposure	
M. Servicing equipment in operation		M. Inadequate or excessive illumination	
N. Horseplay		N. Inadequate ventilation	
P. Under influence of alcohol and/or drugs		P. Other	X
O. Other			

26. Basic causes:		Job Factors	
Personal Factors		A. Leadership	X
A. Capability	X	G. Wear & tear	
B. Knowledge	X	H. Abuse or misuse	
C. Skill	X	J. Weather	
D. Stress (Back stress)	X	K. Other	
E. Motivation	X		
27. Lack of control			
	X	Inadequate programme	
	X	Inadequate programme Standards	
	X	Inadequate compliance with Standards	
Details of personal injury/illness: NOT APPLICABLE			
28. Surname:	29. Forename(s):	30. Employer:	
31. Nationality:	32. Date of birth:	33. Sex:	34. Title:
35. Years of service:	36. Years in job:	37. Work cycle	Day: Night: Overtime:
38. Days on board:	39. Hours worked on shift:		
40. Indicate accident (A):	N/A	41. Nature of injury: N/A	
Illness (I):	N/A		
42. Part of body affected:	N/A		
43. Details of treatment: NOT APPLICABLE			
44. Severity of injury/illness:	F. Fatal L. Loss time M. Minor	45. Disposal:	F. Fatality C. Casevac M. Medivac Other D. Direct to field doctor W. Returned to work
46. Signatures			
Injured person:	Not Applicable	Rig Medic:	Not Applicable
			Date:

<p>Weather at Time of Event: A squall warning had been released for area via PTTEP generated report at 06:45 hours stating a Moderate – High risk of squall to 30kt affecting the southern operations PTTEP fields for next 3 hours. Squall lasting for periods of up to 20-30 minutes with onset gusts to 40kt and temporarily raised seas could also be realized.</p> <p>The EYE team involved in the rig down operations encountered the squall conditions at the same time as cement head rig lift sequence via the TDS was conducted.</p> <ul style="list-style-type: none"> Wind Speed: 30kt – 40kt Wind Direction / State: Strong gusts encountered at time of event. Sea State: Total Wave Significant = 1.1 Max = 2.1 Visibility: Poor / Limited due to squall encountered at same time as TDS used to lift Cement Head assembly. <p>Type of Contact:</p> <p>3. Caught On</p> <ul style="list-style-type: none"> The cement head had ‘caught up’ whilst the quick release clamp was passing over the adapter. <p>Contact With:</p> <p>6. Equipment / Structure</p> <ul style="list-style-type: none"> Release clamp locking components contacted adapter. 	<p>9. Immediate circumstances: What actions and conditions may have or could have caused the event? (See Box 25)</p> <p>Immediate Causes</p> <p>Substandard Practices:</p> <p>B. Failure to Notify/Make Safe (a)</p> <ul style="list-style-type: none"> Inclement weather due to a squall striking at same time as lift sequence and work stoppage not initiated by team involved. (i.e. At the time of lift, a squall with wind gusts of 30kt to 40kt struck the location. There is no documented evidence that a formal work stoppage was initiated in response to this weather change) <p>Failure to Notify / Make Safe (b)</p> <ul style="list-style-type: none"> Crew observed worsening wind but did not escalate to a formal stop-work despite noticeable operational disruption being caused. Work was not suspended when primary control HMI froze due to water ingress, representing critical operational impairment. <p>Substandard Practices</p> <p>F. Use of Equipment (a)</p> <ul style="list-style-type: none"> Incorrect rigging application. (The Top Drive System (TDS) was utilised for the cement head lift rather than the designated utility winch/tugger arrangement. <p>F. Use of Equipment (b)</p> <ul style="list-style-type: none"> Single leg of a generic 2-Leg sling utilized versus dedicated lifting gear being supplied by equipment owner. (i.e. 2 Leg dedicated fit for purpose Cement head rigging arrangement is required to keep unit as close as possible to vertical and limit worker incorporation of manual tool aids NHOL devices to push, help manipulate assembly for removal / install. <p>F. Use of Equipment (c)</p> <ul style="list-style-type: none"> Post incident handling of the cement head for backload witnessed on 14-Aug-2025 by HSE Advisor and Lead Cementing Rep confirmed singular D-Link attachment point of a sling, identical rigging configuration used during incident does not align the assembly into the preferred vertical position. <p>F. Use of Equipment (d)</p> <ul style="list-style-type: none"> Lack of correct rigging methods being employed contributes to the ability of latch to be caught up due to the slight angle of assembly when being lifted off adapter. <p>F. Use of Equipment (e)</p> <ul style="list-style-type: none"> The Cement head had a second lifting gear attachment point that was not utilized.
---	--

<p>F. Use of Equipment (f):</p> <ul style="list-style-type: none"> TDS selected and used as the lifting method despite impaired controls and absence of TDS-specific planning <p>Substandard Practices</p> <p>K. Improper Lifting (g)</p> <ul style="list-style-type: none"> Lift process and pre-planning inadequate. (i.e. The lift process and pre-task planning did not account for the potential over-pull risk inherent to the TDS if the cement head latch locks became snagged. No engineered load restriction control was documented.) <p>Substandard Conditions:</p> <p>B. Inadequate or Improper Protective Equipment (a)</p> <ul style="list-style-type: none"> No protective sleeves, padding, or edge guards were installed at sling contact points, leaving the sling susceptible to abrasion or damage if snagged. <p>D. Congested or Restricted Action (b)</p> <ul style="list-style-type: none"> The work area rigging to TDS presented potential snag points which included the cement head adapter profile. <p>P. Other (c)</p> <ul style="list-style-type: none"> Bad Weather encountered – a sudden squall/gusts introduced visibility issues and impacted safe control of the load. <p>P. Other(d)</p> <ul style="list-style-type: none"> Control system vulnerability to rain (HMI water ingress / freeze) materially reduced the ability to arrest load. <p>P. Other (e)</p> <ul style="list-style-type: none"> Current design of Drillers station restricts clear view of rotary area and allows adverse weather to effect equipment / operations. 	<p>10. Basic circumstances: What specific personal or job factors may have or could have caused the event? (See Box 26)</p> <p>Basic Causes:</p> <p>Personal Factors</p> <p>B. Knowledge & C Skill (a)</p> <p>Risk of overpull being realized if cement head assembly caught up using TDS and weather-impairment stop criteria not effectively recognised.</p> <p>E. Motivation (b)</p> <ul style="list-style-type: none"> Desire to complete task by team involved versus implementation of Stop Work. (i.e. Inclement weather was temporarily compromising safety of lift process) <p>Job Factors</p> <p>A. Leadership</p> <ul style="list-style-type: none"> Task-specific JSA absent; decision to proceed under impaired controls not challenged or escalated. <p>B. Engineering</p> <ul style="list-style-type: none"> Environmental protection of driller’s HMI/console inadequate for squall conditions (lack of weather-rated shielding / covers). <p>D. Maintenance</p> <ul style="list-style-type: none"> Inspection/maintenance of HMI seals/covers, and availability of rain shields require verification. <p>E. Tools and Equipment (b)</p> <ul style="list-style-type: none"> Wrong tools / methodology for the lifting task incorporated. (i.e. TDS versus Tugger) <p>F. Work Standards (a)</p> <ul style="list-style-type: none"> Pre-task planning process inadequate. (i.e. JSA utilized was not for process team employed – a URF Crane JSA incorporated – not applicable to TDS being used.
--	--

- Task-specific JSA absent; decision to proceed under impaired controls not challenged or escalated.

'Why Tree' Analysis used (QHSE A22)

Yes

No

11. Immediate remedial actions that have been and/or should be taken to control the causes & action taken to prevent recurrence:

- Immediate communication TDS shall not be utilized for any future Cement Head Install / Removal Operations.
- Incident learning communicated to all applicable personnel onboard and to be shared with incoming applicable position holders.
- Cement Head Install and Removal procedures to be revised for future operation. (Currently in process)
- Work stoppage process reinforced with all team members (Ongoing process – GSM, Pre-tours, Pre-jobs)

Action Depts:

EVE Senior

Position

Holders (i.e.

QIM – STO,

Tourpushers /

Drillers

Date: 11-August-2025

12. Long Term Remedial Actions:

- Dedicated 2-Leg lift gear appliance to be fabricated and supplied by Baker Hughes Service partner that allows Cement head to be properly aligned into vertical application for lifting / lowering. (Cement Heads have 2 dedicated lift points)
- Cement Head install / removal work procedures to be revised by Baker Hughes Representatives, forwarded for review and input with Edrill responsible persons and approved for future use. (i.e. Utility Winch / Tugger shall only be used)
- Documented Lead Supervisors review / refresher training on Energy Drilling S05 PRO-14-050 Risk Management v2.0 / S06 PRO-14-051 Four Point Check v2.0 and S07 PRO-14-092 Job Safety Analysis (JSA) Guidelines v2.0 to be performed. (i.e. Expectation is pre-task safety meeting process shall always be properly employed by lead supervisors of Energy Drilling and Baker Hughes Service Partner Responsible Lead Representatives)
- Continuation of ongoing Energy Drilling and Client expectations promoting Stop Work Authority to workforce.
- Standing Order prohibiting use of TDS for inappropriate lifting processes to be developed, reviewed, approved and communicated via Energy Drilling Corporate Onshore responsible person.
- Drillers Console / Control Station - survey to be conducted and design improvements to be formulated for review by Energy Drilling Senior Management and budgeted in future incorporating ability to negate these types of weather effects on critical equipment, systems and improve visibility of rig floor operations for TDS Operator. (PTTEP Client COSA SSHE Audit 3-Jun to 3-July-2025 also identified this specific area for future improvement)

13. Signature Investigating Supervisors:

With: [REDACTED]

14. Signature Employee(s) involved:

Quarsh Dima Dine - Teamleader
Tren [REDACTED]

15. Signature Company Rep.

Robbi Noel Coyle – PTTEP DSV



Original Sling Configuration to Cement Head D-Link Only (1 x Attachment Point and One Leg used)



Cement Head configuration can accept a 2nd slinging point to allow better vertical orientation & reduce risk.



2-Leg Slings Single Leg Damage



Cement Head Quick Release Latch Close-up



7" Casing Adapter




Cement Head Assembly



2 Leg Sling Tag recovered post incident.

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Job Safety Analysis Record Sheet

Work Being Analyzed: Rig down 7 Cement head on platform deck.

Section: Baker Hughes
Location: Rig EVE, Wellhead deck

Refer to JSA - CMF-1017-03
Last Updated: 9/10/2024


Date: 27 Feb 25

JSA Team Members:

Work Step	Work Activity	Hazards Arising	Hazard Before Risk Rating Reduction	Risk (Before) C x P	Safety Precautions	Risk (After) C x P	Contingency Actions	Action Party
1.	Hold toolbox meeting and address all issues. All crew involved in the job must be sign in the JSA.	• Poor communication. • Poor understanding of job tasks. • Not enough people for the job.	3	B	MEDIUM (3B) • Proper PPE must be provided to be handled by JSA crew. Bankman, Tugger man & deck man. • Good toolbox meeting before the job. • Assign tasks to all personnel and make sure they understand. • Remember! STOP the job if there is any confusion or if there is any unsafe work. • Put the barrier tape on working area. • Communicate in Thai/English.	LOW (1B)		
2.	Bled off pressure to zero	• Pressure trap and/or release of pressure	4	B	MEDIUM (4B) • Check for zero pressure. • Confirm bleed off line secure and in safe disconnection. • Remember! STOP the job if there is any person at risk during the job.	LOW (2B)		
2.	Disconnect all hoses and valves used for cement job.	• Pressure release. • Slip and fall from hoses when disconnecting. • Confined work area	4	B	MEDIUM (4B) • Check for zero pressure, flow check for 5 min before rig down. • Confirm bleed off line secure and in safe disconnection. • BHP personnel to check head is drained and disconnected. • Use backup person & good lading when using ladder. • Headmark trees. • Remember! STOP the job if there is any person at risk during the job. • Respect your PPE in good condition (safety boot, long gloves)	LOW (2B)		

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Job Safety Analysis Record Sheet

Work Being Analyzed: Rig down 7 Cement head on platform deck.

Section: Baker Hughes
Location: Rig EVE, Wellhead deck

Refer to JSA - CMF-1017-03
Last Updated: 9/10/2024


Date: 27 Feb 25

JSA Team Members:

Work Step	Work Activity	Hazards Arising	Hazard Before Risk Rating Reduction	Risk (Before) C x P	Safety Precautions	Risk (After) C x P	Contingency Actions	Action Party
4.	Hook up URF Crane with lifting ring on Cement Head.	• Heavy object on URF Crane. • Pinch points. • Cement Head not pick up straight	3	C	LOW (3C) • Use tag lines, stay clear of lift area, good lading when swinging hammer. • Good hand signals between Bankman & Host Operator. • Keep hands clear of snatch block, line and wire. • Remember! STOP the job if there is any person at risk during the job.	LOW (2B)		
6.	Pick up weight of head with URF crane, loosen dogs and rotate to left.	• Original snag. • Confined work area. • Pinch and crush points. • Trapped pressure.	4	C	MEDIUM (4C) • Use small movements when hoisting. • Good hand signals between Bankman & Host Operator. • Confirm pressure bled off before loosening dogs. • Remember! STOP the job if there is any person at risk during the job.	MEDIUM (4B)		
6.	Remove Cement Head from URF crane, lower to floor for removal of pressure sensor and ensure more level load.	• Cement Head becomes hand injuries. • Swinging hoist. • Une in the.	3	B	LOW (3B) • Shake Cement Head while pick up to avoid swinging hoist. • Use small movements when hoisting. • Wear hand gloves. • Good hand signals between Bankman & Host Operator. • No hands on load. • Remember! STOP the job if there is any person at risk during the job.	LOW (1A)		

Page 2 of 4

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Job Safety Analysis Record Sheet

Work Being Analyzed: Rig down 7 Cement head on platform deck.

Section: Baker Hughes
Location: Rig EVE, Wellhead deck

Refer to JSA - CMF-1017-03
Last Updated: 9/10/2024


Date: 27 Feb 25

JSA Team Members:

Work Step	Work Activity	Hazards Arising	Hazard Before Risk Rating Reduction	Risk (Before) C x P	Safety Precautions	Risk (After) C x P	Contingency Actions	Action Party
7.	Hoist Cement Head to BOP deck.	• Dropped objects. • Load catch on casing w/ white hoisting.	4	C	MEDIUM (4C) • Heavy object on air hoist line, pinch points, swinging load, slippery hands.	MEDIUM (4B)		
8.	Pick up landing joint to BOP deck.		4	C	MEDIUM (4C) • Use small movements when hoisting. • Good hand signals between Bankman & Host Operator. • Remember! STOP the job if there is any person at risk during the job.	MEDIUM (4B)		
9.	HOUSEKEEPING: ENSURE ALL EQUIPMENT/TOOLS POSITIONED LOCATION.	TRIP HAZARDS	2	C	LOW (2C) • HOUSEKEEPING	LOW (1B)		

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Job Safety Analysis Record Sheet

Work Being Analyzed: Rig down 7 Cement head on platform deck.

Section: Baker Hughes
Location: Rig EVE, Wellhead deck

Refer to JSA - CMF-1017-03
Last Updated: 9/10/2024

Date: 27 Feb 25

JSA Team Members:

Prepared by: (Originator)

Reviewed by: (Reviewer)

Approved by: (Approver)

Name: [Redacted]

Name: [Redacted]

Name: [Redacted]

Signature: [Redacted]

Signature: [Redacted]

Signature: [Redacted]

Date: 17 Aug 25

Date: 17 Aug 25

Date: 17 Aug 25

All Personnel Involved in the job are to sign this Job Safety Analysis to acknowledge that they have participated, read and understand the hazards associated with doing the job and

Name: [Redacted]

Signature: [Redacted]

Page 4 of 4

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	11 Aug
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. Vencedor	Installation / location - Thailand
Date & time of Incident	

1. Incident Information	
Rig No. Vencedor	Installation / location - AN/34A
Date & time of Incident - 0730 17th Aug	

2. Witness details

First Name - Dung	Surname Quach Duc
Job Title - Tourpusher	Employer -

2. Witness details

First Name	Surname -
Job Title -	Employer -

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the incident.

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the incident.

Include only what you yourself saw, heard or did at the time.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structure, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue a separate sheet if necessary)

Operation - Nipple down cement head, cement head connected to TDS elevator with Two leg sling. Cementing crews disconnected the cement head from the string, they gave the signal to me to lift the cement head, I started the drawworks and got tension on the load, the load was moving up slowly without any issue. While continuing to lift the cement head suddenly lost balance and got hung up on to the cement head cross over latch. Immediately took weight on indicator, sling parted simultaneously. Conditions at the time were unfavorable (high winds and heavy rain obscuring drillers visibility).

3. Statement (continue on a separate sheet if necessary)

Preparing to lay down baker cement head, I was having issues with getting rig running with a heavy squall, sideways rain on to drillers held screens landable. The heavy rain drops on to screens had caused screens to freeze. As my first hitch toolpusher asked me to step aside & I hold tap door was cover to prevent rain as he got rig going. I focused on preventing heavy sideways coming on to driller screens as TP. run rig to remove baker cement head. During removal over pull onto rigging sling occurred with change to 1 strand of wire sling during removal. With cement head landed to ~~second~~ head was stopped & discussion held with ~~head and~~.

Preparing to lay down Baker cement head, I was having issued with getting rig running with a heavy squall, sideways rain on to drillers touch screen controls. The heavy rain drops on to screens had caused screens to freeze. As my first hitch toolpusher asked me to step aside & I hold tap door was cover to prevent rain as he got rig going. I focused on preventing heavy sideways coming onto driller screens on TP. run rig to remove baker cement head. During removed over pull onto rigging sling occurred with damage to 1 strand of wire sling during removed with cement head landed. Job was stopped and discussion held.

Signed (Witness) ...

Date: 11/8/25

Signed (Snr. Energy

Signed (Witness)

Signed (Snr. Ener

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. <i>EVE-2025-09</i>	Installation / location - <i>Rig floor</i>
Date & time of incident - <i>11/8/25 : 07:30</i>	

2. Witness details

First Name -	Surname -
Job Title - <i>ช่างเทคนิค</i>	Employer -

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

ฉันเป็นคนช่างเทคนิค...
I started to release the cement head lock and pushed it to the right side so that the locking parts would disengage. Then I gave the signal to lift up. After it was lifted slightly, heavy rain began, making it impossible to see whether it was centered at that moment. Shortly after, I heard the sound of a sling breaking.

Signed (Witness)
Signed (Snr. Energy

Date *17/8/25*

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. <i>EVE-2025-09</i>	Installation / location - <i>Rig floor</i>
Date & time of incident - <i>11 Aug 25/180</i>	

2. Witness details

First Name -	Surname -
Job Title - <i>Rig down CMT Head</i>	Employer -

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

ขณะที่กำลัง Rig down CMT Head...
While rigging down the CMT Head, before lifting the sling, I had already checked that the lock was released and that there was no obstruction. I then instructed the driller to lift. However, during the operation, heavy rain started, making it difficult to see clearly. I was about to call for a stop, but it was too late, and I heard a loud noise. I then observed from the Fastlock upward and saw that the sling was damaged. I immediately told the crew to be cautious and stay clear because the sling was damaged, to prevent anyone from approaching until it was lowered to the ground. After that, we would use the air tugger to hook and pull it away from the well.

Signed (Witness)
Signed (Snr. Energy

Date *11 Aug 25*

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. EWE-3035-04	Installation / location - Fly floor
Date & time of Incident - 11/4/25	07:30 AM

2. Witness details	
First Name - [REDACTED]	Surname - [REDACTED]
Job Title - RN	Employer - [REDACTED]

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the Incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

17:30 น. ขณะที่กำลังทำงานอยู่ ได้ยินเสียงดังมาจากด้านบนของโครงสร้างเหล็ก
และเห็นเศษเหล็กตกลงมาใกล้ๆ ตัวตน

At 07:30, heavy rain was falling while lifting the cement head, and I stepped back. Then I heard a loud noise, but I did not think anything was damaged, so I continued working as normal.

Signed (Witness)	Date 11/4/25
Signed (Snr. Energy)	

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. EWE-3035-04	Installation / location - Fly floor
Date & time of Incident - 11/4/25	07:30 AM

2. Witness details	
First Name - [REDACTED]	Surname - [REDACTED]
Job Title - RN	Employer - [REDACTED]

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the Incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

ขณะที่กำลังทำงานอยู่ ได้ยินเสียงดังมาจากด้านบนของโครงสร้างเหล็ก
และเห็นเศษเหล็กตกลงมาใกล้ๆ ตัวตน

At that time, we were rigging down the cement head when sudden heavy rain occurred. During the removal of the cement head, their crew proceeded to dismantle it themselves, and after that, I stood by and observed.

Signed (Witness)	Date 11/4/25
Signed (Snr. Energy)	

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. <i>EVE-2025-01</i>	Installation / location - <i>Rig Floor</i>
Date & time of Incident - <i>11/4/25 : 07:30 AM</i>	

2. Witness details

First Name -	Surname -
Job Title -	Employer -

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

At 07:30 AM, while preparing to lay down the cement head, the lines and hose had already been disconnected. The cement head was to be lifted using the top drive. Before lifting, the area was cleared of personnel, and the lift commenced. During the lifting process, the sling being used broke and snapped.

Signed (Witness)

Signed (Sr. Energy

Date *11-8-25*

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. <i>EVE-2025-01</i>	Installation / location - <i>Rig floor</i>
Date & time of Incident - <i>11/4/25 : 07:30 AM</i>	

2. Witness details

First Name -	Surname -
Job Title -	Employer -

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

At that time, heavy rain was falling. At 07:30, we began rigging down and removing the cement head. After the top drive was raised, the rig crew stepped back to allow the cementing crew to work. Shortly after, a loud noise was heard, and when I looked again, the sling had broken.

Signed (Witness)

Signed (Sr. Energy

Date *11/4/25*

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. EYE-2015-04	Installation / location - Rig Floor
Date & time of Incident - 11/6/15 : 07:30 AM	

2. Witness details	
First Name - [REDACTED]	Surname - [REDACTED]
Job Title - Down cement hand	Employer - [REDACTED]

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the Incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

While lifting the cement head, the cement head was tilted and not centered. The pipe threads connected to the casing were cross-threaded, and the lifting was done using the top drive, which applied a high pulling force. This caused one of the hanging slings to break.

Signed (Witness) ...	Date: 11/6/15
Signed (Snr. Energy)	

Document no.:	A22 - Appendix 5	Revision no:	01	Date:	05-08-08
Document title:	Witness Statement				
Responsible:	QHSE Manager				

Incident No:

1. Incident Information	
Rig No. EYE-2015-04	Installation / location - Rig Floor
Date & time of Incident - 11/6/15 : 07:30 AM	

2. Witness details	
First Name - [REDACTED]	Surname - [REDACTED]
Job Title - R/N	Employer - [REDACTED]

Describe in your own words, and in as much detail as possible, the events leading up to, during and immediately after the Incident.

Include only what you yourself saw, heard or did at the time.

Use sketches / diagrams, marked up to show where and what happened in relation to structured, equipment and witnesses. Provide weights, dimensions and distances, and include photographs wherever possible.

3. Statement (continue on a separate sheet if necessary)

At 07:30, heavy rain was falling, and as we were about to lift the cement head, a loud noise was heard. The cement head then came loose from the fastlock, and the sling showed signs of tearing. After that, I proceeded to lift the cement head and store it.

Signed (Witness) ...	Date: 11/6/15
Signed (Snr. Energy)	

DO NOT MODIFY THIS SHEET....!!!
Please fill in only light blue cell

Rig / Unit Name: EVE		Offshore Drilling Rig / Unit Leading Indicators											
		January			2025			2025					
Rig leading 1041 indicator per month		January	February	March	April	May	June	July	August	September	October	November	December
Rig leading 1042 indicator per month	January	52	73	130	133	200	200	201					
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1043 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1044 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1045 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1046 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1047 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1048 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1049 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1050 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1051 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1052 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	100	100	100	100	100	100	100	100	100	100	100	100
	May	100	100	100	100	100	100	100	100	100	100	100	100
	June	100	100	100	100	100	100	100	100	100	100	100	100
	July	100	100	100	100	100	100	100	100	100	100	100	100
	August	100	100	100	100	100	100	100	100	100	100	100	100
	September	100	100	100	100	100	100	100	100	100	100	100	100
	October	100	100	100	100	100	100	100	100	100	100	100	100
Rig leading 1053 indicator per month	January	100	100	100	100	100	100	100	100	100	100	100	100
	February	100	100	100	100	100	100	100	100	100	100	100	100
	March	100	100	100	100	100	100	100	100	100	100	100	100
	April	10											

[illegible]

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MONTHLY CLINIC ACTIVITY REPORT

Year 2025

Name of Company / Site Location:	ENERGY DRILLING
CLINIC:	EDRILL VENCEDOR
PERIOD:	January to December 2025
DOCTOR/MEDIC:	SARANKORN J. (PATRICK) / SONGSAK A. (JIW)
MEDICAL SUPPORT:	TOPSIDE SUPPORT CRISIS 24 / BANGKOK

Population	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Average population on site this month		131		132									263
Client		32		31									63
Contractor / Sub Contractor		99		101									200
Male		124		124									248
Female		7		8									15
Type of Visits	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Client	4	13	7	6	2	7	14	0	0	0	0	0	53
Contractor / Sub Contractor	11	16	13	21	7	18	11	2	0	0	0	0	99
Other	4	1	1	4	0	0	0	1	0	0	0	0	11

[illegible]

Category of illnesses and injuries	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Gastrointestinal	1	1	3	7	0	1	6	2	0	0	0	0	21
Eye	0	0	0	1	2	0	1	0	0	0	0	0	4
Ear	0	0	1	0	0	0	0	0	0	0	0	0	1
Respiratory	7	5	7	11	3	10	12	0	0	0	0	0	55
Cardiovascular	0	0	0	0	0	0	0	0	0	0	0	0	0
Musculoskeletal	1	7	6	7	4	4	1	0	0	0	0	0	30
Neurological	2	0	0	0	0	3	1	0	0	0	0	0	6
Skin	7	7	2	5	0	6	3	1	0	0	0	0	31
Urological	0	0	0	0	0	0	0	1	0	0	0	0	0
Dental	0	2	0	0	0	0	0	0	0	0	0	0	2
Genital & Gynecology	1	0	0	0	0	1	0	0	0	0	0	0	2
Other	0	0	0	0	0	0	0	0	0	0	0	0	0
Total visits	19	22	19	31	9	25	24	3	0	0	0	0	152
Total New case	18	18	19	31	9	25	23	3	0	0	0	0	146
Total follow up case	1	12	2	0	0	0	2	0	0	0	0	0	17
Total visit after work hour	0	0	0	0	0	3	0	3	0	0	0	0	6

[illegible][illegible][illegible]



C24 Notification of Case

1. Call, Client & Site Details

Date of Call (DD/MM/YY):	17 Aug 2025
Time of Call:	6 .00 PM
Name of Client:	Energy Drilling
Location of Vessel/Site:	Gulf of Thailand
Name of Vessel/Site:	Edrill Vencedor
Medic/Doctor Name:	Medic: Rapeepat Rakguson
Site phone number:	+662 026 5713
Notification Type:	First Notification / Follow-up Report

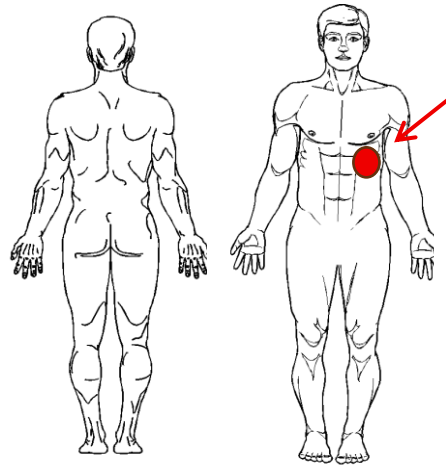
2. Patient Details

Full Name of Patient:	
Name of Company employing the patient:	Energy Drilling
Nationality:	British
Age:	51
Job Position:	
Date patient came on board/site:	7 August 2025
Date patient due to sign off:	4 September 2025

3. Other information

Name of Rig Manager (please note not the OIM)	Sasa Laverovnic
Mobile Tel. of Rig Manager/Site Manager	
Next crew change chopper/boat available:	18 August 2025

4. Details of Condition

Type of Condition:	Illness
Date of First Consultation:	17 Aug 2025
Past Medical History: No drug Allergy , NO U/D	
Date & Time/ Chronology of Accident/Illness (including circumstances of accident, Dates of symptoms): 17 August 2025	
Details of Accident/illness (History & Clinical Findings):	
Chief Complaints: LUQ abdominal pain 30 min PTA	
Present illness: 30 minutes ago, while working, the patient experienced severe LUQ abdominal pain radiating to the Lt. back, pain score 8. No nausea, No vomiting, No diarrhea. Administered Buscopan (10 mg) 1 tablet orally, and observed for 30 minutes After evaluation, the severe pain with a pain score of 8 did not improve. No nausea, vomiting, or diarrhea were observed.	



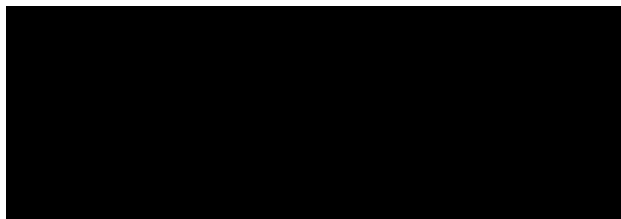
C24 Notification of Case

Clinical Findings: Physical Examination <ul style="list-style-type: none">• Patient: Good conscious• Head: Normal• Eyes: Normal both eyes, not pale, Normal vision• Skin : normal• Neurologic signs:<ul style="list-style-type: none">E4V5M6 (Normal) pupil; 3mm RTLBE.Motor power grade 5 (Normal power)• Ears: Normal Auditory• Nose: Normal shape, no discharge• Heart: S1S2 Normal no murmur• Lung: clear• Abdomen: Soft, Tenderness at LUQ radiating to the Lt. back, Pain Score 8, no guarding, no rigidity, No N/V, No bloody stool, No hematemesis• Extremity: Normal <p>Body weight 112 kgs, Height 186 cms</p>				
Vital signs:				
Temp: 36.3 oC	B/P: 143/86 mmHg	Respiration: 18 bpm	Pulse: 80 bpm	O2 Sat: 99 % RA
Others: Pain score 3-4				
Treatment/Action/Follow up plan: <ul style="list-style-type: none">Buscopan (10 mg) 1 tab oral StatBuscopan(20) 1 amp vTramol (50 mg) vDiclofenac 1 tab oral statR/O Lt kidney Stone				
Medic /Doctor Request for Assistance from the Assistance Centre (delete as appropriate):				
Medical Advice	Yes / No			
Non-urgent disembarkation	Yes / No			
Urgent Disembarkation	Yes / No			




C24 Notification of Case

For Assistance Centre Use Only	
Escalated to MD on Duty	Yes / No
Time of Call in Singapore:	
Coordinating Doctor's Name:	
C24's Case number:	
Medical Assistance Centre Recommendations:	
Escorted / Unescorted:	
Receiving Facility:	
Name of Rig Manager Contacted:	
Rig Manager's instructions:	
C24 to arrange ground transfer	Yes / No
C24 to place guarantee of medical expenses	Yes / No
No assistance required	Yes / No



Month : July-25

Top 5 Condition	Amount
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Baker Hughes 			Wellsite Daily Cost					Daily Report No: 16			
								Date: 11/Sep/25			
Operator : PTTEP			Well Name : AT-39-F					Depth/TVD : 2496.00 m/1410.47 m			
Report For : Puwadech C./ Kunchayon			Field/Area : APW-39					Water Depth : 76.4			
Contractor/Rig: EDRILL VENCEDOR			Location : Gulf of Thailand					Activity : Drill Cement and/or float Eqpt.			
Report For : Matt Russel			Mud Type : CARBO DRILL SDF								
Product Costs Inventory & Consumption	Unit Size	Unit Price	Start Amount	Daily Used	Cum Used	Daily Rec'd	Cum Rec'd	Daily Return	Cum. Return	Final Stock	Daily Cost
BAKER SQUEEZ 25 lb bag	25 lb bag										
BENTONITE, 25 KG BAG	25 kg		240		240		240			240	
BRIDGEFORM TH 25 lb bag	25 lb bag		8							8	
BRINE-PAC 1500 A, 5 GAL PAIL	5 gal										
CaCl2, 25 KG BAG	25 kg bag		280		600		600			280	
CaCO3 C, 25 KG BAG	25 kg bag										
CaCO3 C, MT Big bag	MT										
CaCO3 F, 25 KG BAG	25 kg bag										
CaCO3 F, MT Big bag	MT										
CaCO3 GM 150, 25 KG BAG	25 kg bag		180		80		80			180	
CaCO3 GM 150, MT Big bag	MT										
CaCO3 GM 50, 25 KG BAG	25 kg bag										
CaCO3 GM 50,MT Big bag	MT										
CaCO3 GM F, 25 kg bag	25 kg										
CaCO3 GM F, MT Big bag	MT										
CaCO3 GM SC, 25 KG BAG	25 kg bag										
CaCO3 GM SC, MT Big bag	MT										
CaCO3 M, 25 KG BAG	25 kg bag										
CaCO3 M, MT Big bag	MT										
CaCO3 XC, 25 kg bag	25 kg										
CaCO3 XC, MT Big bag	MT										
CARBOMUL TH, 55 GAL DRUM	55 gal		80	3	73		70			77	
CHEK-LOSS, 25 LB BAG	25 lb bag		96							96	
DFE-938, 25 LB BAG	25 lb bag		459							459	
DIAMOND DUST	40 lb bag		244							244	
H2S SCAV 55 gal drum	55 gal dr										
HDC MK II 55 GAL DRUM, BH	55 gal dr		12							12	
HDC MK II 55 GAL DRUM, PTTEP	55 gal dr										
KCI, 25 KG BAG	25 kg bag		240							240	
LIME, 25 KG BAG	25 kg bag		275	10	460		450			265	
LUBE R PLUS, 55 GAL	55 gal dr										
MAGMA-PLEX, 50 LB BAG	50 lb bag		158		10		10			158	
MAGMA-TROL, 25 KG BAG	25 kg bag		52							52	
MIL-BAR, MT BULK	MT		279		225	75	300			354	
MUL HT 450, 55 GAL DRUM	55 gal dr										
NOXYGEN XT, 25 KG BAG	25 kg bag										
OMNILUBE 655	55 gal dr		115							115	
OVA-CLEAN, 55 GAL DRUM	55 gal										
OVA-KLEAN, 55 GAL DRUM	55 gal dr		5							5	
OVA-VIS, 55 GAL DRUM	55 gal		22	4	36		32			18	
OVAGEL HT, 25 KG BAG	25 kg bag		601	71	449		378			530	
OVATROL HT,50 LB BAG	50 lb bag		6		150		150			6	
OVATROL XHT, 50 LB BAG	50 lb bag		60							60	
PAC LV, 25 KG BAG	25 kg bag		192							192	
PHPA, 25 KG BAG	25 kg bag		32		12		12			32	
SARALINE 185V Q1/2025	1 m3										
SARALINE 185V Q2/2025	1 m3										
SARALINE 185V Q3/2025	1 m3		320		443	80	523			400	
SARALINE 185V Q4/2025	1 m3										
SODA ASH, 25 KG BAG	25 kg bag		78		28		28			78	
SYN GRAPHITE F, 25 KG BAG	25 kg bag		216		92		92			216	
SYN GRAPHITE M, 25 KG BAG	25 kg bag										
THPS 35%, 5 GAL	5 gal		11							11	
XAN PLEX D, 25 KG BAG	25 kg bag		80		10		10			80	
XANPLEX XPR, 25 KG BAG	25 kg bag				25		25				

Total Chemical :

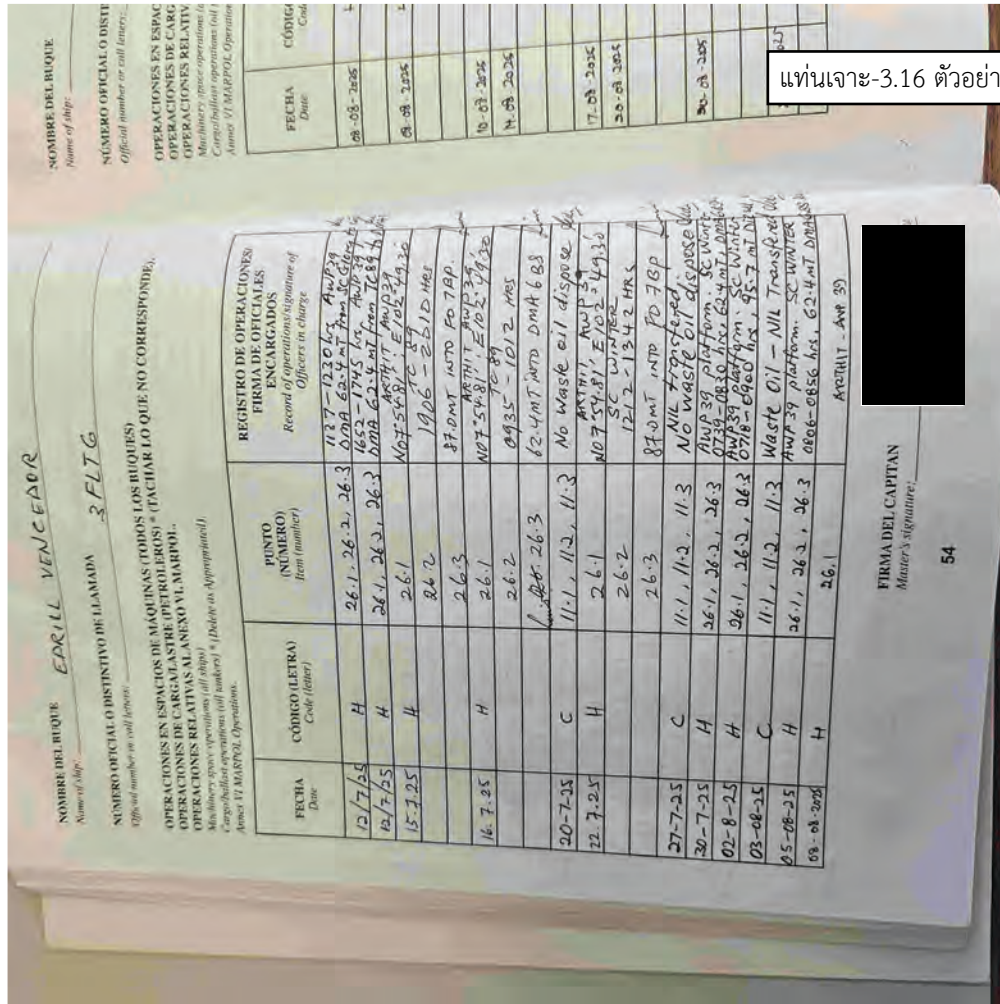
167

Dangerous Chemical :

46

Department	DC No.	No. in folder	Name of chemical	Product Use / Recommended for use	Ingredients	CAS no.	Remark
Energy Drilling		1	Green Calcium Sulfonate	Lubricating grease	Non-Hazardous Components		
Energy Drilling		2	GLEECUT G-15L RIG WASH LIQUID	Blended Chemicals	Non-Hazardous Components		
Energy Drilling		3	Klubersynth BEM 44-4600	Grease	Non-Hazardous Components		
Energy Drilling	DC 1	4	3M™ Scotch-Weld™ Neoprene High Performance Contact Adhesive EC	Contact Adhesive	Acetone Toluene	67-64-1 108-88-3	
Energy Drilling	DC 2	5	Alkaline Manganese Dioxide-Zinc	Energizer Portable power source	Potassium Hydroxide	1310-58-3	
Energy Drilling		6	Corroless CCI 355	Corrosion inhibitor	Non-Hazardous Components		
Energy Drilling		7	DieselPower Biocontrol	Fuels	Non-Hazardous Components		
Energy Drilling		8	FALCHEM RUST CONVERTER WATER BASED	Surface treatment of steel	Non-Hazardous Components		
Energy Drilling	DC 3	9	Fontec AFF 3% A	Appliance protection	Non-Hazardous Components		
Energy Drilling		10	Sulphuric Acid [Not more than 9% w/w]	Sulfuric Acid; Oil of vitriol; Diluted sulfuric acid.	Sulfuric Acid	7664-93-9	
Energy Drilling	DC 4	11	HOUGHTO-SAFE 273CTF Motion Compensator/Riser Tensioner Hydraulic Fluid / Closed loop BOP fluid	Use in motion compensators, drill string and riser tensioners and closed loop hydraulic wellhead control systems.	Aluminum		Double click in Ingredients for more information.
Energy Drilling		12	MAGNAVIS ® PREPARED BATH 7HF	Magnetic Particle Inspection	Non-Hazardous Components		
Energy Drilling		13	Bentonite , pure	Laboratory chemical	Non-Hazardous Components		
Energy Drilling	DC 5	14	1C FORM-A-GASKET #1 SEALANT 110Z	Sealant	METHYL ISOBUTYL KETONE	108-10-1	
Energy Drilling		15	ARON ALPHA GEL 10		Non-Hazardous Components		
Energy Drilling		16	CASTROL VECTON 15W-40 CK-4 E9		Non-Hazardous Components		
Energy Drilling	DC 6	17	CO CONTACT CLEANER		HEXANE	110-54-3	
Energy Drilling		18	HYSPIN AWH-M 68		Non-Hazardous Components		
Energy Drilling	DC 7	19	KE-45-T		2-BUTANONE OXIME	96-29-7	
Energy Drilling		20	KOPR-KOTE		Non-Hazardous Components		
Energy Drilling		21	Loctite 243		Non-Hazardous Components		
Energy Drilling	DC 8	22	LOCTITE 290		α,α-DIMETHYLBENZYL HYDROPEROXIDE	80-15-9	
Energy Drilling							
Energy Drilling	DC 9	23	LOCTITE 545 THREAD SEALANT		METHYL METHACRYLATE α,α-DIMETHYLBENZYL HYDROPEROXIDE	80-62-6 80-15-9	
Energy Drilling	DC 10	24	LOCTITE 567		BIS-PHENOL A-(EPICHLOR HYDRIN) EPOXY RESIN (REACTION PRODUCT)	25068-38-6	
Energy Drilling		25	LOCTITE 592		Non-Hazardous Components		
Energy Drilling	DC 11	26	LOCTITE 660		α,α-DIMETHYLBENZYL HYDROPEROXIDE	80-15-9	
Energy Drilling	DC12	27	LOCTITE LB 8008		CALCIUM HYDROXIDE	1305-62-0	
Energy Drilling		28	LOCTITE SI 593		Non-Hazardous Components		
Energy Drilling		29	LOCTITE SI 596		Non-Hazardous Components		
Energy Drilling	DC 13	30	LOCTITE SI 598		2-BUTANONE OXIME		
Energy Drilling		31	McCabe Gasoline Level Indicator Paste		Non-Hazardous Components		
Energy Drilling		32	MORCHEM SEAQUEST 680 WBC II		Non-Hazardous Components		
Energy Drilling		33	NEPTUNA 2T SUPER SPORT		Non-Hazardous Components		
Energy Drilling		34	NEVER SEEZ REGULAR GRADE		Non-Hazardous Components		
Energy Drilling	DC 14	35	PX FORM-A-GASKET SEALANT #2 11 OZ		ETHANOL (ETHYL ALCOHOL) ISOPROPYL ALCOHOL	64-17-5 67-63-0	
Energy Drilling							
Energy Drilling					METHYL ISOBUTYL KETONE	108-10-1	
Energy Drilling		36	RADIATOR SEALER & CONDITIONER		Non-Hazardous Components		
Energy Drilling		37	Silicone Carbide 450gm ADS		Non-Hazardous Components		
Energy Drilling		38	SUNISO SL 68		Non-Hazardous Components		
Energy Drilling	DC 15	39	Ultra Blue Gasket Maker 3.35 OZ		ETHYL METHYL KETOXIME	96-29-7	
Energy Drilling	DC 16	40	WCP-2. Organic Mixture		ACETONE MONOPROPYLENE GLYCOL METHYL ETHE	67-64-1 107-98-2	
Energy Drilling		41	WD-40 Bulk, Asia - Organic Mixture		Non-Hazardous Components		
Kobchock Catering	DC 18	1	Cif Cream Lemon		SODIUM CARBONATE	497-19-8	
Kobchock Catering		2	Cif Ultrafast Kitchen Spray		Non-Hazardous Components		
Kobchock Catering	DC 19	3	Clorox Bleach		SODIUM HYPOCHLORITE	7681-52-9	
Kobchock Catering		4	Comfort softner		ISOPROPYL ALCOHOL	67-63-0	
Kobchock Catering	DC 20	5	Deb Instant Hand Foam		ETHANOL (ETHYL ALCOHOL)	64-17-5	
Kobchock Catering							
Kobchock Catering					1-PROPANOL	71-23-8	
Kobchock Catering					ISOPROPYL ALCOHOL	67-63-0	
Kobchock Catering	DC 21	6	Dip it Plus - Ecolab		SODIUM CARBONATE	497-19-8	
Kobchock Catering	DC 22	7	Dishwashing Liquid		ETHANOL (ETHYL ALCOHOL)	64-17-5	
Kobchock Catering		8	Floor Cleaner - Ecolab		Non-Hazardous Components		
Kobchock Catering		9	Glass Cleaner - Ecolab		Non-Hazardous Components		
Kobchock Catering		10	Insect Repellent		Non-Hazardous Components		
Kobchock Catering	DC 23	11	Laundry Powder		SODIUM CARBONATE	497-19-8	
Kobchock Catering		12	Lemon eze - Ecolab		Non-Hazardous Components		
Kobchock Catering		13	Lux Soap		Non-Hazardous Components		
Kobchock Catering					Non-Hazardous Components		
Kobchock Catering	DC 24	15	Novasan - Ecolab		2-AMINOETHANOL	141-43-5	
Kobchock Catering		16	Orange Force - Ecolab		Non-Hazardous Components		
Kobchock Catering		17	Pine Disinfectant		Non-Hazardous Components		
Kobchock Catering		18	Rinse Dry Extra - Ecolab		Non-Hazardous Components		
Kobchock Catering	DC 25	19	Sink Sanitizer - Kay		SODIUM DICHLOROISOCYANURATE, DIHYDRATE	51580-86-0	
Kobchock Catering	DC 26	20	Stainless Steel Polish		ETHANOLAMINE	141-43-5	
Kobchock Catering	DC 27	21	Step Off - Diversey		ETHANOLAMINE	141-43-5	
Kobchock Catering	DC 28	22	Super Trump - Ecolab		SODIUM HYDROXIDE	1310-73-2	
Kobchock Catering		23	Toilet Bowl Cleaner		SODIUM HYDROXIDE	1310-73-2	
Kobchock Catering		24	vectra		Non-Hazardous Components		
Kobchock Catering		25	Veg Wash - Ecolab		Non-Hazardous Components		
Kobchock Catering	DC 29	26	Comfort Fabric Conditioner		ISOPROPYL ALCOHOL	67-63-0	
Kobchock Catering	DC 30	27	Deb Instant Foam		1-PROPANOL	71-23-8	
Kobchock Catering		28	Deb Pure Restore		Non-Hazardous Components		
Kobchock Catering		29	ECOLAB GLASS CLEANER		Non-Hazardous Components		
Kobchock Catering	DC 31	30	HARPIC Power Plus Original		HYDROCHLORIC ACID	7647-01-0	
Kobchock Catering		31	LIQUID PAN DANDY		Non-Hazardous Components		
Kobchock Catering		32	Mr Muscle® Glass Cleaner 500mL		Non-Hazardous Components		
Kobchock Catering	DC 32	33	COMPLETE		ETHANE DIOL	107-21-1	
Kobchock Catering	DC 33	34	StepOff		SODIUM HYDROXIDE 2-AMINOETHANOL	1310-73-2 141-43-5	
Kobchock Catering	DC 34	35	Dettol		ISOPROPYL ALCOHOL	67-63-0	
Kobchock Catering		36	Windex® Glass Cleaner Liquid		Non-Hazardous Components		
Kobchock Catering	DC 35	37	3M Dishwashing liquid		SODIUM HYDROXIDE	1310-73-2	
Kobchock Catering		38	Glade Clean Air		Non-Hazardous Components		
Kobchock Catering	DC 36	39	Hytec - Sodium hypochlorite		SODIUM HYPOCHLORITE	7681-52-9	
Kobchock Catering		40	Sunile lemon turbo - Washing dish		Non-Hazardous Components		
Kobchock Catering	DC 37	41	Pro - Powdered detergent		SODIUM CARBONATE	497-19-8	
Kobchock Catering		42	Magic clean Floor Cleaner		Non-Hazardous Components		
Kobchock Catering	DC 38	43	Magic clean cleaner		ETHANOLAMINE	141-43-5	
Kobchock Catering	DC 39	44	Filine - softer		ISOPROPYL ALCOHOL	67-63-0	
Kobchock Catering		45	Glade refresh air		Non-Hazardous Components		
Kobchock Catering		46	Hand soap		Non-Hazardous Components		
Kobchock Catering		47	Softlan Fabric Softener		Non-Hazardous Components		
Kobchock Catering	DC 40	48	Super Trump		SODIUM HYDROXIDE	1310-73-2	
SERVICE PARTNER							
Halliburton		1	D-AIR 3500L		Non-Hazardous Components		
Halliburton		2	DUALSPACERSURFACTANTB		Non-Hazardous Components		
Halliburton		3	ECONOLITE LIQUID		Non-Hazardous Components		
Halliburton		4	HALAD-413L CEMENT ADDITIVE		Non-Hazardous Components		
Halliburton		5	HALAD-560L XM		Non-Hazardous Components		
Halliburton		6	HALAD CEMENT ADDITIVED		Non-Hazardous Components		
Halliburton		7	HR-14LM		Non-Hazardous Components		
Halliburton		8	SCR742L		Non-Hazardous Components		
Halliburton		9	SEM 8 EMULSIFIER		Non-Hazardous Components		
Halliburton		10	SILICALITE LIQUID		Non-Hazardous Components		
Halliburton		11	TUNED SPACER, III MSDS		Non-Hazardous Components		
CEMENT SERVICES							
Baker Hughes Cementing		1	Chem Tag BIOCIDES X-102		Non-Hazardous Components		
Baker Hughes Cementing		2	Chem Tag BRINE-PAC		Non-Hazardous Components		
Baker Hughes Cementing		3	Chem Tag MIL-BAR (Barite)		Non-Hazardous Components		
Baker Hughes Cementing		4	DPE-938		Non-Hazardous Components		
Baker Hughes Cementing		5	GARAMITE 7303		Non-Hazardous Components		
Baker Hughes Cementing		6	GILSONITE		Non-Hazardous Components		
Baker Hughes Cementing		7	NOXGEN		Non-Hazardous Components		
Baker Hughes Cementing		8	SARALINE 200		Non-Hazardous Components		
Baker Hughes Cementing		9	LC-LUBE (Fine)		Non-Hazardous Components		
Baker Hughes Cementing		10	BAKER-SQUEEZ		Non-Hazardous Components		
Baker Hughes Cementing	DC 41	11	Calcium Chloride		CALCIUM CHLORIDE	10043-52-4	
Baker Hughes Cementing		12	CARBO-GEL		Non-Hazardous Components		
Baker Hughes Cementing		13	CARBO-MUL HT		Non-Hazardous Components		
Baker Hughes Cementing		14	CARBO-TROL 375		Non-Hazardous Components		
Baker Hughes Cementing		15	CHEK-LOSS		Non-Hazardous Components		

No.	ชื่อสารเคมีอันตราย (ไทย)	ชื่อสารเคมีอันตราย (อังกฤษ)	CAS number
1	อะเซทิลีน (เอทพีน)	ACETYLENE (ETHYNE)	74-86-2
2	อะเซฟเท	ACEPHATE	30560-19-1
3	อะซีตัล	ACETAL	105-57-7
4	อะซีตัลดีไฮด์	ACETALDEHYDE	75-07-0
5	กรดอะซีติก, กรดน้ำส้ม	ACETIC ACID	64-19-7
6	อะซีติก แอนไฮไดรด์	ACETIC ANHYDRIDE	108-24-7
7	อะซีโตน	ACETONE	67-64-1
8	อะซีโตน ไซยานไฮไดริน	ACETONE CYANOHYDRIN	75-86-5
9	อะซีโตนไไตรล	ACETONITRILE	75-05-8
10	อะซีตัลอะซีโตน	ACETYLACETONE	123-54-3
11	อะซีตัล คลอไรด์	ACETHYL CHLORIDE	75-36-5
12	กรดอะซีตัลซาลิไซลิก	ACETYSALICYLIC ACID	50 - 78 - 2
13	อะโคนิตีน	ACONITINE	302-27-2
14	เกลือของอะโคนิตีน	ACONITINE (SALTS)	
15	อะโครลีน	ACROLEIN	107-02-8
16	อะคริลามิด	ACRYLAMIDE	79-06-1
17	อะคริเลตส์	ACRYLATES	
18	กรดอะครีลิก	ACRYLIC ACID	79-10-7
19	2,2-บิส(อะครีโลอิลออกซีเมทิล) บิวทิล อะคริเลท	2,2-BIS (ACRYLOYLOXYMETHYL) BUTYL ACRYLATE	15625-89-5
20	อะซีโตนไไตรล	ACRYLONITRILE	107-13-1
21	กรดอะดีปิก	ADIPIC ACID	124-04-9
22	อัลลิลลามีน	ALLYLAMINE	107-11-9
23	อัลดีคาร์บ	ALDICARB	116-06-3
24	อัลดริน	ALDRIN	309-00-2
25	อัลคาลิ เอทอไซด์	ALKALI ETHOXIDE	16331-64-9
26	อัลคาลิ ฟลูออโรซิลิเคตส์	ALKALI FLUOSILICATES	
27	อัลคาลิ เมทอไซด์	ALKALI METHOXIDE	3315-60-4
28	เกลืออัลคาลิของเพนเตคลอโรฟีนอล	ALKALI SALTS OF PENTACHLOROPHENOL	
29	อัลเลทธริน	ALLETHRIN	584-79-2
30	อัลโดคลอโร	ALUDOCHLOR	93-71-0
31	อัลลิล แอลกอฮอล์	ALLYL ALCOHOL	107-18-6
32	อัลลิล คลอไรด์	ALLYL CHLORIDE	107-05-1
33	อัลลิล 2,3-เอพอกซีโพรพิล อีเธอร์	ALLYL 2,3-EPOXYPROPYL ETHER	106-92-3
34	อัลลิล ไกลไซด์ อีเธอร์	ALLYL GLYCIDYL ETHER	106-92-3
35	อัลลิล ไอโอดิด์	ALLYL IODIDE	556-56-9
36	อัลลิล ไพรอิดีน ไซัลไฟด์	ALLYL PYRROL DISULFIDE	2179-59-1
37	อะลูมิเนียม อัลคิล	ALUMINIUM ALKYL	
38	สารประกอบอะลูมิเนียม อัลคิล	ALUMINIUM ALKYL COMPOUNDS	
39	อะลูมิเนียม คลอไรด์ แอนไฮไดรอส	ALUMINIUM CHLORIDE ANHYDROUS	7446-70-0
40	อะลูมิเนียม ลิเทียม ไฮไดรด์	ALUMINIUM LITHIUM HYDRIDE	16853-85-3
41	อะลูมิเนียม ฟอสไฟด์	ALUMINIUM PHOSPHIDE	20859-73-8
42	อะลูมิเนียม ฝุ่นผง, ไพโรฟอสฟอรัส	ALUMINIUM POWDER, PYROPHORIC	7429-90-5
43	ผงอะลูมิเนียม (ลักษณะผง ฝุ่น)	ALUMINIUM POWDER, STABILIZED	
44	ฟิวอะลูมิเนียม	ALUMINIUM FUMES, AS AL	
45	โลหะและออกไซด์ของอะลูมิเนียม	ALUMINIUM METAL & OXIDE, AS AL	7429-90-5
46	อะลูมิเนียม ออกไซด์	ALUMINIUM OXIDE	1344-28-1
47	อะลูมิเนียม, ฝุ่นผง, สารละลาย, เกลือ	ALUMINIUM, SOLUBLE SALTS, AS AL	
48	อะลูมิเนียม-ไตร-ไอโซโพรพอกไซด์	ALUMINIUM-TRI-ISOPROPOXIDE	555-31-7
49	อะมิทอน	AMITON	78-53-5
50	แอมโมเนีย	AMMONIA	7664-41-7
51	(a) แอมโมเนียม ไนเตรต (b) แอมโมเนียม ไนเตรตในรูปของปุ๋ย	(a) AMMONIUM NITRATES (b) AMMONIUM NITRATES IN THE FORM OF FERTILISERS	6484-52-2
52	แอมโมเนียม	AMETRYN	834-12-8
53	อะมิโดไทออน	AMIDITHION	919-76-6
54	กรด 3-อะมิโนเบนซีนซัลโฟนิค	3-AMINOBENZENE SULPHONIC ACID	121-47-1
55	กรด 4-อะมิโนเบนซีนซัลโฟนิค	4-AMINOBENZENE SULPHONIC ACID	121-57-3
56	2-อะมิโนเบนซีนไดซีน	2-AMINO BENZIDINE	
57	เกลือ, อะมิโนเบนซีนไดซีน	4-AMINOBIHENYL (SALTS)	
58	5-อะมิโน-1-ฟอสโฟนาอิลอะมิโนฟอสไฟน์-3-ฟีนิล-1,2,4-ไตรazole	5-AMINO-1-(BISDIMETHYL AMINOPHOSPHINYL)-3-PHENYL-1,2,4-TRIAZOLE	1031-47-6
59	2-อะมิโนบูเทน	2-AMINOBUTANE	13952-84-6
60	อะมิโนคาร์บอน	AMINOCARB	2032-59-9
61	4-อะมิโน-เอ็น,เอ็น-ไดเอทิลานิลีน	4-AMINO-N,N-DIETHYLANILINE	93-05-0
62	2-อะมิโน-4,6-ไดไนโตรฟีนอล	2-AMINO-4,6-DINITROPHENOL	96-91-3
63	2-อะมิโนเอทานอล	2-AMINOETHANOL	141-43-5
64	2-อะมิโนเอทิลไดเมทิลามีน	2-AMINOETHYLDIMETHYLAMINE	108-00-9
65	2-อะมิโน-2-เมทิลโพรพานอล	2-AMINO-2-METHYLPROPANOL	124-68-5
66	3-อะมิโนเมทิล-3,5,5-ไตรเมทิลไซโคลเฮกซิลอะมิโน	3-METHYL-3,5,5-TRIMETHYLCYCLOHEXYLAMINE	2855-13-2
67	อะมิโนฟีนอล	2-AMINOPHENOL	95-55-6
68	2-อะมิโนโพรเพน	2-AMINOPROPANE	75-31-0
69	1-อะมิโนโพรเพน-2-ออล	1-AMINOPROPAN-2-OL	78-96-6
70	3-อะมิโนโพรพิลไดเอทิลามีน	3-AMINOPROPYLDIETHYLAMINE	104-78-9
71	3-อะมิโนโพรพิลไดเมทิลามีน	3-AMINOPROPYLDIMETHYLAMINE	109-55-7
72	2-อะมิโนไพริดีน	2-AMINOPYRIDINE	95-53-4
73	อะมิโทรล	AMITROLE	61-82-5
74	แอมโมเนีย แอนไฮไดรอส	AMMONIA, ANHYDROUS	7664-41-7
75	แอมโมเนียม บิฟลูออไรด์	AMMONIUM BIFLUORIDE	1341-49-7
76	แอมโมเนียม คลอไรด์	AMMONIUM CHLORIDE	12125-02-9
77	แอมโมเนียม ไดโครเมต	AMMONIUM DICHROMATE	7789-09-5
78	แอมโมเนียม ฟลูออไรด์	AMMONIUM FLUORIDE	12125-01-8
79	แอมโมเนียม ไฮโดรเจน ไดฟลูออไรด์	AMMONIUM HYDROGEN DIFLUORIDE	1341-49-7
80	แอมโมเนียม เพอร์คลอเรต	AMMONIUM PERCHLORATE	7790-98-9
81	แอมโมเนียม โพลีซัลไฟด์	AMMONIUM POLYSULPHIDES	9080-17-



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