

# Safety Induction for KN Energies Deutschland GmbH Employees and WHV-2 LNG Terminal Visitors

	NAME	POSITION	DATE
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# CONTENT

1. General Information
2. Terminal Key Locations
3. Hazards and Risk Factors
4. Escape Evacuation & Emergency Preparedness
5. Work Operation and Maintenance O&M
6. Incident Reporting



# 1. General Information

# Welcome to KN Energies DE GMBH Wilhelmshaven LNG Terminal 2



- Goal is to ensure **Zero Harm** to humans, animals, the environment, and property.
- The safety requirements in this presentation apply to the entire premises of the LNG Terminal Wilhelmshaven 2, WHV 02.
- Further safety requirements are provided via signs, barriers, verbal and written instructions, and other training.
- They must be respected and followed.
- ❖ For questions or assistance, or in the event of doubt, uncertainty or an emergency, please feel free to contact your local Supervisor, Manager or HSE at anytime.

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# ISPS Registration and Security Clearance Jetty



## 1.Registration via email:

[WHV02-Anmeldung@energy-terminal.de](mailto:WHV02-Anmeldung@energy-terminal.de)

### Required Data:

- Name, contact details (e-mail, telephone)
- Date of planned work task
- Company name
- Location (header station or jetty)
- Contact person on site (client).

## 2. Feedback and confirmation of registration/visit by e-mail



# ISPS Registration and Security Clearance



## Documents Required

- ✓ Identity card or passport
- ✓ Personal protective equipment (PPE)
- ✓ Proof of safety induction carried out by KN Energies DE GmbH

## Registration procedure at Hooksiel

- HSE Induction by KN HSE, if not already provided
  - Registration with the security service at the Hooksiel shipyard and Identity check
  - Issue of a visitor pass
  - Issue of an Access Chip with the required access authorizations.
- 
- ❖ A lifejacket (type 275N+AIS Personal Locator Beacon PLB) must be worn when: climbing over; and during transfer with the CTV; when working on the jetty.
- 
- Collective transport to the CTV and later collection and return transport to the registration office by security service.

# PERSONNEL TRANSFER TO THE JETTY



Registration by email:

➤ [CTV-whv2@knwhv.com](mailto:CTV-whv2@knwhv.com)

Personnel transfer from shoreside to the jetty takes place in Hooksiel with a specially dedicated transfer boat.

- Before being transferred to the jetty, personnel may be subject to a security check.
- Personnel should wear mandatory PPE including a SOLAS approved inflatable lifejacket (275 N) with light, whistle and PLB.
- A lifejacket (type 275N+AIS Personal Locator Beacon PLB) must be worn when: climbing over; during transfer with the CTV; when working on the jetty and Pontoon.
- Check completeness of PPE (no changing room on site)
- ❖ During transfer, personnel should follow instructions from transfer boat captain.

# OVERVIEW

## Terminal Access



## Key Signs and their meaning



Danger  
Explosive  
Atmosphere



Unauthorized  
Persons are  
Permitted to  
Enter



No Open  
Fire Allowed



No Use of  
unauthorized  
electronic  
equipment  
Allowed



No Smoking  
Allowed



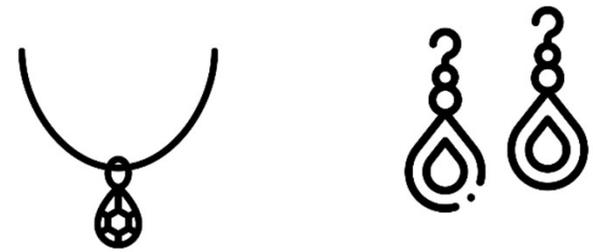
No Alcohol or Drugs  
(incl. marihuana)  
Allowed

- **For Employees** – upon Terminal entry make sure you have a valid **Employees Badge**
- **For Visitors** – upon Terminal entry make sure you have a valid **ID Card** and **Entry Permit**
- **For Contractors** – upon Terminal entry make sure you have a valid **ID Card** and **Entry and Work Permits**
- Before entering the Terminal, you may be a subject to a security check. The aim of such inspections is to prevent bringing any **forbidden objects** to the Terminal. Particularly **alcohol, drugs, weapons, explosives**. Security officer may also conduct a random drug and/or alcohol test.
- By entering the Terminal, it is mandatory to wear **Personal Protective Equipment (PPE)**. PPE for Employees, Visitors and Contractors may vary, but minimum PPE requirements includes **safety helmet, safety glasses, high visibility vest and safety shoes**.
- **Please pay attention to ATEX zone signs and ensure that your electronic devices are switched off in these hazard areas (slide No. 18).**
- **Permit** is required to take pictures or film.
- **Communication and dissemination of information** about the terminal to external parties or the press is only permitted through the DET press office.
- **Interviews or the dissemination of information to third parties** or the public without written permission from DET are prohibited.
- **Publications on social media** are prohibited and shall be prosecuted.

# JEWELRIES CHAINS WATCHES RINGS



- Wearing jewelry (necklaces, rings, earrings, watches, etc.) is not permitted on company premises while working.
- "Tunnels" must be covered or taped over.
- Visible piercings that cannot be removed must be taped over.
- This also applies to wedding rings



# WASTE MANAGEMENT

- Everyone is responsible for order and cleanliness – especially at their own workplace, but not only there.
- The workplace must be kept tidy and clean, even after work or during longer interruptions.
- Always keep traffic routes and escape routes clear.
- Always ensure access to fire extinguishers, rescue equipment, and safety devices.
- Separate waste, store it safely, and dispose of it properly.



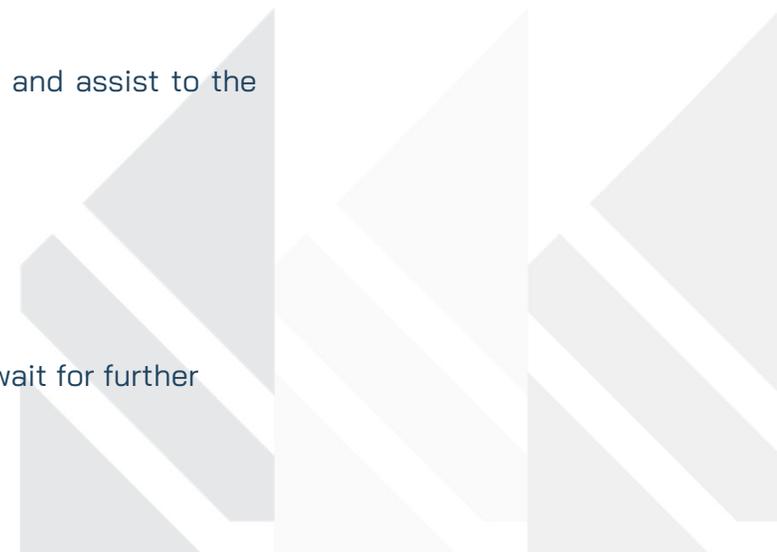
# FIRST AID AND EMERGENCY RESPONSE



- ❖ Everyone is required to familiarize themselves with their work environment immediately upon arrival before beginning work (rescue equipment, escape routes, fire extinguishers, emergency procedures, etc.).
- ✓ If no on-site briefing is provided, everyone is required to request a briefing and a safety walkthrough from their supervisor. Work may not commence before this time!
- ✓ A first-aid kit, eyewash bottles, and fire extinguishers are found in the office container area, AED at the CTV.

Check work area regularly.

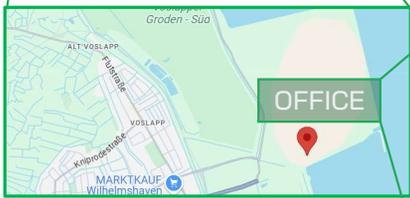
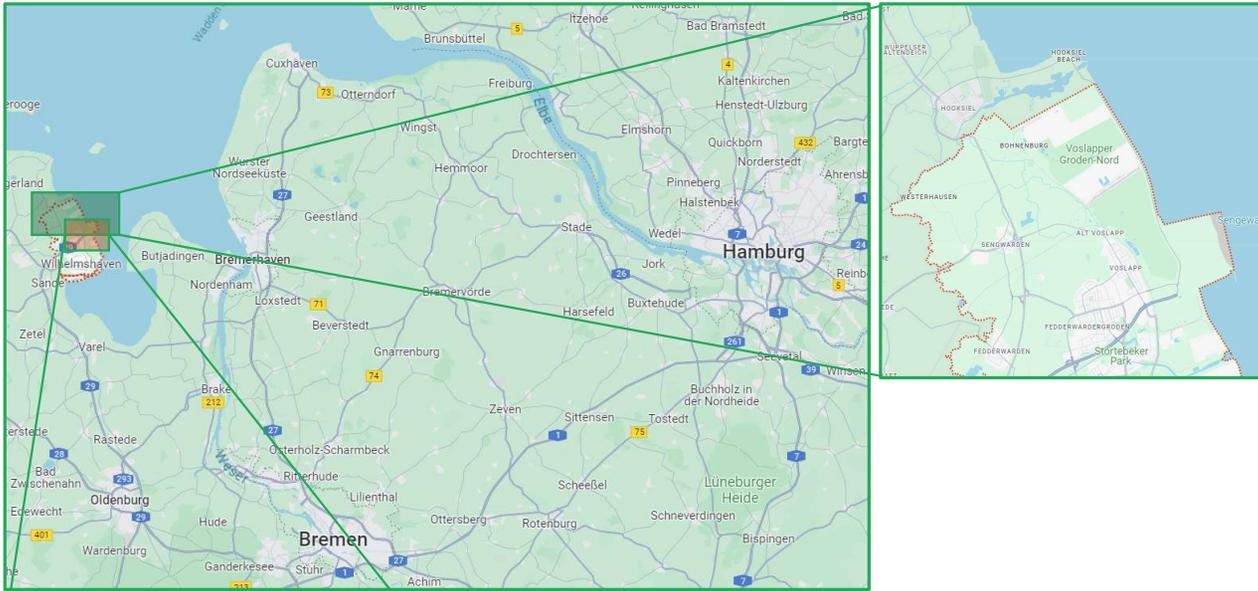
- ✓ In the event of an emergency, everyone is required to inform the 24/7 control room and assist to the best of their ability.
- ✓ Appropriate emergency plans and procedures must be followed.
- ✓ The instructions of the emergency services/emergency personnel must be followed.
- In the event of an emergency, proceed calmly and quickly to the assembly point and wait for further instructions.



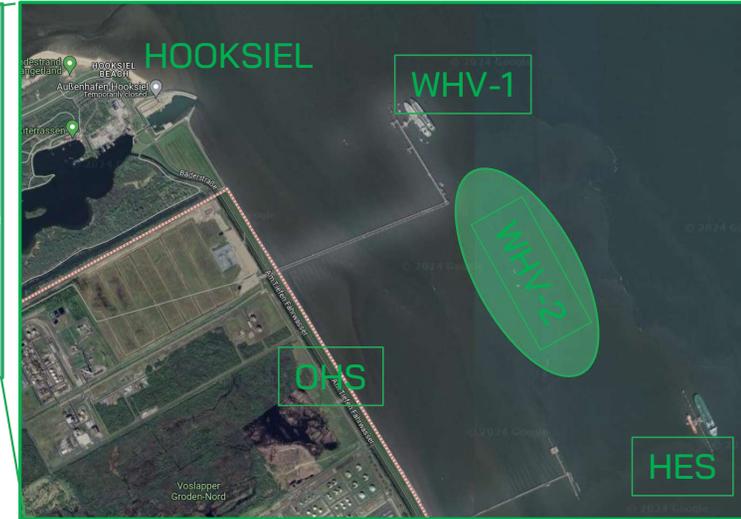


## 2. WHV-2 Terminal Key Locations

# WILHELMSHAVEN-2 LNG TERMINAL LOCATION



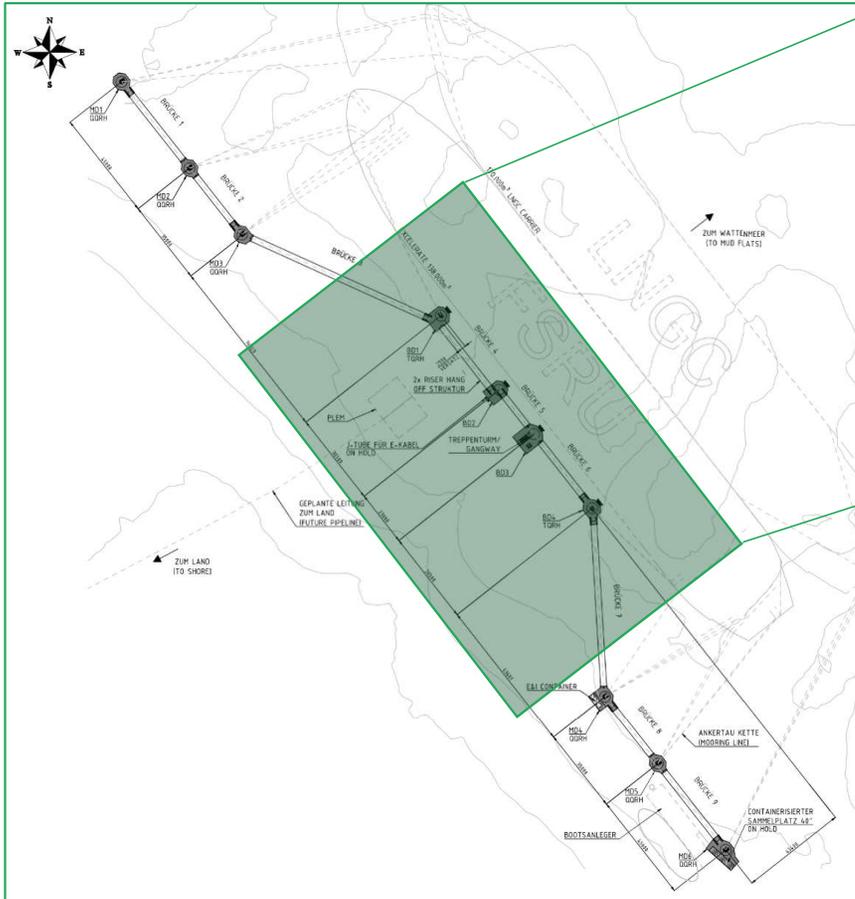
**KNED OFFICE,**  
Pazifik 1,  
Wilhelmshaven



## KEY LOCATIONS :

- Onshore header station (OHS)
- Offshore jetty (WHV-2)
- Hooksiel

# WILHELMSHAVEN-2 LNG – OFFSHORE GAS TRANSFER SYSTEM



## OVERVIEW:

- Gas Balcony on FSRU, a structure for the connection of gas Risers. Includes Winches to raise/lower the Risers and ERS – Emergency Release System.
- PLEM – Pipeline End Manifold, an underwater connection structure, to interconnect Risers to 6 underwater TCPs (Thermoplastic Composite Pipelines).

# WILHELMSHAVEN-2 LNG – ONSHORE HEADER STATION



## Overview:

Onshore Header station connects offshore natural gas send-out system to national gas grid operator (OGE). It consists of common gas header where 6 TCPs connect to a High Integrity Pressure Protection System (HIPPS) and Emergency Shutdown System (ESD) that protects the downstream system from gas overpressure.





## 3. Hazards and Risk Factors

# PHYSICAL PROPERTIES OF LNG AND NATURAL GAS



LNG is an odorless, colorless, and noncorrosive cryogenic liquid

Due to its cryogenic nature, LNG will freeze any material it contacts.

The liquefaction process results in a volume reduction of around a factor of 600

LNG is usually transported and stored at approximately -160 °C in atmospheric pressure

As a liquid, LNG cannot explode and is not flammable. Only when LNG is warmed and returns to its gaseous state, is mixed with air and comes in contact with an ignition source, does the mixture become flammable or explosive (in a confined environment).

K  
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Natural gas poses a significant explosion hazard when its concentration in air falls between its Lower Explosive Limit (LEL) of 5% and Upper Explosive Limit (UEL) of 15%. Within this range, natural gas is highly flammable and can ignite in the presence of an ignition source, such as a spark or flame. Concentrations below 5% are too lean to burn, while concentrations above 15% are too rich to ignite.

Natural gas is primarily composed of methane (CH<sub>4</sub>), which typically makes up 70% to 90% of its volume. Other components include ethane, propane, butane, and trace amounts of nitrogen, and sometimes hydrogen sulfide.

In pipeline transportation, natural gas is typically transported at ambient temperatures (not cryogenic). The temperature inside pipelines can vary depending on external conditions, but it is generally kept above freezing.

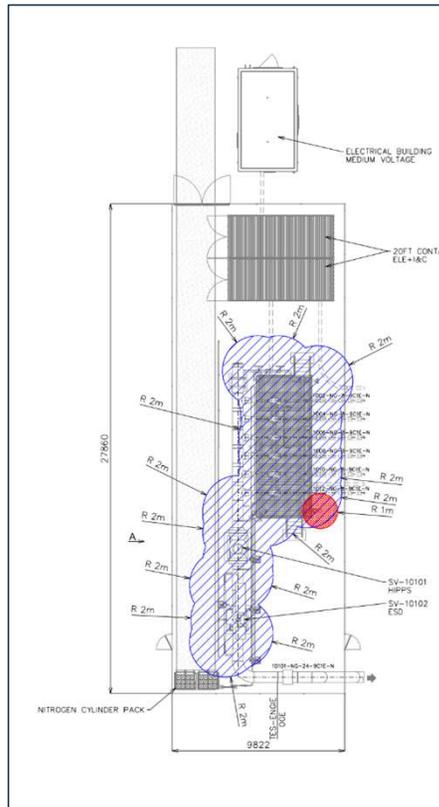
Natural gas is odorless in its natural state, but mercaptan is added to give it a distinct "rotten egg" smell for easier detection of leaks.

In Wilhelmshaven-2 LNG Terminal, natural gas will be transported at up to 90 bar. pressure at around 10 °C temperature.

# HAZARDOUS AREAS PLAN

Onshore Header  
Station

Jetty and FSRU



## Classification of hazardous areas in the Terminal:

- **Zone 0** – an **explosive atmosphere is present continuously** or for long periods or frequently;
- **Zone 1** – an **explosive atmosphere is likely to occur** in normal operation occasionally;
- **Zone 2** – an **explosive atmosphere is not likely to occur** in normal operation but, if it does occur, will persist for a short period only.



Zone 1



Zone 2 (**Switch off your electronic devices**)



Ex zone – explosive zone that applies to Zone 1 and Zone 2 shown in the pictures on the left

# MAIN HARZARDS and RISK FACTORS



## Work Related Hazards

Mechanical	Electrical	Hazardous Material	Fire and Explosion	Physical	Environmental
Objects with dangerous surfaces, slips trips and falls,	Electric shocks. Electric Arcs Electrocutions	Gas, vapor/fumes Particles, liquid and solids that could be irritating to the skin, destroy organs and tissues	Fire risk from solid, liquid or gas. Electrostatic discharges Explosive material Explosive atmosphere	Heavy dynamic work, Body posture, static work and a combination of static and dynamic work	Weather/climate Human related factors Animals Plants

# MANDATORY AND SPECIAL PPE

Mandatory PPE for  
**entering the Terminal**  
(not suitable to enter  
Ex zone)



1. Safety helmet with chin strap
2. Safety glasses
3. Hi-visibility vest
4. Safety shoes
5. Gloves

Mandatory PPE for  
**entering EX zone**



1. Safety helmet with chin strap
2. Safety glasses
3. Hi-visibility, antistatic and nonflammable workwear
4. Antistatic shoes
6. Gloves

Special PPE



Life vest – to be worn during transfer, on Jetty, Pontoon Gangways, and whenever risk of falling overboard can not be excluded.

**Strictly follow CTV crew instructions.**

# ALARM SIGNAL



Fire Alarm	Gas Alarm	ESD Alarm	AIS Alarm
Red Light Signal	Blue Light Signal	Orange Light Signal	No Light Signal, Only Sound
Sound: DIN	Sound: DIN	Sound: DIN	Sound: DIN



# BEHAVIOR IN THE EVENT OF AN INCIDENT



- 1 Assess the Situation
- 2 Ensure Personal Safety and Secure the Area
- 3 Place an Emergency Call
- 4 Provide First-Aid & Emergency Measures
- 5 Provide Support for Emergency and Rescue Teams

- 6 Inform Manager, HSE Officer or Local Supervisor
- 7 Every accident, incident, (first aid case, environmental incident and near miss must be reported immediately by telephone and in writing within 24 hours

## Key Contacts:

KN DE Control Room  
+49 157 83029976

24/7

HSE Officer  
Leonard Tarla Kimbi  
+4915783029824

# BEHAVIOR IN THE EVENT OF EVACUATION



- ✓ Once an evacuation/Alarm is triggered all personnel must stop all activity
- ✓ Shut down equipment/plant in accordance with operating procedures, leave the workplace immediately and follow marked escape routes to a point of assembly or shelter in place
- ✓ Do not take personal belongings
- ✓ Do not use the lift
- ✓ Stay at the point of assembly until clear command is given.



# BEHAVIOR IN THE EVENT OF GAS LEAK



## Dangers arise from:

- ✓ Ignition of explosive gas-air mixtures
- ✓ Pressurized media escaping and parts flying or moving under pressure
- ✓ Risk of suffocation from escaping gas

## in case of gas leakage...

- ✓ Keep calm
- ✓ Shut off the gas supply
- ✓ Avoid or eliminate ignition sources
- ✓ Ensure adequate ventilation
- ✓ Clear and keep the danger area clear of unauthorized persons



# BEHAVIOR IN THE EVENT OF BAD WEATHER



## Be prepared:

- ❖ Use weather warning apps
- Wear weatherproof clothing

## Before the storm:

- ❖ Check scaffolding, machinery, building materials, and work equipment for storm resistance and secure fastening

## Stop work

- ❖ Immediately leave endangered areas such as scaffolding, roofs, and tunnels

## Go to safe areas:

- ❖ Car, container, or CTV

## After the storm:

- ❖ Check for damage
- Have damage to scaffolding, machinery, and electrical equipment professionally repaired
- Have work areas repaired after water ingress



## BEHAVIOR IN THE EVENT OF A FIRE

- ✓ Everyone must be familiar with emergency procedures, escape/evacuation routes, and firefighting equipment.
- ✓ Extinguishing agents or connections must not be concealed, blocked, or tampered with. Access must be ensured at all time.
- ✓ Familiarize yourself with the firefighting equipment and evacuation routes for your work area.
- ✓ In an emergency, proceed calmly and quickly to the assembly point and wait there.



## BEHAVIOR IN THE EVENT OF MAN IN THE WATER



- ✓ Throw the lifebuoy with the line into the water, secure the line, and give a loud voice signal „Man overboard“.
- ✓ Continue to track and indicate the direction of the person in the water.
- ✓ Contact the CCR for rescue and medical assistance, including ambulance services.
- ✓ Seek assistance to organize the retrieval of the person from the water.
- ✓ Provide first aid to the injured person (if possible).



## BEHAVIOR IN THE EVENT OF OIL SPILL

- ✓ Using spill kit and other necessary measures
- ✓ Inform HSEO
- ✓ Investigate the source, especially if it is related to the FSRU.

### **If oils has already spilled into the water:**

- ✓ Inform the CCR and provide detailed information about the observed oil spill in the water.
- ✓ Using bony barriers and other necessary measures.
- ✓ Collaboratively investigate the source, especially if it is related to the FSRU.





# 4. Escape Evacuation & Emergency Preparedness

# OFFICE FLOOR PLAN AND EVACUATION ROUTE

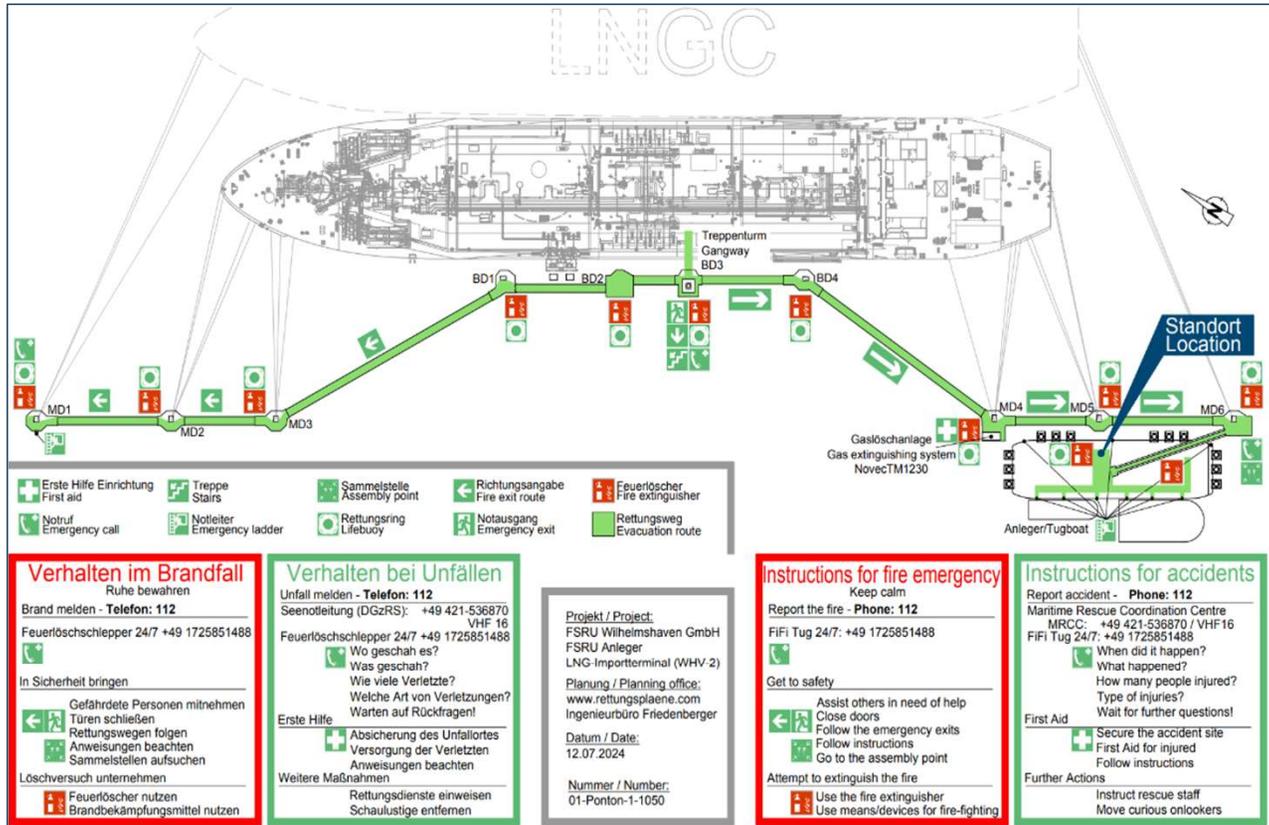


**Staff Fire Action Routine**

-  Operate nearest fire alarm point
-  Call the Fire Brigade
-  Fight the fire, if safe and trained to do so
-  Evacuate the building via the nearest exit
-  Do not stop to collect personal belongings

 Emergency meeting point is outside the building, 30 meters besides the Park House

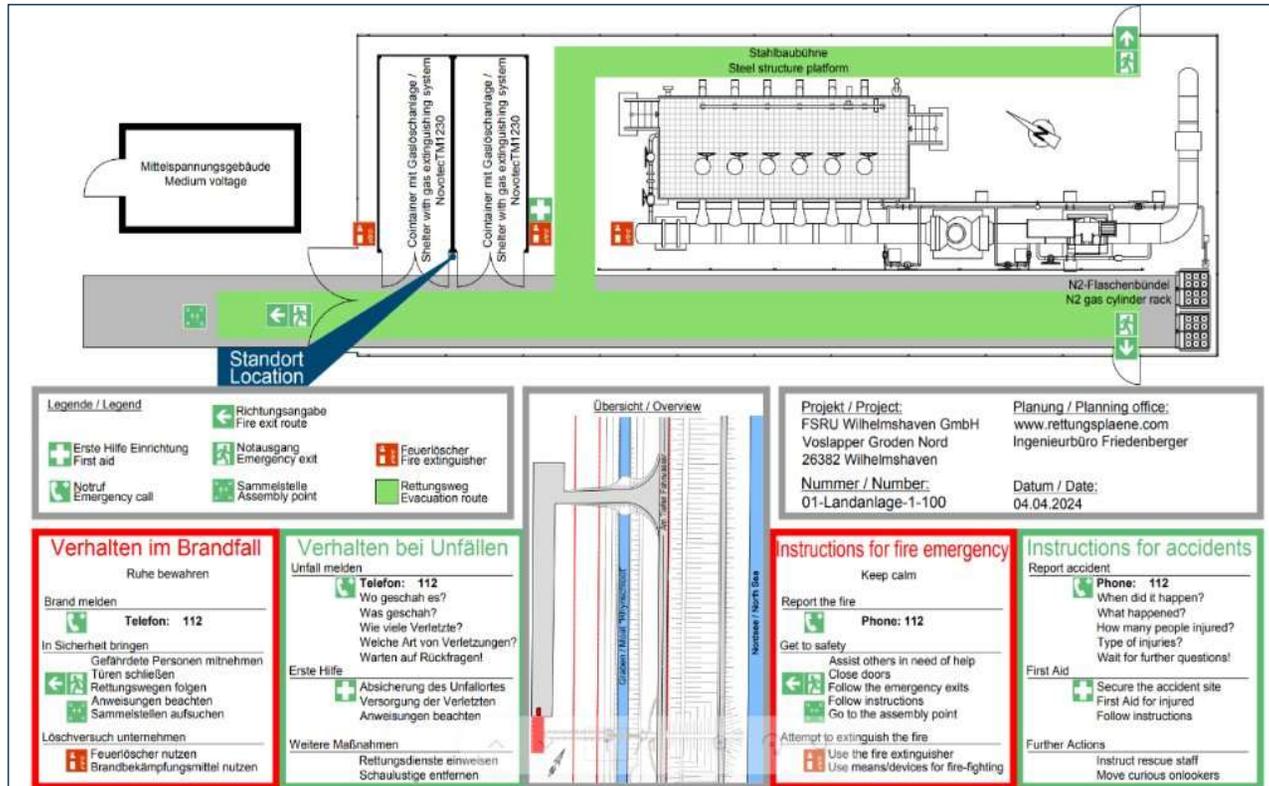
# JETTY EVACUATION ROUTE



In case of gas leak, fire or other emergency at the jetty, all personnel should follow the evacuation route as shown in the evacuation scheme and assemble at the muster point which is located at the pontoon southwest of the jetty. The staff must evacuate on their own, taking the shortest path.

- ❖ A crew transfer boat will be present and moored at the pontoon and ready to evacuate all personnel.

# ONSHORE HEADER STATION EVACUATION ROUTE



Incident alarm will be given through the alarm system and can be activated by the F&G detection system or manually. After sounding the evacuation alarm all local services and operations must be immediately suspended.

The staff must evacuate on their own, follow the evacuation route as shown in the evacuation scheme taking the shortest path and assembly at muster point on the road just outside of the station.



# EMERGENCY CONTACT LIST



## AGAP telephone list of external emergency response forces

		Telephone number	
Fire department	Emergency call	112	From GSM phones
	Other	+49 4421 9818-0	
Emergency services	Emergency call	112	From GSM phones
Police	Emergency call	110	From GSM phones
	Other	+49 4421 942-0 +49 4421 942-213	
Water Police		+49 4421 942-832	
Wilhelmshaven Port Office		+49 4421 4098 0999	
Pilot station Wilhelmshaven		+49 4421 994697	8 AM to 5 PM
Pilot station Bremerhaven		+49 471 944242	5 PM to 8 AM
Tug coordinator	Boluda	+49 421 3488 219	
	Fair Play	+49 171 2777 038	
Emergency Command – Maritime Situation Center, Cuxhaven		+49 4721 567 392	mlz@havariekommando.de
Oil Pollution Reporting Center		+49 4721 567 485	
FSRU Excelsior		VoIP +16464448142 +16464448143	Master.excelsior@fleet.exceleratetm.com



# 5. Work Operation and Maintenance O&M

# PERMIT TO WORK



- ✓ Work permits are required for all activities on all parts of the facility!
- ✓ The "Permit to Work" (PTW) process is an essential element in ensuring that all work is safe and complies with occupational health and safety requirements.
- ✓ Permits must be submitted at least 24 hours before planned activities are to be carried out.
- ✓ Further information - Work Permit Procedure:
  - Working with Hazardous materials/goods
  - Energy (electrical, mechanical, high pressure, etc.) LOTO
  - Crane operations
  - Working at Height
  - Hot work such as welding, grinding, and any work that may generate sparks or other ignition sources
  - Diving.



# SPECIAL PERSONAL PROTECTIVE EQUIPMENT

- ✓ Additional PPE and instructions may be required depending on the activity and risk assessment, e.g.:
- ✓ Personal protective equipment against falls from a height (PPE)
- ✓ For work at heights, scaffolding, and when using aerial platforms or man baskets
- ✓ Personal protective equipment against drowning (PPE)
- ✓ For work near water (less than 2 m from the open edge) or on/above water
- ✓ At least 275 N buoyancy (standard under review as of April 17, 2025)



# MACHINES EQUIPMENT TOOLS

- Work equipment must be in perfect condition and tested from a safety perspective:
- Visual inspection before starting work!
- Use only suitable work equipment
- Use only for its intended purpose
- Ensure that work equipment subject to mandatory testing has a valid inspection sticker.
- Pay attention to the CE marking
- Immediately discard damaged tools (quarantine)
- When working on scaffolding or work platforms, secure tools or store them in secure boxes
- When working in potentially explosive atmospheres, use low-sparking tools or tools with ATEX approval
- Certification



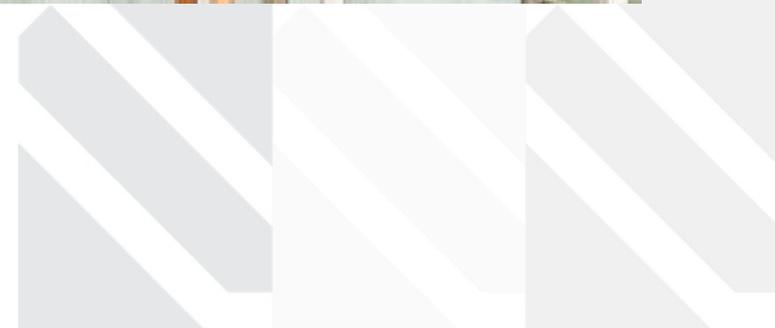
# ELECTRICAL EQUIPMENT/DEVICES

- ✓ Visual inspection before use!
- ✓ Defective devices must be taken out of service immediately (quarantine)
- ✓ Use in accordance with the operating instructions
- ✓ Valid DGUV V3 inspection label
- ✓ Work in potentially explosive areas only with valid ATEX marking
- ✓ Repairs may only be carried out by designated and qualified personnel
- ✓ Cable drums (cable reels) must be completely unwound
- ✓ Weather influences must be taken into account
- ✓ Protect cables against crushing or cutting (e.g., edge protection).



# LADDERS AND CLIMBING AIDS

- ✓ Ladders may only be used to overcome height differences and for short-term construction work, taking safety standards into account
- ✓ Ladders and stepladders may not be used as work platforms
- ✓ Ladders and stepladders on site must comply with the relevant standards and accident prevention regulations, be in perfect condition, and be appropriately marked.



# LADDERS AND CLIMBING AIDS

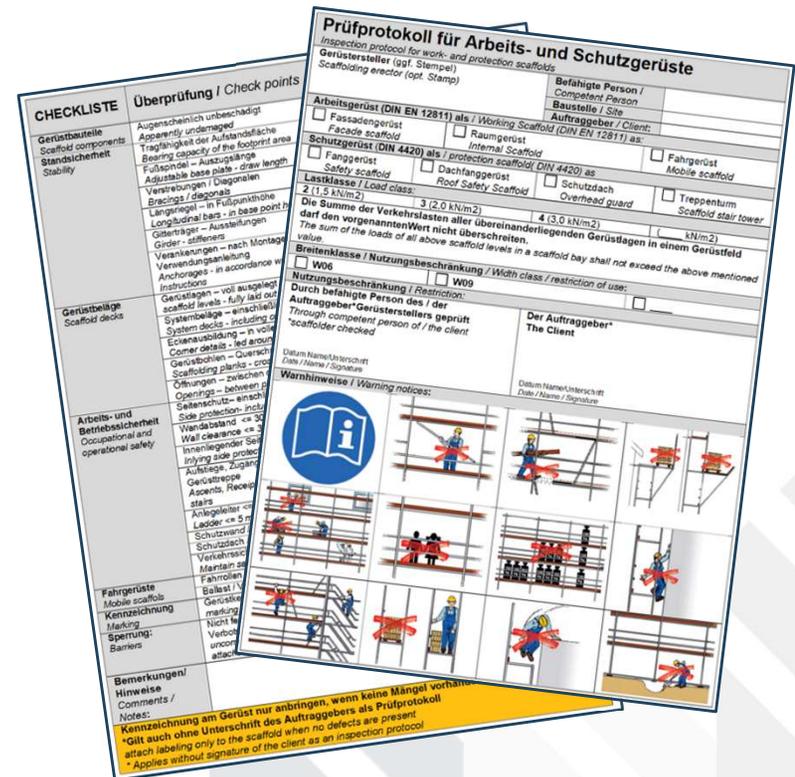
The following must be observed when using ladders:

- ✓ The correct ladder length must be determined for each use
- ✓ Up to 5 m height difference, 1 m overhang at the exit
- ✓ The lean-to ladder must be positioned at the correct angle (approx. 65° - 75°) to ensure stability and secured by a second person or by other appropriate means, e.g., with straps or ropes on both stiles
- ✓ Always have at least three contact points
- ✓ Ladders made of non-conductive material must be used when working with electrical equipment or in control rooms
- ✓ Ladders must be inspected and labeled regularly (annually) by a competent person in accordance with DGUV Info 208-016
- ✓ Only use ladders with steps; rung ladders are no longer permitted.



# SCAFFOLDS

- ✓ Scaffolding may only be erected, modified, or dismantled by qualified personnel
- ✓ Scaffolding must be provided with a valid scaffolding label
- ✓ No modifications to scaffolding may be made by unauthorized persons
- ✓ Damage must be reported immediately, and the scaffolding must be dismantled immediately by the scaffolding erector
- ✓ Scaffolding without railings (free edges) may only be accessed with safety devices and personal protective equipment
- ✓ Observe the maximum permissible distributed load on scaffolding
- ✓ Scaffolding must only be used after approval by the erector; scaffolding must be marked with a release certificate (instead of a label).



**Prüfprotokoll für Arbeits- und Schutzgerüste**  
 Inspection protocol for work- and protection scaffolds

Gerüstersteller (opt. Stempel) / Scaffolding erector (opt. Stamp)      Befähigte Person / Competent Person  
 Baustelle / Site      Auftraggeber / Client:

Arbeitsgerüst (DIN EN 12811) als / Working Scaffold (DIN EN 12811) as:  
 Fassadengerüst / Facade scaffold       Raumgerüst / Internal Scaffold

Schutzgerüst (DIN 4420) als / protection scaffold (DIN 4420) as:  
 Fanggerüst / Safety scaffold       Dachfanggerüst / Roof Safety Scaffold       Schutzdach / Overhead guard       Fahrgerüst / Mobile scaffold

Lastklasse / Load class:  
 2 (1,5 kN/m<sup>2</sup>)      3 (2,0 kN/m<sup>2</sup>)      4 (3,0 kN/m<sup>2</sup>)      Treppenturm / Scaffold stair tower

Die Summe der Verkehrslasten aller übereinanderliegenden Gerüstlagen in einem Gerüstfeld darf den vorgenannten Wert nicht überschreiten.  
 The sum of the loads of all above scaffold levels in a scaffold bay shall not exceed the above mentioned value.

Breitenklasse / Nutzungsbeschränkung / Width class / restriction of uses:  
 W06       W09

Nutzungsbeschränkung / Restriction:  
 Durch befähigte Person des / der Auftraggeber\*Gerüsterstellers geprüft / Through competent person of / the client "scaffolder checked"

Der Auftraggeber\* / The Client

Datum/Name/Unterschrift / Date/Name/Signature

**Warnhinweise / Warning notices:**

**Bemerkungen/ Hinweise / Notes:**  
 Kennzeichnung am Gerüst nur anbringen, wenn keine Mängel vorliegen.  
 \*Gilt auch ohne Unterschrift des Auftraggebers als Prüfprotokoll.  
 attach labeling only to the scaffold when no defects are present.  
 \*Applies without signature of the client as an inspection protocol

# CRANES AND LIFTING OPERATIONS

- ✓ Staying in the danger zone is prohibited during crane operations.
- ✓ Staying under suspended loads is generally prohibited.
- ✓ Sustaining loads must not be guided by hands; guidelines must be used.
- ✓ Cranes may only be operated by designated and qualified crane operators.
- ✓ Signals, commands, and language must be agreed upon in advance.
- ✓ Inspect cranes and lifting gear before use (valid inspection label, damage-free).
- ✓ Recurring inspection of lifting gear must be carried out at least annually by a qualified person.



**Heben**

Plane den Hebevorgang und überwache den Arbeitsbereich.

- ⊙ Ich versichere mich, dass die Ausrüstung und die Last geprüft wurden und für den Vorgang geeignet sind.
- ⊙ Ich betreibe nur Geräte, für die ich qualifiziert bin.
- ⊙ Ich errichte und beachte Absperrungen und Sperrzonen.
- ⊙ Ich bewege mich niemals unter einer schwebenden Last.

# MONITORING GAS CONCENTRATION

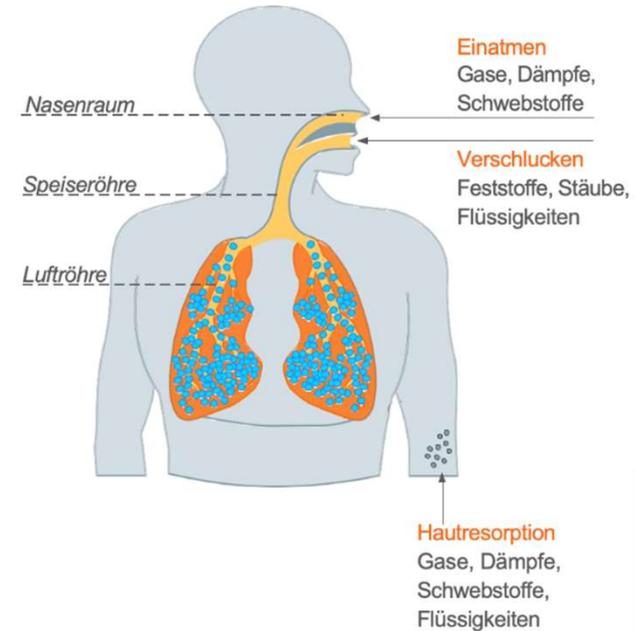
## Protective measures

- Before starting work, especially in potentially explosive atmospheres, conduct clearance measurements to determine whether there is a gas hazard or whether the oxygen concentration is too low.
- Measurements should only be carried out by qualified personnel from a secure position.
- Use only approved and suitable measuring devices.
- Conduct continuous measurements.
- Check gas detection devices every working day before starting work and after completion.
- For LNG/natural gas, gas-free: if the concentration falls below 50% LEL - clearing.
- For toxic gases: the OEL must not be exceeded.
- Observe the acceptance and tolerance values (TRGS 900/TRGS 910) for accompanying gas substances.



# HANDLING STORAGE DISPOSAL OF HAZARDOUS MATERIALS (CHEMICALS)

- ❖ The storage of hazardous substances and larger fire loads must be approved in writing by the terminal management.
- ✓ The application for approval must be submitted informally and must contain the following information:
  - Type of substance
  - Location of storage
  - Maximum quantity of substance to be stored
  - Type of use
  - Operating instructions not older than 2 years (or checked for up-to-date)
  - Safety data sheet not older than 2 years (or checked for up-to-date)
- ❖ The contractor is responsible for compliance with storage requirements, e.g., the German Hazardous Substances Ordinance (Gefahrstoffverordnung) with the associated TRGS (Technical Rules for Hazardous Substances).
- ✓ Prohibitions on joint storage must be observed
- ❖ When in doubt please ask the HSE Officer.



# Biological Hazards



Hazards from plants, animals, or microorganisms

Contact reactions or allergic reactions

Appropriate protective measures (anti-allergic medications, long clothing, gloves etc.)

Inform yourself about potentially dangerous plants and protective measures

Hazards from bites or insect stings

Appropriate protective measures (insect repellent, long clothing, etc.)

Inform yourself about potentially dangerous animals and transmission risks  
Tick protection (tick-repelling medications, long clothing, sturdy shoes, etc.)

During the jetty visit, use safety gloves to avoid contact with bird excrement



# Modification Manipulation and removal of barriers, warning signs or protective devices

Barriers, warning signs, and protective devices are intended to protect against hazards. There are permanent, temporary, organizational, verbal, and written barriers and warning signs.

- ❖ Unauthorized modification and removal, including of parts (e.g., gratings, railings, etc.), is prohibited.
- ❖ If a cover or railing must be temporarily removed for compelling reasons, this area must be secured by other means, e.g., by supervision or permanent barriers, in consultation with the on-site responsible person shift engineer.
- ❖ The exact regulations in each individual case must be discussed with the HSE Officer.



The image shows a blue safety sign with a white circular icon at the top depicting two figures reviewing a document with a power symbol above them. Below the icon, the title 'Umgehen von Sicherheitseinrichtungen' is written in white. Underneath the title, there is a warning sentence in German: 'Hole Dir eine Genehmigung ein, bevor Du eine Sicherheitseinrichtung außer Kraft setzen oder deaktivieren willst.' At the bottom, there are two bullet points with circular icons, each followed by a list of specific actions to avoid.

### Umgehen von Sicherheitseinrichtungen

Hole Dir eine Genehmigung ein, bevor Du eine Sicherheitseinrichtung außer Kraft setzen oder deaktivieren willst.

- ⊙ Ich verstehe und verwende sicherheitsrelevante Ausrüstungen und Verfahren, die meinen Aufgabenbereich betreffen.
- ⊙ Ich hole eine Genehmigung ein bevor ich:
  - eine Sicherheitseinrichtung außer Kraft setze oder deaktiviere
  - vom vorgesehenen Ablauf abweiche
  - eine Sicherheitsabspernung überschreite



# 6. Incident Reporting

# INCIDENT REPORTING AND INVESTIGATION PROCEDURE OVERVIEW



The purpose of the safety incident reporting and investigation procedure is to determine the procedure for reporting safety incidents that have or may affect the environment, employee safety and health, fire safety, technological process safety or malfunctions, the investigation of these events, and the determination of corrective actions.

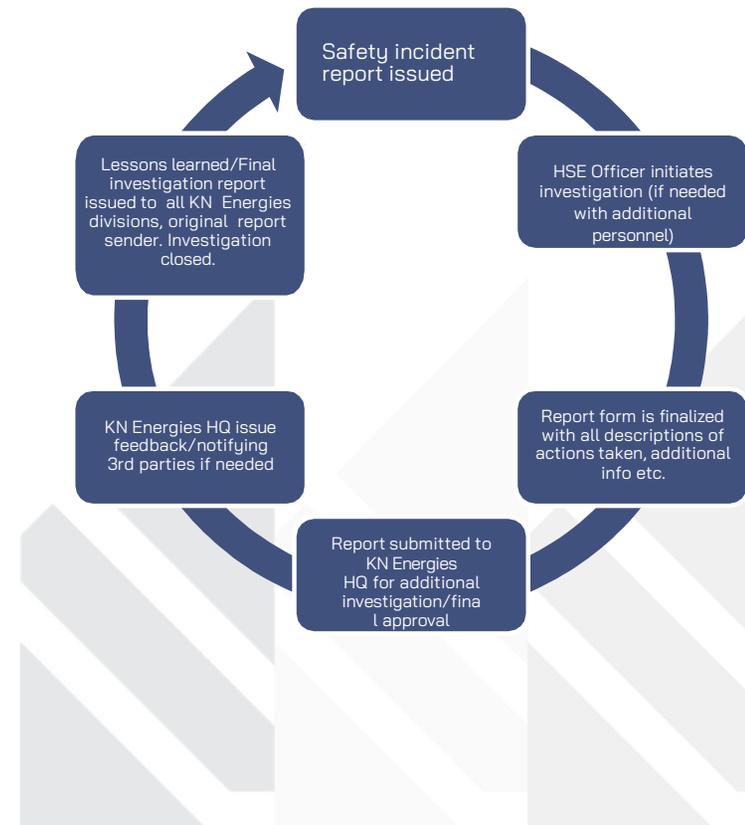
KN DE categorizes incidents in the following key categories:

**Near Miss** – is any incident that may cause a serious injury, property damage or harmful environment impact and/or demonstrate failure in the work process.

- Any incident that had significant injury potential, where no injury occurs only through good fortune, must be written as a Near Miss.
- Any incident where no injury has occurred but where equipment or property was damaged or where no damage occurred, but the event had significant potential to cause grave damage or injury

**Unsafe Condition** – Is a hazardous physical condition or circumstance which could directly permit the occurrence of an accident.

**Unsafe Act** – or at-risk behavior, is an action that is configured as a violation of an accepted safe procedure which could permit the occurrence of an accident.



# SAFETY INCIDENT REPORTING AND INVESTIGATION PROCEDURE OVERVIEW

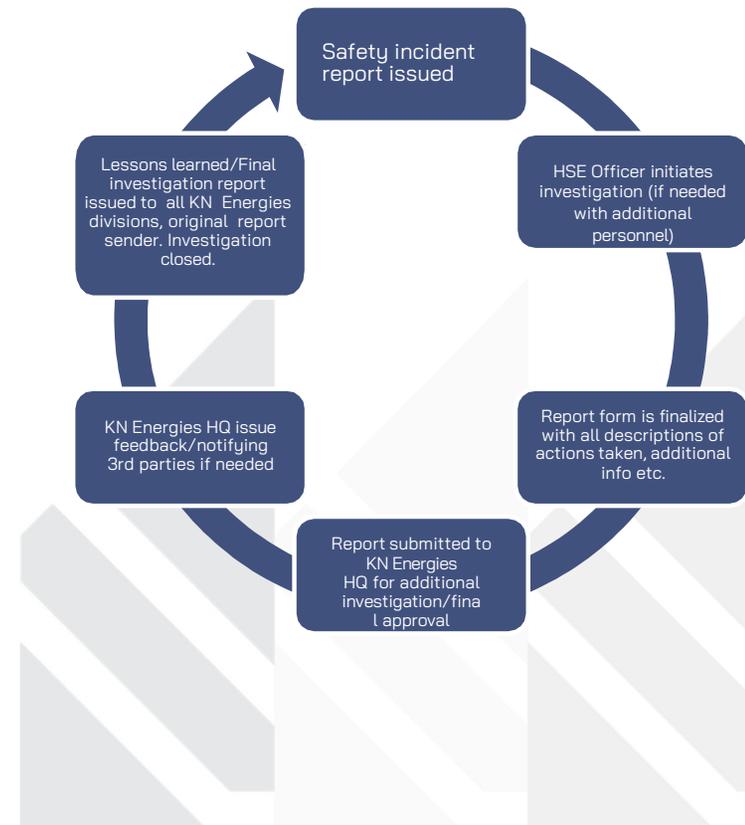


**Process Safety Incident** – a PSI is a release of any process medium (gas, liquid, solid or mixture thereof) from a process vessel, vessel or tube. An examples may include an unexpected discharge of pressure relief device (PRD), a component failure during the pressure test, an improper insulation in a pressurized system.

**Technological disturbance** – is a deviation(s) of the established mode of a technological process from the norms (except for exceeding the limit values of technological parameters) which did not cause or caused the stoppage of technological devices and which, if not eliminated, can potentially lead to the occurrence of processes safety incidents.

**Repetitive failure** - is a repeated failure of the same mechanical, electrical or automation part of the technological device at least 2 times, resulting from malfunctioning of the components/parts of the device (breakage, wear, blockage, corrosion, short circuit, malfunction of measuring device indications, etc.). Is a hazardous physical condition or circumstance which could directly permit the occurrence of an accident.

**Traffic accident** - an event on a road, public or private territory, when a road, railway or water vehicle causes death or injury, damages or damages at least one vehicle, load, road, its structures or any other property at the scene.



# INCIDENT REPORTING OVERVIEW



KN ENERGIES DEUTSCHLAND GmbH			
SAFETY INCIDENT REPORT		No.	Date:
Safety incident type	Description		
Unsafe Condition	A condition in the workplace that is likely to cause property damage or injury.	<input type="checkbox"/>	
Unsafe Act	Performance of a task or other activity that is conducted in a manner that may threaten the health and/or safety of workers	<input type="checkbox"/>	
Near Miss	An unplanned event that has the potential to cause, but does not actually result in human injury, environmental or equipment damage, or an interruption to normal operation.	<input type="checkbox"/>	
Process safety incident	Failure or accident of installation which occurs unexpectedly and unintentionally, and which normally causes or is likely to cause damage to installations, the environment or injury to workers or release of any process medium (gas, liquid, solid or mixture thereof) from a process vessel, vessel or tube.	<input type="checkbox"/>	
Specify the impact:			
Health and safety	<input type="checkbox"/>	Environment	<input type="checkbox"/>
Fire safety	<input type="checkbox"/>	Process safety	<input type="checkbox"/>
DETAILS OF RISK			
Indicate / describe the exact location where you noticed the risk or near miss incident:			
Describe what happened or what and for what reason may occur:			
Your suggestions, what should be changed / managed / reorganized?			
Name surname		Position	
Unit		Date	



It is **every employee's responsibility** to report Incidents: **Near Miss, Unsafe Act, Unsafe Condition or a Process Safety Incident**, should he or she become aware of it.



A **dedicated Near Miss form** (see on the left) is available in a **digital and paper** formats (in an office) for the reporting purposes. Such form should be filled describing the incident as clearly as possible. Supplementing documentation such as photos should be attached to the report.



HSE Officer or team investigates the **incidents within 10 days or more** (depending on the type of incident and its complexity) and provides **recommendations**.



Safety incident reports are shared within KN Group as a **lessons learned** to assist improving behavioral and operational practices and **to avoid any similar incidents in the future**.

# TRCF – TOTAL RECORDABLE CASE FREQUENCY – THE MAIN HEALTH AND SAFETY KPI SET FOR KN ENERGIES OPERATED TERMINALS



**TRCF Total Recordable Case Frequency** – an indicator that measures the frequency of all work-related fatalities, lost time injuries (LTI), restricted work injuries and recordable injuries (medical treatment cases - MTC).  $TRCF = (LTIs + RWCs + MTCs.) \times 200\,000 / \text{Exposure hours}$ .

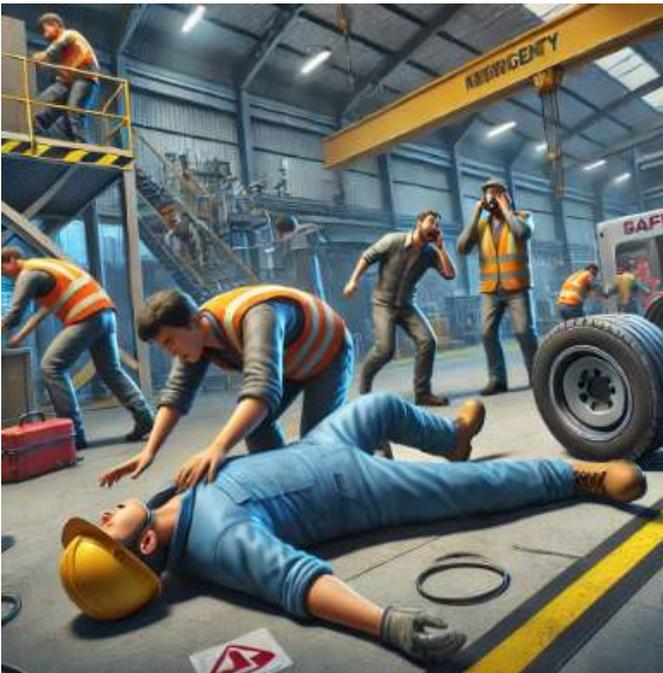
**Lost Time Injury (LTI)** – is an injury sustained by an employee that leads to loss of productive work in the form of absenteeism or delays. A workplace injury is only considered a LTI if the worker is unable to perform their regular duties.

**Medical Treatment Case (MTC)** – a recordable incident involving injury or illness that has required management and care of the patient above and beyond first aid, but not severe enough to be a reportable fatality or lost workday case or restricted workday case.

**Restricted workday cases (RWC)** – any work-related injury other than a fatality or lost workday case which results in a person being unfit for full performance of the regular job on any day after the occupational injury.



# ACCIDENT AT WORK



▶ **Ensure safety.** Stop operations, remove hazards.

▶ **Attend to the injured person.** Assess the situation, provide first aid (e.g. stop bleeding, immobilize broken bones, perform CPR), avoid moving the injured person.

▶ **Call for Emergency Services.** Contact 112 or have someone else calling emergency services while you're attending the injured person.

▶ **Notify supervisors and safety personnel, secure the area, provide support to others.**

▶ **Incident investigation.** Document the incident (take photos, gather witness statements), conduct thorough investigation.

# STOP WORK

- ❖ When an "All Stop!" or "Stop Work!" order is issued, all activities must be stopped immediately in a safe and controlled manner.
- ❖ Everyone has the right and responsibility to refuse unsafe work and/or to prevent others from behaving unsafely.
- ❖ This also applies to ambiguous situations.
- ❖ Work will not resume until the hazardous situation has been eliminated or clarified.
- ❖ The supervisor must coordinate the resumption of work.
- ❖ Long work interruptions must be documented.
- ❖ Those calling a stop-work order have the full support of management.

✓ **Restore the site to its original Safe State!**

Safety is our top priority, and everyone at KN Energies DE has the authority to stop work if an activity or condition is perceived to be unsafe or if the task is not fully understood.



STOP  
WORK!



**THANK YOU FOR YOUR  
ATTENTION**

**QUESTIONS?**

