

TA HSSE INDUCTION



STAATSOLIE MAATSCHAPPIJ SURINAME N.V.

HSSE DOWNSTREAM/REFINERY

Revision date: 14 januari 2024

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Exam: Online Test

To pass the test a score of 80% or higher is required!

STAATSOLIE REFINERY OVERVIEW



- Refinery
- Main Gates
- Mobile Phone allowed
- Process Area
- Control Room
- PPE Freezone



Introduction

Welcome!

The TA HSSE induction is mandatory for all new TA arrivals. It covers HSE-TA specific information to give guidance for a Safe execution of TA activities prior to and during TA-2024.

This training is not all-inclusive. For certain jobs, there are specific requirements and therefore specific training is required.

As a Team we share the responsibility to ensure that all TA-2024 related jobs are executed safely and completed successfully, without any incidents.

HSEQ POLICY

We are strongly committed to health, safety and the environment towards our employees, contractors and the communities in which we operate. We strive for customer satisfaction through continuous improvement of our products and services.

We will achieve this by adhering to the following principles:

1. Abide to the HSE Laws and Regulations
2. Maintain a Safe and healthy workplace
3. Demonstrate Excellent work ethics
4. Continuously Optimizing work processes
5. Provide proper Safety Training programs

Note: The Staatsolie HSEQ policy is supported by HSE procedures and an HSE Manual.



HSEQ BELEID

Wij zijn sterk toegewijd aan gezondheid, veiligheid en een schoon milieu voor al onze werknemers, contractors en de gemeenschappen waarin wij actief zijn. Voorts streven wij naar klanttevredenheid door voortdurende verbetering van onze producten en diensten.

Dit zal worden bewerkstelligd door naleving van de volgende principes:

WET- EN REGELOEVING

Voldoen aan alle toepasselijke wet- en regelgeving en standaarden, rekening houdende met de behoeften van onze stakeholders en de bedrijfsomgeving waarin wij actief zijn.

VEILIG EN GEZOND WERKPLEK

Zorgdragen voor een veilige en gezonde werkplek en het beschermen van het milieu, door de kans op incidenten of onveilige omstandigheden te voorkomen of te minimaliseren. We zijn continu bezig met het identificeren, analyseren en evalueren van risico's, gevaren en milieu-aspecten, om deze effectief te beheeren door middel van eliminatie of mitigatie.

EXCELLENTE PRESTATIES

Behalen van excellente prestaties op een veilige en verantwoorde manier, waarbij de medewerkers betrokken en geraadpleegd worden bij de ontwikkeling en implementatie van de HSEQ-processen. We houden onze medewerkers en contractors verantwoordelijk voor het naleven van de kernwaarden, het beleid en de procedures van Staatsolie.

OPTIMALISATIE VAN PROCESSEN

Continu verbeteren van onze HSEQ-prestaties en -managementsystemen door het optimaliseren van processen, diensten en de productiviteit. Middels procesmonitoring, periodieke evaluaties en geplande acties, realiseren we gestelde doelen en signaleren we kansen.

TRAINING

Zorgdragen dat elke werknemer en contractor goed getraind en bekwaam is om desbetreffende werkzaamheden uit te voeren conform de vereisten van het Staatsolie HSEQ-managementsysteem.

Junli 2023
Annand Jagasar


Managing Director



STAATSOLIE HSE GOALS & OBJECTIVES

1. Zero fatalities
2. Zero Illness /Injuries
3. Zero uncontrolled releases to environment
4. Zero process incidents



SITE SECURITY RULES



Periodic at random
Alcohol & Drugs testing



No smoking and Vaping
On Site



No drones
are allowed



Wear your badge
visible

Access control for vehicles:

1. Vehicle Pass
2. Spark arrestor (for entering process area)
3. Vehicle permit (for entering process area)

SAFETY RULES FOR ENTERING THE PROCESS AREA

Hard Hat



Safety Glasses



FR Clothing



Safety Boots



Hearing protection



Multi Gas
Detector



Gloves



Per person or crew have at least one intrinsically safe radio available for communication.

Gas detectors will be submitted according to the size of the crew.

For all confined space entry, personal gas detectors is required for each worker.

For Hot work, 1 personal gas detector per crew.

Staatsolie Life Saving Rules

“Our Way of Work for all employees and contractors at all sites under Staatsolie operational control”

Rule 1 Working at Height



Personal fall arrest system shall be worn working 6 (1.8 meters) feet or higher above the work surface.

Rule 4 Confined Space Entry



Confined spaces shall not be entered unless authorized by a written permit.

Rule 7 Safety Control Bypass



Authorization shall be obtained before overriding or disabling safety-critical equipment and systems.

Rule 2 Hot Work



A written work permit is required for all hot work outside of designated safe areas.

Rule 5 Mechanical Lifting



Lifting operations shall be planned, risk assessed and performed by qualified personnel using certified equipment.

Rule 8 Work Authorization



A written Permit to Work shall be obtained as per the facility or project requirements.

Rule 3 Energy Isolation



Stored energy sources shall be identified, isolated, tested and communicated to appropriate personnel before work shall proceed.

Rule 6 Driving Safety



Identify all driving threats associated with motor vehicle or watercraft activity prior to operating it.

Rule 9 Line of Fire



Appropriate precautions shall be taken in every task to prevent potential harm from moving machinery, dropped objects and pressurized equipment.

These Rules are mandatory safety requirements to help protect our front-line workers from harm and focused on activities most frequently associated with serious injuries, fatalities, and catastrophic events.

Rule 1: WORKING @ HEIGHTS

Working at heights (WAH) is defined as work in any area where fall protection must be in place to eliminate the possibility of falling from a height. This distance is **1.8 meters (6 feet) or greater**.

- **WAH involves:**
 - All work at unprotected heights;
 - Ladder access,
 - Mobile elevated work platforms, and
 - Scaffolding.



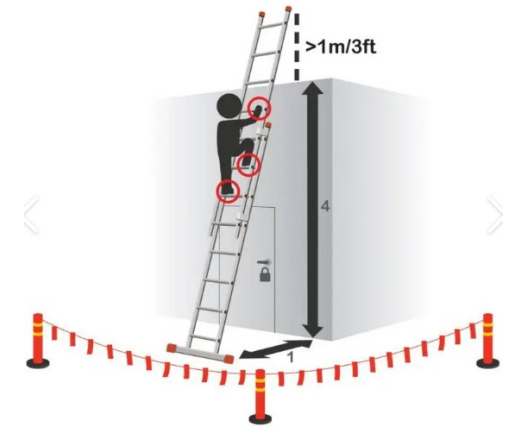
MINIMUM REQUIREMENTS

- Only use elevated platforms that are equipped with guards, handrails, and toe boards.
- Conduct a visual inspection of the fall arrest systems prior to each use and remove any damaged equipment (including ladders, scaffolding) from service.
- Ensure all tools used at height are secure from falling.
- Maintain 3-point contact when climbing or descending.
- Always close the swing gate and trapdoor.
- Always use approved scaffolds and read the yellow part on the green tags.
- Never stand / sit on the railing of a scaffold.



STAATSOLIE TLF OPERATION	
SCAFFTAG	
ERECTION AND INSPECTION RECORD	
CLIENT	
UNIT	
DATE ERECTED	
ERECTED BY (Supervisor)	
CLIENT'S ACCEPTANCE	
ON / DATE	
SIGNATURE	
LOADING SCHEDULE	
LIGHT DUTY (122 KG/M2)	<input type="checkbox"/>
MEDIUM DUTY (244 KG/M2)	<input type="checkbox"/>
HEAVY DUTY (367 KG/M2)	<input type="checkbox"/>
ENGINEERING SCAFFOLD	<input type="checkbox"/>
FULL PROTECTION REQUIRED	<input type="checkbox"/>

STAATSOLIE TLF OPERATION	
SCAFFTAG	
CAUTION SAFETY HARNESS REQUIRED	
RESTRICTIONS:	
INSPECTION RECORD	
DATE	COMPOTENT PERSON



Rule 2: HOT WORK

Hot Work is any Job or activity that could introduce or create an ignition source in an area where flammable/combustible liquids, gases, vapors, fibers or dusts exist.

These activities involves but not limited to burning, welding, cutting, brazing, soldering, grinding, using fire- or spark-producing tools, or other work that produces a source of ignition.



PYROPHORIC MATERIAL

Pyrophoric Iron sulfide are typically found in, but not all included:

- a) Hydrocrackers
- b) Flare & Naphtha line
- c) Distillation columns
- d) Catalyst
- e) Scale and Sludge
- f) Reactors & Exchangers



Control measures to prevent ignition of pyrophoric materials are:

- a) Chemical neutralization
- b) Encapsulation with special chemicals
- c) Drenching with water
- d) Steam

SDS and maintenance history clarify the potential risks associated with pyrophoric materials.



Rule 3: ENERGY ISOLATION

Stored energy sources shall be identified, isolated, tested and communicated to appropriate personnel before work shall proceed (LOTOV).

- A Lock out device or lock is a **positive secure control** for immobilize/ inoperative isolation devices, such as on pressurized systems, fluids, steam, gas, hydraulic or other energy sources

- Lock out devices may include:

- Padlocks- One Key



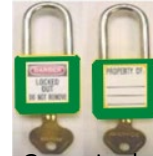
Equipment Lock



Personal Lock



Work Permit Lock



Group Lock

- Locks should always be used in combination with a tag:



- **Test** for Zero Energy and verify all isolation devices on the energy source of the equipment to be worked on.



Rule 4: CONFINED SPACE ENTRY (CSE)

For a work area to be defined as a confined space it must meet at least one of the three of the following criteria:

1. Limited Openings for Entry and Exit.
2. The Space is not Intended for Continuous Human Occupancy.
3. The Space is Large Enough for You to Enter and Conduct Work.

Precautions for CSE

- Isolation and LOTOV
- Gas-freeing and gas testing
- Ventilation and frequent breaks
- Rescue plans, personnel (rescue personnel & man watch) and equipment



Rule 5: MECHANICAL LIFTING

- Lifting operations shall be planned and performed by qualified personnel only.
- Formulate a lifting plan based on the level of risk and complexity of the lift.
- Only lifting equipment that has been pre-inspected and certified shall be used.
- Stop the job, if conditions change such as heavy rain or a windstorm, or there is a deviation from the lifting plan.
- Exclusion / Barricading Zone is only allowed for Authorized personnel.



Rule 6: DRIVING SAFETY

Ensure that all Staatsolie employees, contractors and visitors use vehicles in a safe manner and is ultimately aimed at eliminating driving related incidents.

- All occupants shall wear seatbelts when the vehicle is in motion.
- Drivers shall not use handheld cell phones or operate other devices while the vehicle is in motion.
- Avoid blocking of Emergency equipment (Hydrants).



Speed limit on site: 20Km/h

Rule 7: SAFETY CONTROL BYPASS

Obtain authorization prior to bypassing of safety-critical systems, these include, but are not limited to:

- Fire Protection Systems
- Emergency Shutdown Systems and Trip Settings
- Fire and Gas Detection
- Electrical Protection Devices and Controls
- Emergency Access and Egress Systems



All dispensations for all safety-critical equipment and system bypasses must be logged.

Rule 8: WORK AUTHORIZATION

For TA non-routine and high-risk activities, a Permit to Work (PTW) shall be obtained, as per the TA project requirements.

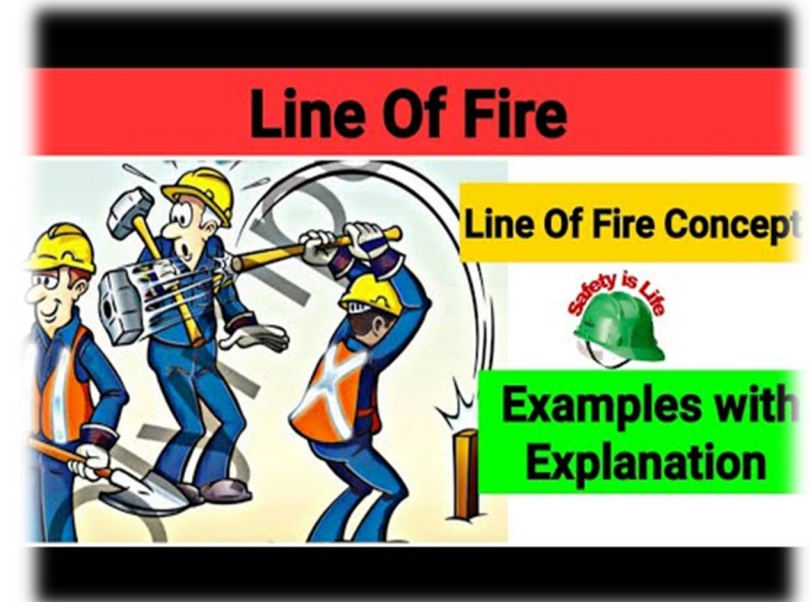
- Verify that all hazards and simultaneous activities are identified, communicated and controlled prior to commencing the work.
- Stop the job and reassess, if a change occurs in the work scope, equipment, shift handover or any other conditions specific to the permit.
- Periodically monitor the effectiveness of the controls listed on the permit.

The image displays two screenshots of a Permit to Work (PTW) form. The left screenshot shows a grid for 'CHECK VALIDATION AND ACCEPTANCE' with columns for 'DATE', 'TIME', 'BY', 'SIGNATURE', and 'STATUS'. The right screenshot shows the 'PERMIT TO WORK' header and 'PERMIT REQUEST' section, including fields for 'JOB NO.', 'JOB DESCRIPTION', 'START DATE', 'END DATE', and 'ISSUED BY'.

A PTW is not required for activities outside the process areas under the responsibility of the TA (All these activities must be covered with an approved JSA)

Rule 9: LINE OF FIRE

Appropriate precautions shall be taken in every task to prevent potential harm from moving machinery, dropped objects and pressurized equipment.



SIGNS & BARRICADES

- Safety sign and barricades are used where there is a significant risk to health, safety or the environment that could not be avoided or controlled by the work methods.



- Around the units will be barricaded with yellow-black chain poles, with one entry and exit.



- The barricade shall be tagged on all four sides if possible, identifying the person who installed the barricade, the Company name, date & time and the danger associated with the job.



- Hard barricading must be used for any grating and handrail removals.

WASTE HANDLING & HOUSEKEEPING

- Black-yellow bins shall be used for Domestic waste only.



- Containers shall be used for Industrial waste only.



- Good housekeeping reduces injuries and incidents, improves morale, reduces fire potential, and can even make operations more efficient.
- Workplaces and passageways shall be kept free from holes, loose boards, without any obstruction across that could create a hazard.
- Housekeeping must be an inherent part of the job.



MOBILE EQUIPMENT

- All mobile equipment must be inspected prior to working on site.
- All equipment operators shall be in possession of the correct credentials to operate the equipment.
- All equipment left unattended at site during the night, must be equipped reflecting light, barricaded with reflecting tape or cones for proper visibility.
- All equipment must be fitted with spark arrestors before entering the site.
- Every mobile equipment must be equipped with a back-up alarm system.



ELECTRICAL SAFETY

- All electrical equipment shall be in proper safe working condition.
- GFCI (Ground Fault Circuit Interrupter) shall be used on all Electrical extension cords.
- All electrical cords shall be properly protected against damage.
- Damaged electrical cords shall be removed from service.



- Only authorized personnel for Entry to the Substation & the FAR.



EMERGENCY RESPONSE

- **ALARMS**



*Fire Alarm – 500 HZ
Alternating 1 sec*



*Flammable Gas– 1000 HZ
Paused 1 sec on, 1 sec off*



*Toxic Gas– 1000 HZ
Paused ¼ sec on, 1 sec off*



- In case of emergency call the Control Room by phone on Emergency number **62444** or **Channel 4** by Radio

saying:

- Your name
- Your company name
- Location of the accident
- Clear description of the accident



Escape routes from a Gas leak. (for example H₂S)

Precautions



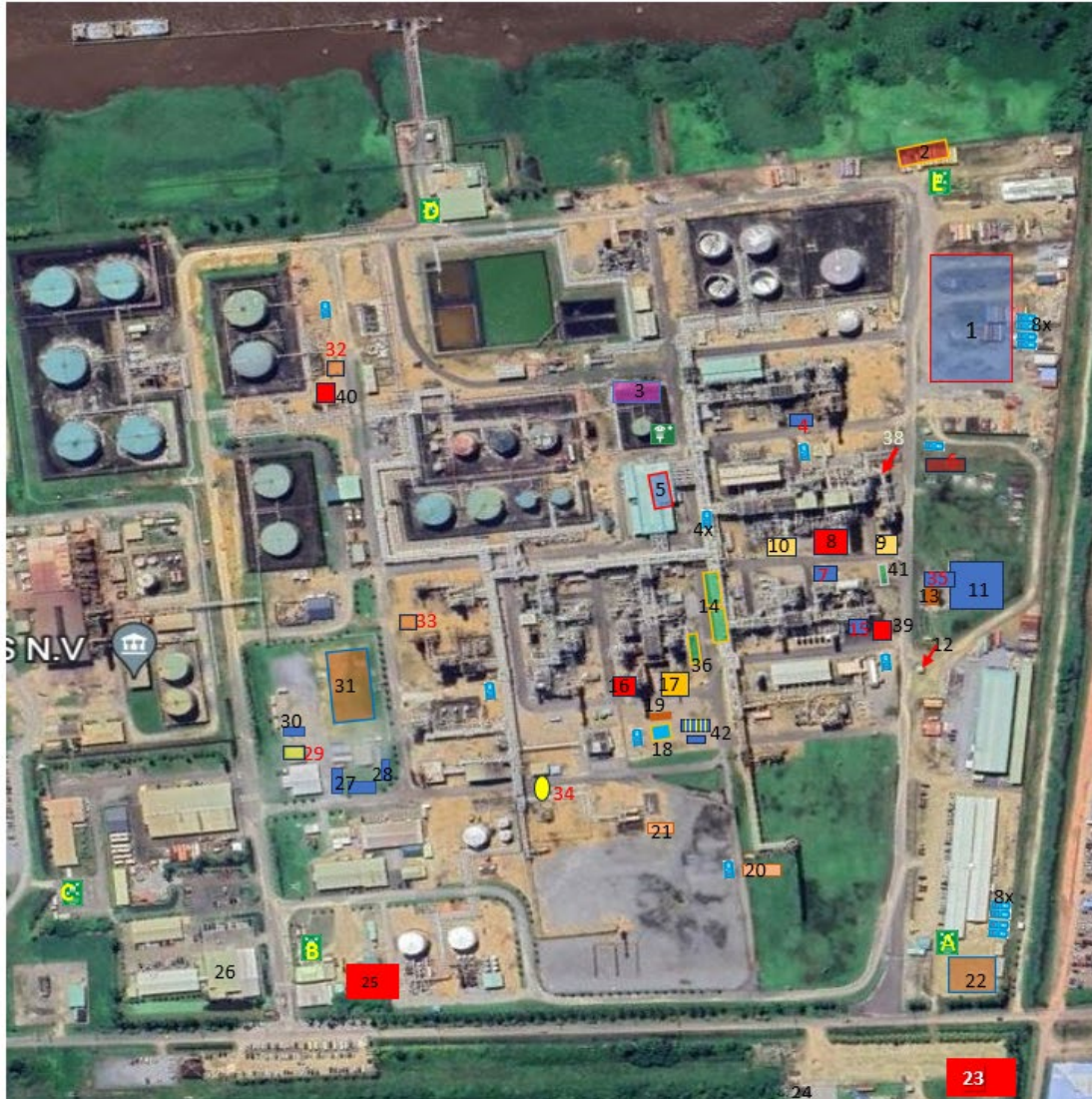
ONLY ESCAPE UPWIND OF A LEAK IF YOU ARE CERTAIN OF ITS SOURCE

MEDICAL SERVICES

- During the TA, medical services will be available 24/7.
- Professional nurses, supported by a physician will be manning the clinic across the plant.
- An ambulance will also be on standby.



MUSTER POINTS & MEDICAL FACILITY



- 1- Dick&Doof complex
- 2- Waste collection area
- 3- Proposed MDEA Storage Unit-630, 35 portafeeds max
- 4- BA tent
- 5- Heltronic inside Substation
- 6- N2 Unit
- 7- BA tent
- 8- Stationary Crane
- 9- Mechanical and smart pigging
- 10- DMDS Storage
- 11- Catalyst storage
- 12- Mourik
- 13- Mourik office
- 14- PTW/LOTOF offices
- 15- BA tent
- 16- Stationary crane
- 17- Mechanical and Smart pigging
- 18- Mock-up area K&G
- 19- Field office K&G
- 20- Suprotech container
- 21- Suprotech cabin
- 22- Dick&Doof Lunch tent
- 23- Medical facility**
- 24- TA warehouse
- 25- Rescue cabin
- 26- War room
- 27- Offices
- 28- Ops assist
- 29- Offices
- 30- Offices
- 31- SOM Lunch tent
- 32- Heater 8301 replacement tent
- 33- Mechanical & smart pigging
- 34- Temporary LPG bullets/Cylinders
- 35- Chevron/Mourik office
- 36- Ops materials
- 38- Reactor 3001 3x3 tent for Mourik
- 39- Crane
- 40- Crane
- 41- Materials container
- 42- Materials containers
- A,B,C,D,E- Muster Points**

GENERAL INFORMATION

- General safety talk for daily critical activities is mandatory.
- PTW revalidation every 24 hours.
- Radiation will normally be done during lunch hours or as conditions allow such.
- Be cautious of Weather Conditions (especially rain with thunder / extreme heat)



- Hygiene
 - Portable toilets and sinks will be available
 - Breaks for food and drinks shall be in a separate, designated 'clean' area and coveralls must be removed and hands washed before eating.
- Compressed Gas Cylinders:
 - Provided with a Safety cap when not in use.
 - Must be secured properly to prevent falling
 - Must always be positioned upright.
- High pressure hoses must be used in combination with a whip check and safety pin.



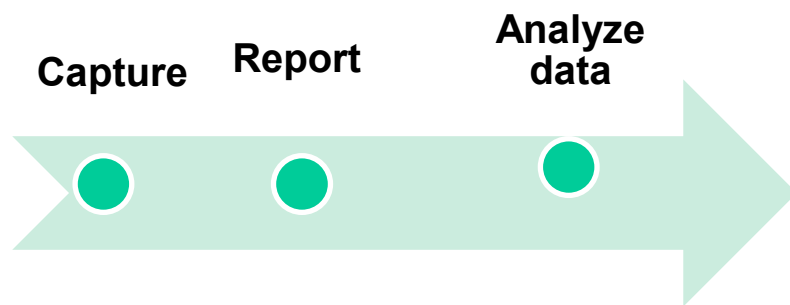
INCIDENT MANAGEMENT

- **Incident reporting**

All incidents (including near misses) should be reported as soon as it is safe to do so, to the supervisor or safety representative.

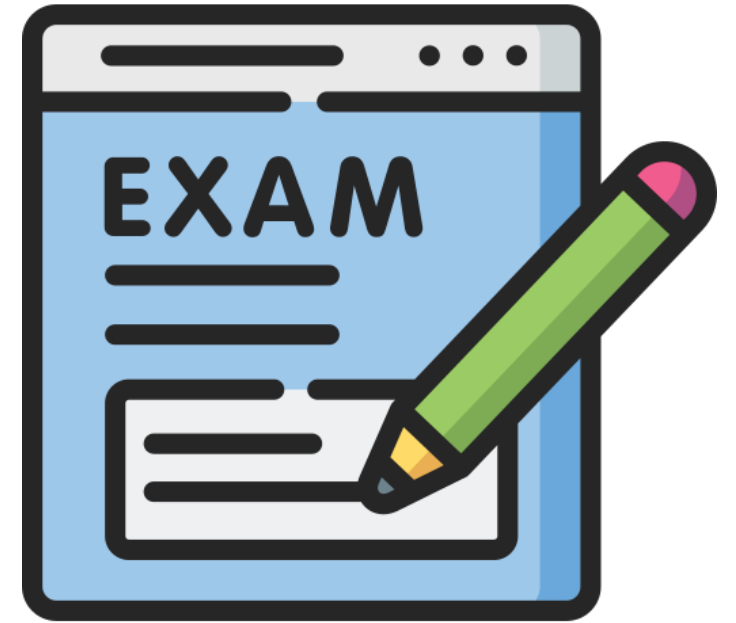
- **Incident investigation**

All incidents are investigated to prevent re-occurrence.



THE END

TIME FOR THE TEST



NOTE TO PASS THE TEST YOU MUST HAVE A SCORE OF 80% OR HIGHER!