



General Instruction
HOT WORK
Marine Department
Fujairah Offshore Anchorage Area
(FOAA) &
Port of Fujairah (Berths)

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Document

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Prepared by	Reviewed by	Approved by	Approved by
<p>Capt. Irfan Ullah Marine HSE-Officer</p> 	<p>Capt. Eduardas Ringis Deputy Harbour Master</p> 	<p>Craig Williams POF HSE Manager Process Owner</p> 	<p>Capt. Mayed Alameeri Harbour Master Concerned Department Owner</p> 

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Purpose

The core purpose of hot work procedures and compliance with all relevant conventions and regulations is to create a safe working environment within the port and Fujairah offshore anchorage area (FOAA), specifically addressing hot work tasks. This objective aims to significantly diminish the likelihood of accidents resulting in personal injury or property damage. This document provides explicit guidelines for precautions to be meticulously observed both before, during, and after hot work operations to effectively prevent the occurrence of fire or explosions. Such incidents could potentially cause harm to individuals or property within the port and Fujairah offshore anchorage area (FOAA).

Scope

The scope of this document is designed as a general instruction to compliment the criteria for hot work process onboard vessels (Tankers) with specified limitations on work activities in line with - Chapter 9, section 9.4 of the Sixth Edition of ISGOTT (International Safety Guide for Oil Tankers & Terminals).

This general instruction is applicable to all individuals and entities utilizing the port, including Ship masters, shipping agents, registered repair companies, and chemists, who intend to engage in hot work activities within the port and Fujairah offshore anchorage area (FOAA).

Table 1: Berth Restrictions

NOTE: FOTT is classed as a hazardous facility, any vessel requiring hot work will be moved to an appropriate allowable Hot Work location.

Hot Work Activity	Location	Permission
	FOTT (Fujairah Oil Tanker Terminal)	Not Allowed due Hazardous Area

Overview

A key shipping hub for the Gulf and wider regions, the Port of Fujairah is the only multi-purpose maritime facility on the east coast of the United Arab Emirates. Strategically located just 70 nautical miles outside the Strait of Hormuz, the Port provides an essential economic link between Europe and Asia, opening the markets of the Indian subcontinent and Northeast Africa to greater local and international trade. Since operations started in 1983, the Port has consistently provided vital infrastructure and resources to meet the region's growing needs, thereby playing an essential economic and strategic role in its progress. Its extensive facilities and services include container operations, general and project cargo, as well as dry and liquid bulk cargo.

- Location: Latitude / Longitude: 25° 10.35' N 056° 21.8' E
- The Service Harbour is used for providing extensive services to the Ocean-going Vessels at the Fujairah Offshore Anchorage Area including Supply, provision, Crew Change & other essential marine activities.

Definition of Hot Work

Hot work can and has caused fires and explosions in, on or near cargo tanks or other spaces that contained or have previously contained, flammable substances or substances that emit flammable vapors.

Hot work is any work that involves sources of ignition or temperatures high enough to ignite a flammable gas or liquid or material. This includes, but is not limited to:

- Welding (electric arc or gas).
- Cutting, burning, gouging (electric or gas).
- Heating (blow torch or heat gun).
- Soldering (electric or blow torch).
- Use of the following temporary/portable equipment in a hazardous area should be classed as hot work:
 - Power tools (electric or electric power tools).
 - Non-intrinsically safe electronic equipment.
 - Internal combustion engines (driving air compressors, pumps, pressure washers, etc.).

Roles and Responsibilities

Port of Fujairah

The Port of Fujairah plays a pivotal role in its jurisdiction as the Port Authority, with its function being to ensure compliance with the specified guidelines and international conventions, including this guideline. The ultimate responsibility and accountability for adherence and compliance with all safeguards concerning Hot Work lie with: **The Ship's Master**

The Ship's Master

- The Master shall initially decide whether hot work is justified and whether it can be done safely as per the vessel safety management system (SMS) under the ISM, their Permit to Work System and relevant international standards and codes of practice.
- The departmental heads shall assess all proposed work within their departments before the work commences.
- A risk assessment shall identify the hazards and the risks involved. This will produce risk-reduction measures that need to be taken to allow the work to be done safely.
- The risk assessment should identify hazards, their threats, and their consequences (via risk matrix) to fire watch personnel and emergency response and evacuation plans. Risk assessments shall be applied utilizing the 5 pillars to ensure all risks are determined as low as reasonably practicable (ALARP).
- A written work plan (method statement) for conducting the work should be thoroughly completed, discussed, and mutually agreed upon by all individuals assigned to or impacted by the planned activities. This plan encompasses all vessel marine crew members as well as contractors

and visitors at the designated location This plan shall define all planned activities, associated risks, and potential consequences while ensuring that all barriers to prevent occurrence are in place.

- The plan shall also identify the person authorizing the work and the personnel responsible for carrying out the specified tasks, including contractors. And their 3rd party contractors.
- A designated Responsible Officer not directly involved in the hot work should ensure that the plan is followed via completing approved inspections.
- Personnel carrying out the work shall be adequately trained and competent to carry out safely and effectively.
- The usual resource limitations on board a tanker mean that only one hot work operation at a time should be carried out. A separate hot work permit should be approved for each intended task and location.
- The work area should be carefully prepared and secured before hot work starts.
- Fire safety precautions and fire-extinguishing measures should be reviewed. Adequate firefighting equipment should be prepared, laid out, and ready for immediate use.
- Fire watch procedures should be established for the area of hot work and for adjacent spaces where heat transfer or accidental damage might create a hazard, e.g., damage to hydraulic lines, electrical cables, thermal oil lines, etc. The fire watch should monitor the hot work and act if residues or paint coatings ignite. Effective ways to contain and extinguish welding sparks and molten slag should be established.
- The atmosphere of the area should be tested and be less than 1% Lower Flammable Limit (LFL) as per Chapter 9, section 9.4.4.1 page 135 of ISGOTT (International Safety Guide for Oil Tankers & Terminals).
- The vessels' hot work permit should be issued just before the work is to be done. If the start of the work is delayed, all safety measures should be rechecked and recorded before it begins in each case.
- Permits are issued under specific conditions, but if these change (missing words/consider rephrase), hot work should stop immediately. The permit should be withdrawn or cancelled until all conditions and mitigations have been checked and reinstated, allowing the permit to be re-issued or re-approved.
- The work area should be adequately and continuously ventilated, and the frequency of atmosphere monitoring should be established. Times and results of atmosphere monitoring should be recorded on a sheet.
- The cargo tank beneath the hot work location should be continuously ventilated, cleaned, and gas freed.
- Isolation of the work area and fire safety precautions should continue until the risk of fire no longer exists.
- Master to make sure, all operations related to Hot Work and Gas Freeing will be carried out in accordance with the Oil Tanker Operation Manual & ISGOTT (International Safety Guide for Oil Tankers & Terminals).

- The Master of the vessel assumes ultimate responsibility and accountability for ensuring rigorous adherence and strict compliance with the 'Port of Fujairah General Instruction Hot Work' within the Port of Fujairah jurisdiction. This responsibility extends to both the Fujairah Offshore Anchorage Area (FOAA) and the Port of Fujairah (Berths).
- In category 1 Hot Work activities, the Chemist, acting as a Safety Assessor on board the vessel, assists the Master in ensuring the safe execution of such tasks & risk assessment. It is crucial to recognize that the Master retains overriding authority and primary responsibility in this capacity.

Registered Agent

The registered vessel agent holds the responsibility for the following tasks:

- Request NOC from the Port of Fujairah for hot work and complete all necessary document submissions.
- The agent of the vessel appoints a Port of Fujairah registered Chemist to attend to vessels when hot work is requested. The foremost duty of the Chemist is to inspect the work area, assess its safety conditions, and issue the requisite certificates, which encompass "Gas free, Safe for entry and Hot Work permit Certificate".
- For **category 1** Hot Work activities, the vessel's agent designates a Chemist registered with the Port of Fujairah to act as a Safety Assessor, supervising vessels during the execution of such specialized hot work. The primary responsibility of the Chemist is to inspect the work area, evaluate its safety conditions, carry out Risk assessment and issue "Gas free, Safe for entry and Hot Work permit Certificate". In the role of a safety assessor, the Chemist stays on board throughout the entire duration of the Hot Work activity, from initiation to completion. All associated charges will be covered by the registered vessel agent and borne by the vessel owner / operator.

General Chemist Roles and Responsibilities

As the primary duty, the Port of Fujairah registered Chemist must board the ship and prepare for hot work safety assessments. Before issuing the "Gas free, Safe for entry, and Hot Work permit Certificate," it is imperative to conduct a thorough inspection of the Hot work area. Failure to adhere to this requirement could result in severe violations of Port regulations and associated consequences. Chemist Shall;

1. Conduct comprehensive gas measurements to verify that the atmosphere in the designated work area is safe for hot work activity and as per requirements.
2. Examine the ship's firefighting appliances to confirm their availability. These are critical for addressing unforeseen emergencies during hot work. Ensure that fire hoses are charged and easily accessible, and available for firefighting to uphold safety standards.
 - In the event of any missing equipment or safety concerns regarding the hot work area, promptly communicate with the Master of the Vessel to arrange necessary actions to rectify the situation.

3. If the hot work area is deemed unsafe, report the situation to the Port of Fujairah control tower for further evaluation and guidance to ensure safety compliance.
4. Confirm that the hot work job requested by the Master of the Vessel has received NOC from the Port of Fujairah before proceeding & verifying the job scope.
5. Clearly document the condition of the "Gas free, Safe for entry, and Hot Work permit Certificate" to accurately reflect the status of the work area. This documentation will minimize confusion and potential risks.
6. Issue separate "Gas free, Safe for entry, and Hot Work permit Certificate" for specific jobs and locations when conditions vary due to onboard resource constraints.
7. The "Gas free, Safe for entry, and Hot Work permit Certificate" should not be issued if the conditions and safety measures are not aligned with the requirements.
8. Maintain open and regular communication with the Port for clarification or addressing any safety-related concerns & and non-compliance.

Chemist role as Safety Assessors

- When Hot Work is designated under **category 1**,
 1. the Chemist will conduct a risk assessment and check measures to mitigate potential risks. Throughout the entire duration of hot work, the Chemist remains on board, serving as a Safety Assessor from commencement until completion.
 2. In the role of a Safety Assessor at the Port of Fujairah, the registered Chemist holds the primary responsibility of boarding the ship and conducting thorough safety assessments for hot work. It is crucial to inspect the hot work area meticulously before issuing the "Gas free, Safe for entry, and Hot Work permit Certificate". Non-compliance with this requirement may lead to severe violations of Port regulations and subsequent consequences.
 3. The Chemist is tasked with performing comprehensive gas measurements to ensure that the atmosphere in the designated work area aligns with the safety standards set by the Port of Fujairah, facilitating safe hot work activities.
 4. Additionally, the Chemist conducts periodic checks of the atmosphere, recording readings at agreed intervals & before restarting hot work after a break, these checks are essential to maintain safety standards and prevent potential hazards.

NOTE: The Chemist who is acting on behalf of the Port of Fujairah as a Safety assessor is assigned to complete a specified assurance task on compliance against stated work plans in the Master Declaration. The Safety assessor does not supersede the accountability of the Master for overall compliance and safe execution of stated work plans.

5. The vessel's Master bears the ultimate responsibility and accountability for ensuring meticulous adherence to and strict compliance with the 'Port of Fujairah General Instruction Hot Work' within the Port of Fujairah jurisdiction. This encompasses both the Fujairah Offshore Anchorage Area (FOAA) and the Port of Fujairah (Berths). While the Chemist, serving as a Safety Assessor on board the vessel, assists the Master in ensuring the safe

execution of hot work activities & risk assessment, it is essential to note that the Master retains overriding authority and responsibility in this regard.

Registered Repair Company (POF Approved Vendors)

- The company should diligently maintain accurate records of essential documents, including the Permit to Work, Risk Assessment, and Toolbox Meeting records. These records should be properly organized and easily accessible.
- Ensure the proper issuance of a Permit to Work for the hot work activity. This should involve a thorough assessment of the work area and potential risks before starting any hot work.
- Perform a comprehensive risk assessment before commencing hot work. Identify potential hazards, assess their severity, and implement necessary safety measures to mitigate risks.
- Arrange and conduct a Toolbox Meeting with all technicians involved in the hot work. During this meeting, safety review of procedures, emergency protocols, and any specific concerns related to the task at hand.
- Ensure that all technicians directly involved in the hot work activity sign the Permit to Work, Risk Assessment, and Toolbox Meeting records. This signifies their acknowledgment and commitment to adhering to safety protocols.
- Verify that all technicians follow the safety guidelines outlined in the Permit to Work, Risk Assessment, and Toolbox Meeting. Address any deviations promptly to maintain a safe working environment.
- Have contingency plans in place for dealing with emergencies related to hot work, such as fire, gas leaks, or injuries. Ensure that technicians are aware of these procedures.
- Provide adequate supervision and oversight throughout the hot work process to ensure that safety measures are maintained and that the work is carried out according to established standards.
- Safeguard the records of the Permit to Work, Risk Assessment, and Toolbox Meeting for a designated period in compliance with regulations and company policies.
- The technician from the repair company should strictly perform only the approved hot work job as approved by the Port of Fujairah. Any requests for additional tasks or instructions from the Ship's master should not be accepted and must be promptly reported to the Vessel agent.

Hot Work Requirements (Tankers)

The requirements mentioned below are derived from section 9.4 of the Sixth Edition of ISGOTT (International Safety Guide for Oil Tankers & Terminals). Industry guidance, including ISGOTT, is founded upon the most current and reliable knowledge and information accessible. The Safety Management System (SMS) of the vessel under the ISM should include adequate guidance on the control of hot work and should be robust enough to ensure compliance. An absence of guidance should be understood as work is prohibited rather than approved. Welding should only be carried out in ventilated areas.

Hot Work Requirements

The implementation of hot work on vessels (Tankers) will adhere to the guidelines detailed in Chapter 9, section 9.4 of the Sixth Edition of ISGOTT (International Safety Guide for Oil Tankers & Terminals).

Appendix H – Chapter 9, section 9.4 of the Sixth Edition of ISGOTT (International Safety Guide for Oil Tankers & Terminals).

Hot Work Categories (Hi Potential Risk Group 1 and 2)

The Hot Work procedures onboard tankers are categorized into two groups based on the location of the work and associated risk assessment:

Category 1:

1. Hot Work being carried out in Cargo, Ballast, or Bunker Tanks.
2. Hot Work on the tank deck or less than 500 mm above the tank deck
3. Hot Work performed on Pipelines ISGOTT section 9.4.5.7
4. Hot Work carried out in the Pump Room ISGOTT section 9.4.5.4
5. Hot Work in the vicinity of bunker tanks ISGOTT section 9.4.5.6

Category 2:

1. Hot Work conducted outside Cargo, Bunker, or Ballast Tanks & above the tank deck at a height more than 500 mm
2. Hot Work carried out in Machinery Spaces (outside of the Engine Workshop).
3. Any Hot Work location not classified as category 1.

Risk Management Requirements for Category 1:

The designated Chemist will board the vessel and,

1. conduct a physical inspection and photograph for evidence,
2. record gas readings, and issue the "Gas free, Safe for entry, and Hot Work permit Certificate".
3. Photographic evidence to be submitted with gas free certificate.

The Chemist, serving as a Safety Assessor,

1. will remain onboard throughout the entire duration of the Hot Work activity,
2. ensuring continued compliance with safety measures approved photographic evidence of work area to be documented.
3. The Chemist will also perform periodic atmosphere checks at agreed intervals and photographed as documented evidence.

Risk Management Requirements for Category 2:

1. The designated Chemist will board the vessel,
2. conduct a physical inspection, record gas readings,
3. and issue the "Gas free, Safe for entry, and Hot Work permit Certificate".

NOTE: Unlike Category 1, where determined based on risk, the Chemist is not obligated to remain onboard throughout the entire Hot Work activity. However, the Port of Fujairah may direct the Chemist to remain onboard based on.

1. The residual risk requiring further supervision is required.
2. Determined that change in work scope may occur.
3. Vessel supervision has been determined as required.

Conditions

The Ship must be in Ballast Condition. All slops should either be removed from the ship or isolated in a tank located as far away from the hot work location as practicable greater than 30 m.

Hot Work Restricted Activity (International Standard)

Table 2: Restrictions

Hot Work activity	FOAA	POF (Lay by Berths)
During Bunkering Operation/De-slopping (Hydrocarbon transfers)	Not allowed	Not allowed

For tankers without an Inert Gas (IG) system:

All cargo tanks within 30m of the hot work location, including those positioned diagonally, should be either:

1. Cleaned and gas freed to meet hot work standards. or
2. Completely filled with water.

All slops should be either removed from the ship or securely isolated in the tank that is furthest from the hot work location, with a minimum distance of 30m. Vapor or vent lines to the compartment should be ventilated to not exceed 1% Lower Flammable Limit (LFL) and then isolated. Additionally, the possibility of using an external source of IG should be considered.

"Gas free, Safe for entry and Hot Work permit Certificate" validity

The Chemist issued "Gas free, Safe for entry and Hot Work Certificate" maximum validity 24hrs.

Hot Work Requirements (LPG/LNG Ships)

Hot work on LPG/LNG ships will be evaluated based on location and risk assessment, with special consideration given to explicit permission from the Harbour Master. An established habitat for hot work must be verified. The Ship must be in Ballast Condition.

Hot Work Requirements (Cargo Ships)

Conditions

The Ship must be in Ballast Condition or loaded with non-hazardous cargo.

Hot Work Categories (Hi Potential Risk Group 1 and 2)

The Hot Work procedures onboard ship is categorized into two groups based on the location of the work and associated risk assessment:

Category 1:

1. Hot Work conducted inside Ballast tanks having common boundary with Fuel oil tanks.
2. Hot Work conducted inside Bunker tanks.
3. Hot Work performed on Pipelines such as Bunker lines.

Category 2:

1. Any Hot Work location not classified as category 1.

Risk Management Requirements for Category 1:

The designated Chemist will board the vessel and,

1. conduct a physical inspection,
2. record gas readings, and issue the "Gas free, Safe for entry, and Hot Work permit Certificate"

The Chemist, serving as a Safety Assessor,

1. will remain onboard throughout the entire duration of the Hot Work activity,
2. ensuring continued compliance with safety measures approved.
3. The Chemist will also perform periodic atmosphere checks at agreed intervals.

Risk Management Requirements for Category 2:

1. The designated Chemist will board the vessel,
2. conduct a physical inspection, record gas readings,
3. and issue the "Gas free, Safe for entry, and Hot Work permit Certificate".

NOTE: Unlike Category 1, where determined based on risk, the Chemist is not obligated to remain onboard throughout the entire Hot Work activity. However, the Port of Fujairah may direct the Chemist to remain onboard based on.

1. The residual risk requiring further supervision is required.
2. Determined that change in work scope may occur.
3. Vessel supervision has been determined as required.

Hot Work Restricted Activity (International Standard)

Table 3: Restrictions

Hot Work activity	FOAA	POF (Lay by Berths)
During Bunkering Operation/De-slopping (Hydrocarbon transfers)	Not allowed	Not allowed

"Gas free, Safe for entry and Hot Work permit Certificate" validity

The Chemist issued a "Gas free, Safe for entry, and Hot Work Certificate" with a maximum validity of 72 hours, except for enclosed space areas, where the validity is 24 hours.

Hot Work Requirements (Service Boats)

Conditions

The vessel must be in Ballast Condition and the Deck area should be clear from any cargo.

Hot Work Categories (Hi Potential Risk Group 1 and 2)

The Hot Work procedures onboard Service boat are categorized into two groups based on the location of the work and associated risk assessment:

Category 1:

1. Hot Work conducted inside Ballast tanks having common boundary with Fuel Oil tanks.
2. Hot Work conducted inside Bunker tanks.
3. Hot Work performed on Pipelines such as Bunker lines.

Category 2:

4. Any Hot Work location not classified as category 1.

Risk Management Requirements for Category 1:

The designated Chemist will board the boat and,

1. conduct a physical inspection,
2. record gas readings, and issue the "Gas free, Safe for entry, and Hot Work permit Certificate".

The Chemist, serving as a Safety Assessor,

1. will remain onboard throughout the entire duration of the Hot Work activity,
2. ensuring continued compliance with safety measures approved.
3. The Chemist will also perform periodic atmosphere checks at agreed intervals.

Risk Management Requirements for Category 2:

1. The designated Chemist will board the boat,
2. conduct a physical inspection, record gas readings,
3. and issue the "Gas free, Safe for entry, and Hot Work permit Certificate".

NOTE: Unlike Category 1, where determined based on risk, the Chemist is not obligated to remain onboard throughout the entire Hot Work activity. However, the Port of Fujairah may direct the Chemist to remain onboard based on.

4. The residual risk requiring further supervision is required.
5. Determined that change in work scope may occur.
6. Boat supervision has been determined as required.

Hot Work Restricted Activity

Table 4: Restrictions

Hot Work activity	FOAA	POF (Lay by Berths)
During Bunkering Operation (Hydrocarbon transfers)	Not allowed	Not allowed
While drifting	Not allowed	Not allowed

"Gas free, Safe for entry and Hot Work permit Certificate" validity

The Chemist issued a "Gas free, Safe for entry, and Hot Work permit Certificate" with a maximum validity of 72 hours, except for enclosed space areas, where the validity is 24 hours.

NOTE: The dedicated area for Hot Work jobs in the port is the UBB (Utility Boat Berth) area or Layby berth allocated by the Operation Department.

Hot Work Requirements (Dry Berth)

Hot Work Categories (Hi Potential Risk Group 1 and 2)

The Hot Work procedures onboard Service boat are categorized into two groups based on the location of the work and associated risk assessment:

Category 1:

1. Hot Work conducted inside Ballast tanks having common boundary with Fuel Oil tanks.
2. Hot Work conducted inside Bunker tanks.
3. Hot Work performed on Pipelines such as Bunker lines.

Category 2:

4. Any Hot Work location not classified as category 1.

Risk Management Requirements for Category 1:

The designated Chemist will board the boat and,

5. conduct a physical inspection,
6. record gas readings, and issue the "Gas free, Safe for entry, and Hot Work permit Certificate"

The Chemist, serving as a Safety Assessor,

1. will remain onboard throughout the entire duration of the Hot Work activity,
2. ensuring continued compliance with safety measures approved.
3. The Chemist will also perform periodic atmosphere checks at agreed intervals.

Risk Management Requirements for Category 2:

1. The designated Chemist will board the boat,
2. conduct a physical inspection, record gas readings,
3. and issue the "Gas free, Safe for entry, and Hot Work permit Certificate".

NOTE: Unlike Category 1, where determined based on risk, the Chemist is not obligated to remain onboard throughout the entire Hot Work activity. However, the Port of Fujairah may direct the Chemist to remain onboard based on.

4. The residual risk requiring further supervision is required.
5. Determined that change in work scope may occur.
6. Boat supervision has been determined as required.

Hot Work Prohibition:

Table 5: Restrictions

Hot Work activity	POF (Dry Berth)
During Bunkering Operation (Hydrocarbon transfers)	Not allowed

Safety measures:

1. Cover the entire work area with appropriate sheets to safeguard against debris, dust, and exposure to weather elements.
2. Ensure the availability of fire-fighting arrangements, including functional fire extinguishers, fire hoses, and a responsive fire alarm system. Regularly inspect and maintain this firefighting equipment to ensure their effectiveness.
3. Keep a charged hose nearby at all times to promptly address any potential fire incidents.
4. Exercise caution when working with oxygen and acetylene bottles. Store, handle, and ventilate these bottles properly to prevent accidents.
5. Provide continuous supervision of the repair work to ensure strict compliance with safety protocols and to respond promptly to any emergencies.
6. Implement effective dust control measures, particularly when the repair work involves sanding or painting, to minimize the risk of respiratory issues.
7. Take precautions for working in hot weather conditions by providing shade, access to drinking water, and encouraging frequent breaks to prevent heat-related illnesses.
8. Maintain a well-stocked first aid kit on-site and ensure that at least one person is trained in first aid procedures.
9. Keep a list of emergency contact numbers readily available and prominently displayed in case of accidents or emergencies.
10. Ensure that all personnel involved in the repair work wear appropriate personal protective equipment (PPE) such as safety helmets, safety glasses, gloves, and suitable footwear.

11. Conduct regular toolbox meetings to discuss safety procedures, potential hazards, and strategies for mitigating risks.
12. Perform a comprehensive risk assessment before commencing the repair work and implement necessary safety measures based on the assessment findings.
13. Display safety signs and warnings prominently in the work area to remind workers of potential hazards and safe practices.

"Gas free, Safe for entry and Hot Work permit Certificate" validity

The Chemist issued a "Gas free, Safe for entry, and Hot Work permit Certificate" with a maximum validity of 72 hours, except for enclosed space areas, where the validity is 24 hours.

Risk Management Process

The risk management process to be conducted by the Master of the Vessel & registered repair company should take into account the following factors:

1. The nature of the work activity, including practices and processes involved.
2. The presence of potential hazards, such as dangerous goods, hazardous substances, dust, fibers, or asbestos.
3. The overall work environment.
4. The compatibility of work within the area.
5. Limitations related to working conditions, such as working at heights, working over water, or working in or near confined spaces or fuel tanks.
6. The potential for changing circumstances and environments during the course of the work.
7. The size and constraints of the workforce.
8. The existing control measures, such as system isolation and area barricading.
9. The availability of control measures in the vicinity, including fire screens, fire blankets, and firefighting equipment.

Each stage of the risk management process should be thoroughly documented. This documentation should encompass assumptions, methods, data sources, analysis results, and the rationale behind decision-making. These documented records are essential and must be kept on-site and readily accessible where the work is being carried out.

Risk Assessment:

The purpose of this assessment is to determine the likelihood and consequences of exposure to identified hazards. The goal is to either eliminate or mitigate the risks associated with:

1. Potential harm to individuals from the ongoing work.
2. Potential damage to property due to the ongoing work.
3. Unsafe work practices that may be in place.
4. Unsupervised work activities.
5. Hazards that require control and the order in which they need to be addressed.

While a generic assessment can be used to reduce redundancy and streamline the process, the vessel Master (or their designated crew member) is responsible for ensuring that the risk assessment:

- Is applicable to the specific work being undertaken.
- Remains up-to-date and relevant.
- Is accompanied by a work permit and a work method statement.

Risk Control:

Risk control involves determining and implementing appropriate measures to eliminate or reduce the risks associated with the work being carried out. These measures should be applied primarily to high-risk situations but should not overlook lower-level risks that can be easily managed. Any risk

with unacceptable consequences must be addressed promptly. Risk control measures should be continuously reviewed to ensure that actions taken to address one risk do not inadvertently create another risk.

The main objective is to eliminate or reduce the risk to the greatest extent reasonably achievable. A hierarchy of control measures is in place, starting with:

1. Elimination: Removing the risk at its source (while recognizing that complete elimination of all risks, especially in hot work, may not always be possible).
2. Substitution: Replacing hazardous activities with less hazardous alternatives.
3. Isolation: Separating dangerous activities from people, property, or other hazardous activities.
4. Engineering controls: Modifying equipment or processes to reduce risk.
5. Administrative controls: Implementing work procedures and practices that eliminate or reduce risk, often used in conjunction with other control measures.
6. Personal Protective Equipment (PPE): Providing individuals with protective gear as a supplementary measure when other controls are not sufficient.

Implementation of Risk Control:

The implementation of risk control and treatment measures must be documented, monitored, and reviewed. These measures should be:

- Tailored to the specific work, task, person, and hazard.
- Accompanied by an action plan and training on correct use and application.
- Cost-effective.
- Designed to eliminate or reduce health and safety risks.

Monitor and Review:

The entire risk management process should be thoroughly documented to enable ongoing monitoring and facilitate continuous improvement. The monitoring and review process should encompass all levels of the process, including planning, strategic, and operational levels. Changing circumstances should be considered during this process to adapt priorities and control measures accordingly.

Verification for concurrence of Procedure

Step 1 Advance Notification

Notify Ports of Fujairah at least 48 hours in advance of the intended Hot Work job to request a NOC (No Objection Certificate)

Appendix E – Required documents.

1. Attachment 25 Master Declaration of Compliance
2. Risk Assessment
3. Method Statement
4. Permit to Work as per vessel Safety Management System (SMS)
5. Declaration of Compliance for Gas Free Certificate by Chemist / Safety Assessor
6. Registered Repair Company Attendance Letter including List of Technicians

Note: When hot work is to be conducted in enclosed spaces or underwater, the regulations and guidelines for enclosed space and underwater operations as outlined in NTM 148 must also be adhered to.

Step 2 Concurrence of Procedure Documentation Compliance

The designated registered agent will have the responsibility of submitting all required documents from the vessel master to the Port authority in accordance with this procedure, as outlined in Appendix-E. The registered vessel agents will not be held accountable for the contents of the documents; instead, their responsibility lies in ensuring the delivery of all documentation as specified in this procedure.

Step 3 Port Authority Concurrence

The Port Authority upon receiving all required documentation as outlined in Appendix-E will issue NOC (No objection Certificate) for Hot Work job.

Step 4 Arranging a Chemist

Category 1:

The vessel's agent designates a Chemist registered with the Port of Fujairah to act as a Safety Assessor, supervising vessels during the execution of such specialized hot work. The primary responsibility of the Chemist is to inspect the work area, evaluate its safety conditions, carryout Risk assessment and issue "Gas free, Safe for entry and Hot Work permit Certificate". In the role of a safety assessor, the Chemist stays on board throughout the entire duration of the Hot Work activity, from initiation to completion. All associated charges will be covered by the registered vessel agent.

Category 2:

The vessel's agent arranges for a Chemist to board the vessel for the issuance of a "Gas-Free, Safe for Entry, and Hot Work Permit Certificate."

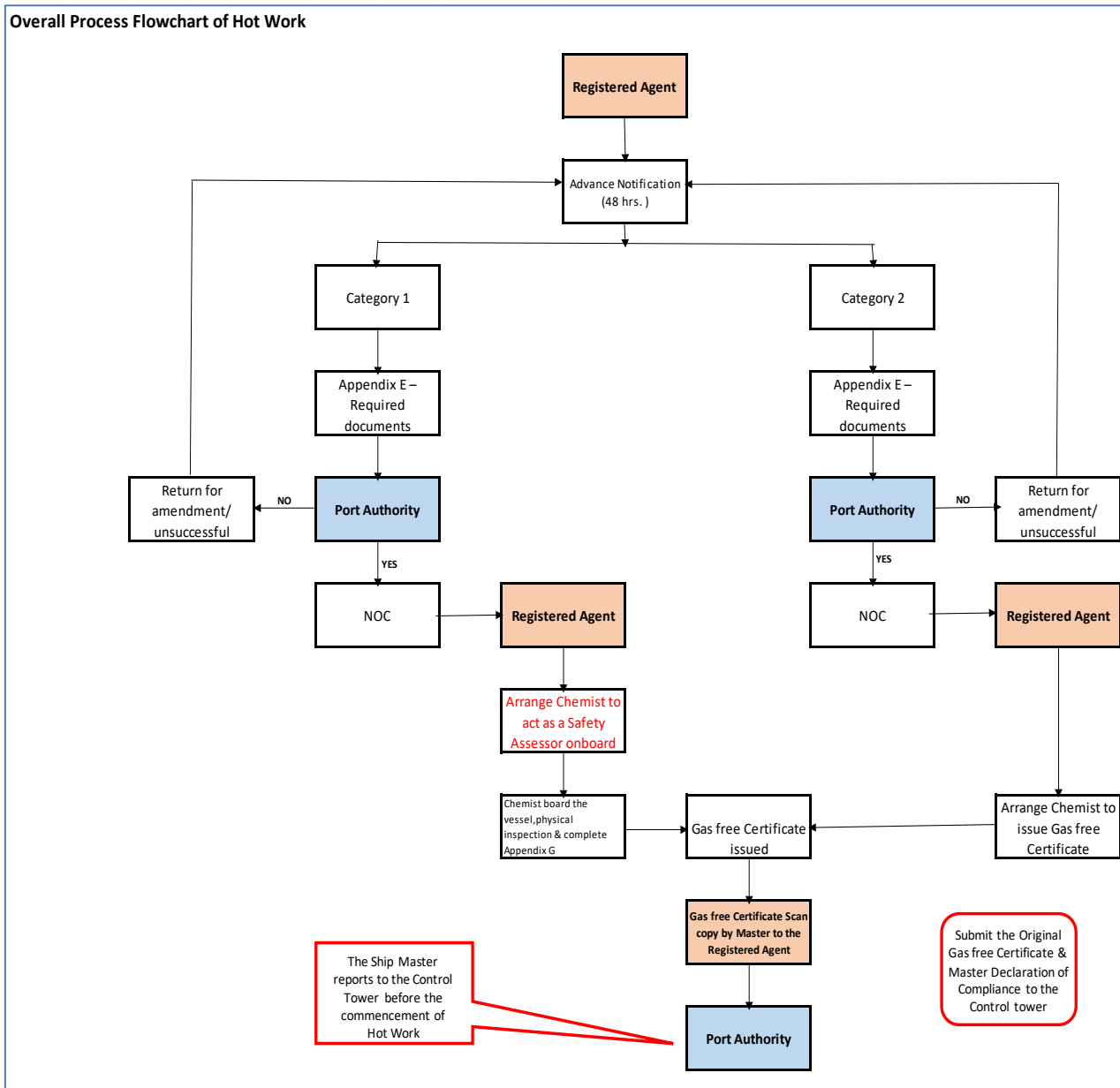
Step 5 Certificate Issuance

If the conditions are met, the Chemist issues the "Gas-Free, Safe for Entry, and Hot Work Permit Certificate".

Step 6 Submission of Certificate

The Control Tower will only allow the Hot Work job after receipt of scan copy of the "Gas free, Safe for entry and Hot Work permit Certificate".

The Original "Gas free, Safe for entry and Hot Work permit Certificate" & Attachment 25 Master Declaration of Compliance should be submitted to the Control Tower.



Continuation of Hot Work (Revalidation)

Step-by-step procedure for ensuring the safe continuation of Hot Work activities on board a vessel:

Step 1 Initial Assessment

The Master should assess the need for continuing Hot Work activities on the vessel.

Step 2 Contact the Vessel Agent

If Hot Work needs to continue, the Master contacts the vessel's agent and informs them of the requirement.

Step 3 Arranging a Chemist

Category 1:

For category 1 Hot Work activities, the Chemist who act as a Safety Assessor, issue "Gas free, Safe for entry and Hot Work permit Certificate for continuation of the Hot Work activity.

Category 2:

The vessel's agent arranges for a Chemist to board the vessel for the issuance of a "Gas-Free, Safe for Entry, and Hot Work Permit Certificate." This arrangement should be made well in advance.

Step 4 Chemist Verification

The Chemist verifies that there have been no changes in the conditions and that the same Hot Work operation is planned to proceed for the specified duration:

- For tankers: 24 hours
- For cargo ships/service boats: 72 hours

Step 5 Certificate Issuance

If the conditions are met, the Chemist issues the "Gas-Free, Safe for Entry, and Hot Work Permit Certificate" without specifying any time gaps.

Step 6 Notification to Port Authority

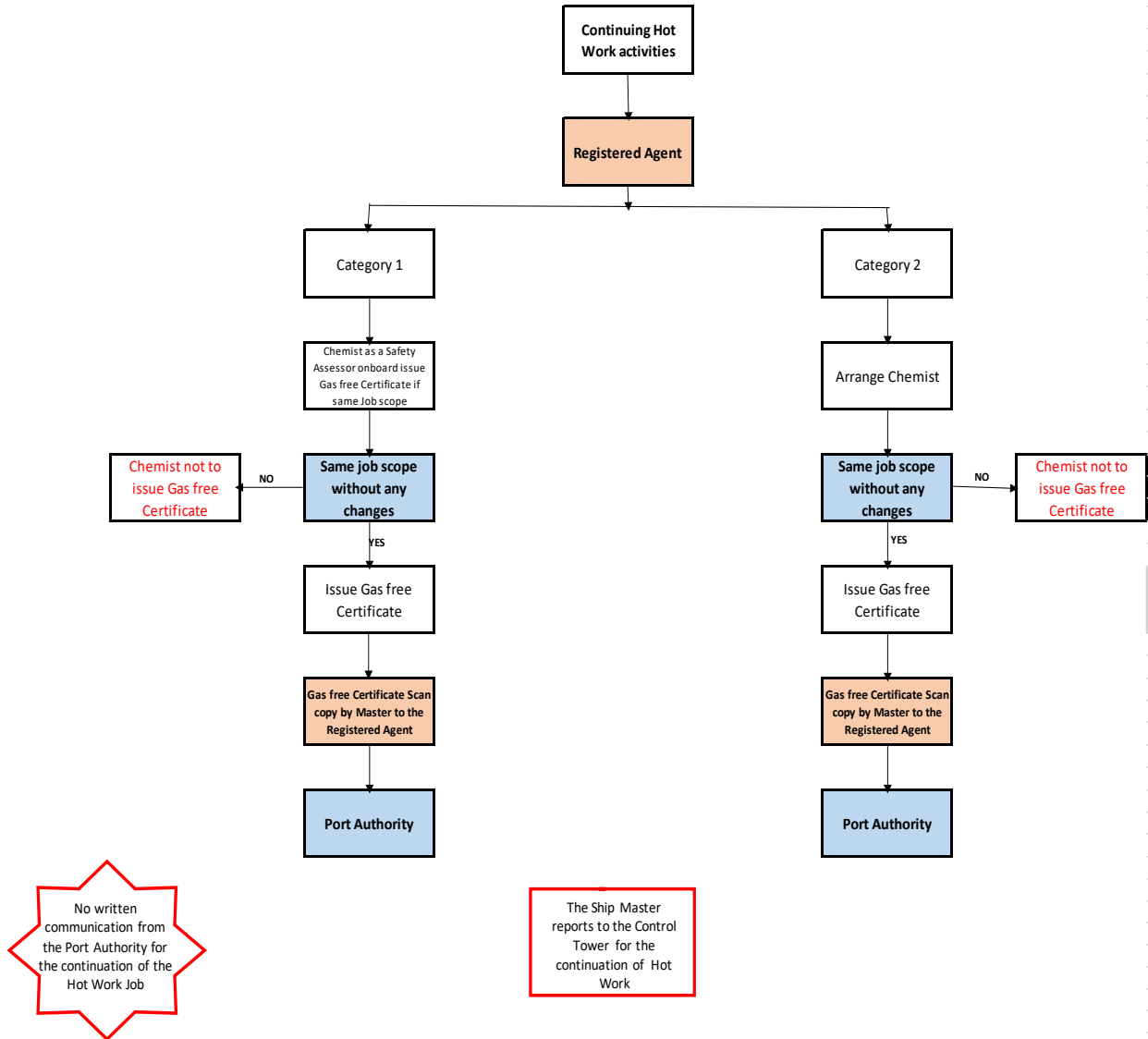
The registered vessel agent notifies the port authority by sending a scanned copy of the certificate. This serves as a notification of the continuation of Hot Work activities.

Step 7 No Further Concurrence Required

It's important to note that no further acknowledgment, NOC, or verbal approval is needed from the Port Authority or the control tower for the continuation of Hot Work once the certificate has been issued and the Port Authority has been notified.

The Original "Gas free, Safe for entry and Hot Work permit Certificate" & Attachment 25 Master Declaration of Compliance should be submitted to the Control Tower.

Overall Process Flowchart Continuation of Hot Work



Reporting of Non compliances

The Master shall advise shipping agent as soon as practicable where noncompliance (s) with this procedure are discovered and reported with all work activities involved have ceased and rendered safe. Immediately notify the Control Tower.

Emergency Contacts List

Control Tower - Supervisor	24/7	VHF Ch.10 Phone: +9719 207 0808
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Appendix

1. Appendix A – Risk assessment
2. Appendix B – Method statement
3. Appendix C – Attachment 25 Master Declaration of Compliance
4. Appendix D – Declaration of Compliance for Gas Free Certificate by Chemist / Safety Assessor
5. Appendix E – Required documents for NOC
6. Appendix F – Gas free, Safe for entry and Hot Work permit Certificate specimen for Chemist
7. Appendix G – Checklist as Safety Assessor onboard for Category 1
8. Appendix H – Chapter 9, section 9.4 of the Sixth Edition of ISGOTT (International Safety Guide for Oil Tankers & Terminals) page 133 to 145.

References

- I. ISGOTT (International Safety Guide for Oil Tankers & Terminals) 6th Edition.
- II. ISM (International Safety Management Code)

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Appendix B – Method Statement (Specimen)


Method Statement

(To be completed on official letterhead)

The method statement should contain at least the following sections.

1. Introduction:
2. Scope of Work:
3. Work Sequence and Methodology:
4. Sketch the Location of the Hot Work & attach Photos/Drawings:
5. Pre-Job Inspection and Preparation:
6. Responsibilities:
7. Personnel and Competencies:
8. Equipment and Tools:
9. Health, Safety, and Environmental Considerations:
10. Emergency Procedures and Contingencies:

Appendix C – Attachment 25 Master Declaration of Compliance

 <p style="font-size: small;">Port of Fujairah موانئ الشارقة United Arab Emirates</p>	PORT OF FUJAIRAH			
	Document Title:	MASTER DECLARATION	Revision No.:	4
	Document No.:	ATTACHEMENT 25-NTM 148 V6	Revision Date:	15.01.2024

1-General Details

Name of Vessel		Type of Vessel	
IMO No		Flag / POR	
Job to be carried out (Tick)		By Registered Repair Company	<input type="checkbox"/>
		By Ship's Crew	<input type="checkbox"/>
Hot Work Period	From	To	
	Date	Date	
	Hours	Hours	
Registered Repair Company/Workshop		Contact	
Registered Agent		Contact	
Registered Chemist		Contact	

2-Detail of Hot Work Job

(For Tanker Vessels) Are adjacent tanks within a radius of 30 meters confirmed in gas free condition with HC not more than 1% LFL OR inert with HC <2% by volume OR filled with water	Gas free/Inert/filled water
(For General Cargo Vessels) The Ship is in Ballast Condition or loaded with non-hazardous cargo (provide MSDS).	Ballast/Loaded

3-Category 1

Tick below only if the hot work activity falls into any of the following. In such cases, the Port of Fujairah Chemist will remain on board throughout the entire duration of the hot work, serving as a Safety Assessor from commencement until completion.

Tanker Vessels		
1	Hot Work being carried out in Cargo, Ballast, or Bunker Tanks	YES/NO
2	Hot Work on the tank deck or less than 500 mm above the tank deck	YES/NO
3	Hot Work performed on Pipelines ISGOTT section 9.4.5.7	YES/NO
4	Hot Work carried out in the Pump Room ISGOTT section 9.4.5.4	YES/NO
5	Hot Work in the vicinity of bunker tanks ISGOTT section 9.4.5.6	YES/NO
General Cargo Ships & Service Boats		
5	Hot Work inside Ballast tanks having common boundary with Fuel Oil tanks or inside bunker tanks or on Pipelines such as bunker lines	YES/NO

4-Master Declaration

I, the undersigned, in my capacity as the Master of the vessel, hereby solemnly acknowledge and assume the ultimate responsibility and accountability for ensuring the rigorous adherence and strict compliance with 'Port of Fujairah General Instruction Hot Work', within the jurisdiction of the Port of Fujairah, encompassing both the Fujairah Offshore Anchorage Area (FOAA) and the Port of Fujairah (Berths). I commit to undertaking a comprehensive review, comprehension, and unwavering enforcement of the 'Port of Fujairah General Instruction Hot Work' as mandated and enforced by the Port of Fujairah.

By appending my signature below, I unequivocally affirm my unwavering commitment to upholding the highest standards of safety and compliance with the Port of Fujairah's safety rules, regulations, and Notice to Mariners (NTM) 148, in all Hot Work activities carried out on board the vessel under my direct command.

5-Authorization Signatures

Name of Master:		Signature with Stamp:		Date:	
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Appendix D –Declaration of Compliance for Gas Free Certificate

(This document should be filled out by the **Chemist** company's chief executive on official letterhead at the time of registration, renewal, or in the event of any changes in the management of the company).

To,

The Port Authority

Port of Fujairah,

United Arab Emirates.

Subject: Declaration of Compliance for "Gas free, Safe for entry, and Hot Work Certificate."

I, [Your Name], [Designation], representing [Company Name], hereby solemnly declare our unwavering commitment to the stringent safety protocols mandated by the Port of Fujairah for hot work operations. As Chemists, we acknowledge our paramount responsibility in ensuring strict adherence to these safety procedures. We understand that this declaration may serve as a legally binding document in the event of any breach of hot work safety regulations within the Port.

Our commitment encompasses conducting gas measurements to ensure that the work area's atmosphere aligns with Port requirements. We diligently verify the availability of the ship's firefighting appliances, including charged fire hoses, to respond promptly to unforeseen emergencies during hot work.

In cases where the work area is deemed unsafe during inspection, we pledge to report the situation to the Port of Fujairah for further evaluation and guidance, ensuring rigorous compliance with safety standards.

Additionally, we confirm that hot work jobs requested by the Vessel's Master have obtained a no objection certificate (NOC) from the Port of Fujairah. To avoid confusion and mitigate potential risks, we commit to accurately documenting the work area's condition on the "Gas free, Safe for entry, and Hot Work permit Certificate."

Furthermore, we shall adhere to the latest Notice to Mariners (NTMs).

Sincerely,

(Signature with Stamp)

Appendix E – Required documents for NOC

1. Attachment 25 Master Declaration of Compliance
2. Risk Assessment
3. Method Statement
4. Permit to Work as per vessel Safety Management System (SMS) on letterhead.
5. Registered Repair Company Attendance Letter including List of Technicians on letterhead.
6. Appendix D – Declaration of Compliance for Gas Free Certificate by Chemist / Safety Assessor

Appendix F – Gas free, Safe for entry and Hot Work Certificate (Specimen)

Certificate No													
Name of Vessel				Type of Vessel									
IMO No				Flag									
Berth No / FOAA				Certificate (New/Renewal)									
Certificate Validity		From						To					
		Date						Date					
		Hours						Hours					
Name of the Boat used for transportation to FOAA.													
Job Scope													
2-Sketch the Location of Hot Work & draw 30m radius (Reference Figure 9.2 Page 141 ISGOTT)													
Tank	Port				Centre				Stbd				
	LEL	O ₂	CO	H ₂ S	LEL	O ₂	CO	H ₂ S	LEL	O ₂	CO	H ₂ S	
	LEL	O ₂	CO	H ₂ S	LEL	O ₂	CO	H ₂ S	LEL	O ₂	CO	H ₂ S	
Condition												YES/NO/NA	
The Ship is in Ballast Condition (For Tankers)													
The Ship is in Ballast Condition or loaded with non-hazardous cargo. (Cargo Ship/Service Boats)													
All cargo tanks within a radius of at least 30m around the working area are emptied, cleaned, and gas freed with hydrocarbon vapour content reduced to not more than 1% Lower Flammable Limit (LFL), which is maintained at that level.													
All other cargo tanks greater than 30m around the working area are emptied and inerted or gas freed.													
The cargo tank below the working area is cleaned and gas freed or meets hot work requirements and is continuously ventilated.													
All slops are either removed from the ship or isolated in a tank located as far away from the hot work location as practicable, greater than 30m.													
Fire Pumps, Emergency Fire Pump working satisfactory & FFA available.													

Ship Master

Contractor

Chemist

Section F: Completion of job

Job completed

Space secured against entry

Port Authority informed about the completion of Hot Work

Name of Safety Assessor	Signature	Date/Time

Appendix H – Chapter 9, section 9.4 of the Sixth Edition of ISGOTT

Page 133 to 145.