

Notice of Change to Controlled Documents

119-123 /24 Oct 2012

Summary of Changes

NOC#	Ch., Sec., SOP	Summary	Revision#
119	SOP-GEN-007D Sec 2.0	Chief Engineer's responsibilities updated.	8
120	SOP-GEN-007D Sec 3.0	Chief Engineer's Standing Orders must include a statement that all sight glass valves are to remain closed except during the reading of the tank level.	8
121	SOP-GEN-008E Sec 3.0	Incident Secretary of ERT changed to Kathleen Nease with Megan Brooks as alternate	9
122	SOP-GEN-006B Sec 4.0 (form only)	Permit to work system and environmental policy added to crew orientation form checklist	7
123	SOP-GEN-012B	New SOP for Permit to Work System Created	1

Approvals	Approvals

- _____ **SMM TOC web page updated**
- _____ **NOC web page updated**
- _____ **SMM- each section updated**
- _____ **NOC sent to fleet**
- _____ **NOC pdf posted on CM**

NOC #119
SOP-GEO-007D Chief Engineer's Standing Orders
Section 2.0

Topic: Chief Engineer responsibilities updated.

Revision #	Section(s)
Revision #8	<p>2.0 Responsibilities</p> <p>The chief engineer is responsible for ensuring the good operating condition and maintenance of the various engineering systems on the vessel. Particular attention is to be paid to the critical systems, which are considered vital to the vessel. The vital systems are described in Chapter 10. as follows.</p> <p>Main propulsion Bow thrusters Steering gear Bilge pump MSD system Ship services generators Fuel oil purifiers Fire pump Air compressors Hydraulic system Oily water separator Anchor windlass</p> <p>Preventative maintenance of vessel equipment is tracked in the NS5 maintenance database. NS5 generates a weekly, monthly and quarterly list of maintenance jobs. It is the Chief Engineer's responsibility to ensure that those jobs are completed in a timely manner and properly documented.</p> <p>It is the responsibility of the chief engineer to assign the preventative maintenance of each system of the vessel to a position in the engineering department. Assignments must be updated with the addition of new chief engineer and new crew. Other responsibilities of the chief engineer include:</p> <ul style="list-style-type: none"> • Notifying the Port Engineer of any critical system repairs/ replacement/ operational issues. • Directs Directing emergency repairs while at sea. • Stands Standing watch as engineering officer. • Establishes Establishing and maintains maintaining all records essential to maintenance, repairs, and consumables.

	<ul style="list-style-type: none"> • Maintains Maintaining a clean, safe engine room, reports daily to bridge all fuel, water, and lube oil totals. • Immediately reports reporting any breakdowns, failures of equipment or systems essential to the safety or safe navigation of the vessel to the bridge immediately. • Maintains Maintaining a close watch and adequate preventative maintenance program to prevent the overboard discharge of prohibited materials. • Provides Providing recommendations to the Port Engineer, Operations Manager, and Master on major overhaul and equipment needs, modification, repairs and maintenance. • Sets Setting Watch Bill for engine room department. • Assists Assisting science/technical personnel in support of cruise activities. • Work is performed Performing work under the supervision of the Master. • Encourages Encouraging and enforces enforcing adherence to HSE policies to those under his supervision. • Completing a Chief Engineer's Handover before leaving the vessel.
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NOC #120
SOP-GEO-007D Chief Engineer's Standing Orders
Section 3.0

Topic: Chief Engineer's Standing Orders must include a statement that all sight glass valves are to remain closed except during the reading of the tank level.

Revision #	Section(s)
Revision #8	<p>3.0 Chief Engineer's Standing Orders</p> <p>The following components should be included in the chief engineer's standing orders. Standing Orders shall be posted in the engine room and signed by current engine room crew. The orders must include a statement that all sight glass valves must remain closed except when taking a tank reading.</p>

NOC #121
SOP-BMC-008E Emergency Response Plan in the
Event of a Major Emergency
Section 3

Topic: Updating Incident Secretary and assigning alternate.

Revision #	Section(s)
Revision #9	<p><i>3.0 Organization of the ERT</i></p> <p><u>Incident Secretary</u></p> <p>Name: Kathleen Nease Title: Quality Management Representative FAX: (979) 693-6389 Residence: 1103 Village Dr., College Station, TX 77840 Cell Phone: (903) 641-6239</p> <p><u>Responsibilities</u></p> <ul style="list-style-type: none"> • Maintains system for immediate personal contact by cell phone and email vigilance. • Maintains contact information/travel schedules of all ERT members. • Logs all ERT activities and decisions during a crisis. • Arranges for transcription of taped phone conversations and videos; helps prepare the final report. • Ensures that the Alternate Incident Secretary knows of extended travel/vacation plans. <p><u>Alternate Incident Secretary</u></p> <p>Name: Megan Brooks Title: Field Logistics Coordinator Phone: (979) 690-2787 Residence: 3957 Cedar Ridge, College Station, TX 77845 Cell Phone: (979) 220-3802</p> <p><u>Responsibilities</u></p> <ul style="list-style-type: none"> • Maintains system for immediate personal contact by cell phone and email vigilance. • Performs all of the Incident Secretary's duties when the Incident Secretary is absent or unavailable.

Communication systems on vessel	_____	Record keeping requirement	_____
Ship's Policies	_____	Muster assignment	_____
PPE expectations	_____	Fire fighting role	_____
Room Assignment	_____	MOB role	_____
PFD	_____	Abandon ship role	_____
Survival Suit	_____	Job description	_____
Muster Point	_____	Housekeeping duties	_____
Station Bill	_____	Review Permit to Work System	_____
Safety Expectations	_____	Use of NS-5 system	_____
Safety and Policy Document Locations	_____	_____	_____
Safety Management Manual	_____	Signature of crew receiving orientation	_____
Review of TDI Environmental Policy	_____	Date	_____
Working Attire	_____	_____	_____
Ship's Routines	_____	Signature of person giving orientation	_____
Trash and Waste Policies	_____	Date	_____
Fire Extinguishers	_____	_____	_____
Eye Wash Stations	_____	_____	_____
First Aid equipment/supplies	_____	_____	_____
Location/ purpose of SOLAS Manual	_____	_____	_____

NOC #123
SOP-GEN-012B Permit to Work System
All – NEW SOP

Topic: New SOP for Permit to Work System Created.

Revision #	Section(s)
Revision #1	<ul style="list-style-type: none"> • See SOP below

SOP GEN-012B	
Permit to Work System	
1.0	<u>Introduction</u>
2.0	<u>Definitions</u>
3.0	<u>References</u>
4.0	<u>Procedures</u>
4.1	<u>How to document planned or unplanned work</u>
4.2	<u>How to complete a permit</u>
5.0	<u>How to Conduct a Job Safety Analysis</u>
6.0	<u>Flowchart for Documenting Work</u>

Revision/ Review Log

Revision Date	Approved by	Reviewed by	Revision Details/ Proposal Notes
24 October 2012 Revision #1	Dr. Jim Brooks		

1.0 Introduction

A permit-to-work system is a formal written system used to control certain types of potentially hazardous work. A permit is a document that describes the work to be done and the precautions to be taken. All permits must be signed by at least two persons, one of whom must be an Authorized Person,

Permits-to-work form an essential part of safe systems of work for many maintenance activities. They allow work to start only after safe procedures have been defined and they provide a clear record that all foreseeable hazards have been considered.

A permit is needed when maintenance work can only be carried out if normal safeguards are dropped or when new hazards are introduced by the work. Examples of permits used on TDI-Brooks vessels are: confined space entry, hot work and working at heights.

2.0 Definitions

Attendant-- An individual stationed outside one or more permit spaces who monitors the authorized entrants.

Authorized Person-- Someone empowered by TDI-Brooks to approve a specific type of permit. The only authorized persons on TDI Vessels are the Master, the 1st Mate, the 2nd Mate and the Chief Engineer. In the absence of any of these crewmen, for example in a shipyard, the Port Engineer becomes an Authorized Person to sign any permit.

Job Safety Analysis (JSA)-- A written risk analysis that breaks the task down into steps, evaluates the risks in each step and assigns mitigations, usually PPE or a procedure, to minimize the risks.

JSA Meeting-- A meeting by all persons involved in performing a task for the purpose of creating or reviewing a Job Safety Analysis for that task. A copy of the written JSA is to be signed by all participants.

Working at Heights Permit-- A permit that is required for any task that requires working 5 feet or more from the surface of the deck or when working over dangerous equipment and machinery, regardless of the fall distance. [The 5 ft rule in public shipyards is derived from 29 CFR 1915.73\(d\) which states, "When employees are exposed to unguarded edges of decks, platforms, flats, and similar flat surfaces, more than 5 feet above a solid surface, the edges shall be guarded by adequate guardrails meeting the requirements of 1915.71\(j\)\(1\) and \(2\), unless the nature of the work in progress or the physical conditions prohibit the use or installation of such guardrails."](#)

Hot Work Permit—29 CFR 1915.11 defines hot work as "...any activity involving riveting, welding, burning, the use of powder-actuated tools or similar fire-producing operations." A hot work permit is required for any task that meets that definition. 29 CFR 1910.252(a)(2)(iv), "Before cutting or welding is permitted, the area shall be inspected by the individual responsible for authorizing cutting and welding operations. He shall designate precautions to be followed in granting authorization to proceed preferably in the form of a written permit."

Fire Watch Policy-- 29 CFR 1915.504(a) requires that, "The employer must create and keep a written policy that specifies the following requirements for employees performing fire watch in the workplace." The policy must include the training employees are to be given, the duties they are expected to perform, the equipment and PPE that must be provided and worn. A fire watch is required under specific conditions outlined in 29CFR 1915.504(b).

Fire Watchman—A trained employee assigned to the duty of fire watch while hot work is in progress and authorized to stop work if necessary to restore safe conditions within the hot work area. Per 29CFR 1915.504(c)(1), this person cannot perform any other duties while on fire watch. The person performing the hot work cannot be their own fire watch. Per 29 CFR 1910.252(a)(2)(iii)(B), fire watchers shall have fire extinguishing equipment readily available and be trained in its use.

Energy Isolation Permit (formerly Lockout/ Tagout)—A permit required any time a piece of equipment must be locked or tagged out to prevent activation of the equipment or the release of stored energy that could harm an employee. 29 CFR 1915.89

3.0 References

Confined Spaces - 29 CFR 1910.146, 1915.11- 16

Hot Work – 29 CFR 1915.11, 1915.14

Fire Watch - 29CFR 1915.504, 1910.252

Energy Isolation (Lockout/ Tagout) – 29 CFR 1910.147, 1910.269(d) and 1915.89

4.0 Procedures

4.1 How to document planned or unplanned work

- **Step 1:** All work start with someone realizing a task needs to be done. This can be a standard job from NS5 or an unplanned job.
- **Step 2: Create a work order in NS5** describing the work to be done and link it to the equipment if possible.
- **Step 3:** Conduct a Job Safety Analysis (JSA). A JSA simply breaks the job down into steps, lists any hazards associated with that step and describes how the hazards will be mitigated. Those performing the work – INCLUDING CONTRACTORS-- must participate in the JSA and sign it. *(TDI is currently developing JSAs for standard jobs)*. **State in the WO that a JSA was completed and filed on the bridge.**
- **Step 5:** Determine if the task will require any special permits. If not, complete the task, document the work order with details of the repair/ work and complete the work order. If the task DOES require special permits, then proceed to the next section.

4.2 How to issue a permit

Once it has been determined that a special permit is required for a task, there are several steps that need to be completed. If more than one permit is needed, these steps must be followed for each permit.

****** If one or more permits are required for a task, the title of the work order in NS5 must follow the naming protocol to indicate it includes a permit.**

Each WO title must start with an abbreviation of the permit type (“WH-“ for Working at Heights, “HW-“ for Hot Work, “EI-“ for Energy Isolation and “CS-“ for Confined Space) followed by a short description of the work. If more than one permit is required, you only need one work order, but mention both permits in the notes and include both prefixes in the title.

Ex: “HW-WH-WELD NEW LADDER RUNG ON TOP OF STERN A-FRAME”

The notes in the WO should say, “HOT WORK AND WORKING AT HEIGHTS PERMITS COMPLETED AND FILED ON BRIDGE. RUNG REPLACED.”

- **Step 6:** Complete all sections of a paper permit and get the persons doing the work and the Authorized Person to sign it. The Chief Engineer is the Authorized Person to sign Hot Work and Energy Isolation permits. The Master or Mate may serve as the Authorized Person for Working at Heights and Confined Space permits.
- **Step 7:** Post a copy of the permit at the work site and file the original on the bridge.

- **Step 8:** Notify affected persons and departments
- **Step 9:** Complete the task and have the persons doing the work and the Authorized Person sign the paper permit to close it. File the signed copy on the bridge.
- **Step 10:** Document the work order with details of the repair/ work and complete the work order.

5.0 How to conduct a Job Safety Analysis (JSA)

A JSA meeting is held with all personnel participating in the work to evaluate the hazards of the job. The steps for evaluating the hazards are listed below. TDI has developed a standard format JSA for non-permitted work, which may be found on the ship web pages, SMM Forms Only page. JSAs for Permitted work are included as part of the permits.

5.1 Job Safety Analysis (JSA)

- Identify the task to be accomplished.
- Break down the task into a series of steps and list each step of the process.
- Describe the risks associated with each step and list mitigation measures to minimize those risks.
- Identify any additional personnel or operations that may be affected.
- Notify all affected personnel of the planned work.
- List the PPE to be used.
- Determine if there is a need for any other special permits such as working at heights, hot work or energy isolation.
 1. If permits are needed, follow all steps for completing the permits.
- Establish clear methods of communication for those participating in the work.

Once the JSA has been conducted, participating personnel must sign the JSA and that JSA must be filed on the bridge.

6.0 Flowchart for Documenting Work

Procedures for documenting work: planned, unplanned, with or without permit

