

Notice of Change to Controlled Documents #242 / 8 Apr 2015

Summary of Changes

Revisions managed by: Shannon Smith

Purpose: Updates respiratory protection policy and clarifies the roles of engineering staff.

NOC#	Ch., Sec., SOP	Summary	Revision#
242	SOP-GEN-007E ALL ✓	2 nd , 3 rd engineers and oilers to assist Chief Engineer as directed.	#8
243	Galley Inspection Checklist ✓	Replaces "Food Sanitation Inspection Checklist"	Apr 2015
244	SOP-GEN-011E All ✓	Respiratory Protection- Half face respirator use addressed	#5
245	Ch 3 Sec 4 ✓	Reference to ships drawings removed. Party chief is company SMS rep.	#16
246	SOP-RYT-007N SOP-RYT-007O SOP-RYT-007P ✓ SOP-RYT-007Q SOP-RYT-007R	Vessel Specific SOPs for the Rylan T removed	
247	Ch 10 Sec 9.0 ✓	Reference to Rylan T critical systems removed	#15

<p>Date Completed _____</p> <p><u>4-9-15</u> SMM TOC page updated</p> <p><u>4-9-15</u> NOC web page updated</p> <p><u>4-9-15</u> SMM- each section updated</p> <p>_____ NOC sent to fleet</p>	<p>Date Completed _____</p> <p><u>4-9-15</u> NOC pdf posted on CM</p> <p>_____ Vessel acks recorded</p> <p>_____ Office controlled SMM updated</p>
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Approvals	Approvals
<p><u>Approved for Distribution</u></p> <p>Date <u>4/08/15</u> Initials <u>JEA</u></p> <p>Print Name <u>James Howell</u></p>	<p><u>Approved for Distribution</u></p> <p>Date <u>4/9/15</u> Initials <u>PT</u></p> <p>Print Name <u>Pete Tetro</u></p>

Approved for Distribution

Date 4/09 Initials JEB

Print Name Jim Brooks

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NOC # 242
SOP-GEN-007E Engineers/ Oilers Responsibilities
ALL

Topic: 2nd, 3rd engineers and oilers to assist Chief Engineer as directed.

Revision #	Section(s)
Revision #8	See attached new SOP

NOC # 243
Galley Inspection Checklist

Topic: Galley Inspection Checklist updated. Replaces the "Food Sanitation Inspection Checklist".

Revision #	Section(s)
April 2015	See attached new Galley Inspection Checklist

NOC # 244
SOP-GEN-11E Respiratory Protection Program
ALL

Topic: Half Face Respirators to be used for painting in enclosed spaces per SDS.

Revision #	Section(s)
Revision #5	Half face respirators added to SOP, procedures revised and updated. See attached new SOP.

NOC # 245
Chapter 3 Company Responsibility and Authority
Sec 4.0 Key Positions

Topic: Reference to ships' drawings removed

Revision #	Section(s)
Revision #16	Dr. Roger Fay, Compliance Officer and Company Security Officer (CSO)

	<p><u>Responsibilities:</u></p> <ul style="list-style-type: none"> Responsible for maintaining vessel drawings, documentation, certifications, and compliance with U.S. and International laws, regulations, and codes. <i>Flag State</i> <p>...</p> <p>Party Chief</p> <p><u>Responsibilities:</u></p> <ul style="list-style-type: none"> Responsible for science and technical operations on vessel. Directs sampling efforts. Directs vessel technical staff. May serve Serves as company vessel SMS Safety Management System representative. Coordinates science operations with master to ensure work is conducted in a manner consistent with the safe operations of the vessel.
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NOC # 246

Rylan T Vessel Specific SOPs removed from SMM ALL

Topic: The Rylan T has been removed from the fleet. All vessel specific SOPs removed from SMM.

Revision #	Section(s)
	SOP-RYT-007N, SOP-RYT-007O, SOP-RYT-007P SOP-RYT-007Q, SOP-RYT-007R

NOC # 247

Chapter 10 Maintenance of Ships and Equipment

Topic: The Rylan T has been removed from the fleet. References to RT removed from Ch 10.

Revision #	Section(s)
Rev #15	Section 9.0 Critical Systems: ORV Rylan T Entire section removed from chapter.

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SOP-GEN-007E
Engineering Staff
Responsibilities

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SOP GEN-007E
Engineering Staff Responsibilities

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Revision/ Review Log

Revision Date	Approved by	Reviewed by	Revision Details/ Proposal Notes
11 January 2010 Revision #5	Dr. Jim Brooks	HSE Manager: Sue McDonald	
15 October 2010 Revision #6	Dr. Jim Brooks Dr. Bernie Bernard	HSE Manager: Russell Putt Port Captain: Capt. Pat Fallwell	Changed to electronic format
18 December 2014 Revision #7	Dr. Jim Brooks Pete Tatro	Dr. Jim Brooks Pete Tatro Dr. James Howell Dr. Roger Fay	ORB to be kept according to flag state requirements and all shore side disposal receipts to be kept with ORB
08 April 2015 Revision #8	Dr. Jim Brooks Pete Tatro	Dr. Jim Brooks Pete Tatro Dr. James Howell	Engineering staff roles clarified

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1.0 Introduction

The Chief Engineer will direct the activities of the engineering staff to ensure that engineering systems are maintained properly within the preventative maintenance program.

All members of the engineering staff are required to follow the policies and procedures of the Safety Management System, including the proper completion of permits before beginning permitted work, conducting Job Safety Analysis before beginning non-routine tasks and ensuring that any contractors working on TDI Vessels are working in a safe manner.

2.0 Responsibilities

The Port Engineer is responsible for the maintenance of all vessels, including dry dock and shipyard activities and may be contacted at PortEngineer@tdi-bi.com.

The Chief Engineer of each vessel is responsible for the maintenance of the vessel and for promptly reporting maintenance issues to the Port Engineer that may affect the ability to sail when expected.

In addition, the Chief Engineer is responsible for:

- ensuring that all maintenance records are recorded in the appropriate log and the NS-5 system maintenance module.
- immediately reporting any maintenance issues that could affect the safety of the vessel to the Master.
- posting his own standing orders signed by himself and current ER staff.
- contacting the Port Engineer with any questions he may have about equipment or repairs.
- ensuring Oil Record Books are maintained according to the requirements of the flag state.
- keeping all receipts and certificates for shore side disposal of dirty ballast, residues, sludge or oily waste with the ORB [VMS MB 104].

Second and Third Engineers and Oilers will perform maintenance duties as directed by the Chief Engineer. It is the responsibility of each member of the engineering department to immediately report any equipment found to be failing or in need of repair.

Galley Inspection Checklist

Vessel _____ Inspection Date(DD-MONTH-YYYY) _____

Print Inspector's Name Below	Inspector's Signature Below

The First Mate is in charge of galley crew and is responsible for Galley health and safety. (SMM Ch 7 Sec 9)
Galley inspection is to be conducted weekly and the summary page sent in as part of the vessel's Weekly Report.

Checklist Options:

Satisfactory S Needs Improvement N Not Applicable N/A
Unsatisfactory U Not Observed N/O

Section 1: Food Handlers- Personal Hygiene/ Health		S	N	U	N/A	N/O
A	Food handlers have current food handler's license/certificate on CM.					
B	Food handlers know to notify supervisor if feeling ill.					
C	Food handlers shower daily.					
D	Fingernails are short and clean.					
E	Food handlers' hair is clean.					
F	Food handlers wear hair restraints, clean caps, hair nets or are bald.					
G	Clothing is clean. Dirty aprons changed daily or as needed.					
H	No sores, cuts or infections on arms or hands. Sores or cuts on other body parts are covered and dry.					
I	Disposable gloves used to handle food and changed regularly.					
J	Hands washed frequently with soap and dried with paper towels, especially when moving from non-food prep surfaces to food prep tasks.					
K	No tobacco use while on duty. Smoking/ dipping must be done in designated areas and hands washed thoroughly before returning to work.					
Comments:						

Section 2: Source of Food		S	N	U	N/A	N/O
A	Meat, poultry, eggs, dairy and other refrigerated items received cold.					
B	Frozen foods still frozen when delivered.					
C	Food examined for signs of spoilage, infestation, mishandling, expiration dates BEFORE SIGNING delivery invoice. (Return unacceptable items and insist on refund/ purchase price adjustment.)					
Comments:						

Section 3: Refrigerated Storage		S	N	U	N/A	N/O
A	Refrigerator temperature maintained at or below 40 °F (4 °C).					
B	Refrigerator temperature recorded daily in log.					
C	External thermometers visible and internal thermometers present.					
D	Products stored to allow adequate airflow to maintain temperature.					
E	Refrigerator doors kept closed as much as possible.					

F	Food in refrigerator is wrapped or in proper storage container to prevent cross contamination. (No open containers or unwrapped foods)					
G	Raw meat, fish, poultry stored separately and below cooked foods.					
H	No expired foods, salad dressings, condiments.					
I	Leftover foods discarded after 48 hours.					
J	Products used on First In/ First Out rotation (FIFO). (Rotate stock by using older items first, placing newer items behind them.)					
Comments:						

Section 4: Frozen Storage		S	N	U	N/A	N/O
A	Freezer temperature maintained at or below 0 °F (-18 °C).					
B	Freezer temperature recorded daily in log.					
C	External thermometers visible and internal thermometers near back of freezer.					
D	Products stored to allow adequate airflow to maintain temperature.					
E	Freezer doors kept closed as much as possible.					
F	Food stored in original containers or wrapped tightly. (No unwrapped foods)					
G	Products used on First In/ First Out rotation (FIFO). (Rotate stock by using older items first, placing newer items behind them.)					
Comments:						

Section 5: Dry Goods Storage		S	N	U	N/A	N/O
A	Dry stores temperature maintained at or below 70 °F (21 °C).					
B	Food stored at least 6 inches off the floor.					
C	Foods stored in original packaging or labeled container/ plastic bag.					
D	Products stored to allow adequate airflow to maintain temperature.					
E	Sufficient lighting to see all dry stores easily.					
F	Spills cleaned up immediately.					
G	Products used on First In/ First Out rotation (FIFO). (Rotate stock by using older items first, placing newer items behind them.)					
H	No signs of active rodent or insect infestation.					
Comments:						

Section 6: Food Preparation		S	N	U	N/A	N/O
A	When changing from the preparation of raw meats, poultry and seafood to produce or ready to eat items, prep area is sanitized and new, clean cutting boards and utensils are used.					
B	Work surfaces are sanitized with sanitizing spray or bleach solution after every task and new bleach solution made fresh daily or as needed.					
C	Cut resistant gloves used when knives are used. Changed and washed daily or as needed.					
D	Paper towels used to clean spills.					
E	Food thawed in refrigerator OR in clean tubs of cool water while in original packaging or plastic wrap. (Never left out overnight.)					

F	Food thermometers used to check for minimum safe internal temperatures. [Most foods = 140 °F (60 °C) , Stuffed poultry and meats 165 °F (74 °C)]					
G	Ovens and fryers not overloaded during cooking process.					
H	Cooked foods discarded or refrigerated within 3 hours of setting out in bain marie.					

Comments:

** To sanitize with bleach: (3/4 cup bleach to 1 gal water. Clean all food off surface, wipe surface with bleach solution, wait 5 minutes, rinse and air dry)

Section 7: Kitchen Equipment		S	N	U	N/A	N/O
A	Hand washing station readily available with soap, hot and cold water and paper towels.					
B	Trash disposal areas clean and uncluttered.					
C	Trash cans cleaned at regular intervals.					
D	Used grease stored for proper shore side disposal.					
E	Cardboard boxes broken down and stored away from food.					
F	All food prep equipment maintained and cleaned according to manufacturer's recommendations.					
G	Knives are separated from other utensils, washed separately and never placed where they cannot be seen (soapy water). Stored when not in use.					
H	Pot/ Dishwashing area kept clean.					
I	Proper PPE used when conducting cleaning. (See manufacturer's recommended PPE on cleaning chemical bottles or SDS)					

Comments:

Section 8: Pest Control		S	N	U	N/A	N/O
A	Pesticides stored in original containers and away from food storage or preparation areas. (Under sink OK. On/ in cabinet with food, not OK)					
B	Crew uses manufacturer recommended PPE to apply pesticides when indicated. (disposable gloves, safety glasses, ventilation?)					
C	All food is covered or sealed in plastic wrap between mealtimes. Open cookies, crackers, cereal boxes, etc. must be stored in a sealed container, Ziplock bag or the original bag sealed closed with a clip. (No easy access for pests)					
D	Pest traps are checked and replaced regularly.					
E	Remove or cover all food before applying pesticide and food handlers must change clothes after applying pesticide.					

Comments:

Section 9: Dining Area		S	N	U	N/A	N/O
A	Tables wiped down between meals.					
B	Condiments requiring refrigeration put back in fridge after each mealtime.					
C	Tables sanitized at least once a day.					
D	Once a week all non-skid washed with soap and water and entire table and cabinet surfaces sanitized.					

E	Once a week all condiments on tables wiped down and checked for expiration dates. Expired items discarded.					
F	Trash cans maintained and cleaned.					
G	Recycle bins maintained and cleaned.					
H	Floor maintained clean and free of food/ spills.					
I	Floor maintained free of cracks and trip hazards.					
Comments:						

Section 10: General Safety		S	N	U	N/A	N/O
A	Is first aid kit with burn gel, band aids, readily available and stocked?					
B	Fire blanket and CO2 fire extinguisher nearby?					
C	Is there a working power cut off switch for the fryer/ stove/ grill in case of fire?					
Comments:						

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- 7.0 [Cleaning, Maintenance and Storage](#)
- 8.0 [Certification](#)
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Revision/ Review Log


Revision Date	Approved by	Reviewed by	Revision Details/ Proposal Notes
25 May 2011 Revision #1	Dr. Jim Brooks	Dr. Jim Brooks Dr. Bernie Bernard	Topic this SOP addresses
26 July 2013 Revision #2	Dr. Jim Brooks Dr. Bernie Bernard	Dr. Jim Brooks Dr. Bernie Bernard	Reference to confined space rescue deleted. H2S reference modified.
08 April 2014 Revision #3	Dr. Jim Brooks Mr. Pete Tatro	Dr. Jim Brooks Mr. Pete Tatro	Respiratory protection section updated
28 July 2014 Revision #4	Dr. Jim Brooks Mr. Pete Tatro	Dr. Jim Brooks Mr. Pete Tatro	Asbestos in lagging addressed
09 April 2015 Revision #5	Dr. Jim Brooks Mr. Pete Tatro	Dr. Jim Brooks Mr. Pete Tatro Dr. James Howell	Half face respirators now provided for painting in the interior of the vessel as recommended by the SDS

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1.0 Introduction

TDI-Brooks Int'l has determined that employees may be exposed to harmful vapors, gasses or particulates in the following operations. Required PPE for these activities are indicated on the TDI-Brooks PPE Matrix and is in addition to whatever is required by the Safety Data Sheet.

- 1.1 Painting in the interior of the vessel – Painting on vessels is a common practice and most marine paints and epoxies contain organic compounds which could produce potentially harmful organic vapors. A half face respirator with the appropriate cartridges should be used. In addition forced air ventilation and opening all doors will reduce exposure.
- 1.2 Use of OSPHO or similar acid to treat metals- OSPHO or other acids are often used to pre-treat metal surfaces. These can produce potentially harmful acid gas vapors requiring the use of half face respirator with the appropriate cartridge.
- 1.3 Processing geochemical or geotechnical cores - On geochemical coring operations, we may take a core sample that contains hydrogen sulfide or methane. In these cases, proper ventilation of the lab and processing areas by opening all doors, using fans and removing personnel from the lab until the majority of the gas dissipates precludes the need for a respirator. We also have wall mounted and personal gas detecting devices which may be used for specific projects.
- 1.4 Firefighting- All STCW endorsed personnel onboard a vessel have been trained in firefighting and may be called upon to participate in drills or to actively fight a real fire. SCBAs with negative pressure respirator masks are a standard part of firefighting gear.
- 1.5 Asbestos- When work with lagging is involved and the area cannot be certified free of asbestos, repairs will be postponed until a certified Asbestos removal company can do the work or certify that the lagging is asbestos free. Because of the complexity of working with asbestos outlined in 29 CFR 1915 Subpart Z, and the rare situations in which it would apply, **asbestos related work will not be conducted by TDI personnel and asbestos related work by a certified asbestos removal company will not occur without a Management of Change** specifically approved and signed off by both the DPA and Port Engineer.

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2.0 Scope and Application

This program applies to all employees who may be required to wear respirators during non-routine or emergency operations.

3.0 References

The OSHA General Industry standard does not apply to offshore operations, however we do refer to 29 CFR 1910.134 Respiratory Protection Standard as a guideline for developing TDI-Brooks policies and procedures.

4.0 Responsibilities


The Program Administrator is responsible for administering the respiratory protection program. Duties of the program administrator include:

- Identifying work areas, processes or tasks that require workers to wear respirators and evaluating hazards (see **Section 1**).
- Selection of respiratory protection options (see **Section 2**).
- Monitoring respirator use to ensure respirators are used in accordance with their certifications.
- Arranging for and/ or conducting training. *Training is provided for SCBAs as part of STCW.*
- Ensuring proper storage and maintenance of respiratory protection equipment. *Vessel Captains and Managers ensure proper storage and maintenance of SCBAs, EEBDs and half face respirators on the vessels.*
- Maintaining records required by the program. *Maintenance records are kept on board as part of the regular safety gear inspections.*
- Evaluating the program.
- Updating the written program as needed.

The Program Administrator for TDI-Brooks International is the HSE Manager.

Supervisors are responsible for ensuring that the respiratory protection program is implemented in their particular areas. In addition to being knowledgeable about the program requirements for their own protection, supervisors must also ensure the employees under their charge also understand and follow the program. Duties of the supervisors include:

- Ensuring that employees under their supervision (including new hires) have

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- received appropriate training and medical evaluation every two years.
- Ensuring the availability of appropriate respirators and accessories.
- Being aware of tasks requiring the use of respiratory protection.
- Enforcing the proper use of respiratory protection when required.
- Ensuring respirators fit well and function correctly.
- Ensuring that respirators are properly cleaned, maintained and stored according to the respiratory protection plan. (Follow manufacturer's instructions)
- Coordinating with the Program Administrator on how to address respiratory hazards or other concerns regarding the program.

Each employee has the responsibility to wear his or her respirator when required and in the manner in which they were trained. Employees must also:

- Care for and maintain respirators as instructed and store them in a clean, sanitary location.
- Notify their supervisor if the respirator does not fit well, and request a new one that fits properly.
- Notify their supervisor or the Program Administrator of any respiratory hazards they feel are not adequately addressed in the workplace and of any other concerns they may have regarding the program.


5.0 Procedures

The Program Administrator will select respirators (SCBAs, EEBDs and half face respirators) to be used based on the hazards to which workers may be exposed and in accordance with industry best practices and NIOSH guidelines. SCBA gear is tested and training is conducted during onboard fire drills on the vessels. Other hazard evaluations will be revised as needed and will include:

- 5.1 A list of the potential respiratory hazards an employee may face
- 5.2 Steps to mitigate those hazards
- 5.3 The type of respirator to use in specific non-routine or emergency situations

6.0 Respirator Use and Inspection

TDI-Brooks Int'l has vessels deployed all over the world, and as a result, different equipment by different manufacturers may be used on any given vessel. The table in figure 6.1 shows the basic respirator types that may be encountered on our vessels.

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Basic Respirator Types used by TDI-Brooks International			
Type	Potential Uses	Potential Users	When needed
SCBAs Self contained breathing apparatus	Firefighting, Confined Space Rescue	SCTW trained crew	As Required
EEBDs Emergency escape breathing devices	Escape from the ship in an emergency which compromises the atmosphere	Any employee	As Required
Half Face respirators with P100 cartridges	Painting in enclosed spaces	Any employee	Per PPE Matrix
Paper filter masks (disposable)	Sanding, spray painting	Any employee	Voluntary

Figure 6.1

7.0 Cleaning, Maintenance and Storage

Respirators will be cleaned, maintained, inspected and stored according to manufacturers' instructions.

8.0 Certification

All respirators must be certified by the National Institute for Occupational Safety and Health (NIOSH) and shall be used in accordance with the terms of that certification. Also, all filters, cartridges, and canisters must be labeled with the appropriate NIOSH approved label, which must not be removed or defaced during use.

9.0 Medical Evaluations

Medical evaluations are required every two years as part of the merchant mariner physical.

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10.0 Definitions

The following definitions are important terms used in the respiratory protection standard in this SOP.

Air-purifying respirator: means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

Atmosphere-supplying respirator: means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Canister or cartridge: means a container with a filter, sorbent, or catalyst, or combination of these items, which removes specific contaminants from the air passed through the container.

Demand respirator: means an atmosphere-supplying respirator that admits breathing air into the facepiece only when a negative pressure is created inside the facepiece by inhalation.

Employee exposure: means exposure to a concentration of an airborne contaminant that would occur if the employee were not using respiratory protection.

End-of-service-life indicator (ESLI): means a system that warns the respirator user of the approach of the end of adequate respiratory protection, for example, that the sorbent is approaching saturation or is no longer effective.

Escape-only respirator: means a respirator intended to be used only for emergency exit.

Filter or air purifying element: means a component used in respirators to remove solid or liquid aerosols from the inspired air.

Filtering facepiece (dust mask): means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium.

Hood: means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Immediately dangerous to life or health (IDLH): means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

DELETE