



**MARINE**  
Safety Forum

# All Members Meeting

*November 2023*

**SALUS Technical**

*David Jamieson – Process Safety Engineer*

Can the results from  
poor Offshore  
Inspections help  
prevent the next  
major accident?

Marine Operations

**SALUS**



# Who here has been shown a HSE Inspection Letter?

Offshore Safety Directive Regulator  Department for Business, Energy & Industrial Strategy



Attn:   
Date: 20 February 2019  
Reference: COIN Case 4019561/SVC4371242

Dear Sirs,

**FORTIES E OFFSHORE INSPECTION: 15 – 17 JANUARY 2019**

**HEALTH AND SAFETY AT WORK ETC ACT 1974**

My colleague  and I undertook a regulatory inspection on the above installation. We discussed our findings with , the Offshore Installation Manager (OIM) and the Elected Safety Representatives before leaving the installation. Our findings were further discussed with you on 24 January 2019 at your offices.

I am now writing to you, on behalf of the Competent Authority, to require you take a number of actions following the inspection. In doing so, I have quoted the legislative basis for this. You should reply in writing to me within 28 days of receiving this letter stating what measures you are taking in response to the actions below, including any timescales for implementation as appropriate.

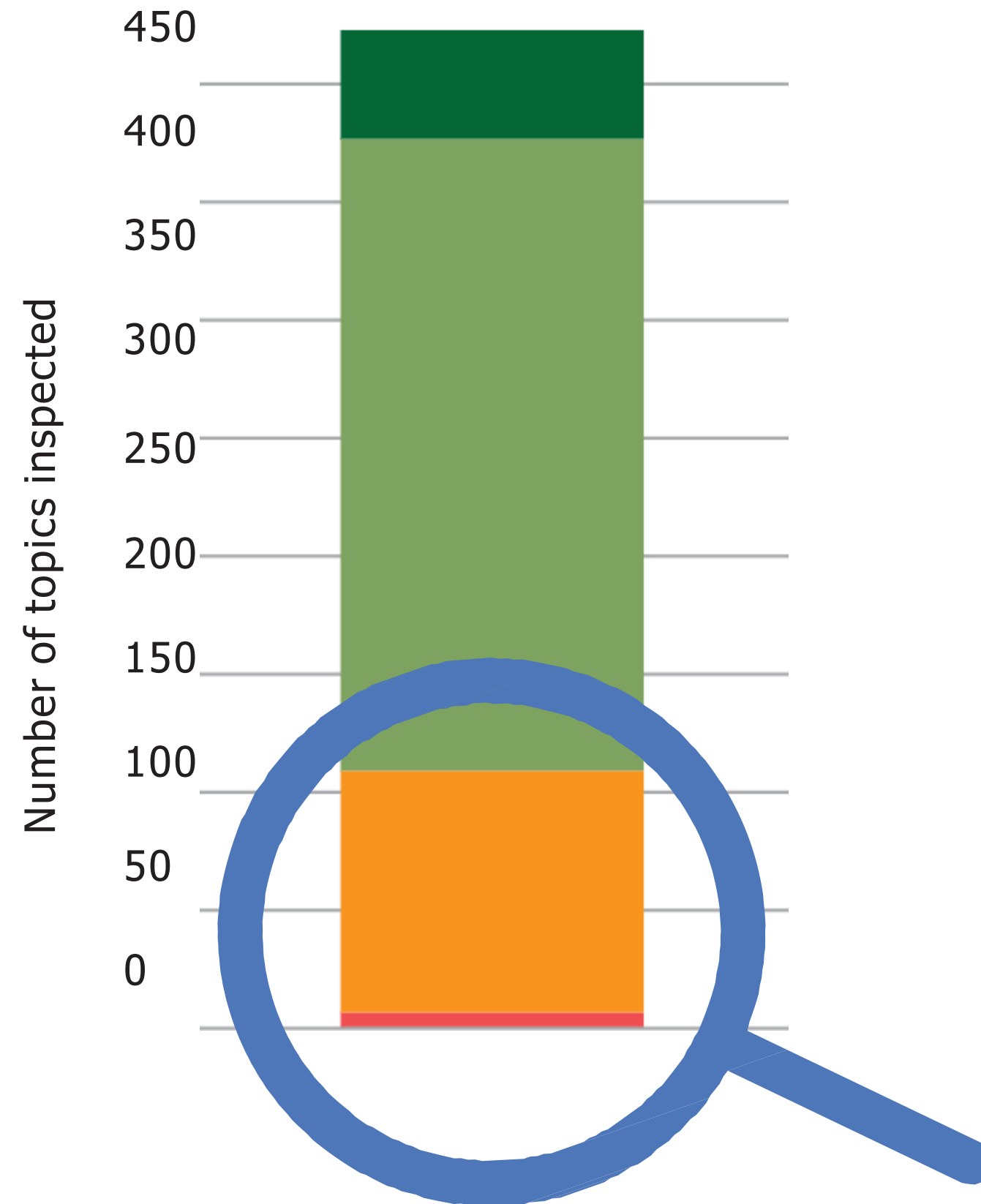
In addition, please send an electronic copy of your signed letter to my email address above, and to [ED-Offshore.Intervention-Responses@hse.gov.uk](mailto:ED-Offshore.Intervention-Responses@hse.gov.uk).

I have sent a copy of this letter to the installation's elected safety representatives in accordance with the requirements of Section 28(8) of the Health and Safety at Work etc Act 1974. This letter has also been shared with BEIS.

Energy Division – Offshore  
Lord Cullen House  
Fraser Place  
Aberdeen  
AB25 3UB  
Tel: 0200   
  
<http://www.hse.gov.uk/osdr>  
HM Principal Inspector of Health & Safety  


# What can we learn from offshore inspection scores?

2019



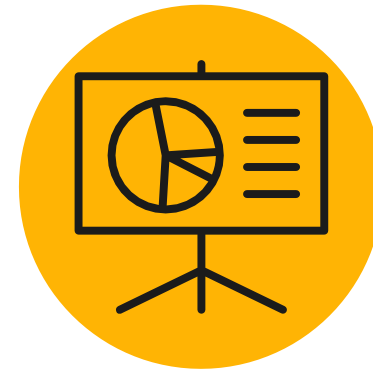
# Who are we?



Engineering

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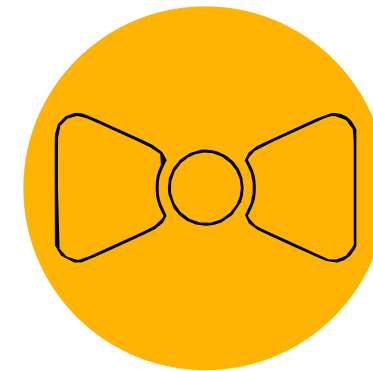
Process Safety engineering support, workshop facilitation and general UK Offshore Safety Regulations support



Training

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Bespoke Process Safety training courses and videos



Software

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Suite of cloud-based Process Safety software products related to bowtie diagrams and human factors



“Process Safety is not the absence of incidents, it is the presence of effective barriers”

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# What topics does the offshore HSE inspection cover?

**Maintenance Management**

**Operational Risk Assessment**

**Control of Work**

**Evacuation, Escape and Rescue**

**Loss of Containment**

**Workforce Engagement**

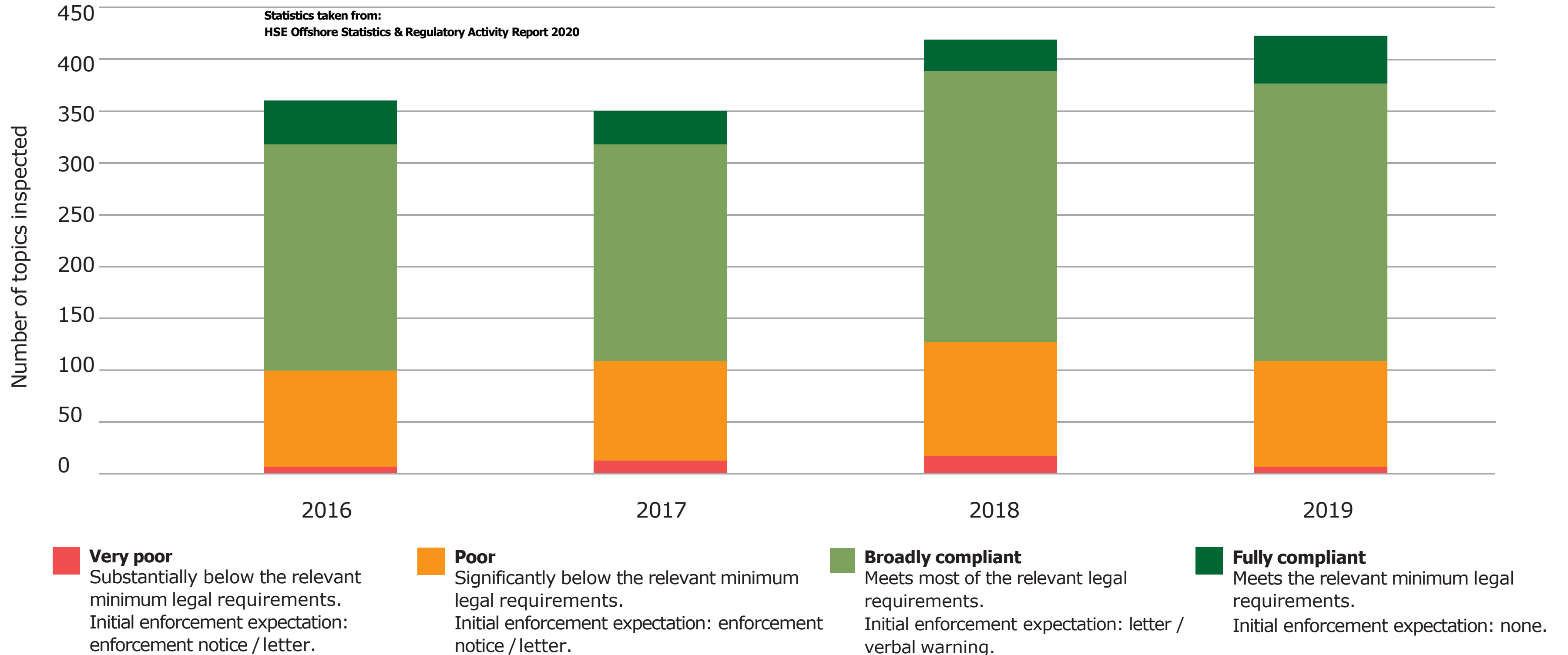
**Well Control**

**Noise and Vibration**

**Marine Operations**

**and more...**

# What can we learn from offshore inspection scores?







If we scratch below the surface, the weak signals from 2019 reveal themselves...

Statistics taken from:  
HSE Offshore Statistics & Regulatory Activity Report 2020

**1 in 4**

offshore inspections found aspects of the duty holders' operation which were significantly below the standard expected in the regulations, on average \*

**Once every 2 weeks**

an enforcement action was raised against duty holders by the regulator (either prohibition or improvement notices), on average \*

**Once every 5 days**

there was an unplanned hydrocarbon release (classified as major, significant or minor based upon their severity), on average \*

# 2019 successes

0

3

# 2020 successes

0

0

# 2019 weak signals

218

61

18

17

113



# 2020 weak signals

172

63

16

7

86



Fatalities

Major releases

Dangerous occurrences

Hydrocarbon releases topsides

Pipeline releases

Well releases

Non-hydrocarbon releases

% of Poor or Very Poor Scores in Offshore Inspections

# What did we do?

18

inspection topics assessed.

1062

non-compliances found.

147

letters issued to

56

duty holders.

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# Results

## Marine Operations

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# Vessel Operations



## Findings

Safety Zone Entry Checklists did not align with the standards outlined by Step Change and GOMO.

There was inadequate monitoring of vessels within the safety zone by the control room. In one case, there was a radio check 2-hours after entering the safety zone, with no other monitoring taking place.

ERRV had not performed the required number of verification exercises.

No evidence that the attendant standby vessel can detect vessels at a range of 16 nautical miles for collision detection as specified in the Safety Case.

# Organisation



## Findings

Inadequate organisation. E.g. part-time Marine TA, only available three days a week during key offshore operations. Other instances where there was no evidence that day-to-day operations could be supported.

Competence – mandatory marine training had not been completed by the core crew. Poorly defined job descriptions of marine crew, or personnel with responsibilities during marine operations.

# Safety Critical Equipment



## Findings

Thrusters identified as SECEs were inoperative or only functional on alternate controls, risking vessel collision. No ORA was in place.

Significant differences were observed between two heading displays in the control room, which could affect the response to mooring system failures.

The Emergency Response Plan for Mooring System Failure lacked clarity on triggers for emergency actions and their relation to offset limits displayed on the excursion monitoring system.

Various mooring line issues including not providing a demonstration of compliance with ISO 19901-7 Annex 8.2 as required in OIS 4/2013.

# Summary of other Results



## Training and Competence

No one deliberately acts unsafely. There must be a general awareness of process safety throughout an organisation so that personnel can understand how their actions can impact on safety. The workforce must be competent to perform their role and be provided with adequate support and resources.

## Risk Assessment

Risk assessments must be robust, performed at the right time, and with the right people present. The cumulative risk across an installation must be understood at all times.

## SECE

There should be a clear link between performance standards and the Maintenance Management System (MMS). There should be robust procedures in place to risk assess Safety and Environmentally Critical Equipment (SECE) impairments and backlog.

## Human Factors

Human factors should be implemented across the organisation and clear training provided for those that need it. There should be a procedure in place for Safety Critical Task Analysis (SCTA). Safety critical procedures should be subject to SCTA as appropriate.

## Emergency Response

Emergency response risk assessments and plans should be up to date, understood by all personnel, and regularly drilled.

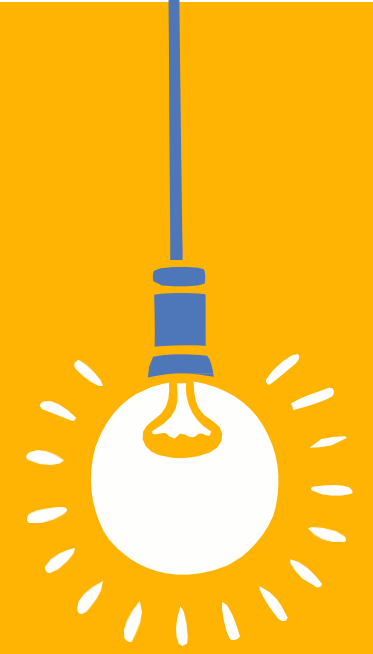


# Questions to ask your company



Training and Competence	Can you demonstrate that frontline workers being provided adequate training, competence and resources to complete their work?
Risk Assessment	How do you ensure that risk assessments are suitably robust, have the right people present, and that the controls are being followed?
SECE	Has each item in our maintenance backlog been suitably risk assessed and prioritised?
Human Factors	How are we implementing human factors across our organisation, and who is responsible?
Emergency Response	Do we record, and then learn from findings from our Emergency Response Drills?

# Ask yourselves



How confident are you that these findings wouldn't apply to your operation?

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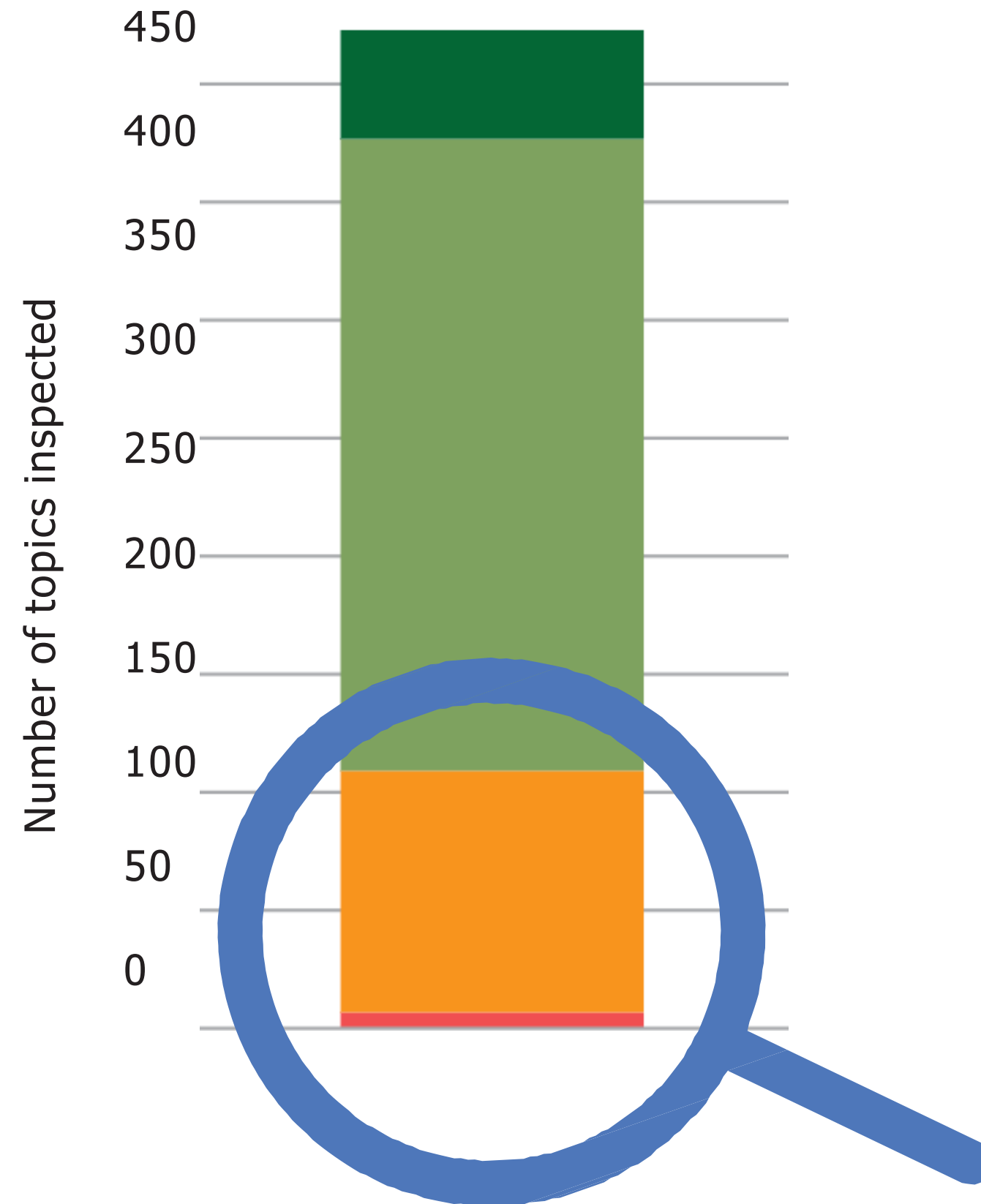
Has the workforce been suitably engaged with your management of process safety?

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Is your workforce aware of your asset's Major Accident Hazards (MAHs)?

# What can we learn from offshore inspection scores?

2019



# SALUS



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***Any Questions?***