



EXPERIENCE **MATTERS**

2016

ANNUAL REPORT

- Support of existing strategic governance through implementation of an 'Operational Excellence Governance Model' to address business ownership, change control and investment decision making structures for GEMS processes, data-sets, information and applications
- Continuation of the deployment of the ISRS plan with all GEMS Process Owners and Business Owners
- Launch of the Incident Management Committee to increase assurance on the Incident Management Process
- Development of a revised life cycle Incident Management process and supporting tool
- Standardization of methodology and training of key personnel in robust Root Cause Analysis
- Development of revised Management of Change processes and tool for the 'Execute' life cycle phase

FUTURE

The following objectives have been set for 2017:

- Deploy GEMS Role Assignment and Workflow tools
- Further integrate legacy Operations Management System documentation into GEMS
- Process Safety Management strategy and targets as highlighted in Section 2.6.1
- Continuation of the deployment of the ISRS plan with all GEMS Process Owners and Business Owners
- Continued development and deployment of the revised Management of Change processes and tools
- Develop and deliver an enhanced 'Lessons Learnt' tool to support a revised process
- Deployment of revised Incident Management and MoC tools developed in 2016

2.6.1 PROCESS SAFETY MANAGEMENT

MANAGEMENT APPROACH

An important risk for the Company is fire and explosion associated with hydrocarbon releases and loss of structural integrity and stability. As such the Company has endorsed a Process Safety Management (PSM) framework and associated tools for implementation of a comprehensive PSM program based on a well-established industry standard 'Guidelines for Risk Based Process Safety' by the Centre for Chemical Process Safety (CCPS).

When applied throughout the lifecycle of SBM Offshore activities, the PSM framework has the potential to reduce the risk of catastrophic events, with the ultimate aim of minimizing these risks on all of its units worldwide. These priorities consist of a set of activities and practices that are being embedded in the SBM Offshore Global Enterprise Management System (GEMS) and the Group Technical Standards (GTS). They have been aligned with the Company International Sustainability Rating System™ (ISRS) improvement activities.

Any Loss of Primary Containment occurring offshore is reported and communicated to the relevant parties within the organization. Volume of LOPCs are systematically analyzed to verify if they meet the Process Safety Events thresholds of IOGP Report 456, Process Safety – Recommended Practice on Key Performance Indicators. Process Safety performance is analyzed and consolidated on a monthly basis and disclosed annually.¹⁵ The results are compared to the previous years as well as benchmarked against the IOGP averages. The results are recorded and reported in accordance with the IOGP and API guidelines.

¹⁵ SBM Offshore has been reporting its Loss of Primary Containment (LOPC) results since 2014.

2 STRATEGY AND PERFORMANCE

2016 PERFORMANCE

The following objectives were set in 2016:

- Reduce the frequency of Tier 1 and 2 Process Safety Events to align with IOGP industry average. This meant a target of 0.04 for the frequency of Tier 1 PSE and 0.12 for Tier 2 PSE normalized per 200,000 exposure hours offshore
- Cascade the new PSM program within the organization
- Continue development and drive implementation of PSM

Key achievements

- Progress has been made on the implementation of identified PSM priorities, including process safety culture, risk analysis, process safety dossier¹⁶, management of change and incident investigation
- The PSM Training Program has continued to train defined functions across the organization and provide more in-depth focus on PSM requirements and implementation
- A sharepoint microsite was launched to share information with the PSM Community and all employees
- The dedicated PSM department has been strengthened in fleet Operations to ensure implementation of PSM activities in the Operations phase as well as cascading the message of the importance of PSM

Key results

- A total of 297 Loss of Primary Containment incidents were recorded, of which 100 were oil and gas releases. In total, three were classified as Tier 1 Process Safety Events and 14 as Tier 2 Process Safety Events. Normalized per 200,000 exposure hours offshore, the Tier 1 PSE Frequency was 0.07 and Tier 2 PSE Frequency was 0.34. SBM Offshore has not been able to meet the targets. This result can be attributed

¹⁶ The Process Safety Dossier is the name used at SBM Offshore for a document which contains or refers to process safety critical information. This document is a required part of internal processes implemented in 2016.

mainly to the start-up of three units in 2016, which if excluded, would demonstrate an improved performance over previous reporting years and closer to the IOGP benchmark.

- Since the introduction in 2014 of process safety reporting in line with industry standards, the Company has achieved its best ever performance for Tier 1 events (3 in 2016; 4 in 2015; 6 in 2014). Compared to 2015, the Company has seen a significant increase in the number of minor LOPCs reported. This increase demonstrates an effective reporting process and is a direct result of training, awareness campaigns and reminders on the topic.
- The majority of the liquid related Loss of Primary Containment incidents resulted in releases contained onboard.

FUTURE

The following objectives have been set for 2017:

- Tier 1 and Tier 2 targets have been set using a bottom-up approach linked to Asset Integrity and monitoring programs, with a view to continuing to reduce LOPC events across all units.
- Specifically targets are set to reduce the frequency of Tier 1 and 2 Process Safety Events (PSE) compared to 2016 i.e. Tier 1 PSE Frequency to be better than 0.05 and Tier 2 PSE Frequency to be better than 0.17.
- Continue development and drive implementation of PSM aligned with ISRS plans.
- Support PSM deployment and increase employees awareness with quarterly PSM campaigns, e-learning modules and inclusion of PSM workshops in the Global SBM Offshore Life Day in 2017.

2.6.2 INTERNATIONAL SUSTAINABILITY RATING SYSTEM™

SBM Offshore adopted DNV GL's International Sustainability Rating System™ (ISRS) system in 2014. Implementation of ISRS has allowed SBM