2022 Annual Performance Report Webinar

September 25, 2023
API Antitrust Guidelines

It is API’s policy to comply with the antitrust laws. API staff and API committee participants should observe the following guidance:

- No discussion or forecasting of prices for goods or services provided by or received by a company.
- No sharing or discussing any company’s confidential or proprietary information.
- No discussion of a company’s specific purchasing plans; merger/divestment plans, production information, inventories or costs.
- No sharing or discussion of specific company compliance cost, unless publicly available.
- No agreement or discussion regarding the purchase or sale of goods or services (such decisions are independent company decisions).
- No discussion of how individual companies intend to respond to potential market/economic scenarios or government action; discussion limited to generalities.
- No disparaging remarks and no promotional remarks regarding specific vendors, products or services.

If a discussion presents an antitrust issue, raise your concern immediately. If the discussion continues, announce that you are leaving the meeting because you have an antitrust concern, and immediately report your concern to API’s Office of the General Counsel and to your company’s own counsel.

This Reference is not a comprehensive summary of antitrust issues, nor is it a substitute for legal advice. Antitrust issues should be raised with API’s Office of the General Counsel and/or the member company’s own antitrust counsel.
Presenters

Russell Holmes, COS
Christy Lafferty, Oceaneering
Kevin Roberts, Baker Hughes
Dustin Campbell, Valaris
Kate Solomon, Hess
Lon Langlois, Hess
Deb Sanders, Equinor
COS Activities

SEMS AUDITS & CERTIFICATES
Audit Planning and Reporting
Corrective Action Plans

DATA COLLECTION, ANALYSIS & REPORTING
Annual Performance Report
Safety Shares

GOOD PRACTICE DEVELOPMENT
Safety Culture
SEMS Maturity
Learning from Normal Work

SHARING INDUSTRY KNOWLEDGE
Committees
Webinars
COS Forum
OTC

ACCREDITATION BODY
Audit Service Providers
Recognized AB for BSEE
SEMS Certificates
Stimulate cooperation within the industry to share good practices and learn from each other.

Provide a platform for collaboration between industry, the government, and other stakeholders.
How is COS data used?
Overview:

Safety Performance Indicators (SPI) Program

Learning from Incidents & Events (LFI) Program
# Safety Performance Indicators – US OCS

## Operator:
- SPI 1-10
- Work Hours
- ALL incidents – operator and contractor - within 500m of lease
- SPI 5 for Operator owned facilities and equipment

## Contractor:
- SPI 1-4, 6-10 Incidents outside 500m or for non-COS Operators
- SPI 5 for Contractor owned facilities and equipment

### SPI 1
The frequency of incidents that resulted in one or more of the following:
- A. Fatality
- B. Five or more injuries in a single incident
- C. Tier 1 process safety event
- D. Level 1 Well Control Incident - Loss of well control
- E. $1 million direct cost from damage to or loss of facility / vessel / equipment
- F. Oil spill to water > 10,000 gallons (238 barrels)

### SPI 2
The frequency of incidents that do not meet the SPI 1 definition but have resulted in one or more of the following:
- G. Tier 2 process safety event
- H. Collision resulting in property or equipment damage > $25,000
- I. Mechanical Lifting or Lowering Incident
- J. Loss of station keeping resulting in a derive or drift off
- K. Life boat, life raft, rescue boat event
- L. Level 2 Well Control Incident - Multiple Barrier Systems Failures and Challenges

### SPI 3
The number of SPI 1 and SPI 2 incidents that involved failure of one or more pieces of equipment as a contributing factor.

### SPI 4
A crane or personnel/material handling operations incident.

### SPI 5
The percentage of planned critical maintenance, inspection and testing (MIT) completed on time. Planned critical MIT deferred with a formal risk assessment and appropriate level of approval is not considered overdue.

### SPI 6
Number of work-related fatalities.

### SPI 7
The frequency of days away from work, restricted work, and job transfer injury and illnesses (DART).

### SPI 8
The frequency of recordable injuries and illnesses (RIIF).

### SPI 9
The frequency of oil spills to water > 1 barrel.

### SPI 10
The severity potential of incidents involving a dropped object.
Learning from Incidents & Events

SPI 1 and SPI 2 Incidents
• Following the completion of any incident investigations
• Only 1 form per incident – usually submitted by company that did the investigation.

High Value Learning Events (HVLE)
• Incidents that didn’t rise to the level of an SPI 1 or SPI 2, but that still provide valuable insight and learnings.
• Near misses / Close calls

• US OCS
• US Onshore/State Waters
• International
Learning from Incidents & Events

Incident Description
- Activities, conditions, and acts
- Number of people involved and their roles

Corrective Actions
- Actions taken at time of incident to mitigate consequences and secure people, equipment, and facility

Lessons Learned
- Actions taken as a result of incident to prevent recurrence at all locations

NEW for 2022RY
LFI - Areas for Improvement (AFI)

**Physical Facility, Equipment, and Process**
- Design or Layout of a Facility or Individual Piece of Equipment
- Facility or Equipment Material Specification, Fabrication and Construction, or Quality Control
- Facility or Equipment Reliability
- Instrument, Analyzer and Controls Reliability

**Administrative Processes**
- Risk Assessment and Management
- Operating Procedures or Safe Work Practices
- Management of Change
- Work Direction or Management
- Emergency Response

**People**
- Personnel Skills or Knowledge
- Quality of Task Planning and Preparation
- Individual or Group Decision Making
- Quality of Task Execution
- Quality of Hazard Mitigation
- Communication
2022 Reporting Year
SPI Data
Work Hours (Normalization Factor)

<table>
<thead>
<tr>
<th>Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>COS U.S. OCS Work Hours (millions)</td>
<td>41.7</td>
<td>44.2</td>
<td>34.5</td>
<td>45.9</td>
<td>54.7</td>
</tr>
</tbody>
</table>
Incidents involving 1 or more fatalities 0
Incidents with injuries to 5 or more 0
Tier 1 process safety events 2
Level 1 well control incidents 0
Incidents resulting in damage ≥ $1MIL 2
Oil spill to water ≥ 238 bbl (10k gallons) 0
Tier 2 process safety events: 8
Collision damage ≥ $25,000: 1
Mechanical lifting incidents: 14
Loss of station keeping: 1
Lifeboat, life raft, rescue boat: 2
Level 2 well control incidents: 0
SPI 3

SPI 3 is the number of SPI 1 and SPI 2 incidents that involved failure of one or more pieces of equipment as a contributing factor.

- 30 SPI 1 and SPI 2 Incidents Reported
- 16 (53%) of those 30 cited failure of equipment as a contributing factor

**Equipment Types:**
- 5 - Process Equipment/Pressure Vessels/Piping
- 2 - Pressure Relief Devices/Flares/Blowdown/Rupture Disks
- 5 - Mechanical Lifting Equipment/Personnel Transport Systems
- 1 - Fire/Gas Detection and Fire Fighting Systems
- 2 - Lifeboat/Life Raft/Rescue Boat/Launch and Recovery Systems
- 1 - Other
Incident Description: A contract Coiled tubing crew was in the process of rigging down coil equipment. Part of the process required the hook up of a Nitrogen bottle rack to blow compressed nitrogen into the coil tubing to flush fluids from within. The IP opened one of the nitrogen bottle valves to begin the process when the brass nipple connecting the hose to the bottle rack broke at the hose fitting. The hose, now under pressure started whipping and struck two separate IPs. One IP was struck on the right hand with causing minor laceration and bruising, the other on the right forearm with abrasions and bruising. The IP that was struck in the hand resulted in two fractured fingers.

Corrective Actions – At time of incident: Replace the failed equipment and ensured that safety whip checks were in place as required by contractor’s safe work practices.

Lessons Learned – Following incident: Post incident investigation identified failure to identify two prominent causal factors. Nitrogen bottle racks and associated hoses were delivered to location without the appropriate safety devices (whip checks) installed. The procedure for blowing the reel dry and rigging up the nitrogen bottle racks was not risk assessed and identified on the JSA. Actions taken to prevent recurrence included Safety Alert dissemination, notification to suppliers to include appropriate safety equipment, and discussion with employee about Stop Work Authority utilization when equipment is not up to standards and lack of inclusion in the JSA.
SPI 4 is a crane or personnel/material handling operations incident.

<table>
<thead>
<tr>
<th>Year</th>
<th>Count</th>
<th>Rate / 200k Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>0.187</td>
<td>0.620</td>
</tr>
<tr>
<td>2019</td>
<td>0.620</td>
<td>0.945</td>
</tr>
<tr>
<td>2020</td>
<td>0.945</td>
<td>0.623</td>
</tr>
<tr>
<td>2021</td>
<td>0.623</td>
<td>0.636</td>
</tr>
<tr>
<td>2022</td>
<td>0.636</td>
<td></td>
</tr>
</tbody>
</table>

2021 2022
Count 143 174
Rate / 200k Hours 0.623 0.636
SPI 5

SPI 5 is the percentage of planned critical maintenance, inspection and testing (MIT) completed on time. Planned critical MIT deferred with a formal risk assessment and appropriate level of approval is not considered overdue.

<table>
<thead>
<tr>
<th>Year</th>
<th>Operator</th>
<th>Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>88.0%</td>
<td>94.0%</td>
</tr>
<tr>
<td>2019</td>
<td>94.0%</td>
<td>98.0%</td>
</tr>
<tr>
<td>2020</td>
<td>90.4%</td>
<td>97.0%</td>
</tr>
<tr>
<td>2021</td>
<td>65.0%</td>
<td>98.0%</td>
</tr>
<tr>
<td>2022</td>
<td>95.0%</td>
<td>113%</td>
</tr>
</tbody>
</table>
SPI 6 is number of work-related fatalities
SPI 7 is the frequency of days away from work, restricted work, and job-transfer injuries and illnesses (DART)
SPI 8 is the frequency of recordable injuries and illnesses (RIIF)
SPI 9 is the frequency of oil spills to water ≥ 1 barrel
SPI 10

SPI 10 is the severity potential of incidents involving a dropped object

- Based on definitions developed by the DROPSOnline network
- 305 Dropped Objects reported
  - 121 Slight injury potential
  - 82 Minor injury potential
  - 24 Major injury potential
  - 78 Fatal injury potential
- 255 of 305 (84%) resulted in zero harm
2022 Reporting Year
LFI Data
Areas for Improvement

**U.S. OCS**

**2018-2022**

<table>
<thead>
<tr>
<th>Top 5 AFI 2018-2022</th>
<th>2022</th>
<th>5-yr Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Procedures or Safe Work Practices</td>
<td>38.9%</td>
<td>46.3%</td>
</tr>
<tr>
<td>Quality of Task Planning &amp; Preparation</td>
<td>16.7%</td>
<td>29.0%</td>
</tr>
<tr>
<td>Facility or Equipment Design or Layout</td>
<td>22.2%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Quality of Task Execution</td>
<td>9.3%</td>
<td>23.3%</td>
</tr>
<tr>
<td>Individual or Group Decision Making</td>
<td>11.1%</td>
<td>22.4%</td>
</tr>
</tbody>
</table>

**Areas for Improvement (U.S. OCS only)**

- Operating Procedures or Safe Work Practices
- Quality of Task Planning & Preparation
- Facility or Equipment Design or Layout
- Quality of Task Execution
- Individual or Group Decision Making
- Process or Equipment Design or Layout
- Process or Equip Material Spec, Fab and Construction
- Process or Equipment Reliability
- Instrument, Analyzer and Controls Reliability
- Risk Assessment and Management
- Operating Procedures or Safe Work Practices
- Management of Change
- Work Direction or Management
- Emergency Response
- Personnel Skills or Knowledge
- Quality of Task Planning and Preparation
- Individual or Group Decision-Making
- Quality of Task Execution
- Quality of Hazard Mitigation
- Communication

- 2018
- 2019
- 2020
- 2021
- 2022
## NEW – SEMS Elements per LFI & Crane Incident

<table>
<thead>
<tr>
<th>SEMS Elements</th>
<th>2022</th>
<th>2-yr Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>6.5%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Interface Management</td>
<td>3.2%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Risk Assessment and Risk Controls</td>
<td>33.9%</td>
<td>29.8%</td>
</tr>
<tr>
<td>Procedures</td>
<td>32.3%</td>
<td>34.2%</td>
</tr>
<tr>
<td>Safe Work Management &amp; Safe Work Practices</td>
<td>51.6%</td>
<td>47.4%</td>
</tr>
<tr>
<td>Knowledge and Skills</td>
<td>14.5%</td>
<td>18.4%</td>
</tr>
<tr>
<td>Asset Design and Integrity</td>
<td>25.8%</td>
<td>22.8%</td>
</tr>
<tr>
<td>Management of Change</td>
<td>3.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Pre-Startup Review</td>
<td>6.5%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Emergency Response and Preparedness</td>
<td>1.6%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Investigating and Learning from Incidents</td>
<td>16.1%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Evaluation and Improvement of SEMS</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>SEMS Information</td>
<td>0.0%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>
**Incident Description:** A contract diver was in dive control attempting to mount the DP (dynamic positioning) lights. The employee was attempting to remove a plastic zip tie with an alternative cutting device (Craftsman cutters) and could not get the cutter to engage the zip tie. The employee proceeded to open the cutting device and was trying to pull the blade across and through the zip tie. As the employee was pulling the blade in a downward motion, it contacted the left index finger which resulted in a laceration.

**Corrective Actions – At time of incident:** All STOP called. Task assignments evaluated and correct tool for the task was identified.

**Lessons Learned – Following incident:** Implement a new updated contractor onboarding process and orientation. Identify correct tool to be used for task on JSEA.

**Additional Findings:** Employee was a contract employee and had 20+ years of diving experience. The cutter tool that the employee was using was not used in the way it was designed for use. Employee was not listed on any of the JSEAs for the work taking place. There was not a clear understanding of what level of safety orientation the contract employee received prior to arrival. No gloves were worn at the time of the incident. Supervisor did not assign the employee the task of hanging the lights.
2020-2022 SEMS Audit Data
<table>
<thead>
<tr>
<th># of Audits</th>
<th>47 Audits</th>
<th>790 Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Deficiencies</td>
<td>223 Non-Conformances</td>
<td>226 Areas of Concern</td>
</tr>
<tr>
<td>4 SEMS Elements = 55% of Deficiencies</td>
<td>Assurance of Quality and Mechanical Integrity</td>
<td>Hazards Analysis</td>
</tr>
<tr>
<td></td>
<td>Safe Work Practices</td>
<td>Operating Procedures</td>
</tr>
</tbody>
</table>
2020-2022 Deficiencies per SEMS Element
Four Phases of SEMS Maturity

**MAINTAIN:** Do you confirm your SEMS is working as designed, and review and act when you say you will?

**DOCUMENT:** Do you document what you do, update documents appropriately, and provide access to the right people?

**IMPLEMENT:** Do you do what you say?

**ESTABLISH:** Do you say what you do?
2020-2022 Deficiencies by SEMS Maturity Phase

### SEMS Elements

**API RP 75, 4th Edition**

<table>
<thead>
<tr>
<th>Phase</th>
<th>SEMS Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Emergency Response and Control</td>
</tr>
<tr>
<td>Safety and Environmental Information</td>
<td>Investigation of Incidents</td>
</tr>
<tr>
<td>Hazards Analysis</td>
<td>Auditing</td>
</tr>
<tr>
<td>Management of Change</td>
<td>Recordkeeping and Documentation</td>
</tr>
<tr>
<td>Operating Procedures</td>
<td>Stop Work Authority</td>
</tr>
<tr>
<td>Safe Work Practices</td>
<td>Ultimate Work Authority</td>
</tr>
<tr>
<td>Training</td>
<td>Employee Participation Program</td>
</tr>
<tr>
<td>Mechanical Integrity</td>
<td>Reporting of Unsafe Working Conditions</td>
</tr>
<tr>
<td>Pre-Startup Review</td>
<td></td>
</tr>
</tbody>
</table>

- **Establish**: 27%
- **Implement**: 45%
- **Document**: 22%
- **Maintain**: 6%
- **Pre-Startup Review**: 30%

[Deb Sanders]
2020-2022 Deficiencies by SEMS Maturity Phase

Safe Work Practices

- Document: 21%
- Implement: 55%
- Maintain: 3%
- Establish: 21%

Operating Procedures

- Document: 20%
- Implement: 29%
- Maintain: 10%
- Establish: 41%
2020-2022 Deficiencies by SEMS Maturity Phase

Hazards Analysis
- Establish 15%
- Implement 60%
- Document 23%
- Maintain 2%

Mechanical Integrity
- Establish 51%
- Document 8%
- Implement 38%
- Maintain 3%
2020-2022 SEMS Audits

Sample Good Practices

A midday pause for safety meeting is held daily to see if any of the projects initiated at tower change have changed and require additional evaluation.

Annual audit of facility drawings and P&IDs.

A comprehensive safety harness and lanyard pre-use inspection checklist documents the equipment used for each job.
Become a Member!

• Annual Membership Fee
  • API Members - $0 additional annual fee to join COS
  • Non-API Members - $5000 annual membership fee

• For Additional Information:
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  • Julia FitzGerald – fitzgeraldj@centerforoffshoresafety.org
Available for download:

www.centerforoffshoresafety.org
Stay Connected – www.centerforoffshoresafety.org

CENTER FOR OFFSHORE SAFETY

The Center for Offshore Safety (COS) is an industry sponsored group focused exclusively on offshore safety on the U.S. Outer Continental Shelf (OCS). The Center serves the US offshore oil and natural gas industry with the purpose of adopting standards of excellence to ensure continuous improvement in safety and offshore operational integrity.

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Accreditation

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Questions?

Thank you!