



ONSHORE SAFETY ALLIANCE

Annual Report

2024



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The Onshore Safety Alliance Annual Report is intended to highlight and communicate progress from within the calendar year. This includes the annual reporting of safety data from the previous calendar year.

Data published in the OSA Annual Report for the 2023 reporting year are based on data voluntarily reported by exploration and production operators, drilling contractors, and service companies operating onshore in the United States. Although the OSA reviews reported data to identify internal inconsistencies and unusual period-to-period changes, in general, the OSA is not able to verify the accuracy or completeness of the reported data. The American Petroleum Institute (API), the OSA and any of their employees, subcontractors, consultants, or other assigns make no warranty or representation, either express or implied, with respect to the accuracy, completeness, or utility of the information contained herein, or assume any liability or responsibility for any use, or the results of such use, of any information or process disclosed in this publication, or represent that its use would not infringe upon privately owned rights.

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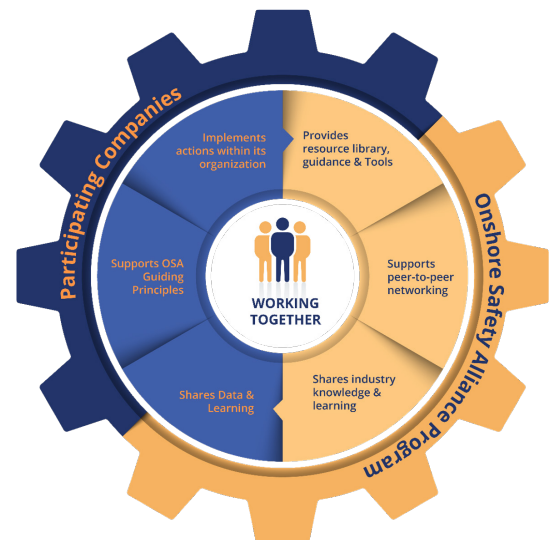


JOINT MESSAGE FROM OSA LEADERSHIP

The Onshore Safety Alliance (OSA) continues to see strong growth and progress in the first nine months of 2024. Additional safety share forums, better alignment of safety data and reporting methodologies, as well as sustained membership growth are all highlights of the year. As the OSA completes its fourth year of raising the bar on safety, below is a review of the progress seen in these three areas through August of 2024. Going forward, the OSA will continue to strengthen itself as a voluntary, dues-free initiative with the primary goal of maintaining safety while reducing and eliminating serious injuries and fatalities in U.S. upstream onshore operations.

Sharing of Safety Related Learnings: Building on the success seen in 2023, the OSA continues to offer basin-specific industry safety share forums. These highly popular events allow members to share incidents and associated learnings with attendees. Attendees of these safety share forums are highly encouraged to ask questions, share experiences and knowledge, as well as pass-on the learnings gained to other colleagues in their organization. The safety share forums also provide the OSA an opportunity to expand its network with state and local organizations as well as an opportunity to expand the initiative's membership.

Targeting events at the basin-level proved especially beneficial in highlighting common safety challenges seen in the field. In May, the OSA worked with the Appalachian STEPs Network, an Appalachian Basin safety organization, as well as the Pennsylvania Independent Oil & Gas Association (PIOGA) to hold its first event east of the Mississippi River in the Appalachian Basin. The event had over 160 registered attendees, doubling our average attendance from the 2023 safety share forums. In August, the OSA returned to Oklahoma City, working closely with the Petroleum Alliance of Oklahoma in the second annual Oklahoma Safety Share Forum. Engaging with other organizations to host these events at the basin-level has proven especially critical. Connecting the OSA to smaller organizations, drives up attendance at safety share forums, which in turn allows for more sharing, more learning and more collaboration.



Looking ahead to the back-half of 2024, the OSA intends to hold additional industry safety share forums. The OSA hopes to return to the Permian Basin as well as potentially established new events in the Williston Basin, the Powder River Basin, and the Eagle Ford Shale. Supporting content, such as safety bulletins, will be tailored to address and reinforce issues common to each basin.

Collection, Aggregation & Analysis of Safety Data: This was the third year that the OSA collected, aggregated and presented safety data from its membership. Highlights and specifics of this data will be presented later in this report.

Collecting and aggregating participants' safety data is a major component of the OSA. Working to ensure alignment of this safety data and standardized analytical methodologies is equally important to ensure the highest data quality. New in 2024, the OSA has engaged with our member and non-member trade associations to adjust, align, and improve our reporting protocols. This ensures the data the OSA collects is consistent with data collected across the broader industry. Aligning reporting methodologies and standardizing the reported data also provides us confidence in recognizing key safety data trends.

Growing the OSA's Membership: Since last year, the OSA has grown from 39 member companies to 43 member companies. Thus far in the year, three new operators (89 Energy, Chesapeake Energy and Ovintiv) and one service company (Key Energy Services) have joined. Upticks of new companies expressing an interest to join the OSA are commonly seen after each safety share forum. This type of uptick in interest is a testament to the safety share forums' success and popularity.

To further drive growth and outreach, in the Fall of 2024, the OSA will unveil a national stakeholder group as well as basin-specific stakeholder groups. The primary goal of these groups will be to pool and leverage resources when hosting events, such as safety share forums, workshops, or discussion panels. With secondary goals being to share safety bulletins and hazard alerts to a broader community, connect the OSA's resources to smaller organizations who may need guidance in better developing their own safety programs, and finally growing the OSA's membership.

Through the OSA, companies continue to raise the bar on safety. We have and continue to accomplish this objective as an as an initiative through bridging industry knowledge, advancing safety data and safety culture, all while aiming to reduce serious injuries and fatalities. As the OSA leadership, we are proud to stand by our accomplishments, the resources we produce and share, and the growth of the organization. We would like to thank our members for their commitment to advancing and achieving our mission and we look forward to continuing this journey with you.



SEAN FLYNN

Continental Resources
OSA Chair



GARRETT JACKSON

Devon Energy
OSA Rising Chair



JEFF ATTEBERRY

American Petroleum Institute
Sr Policy Advisor Upstream &
OSA Manager



OSA PARTICIPANTS

Building an alliance of operators, drilling contractors, service companies and trade associations, while working together to protect our industry's workers, drive down incident rates, and improve safety.

OPERATORS & PRODUCERS



DRILLING CONTRACTORS



SERVICE COMPANIES



CHARTER TRADE ASSOCIATIONS





OSA PARTICIPANT INSIGHTS

ADVANCING SAFETY THROUGH SHARING & LEARNING

“

Safety is not about data or numbers—It is about people

Devon Energy believes that doing the right thing, in the right way, is not only good for our people and the environment, but also for our business.”



Garrett Jackson
Vice President EHS & Measurement
Devon Energy

As a founding participant of the Onshore Safety Alliance (OSA), we support its aim to work together collaboratively to improve safety performance across the U.S. onshore oil and natural gas industry. The sharing of best practices and lessons learned is essential to discovering new and better ways to continue improving safety performance across the industry. We regularly participate and assist in facilitating industry peer roundtables, basin-specific work groups and other events to demonstrate our commitment to safety-related learning and sharing.

Devon derives consistent value from being a regular attendee of the OSA safety share forums, which continue to improve in the quality and depth over time. The industry is now sharing more critical learnings from SIF events to better understand the challenges, learn from the events, and apply those learnings to help reduce SIF events.

The U.S. oil and gas industry is rich in innovation and creativity that has spurred exponential growth since the start of the shale revolution, the ripple effects of which both domestic and abroad are hard to overstate. However, for the same period, upstream operations have experienced a fatality rate that has ranged from five to eight times greater than the national average for all U.S. industries, according to the OSA – despite improved technology decreasing operational risk.

We believe the OSA is a critical catalyst to harnessing the same innovation and creativity that spurred the shale revolution to meet the challenge of improving our collective industry's safety performance. Safety is not about data or numbers—it is about people. It is about families who suffer deeply when a loved one is lost or experiences a life-altering injury on the job. Industry leaders at all levels and across operators, service companies, vendors and suppliers are joining the OSA and sharing critical learnings to improve these trends. Most importantly, they are working together to bring everyone across our jobsites home at the end of each shift.

COLLABORATION ACROSS INDUSTRY SEGMENTS



**43 MEMBER COMPANIES,
EMPLOYING OVER 500,000
WORKERS**

22

operators employing
nearly **243,000** workers

7

drilling contractors
with over **37,000**
workers

14

service companies
with over **223,000**
workers

“

Our participation with the Onshore Safety Alliance has been transformative, providing us with insights and collaborative opportunities that have elevated our safety standards and solidified our role as an industry leader in responsible operations”

“Being a part of the Onshore Safety Alliance has not only enriched our safety programs with innovative ideas but also strengthened our industry relationships, underscoring our commitment to ensuring every individual returns home safely.”



Mike Garvin
President
Patterson-UTI Drilling Company

At Patterson-UTI Drilling, we strive to set the benchmark for drilling performance and health, safety, and environmental (HSE) standards through innovation and operational excellence. Our commitment to HSE is part of our Core Values, and we are proud to actively participate in the Onshore Safety Alliance (OSA), which is key to advancing safety and environmental stewardship across our industry.

The OSA promotes continuous improvement and accountability, allowing us to share best practices, identify hazards, and develop proactive solutions to protect our employees, the public, and the environment. It provides a unique platform for collective action, ensuring safety remains central to all our efforts. Our engagement in the OSA’s governance and decision-making processes has deepened our sense of ownership and commitment to the alliance’s objectives. What distinguishes the OSA is its collaborative and focused approach, uniting industry leaders who share a common goal of prioritizing safety in onshore operations.



OSA PROGRAM SUMMARY & 3 YEAR BUSINESS PLAN

PROGRAM INTRODUCTION

The following section highlights the OSA program, guiding principles, general setup, the three-year business plan, the participant actions, and the program components.

The OSA's annual business plan for 2024 details specific activities that will help the OSA continue to meet its mission and objectives. The business plan is fully compatible and in alignment with the OSA guiding principles and the current OSA charter. It is designed to be implemented over an annual period, January 2024 thru December 2024, and be inclusive of a 3-year strategic outlook (January 2024 through December 2026). It will be assessed and refreshed annually to measure the effectiveness of the OSA while incorporating learnings and new opportunities to reduce serious injury and fatality (SIF) events onshore. Future business plans will incorporate lessons learned through the execution of the previous business plan and activities. The OSA business plan is subject to change and is intended to be aspirational in nature while providing transparency to members and stakeholders.

The business plan is consistent with the vision for the OSA to eliminate SIF events in U.S. onshore E&P operations by:

- Continuously improving & consistently reinforcing operation safety practices across the industry,
- Providing an educational platform for collaboration between industry, the government, and other stakeholders, and
- Stimulating cooperation within industry to share best practices and learn from each other

OSA GUIDING PRINCIPLES

COMMIT TO THE REDUCTION OF INCIDENTS

We are an industry committed to the elimination of fatalities and life altering events.

DRIVE INDUSTRY IMPROVEMENT

We will use and make recommendations for the development of best practices that drive consistency for safe planning and execution of work.

WORK TOGETHER TO IMPROVE SAFETY

We will work together as **operators, contractors and suppliers** to learn and share best practices to drive collective industry improvement in both personal and process safety.

BUILD A SAFE WORKPLACE

We will create a work environment where everyone feels accountable for their safety and the safety of others. To that end, we will adopt the concept of Human Organizational Performance (HOP).

The five Human Performance Principles are:

- a. **Error is Normal:** Acknowledge that errors are a part of human nature and work processes. Instead of aiming for zero errors, focus on creating systems that are resilient to errors. This can be done by emphasizing the importance of designing work processes and safety measures that account for the inevitability of human error.
- b. **Blame Fixes Nothing:** Cultivate a blame-free environment where individuals feel safe to report incidents, near misses, and safety concerns. Encourage transparency and open communication about safety incidents without fear of retribution.
- c. **Context Drives Behaviors:** Recognize that people's actions are influenced by their work environment. Emphasize the importance of understanding the context in which work is performed and how it impacts safety behaviors.
- d. **Learning is Vital:** Promote continuous learning from both successful and unsuccessful work activities. Encourage regular safety training, learning from incidents, and sharing of best practices among members.
- e. **How We Respond Matters:** Ensure that responses to safety incidents are constructive and lead to improvements rather than punitive measures. Outline a positive and constructive approach to responding to safety incidents.

PROGRAM BACKGROUND

All stakeholders within the oil and gas industry share the goal of maintaining safe operations. The OSA program is designed to enhance a company's existing safety program by leveraging the collective expertise of the industry and addressing processes and behaviors that can lead to SIFs.

It is framed around five areas within a typical company's operations, and these areas are designed to both align with participating companies' safety management systems as well as provide opportunity for program growth.

There are four core components to the OSA program – participant actions, resource library, data collection & benchmarking and industry sharing & learning. Each of these program components are intended to help companies improve their internal operations across the five areas.



FIGURE 1: PROGRAM COMPONENTS ARE IN GRAY SECTIONS SURROUNDING THE FIVE INTERNAL OPERATIONAL AREAS.





FIGURE 2: THE FIVE INTERNAL OPERATIONAL AREAS AND DESCRIPTIONS.

LEADERSHIP	• Demonstrated commitment • Visible leadership • Objectives & resources
PLANNING	• Standards • High risk identification, evaluation & planning • Operational deviation planning
WORKFORCE	• Training & qualifications • Communication & engagement • Oversight & feedback
WORK	• Methods, procedures & safe work practices • Defined roles & responsibilities • Customer/Contractor management
IMPROVEMENT	• Event reporting, investigation & learning • Verification & follow-up • Monitoring & review



STRATEGIC PRIORITIES FOR NEXT THE THREE YEARS (2024-2026)

The business plan is divided into 4 long-term strategic priorities highlighted below. Successful execution of these priorities is crucial to the continued success of the OSA. The milestones and activities highlighted for each strategic priority are forward looking into calendar year 2025. This is to give members a vision of how next year's activities will align to our strategic priorities.

Implement OSA Programs to **Support OSA** Participant Actions

Enhance Data Collection, Analysis & Reporting

Develop **Nationwide Consortium** to Support OSA's Charter

Evaluate & Implement **Revenue Generating Strategies**

I. STRATEGIC PRIORITY 1: IMPLEMENT OSA PROGRAMS TO SUPPORT OSA PARTICIPANT ACTIONS

Description and Scope:

Relentlessly and effectively implement OSA programs designed to significantly increase overall industry adherence to the key OSA Participant Actions. These actions include:

- 1. Implement a Life Saving Actions Program
- 2. Ensure worker awareness and knowledge of the Life Saving Actions
- 3. Ensure Field Supervisor understanding of key safety leadership principles, such as human and organizational performance principles.
- 4. Implement an incident investigation and learning program
- 5. Perform risk assessments for common process safety hazards
- 6. Present and mitigate high consequence well control incidents
- 7. Participate and support the Onshore Safety Alliance as well as its associated work groups and programs.

Objectives:

- Plan and execute annual content generation and program plans. These plans shall consist of safety share forums, safety bulletins, hazard alerts, workshops, webinars, and other resource library materials.
- Maintain existing content in the OSA Resource Library.
- Ensure high level learnings and takeaways can be shared for each industry safety share forum.
- Through quarterly newsletter, communicate content, resource, and training opportunities with stakeholder groups that adhere to existing content and support participant actions.

Key Performance Indicators:

- Complete all desired activities & tasks

II. STRATEGIC PRIORITY 2: ENHANCE DATA COLLECTION, ANALYSIS & REPORTING

Description and Scope:

The OSA uses data to help the onshore industry identify high risk areas to drive improvements in safety performance and supporting content generation. The OSA will collect, analyze, and report aggregated data shared by participants to continually improve the OSA program through actions approved by the Program Execution Steering Committee and to increase industry awareness of safety trends.

Objectives:

- Execute a data collection, reporting and analysis process.
- Collect, analyze and report aggregated results in the OSA Annual Report.
- Share aggregated data results using tools appropriate for the intended audience, such as summary report to API Upstream Committee and publication in the OSA Annual Report.
- Use data collection and analysis results to drive program enhancements and opportunities for internal improvement and better external alignment to partner trade associations and stakeholder groups.

Key Performance Indicators:

- 100% of OSA participants share SIF and WCI information



III. STRATEGIC PRIORITY 3: DEVELOP NATIONAL CONSORTIUM TO SUPPORT OSA'S CHARTER

Description and Scope:

Develop a true, nationwide consortium in the U.S. onshore oil and gas industry collaborating to implement tangible, impactful changes consistent with the OSA's charter. This includes establishing both a nationwide stakeholder group and, where applicable, basin-specific stakeholder groups. These stakeholder groups may be composed of founding trade associations, state trade associations, other oil and gas trade associations, oil and gas safety related non-profit groups, government non-regulatory entities, general safety non-profit groups, government regulatory entities, third party compliance vendors, academia, and insurers.

Objectives:

- Strengthen working relationships with OSA participants, partners, and stakeholders to achieve OSA objectives.
- Enhanced outreach to other industry members to achieve business plan elements.
- Implement external stakeholder group at the national level.
- Develop and implement basin-specific engagement plans and stakeholder groups, where appropriate, to increase the effectiveness of the OSA's programs in key areas.

Key Performance Indicators:

- Hold annual meetings with founding trade association partners and stakeholder groups.
- Maintain and build membership in stakeholder groups.



IV. STRATEGIC PRIORITY 4: EVALUATE AND IMPLEMENT REVENUE GENERATION STRATEGIES

Description and Scope:

Evaluate and implement, where warranted, revenue generating strategies to ensure adequate funding and long-term sustainability of the OSA and its associated programs and projects. Membership dues and charging for OSA events are out of scope at this point. Asking for sponsorships of OSA safety share forums is in scope and should be considered if the budget warrants.

Objectives:

- Maintain monthly budget tracking and actuals.
- Communicate state of the program budget to PESC on a monthly basis.
- To further bolster the budget have an executable plan in place to secure sponsorships for the OSA safety share forums.

Key Performance Indicators:

- If needed, secure sponsors for all industry safety share forums.





PARTICIPANT ACTIONS

When a company joins the OSA, they commit to carry out defined safety actions within their organization as well as support the OSA program, its principles and data reporting and sharing requirements. Because every company is at a different point along their safety journey, the actions are designed to allow flexibility for companies to implement in a way that fits within their operations while still meeting the safety objective. There are currently seven actions within the program which support both personal and process safety improvements. The actions help companies take meaningful steps within their operations to reduce hazards, prevent incidents within their organizations and build a culture of safety.

FIGURE 3: SHOWS HOW THE ACTIONS OF THE OSA PARTICIPANTS ALIGN WITH THE FIVE INTERNAL OPERATIONAL AREAS.



PARTICIPANT ACTION 1: Implement a Life Saving Actions Program

AREA: Work
Implement a program, typically called LIFE SAVING ACTIONS (LSA), within your organization that educates and emphasizes the most critical safety hazards and key actions that workers can take to protect themselves and their colleagues from these hazards.

PARTICIPANT ACTION 2: Ensure Worker Awareness and Knowledge of Life Savings Actions

AREA: Workforce
Require that your employees on location have completed an orientation with a focus on all life saving actions and ask that contractors and subcontractors on location ensure that their workers have also completed an orientation with a focus on life saving actions.

PARTICIPANT ACTION 3: Ensure Field Level Supervisor Understanding of Key Safety Leadership

AREA: Workforce Improvement Leadership
Require that all field level supervisors who work on member's locations or work on member's behalf, including field level supervisors for contractors and subcontractors, have completed safety leadership training.

PARTICIPANT ACTION 4: Implement a SIF Incident Investigation and Learning Program

AREA: Improvement
Apply investigative and learning processes, tools or methods to identify root causes and latent factors and to confirm corrective actions are in place that prevents SIF Events. A process that shares learnings related to the prevention of SIF Events.

PARTICIPANT ACTION 5: Perform Risk Assessments for Common Process Safety Hazards

AREA: Planning
Perform risk assessment(s) for potentially high-risk activities associated with drilling, completions, flowback, well service and ongoing production operations.

PARTICIPANT ACTION 6: Improve Effectiveness in Preventing and Mitigating High Consequence Well Control Incidents

AREA: Workforce Improvement Work
Take the following steps to improve the effectiveness of your well control programs:

- Create a well control barrier philosophy appropriate within your organization.
- Verify that appropriate worksite personnel understand and maintain well control barriers and practices.
- Ensure that appropriate worksite personnel are trained in well control methods through an accredited program.
- Implement an internal method to track well control incidents and lessons learned to prevent future incidents.

PARTICIPANT ACTION 7: Participate in and Support the Onshore Safety Alliance

AREA: Leadership
Implement the OSA participant actions within your organization and support the OSA Guiding Principles by sharing lessons learned from incidents and near misses with other program participants and providing data as specified by the OSA program.

RESOURCE LIBRARY

The OSA provides guidance, best practices and tools to assist participating companies as they work to implement the Participant Actions within their organization. Companies may be at different places on their safety journey and may have different resource abilities to focus on safety. Where possible, the OSA seeks to leverage existing good practices and avoid duplication both across the industry as well as by individual companies. Individual companies should not have to expend resources unnecessarily to recreate safety tools and procedures from scratch. We also hope that through this sharing, good practices may be harmonized across the industry.

And because safety is not proprietary, the OSA has made these tools and its participant platform available at no cost to any company seeking additional safety resources through our website at onshoresafetyalliance.org.

OSA Risk Matrix

For the purposes of OSA guidance materials, the OSA has selected the below simplified 3x3 risk matrix to use in its guidance for learning educational purposes. OSA participants should select a risk matrix appropriate for its specific operations.

Asset Criticality Description (All Barriers)	1	2	3
Expected score - Likely	1	2	3
Conditions may allow for escalation	1	2	3
Expected conditions may allow for escalation	1	2	3
Personnel may not be trained for the activity	1	2	3
Time required to respond to the activity	1	2	3

Asset Criticality Description (All Barriers)

Asset Criticality Description (All Barriers)	1	2	3
Expected score - Likely	1	2	3
Conditions may allow for escalation	1	2	3
Expected conditions may allow for escalation	1	2	3
Personnel may not be trained for the activity	1	2	3
Time required to respond to the activity	1	2	3

Learning Teams Methodology

Learning teams bring together those who are closest to the work to create a shared understanding of how work actually gets done in the field. This approach creates an environment of open communication, making it easier to understand the complexity of the work.

Working in Hot Weather

With the summer temperatures upon us, it is important employees are aware of the dangers associated with extreme hot temperatures and are prepared to work in them. To reduce the risks of heat illness you need to know when you are at risk, how to recognize the symptoms and what to do if symptoms occur.

Know the Heat Index:

- As temperatures increase, so does your risk to heat illness.
- Download the [OSHA-NIOSH Heat Index](#) to your smart device to assist in calculating the heat index, provide reminders of corrective measures, and review signs and symptoms and first aid measures of heat illness.
- As the heat index rises above 103°F, there is a high risk for heat-related illness, so additional measures to protect workers are needed.
 - Increase rest periods and determine appropriate work/rest schedules.
 - Reduce workload and pace strenuous work tasks.
 - Schedule most strenuous activities during the coolest parts of the day.
 - Remind workers to drink plenty of water every 15 to 20 minutes.

UNDERSTAND WHAT THE WELL IS DOING AT ALL TIMES

The diagram illustrates the well control barriers and safeguards. It shows a sequence of barriers from the wellhead down to the reservoir. Key components include:

- Wellhead:** Includes barriers like the wellhead cap and wellhead pressure indicators.
- Surface Well Control:** Includes barriers like the wellhead cap and wellhead pressure indicators.
- Subsurface Well Control:** Includes barriers like the wellhead cap and wellhead pressure indicators.
- Reservoir:** Includes barriers like the wellhead cap and wellhead pressure indicators.

WHAT IS A LEARNING TEAM? WHAT ARE THE KEY BENEFITS? WHEN DO WE USE THEM?

A learning team is a diverse group of people who are directly involved in a work activity or have useful information concerning an event.

The purpose of a learning team is to learn and improve operational knowledge. Applying learning teams to the prevention of fatalities, serious injuries, and losses of containment results in stronger safeguards.

Learning teams help tell the story about the complexity of the work we do and how work gets done in the field.

- Focus on identifying and strengthening safeguards
- Generate possible solutions in hours not weeks
- Identify error traps and latent conditions that other tools may not detect
- Engage the people that do the work resulting in...

Learning teams can be used when things have gone well or when things have gone wrong. Learning teams can be applied to safety, reliability, and business processes.

- Explore normal and successful work (Proactive Learning): Evaluate safeguards and examine if they are aligned with how work is done.
- Learn from events

Relative Humidity (%)

Heat Index (Apparent Temperature)

With Prolonged Exposure and/or Physical Activity

Heat stroke or sunstroke likely

Extreme Caution

Symptoms: muscle cramps, and/or heat exhaustion likely

Caution

Fatigue possible

Resource Library

Participant Action 1: Participate in and Support the Onshore Safety Alliance

Action: Implement all applicable OSA Participant Actions within your organization and support the OSA Guiding Principles by sharing lessons learned from incidents and near misses with other program participants and providing data as specified by the OSA program.

OSA Resources may be found at onshoresafetyalliance.org/Resources/Resource-Library



DATA COLLECTION AND ANALYSIS

Participating companies also share SIF and well control incident data to help provide better safety data analysis specific to onshore exploration and production (E&P) operations. In time, we hope this sharing of data will improve industry knowledge and learning and identifying trends to better target where improvement is needed within the industry. All shared data is aggregated or non-attributable and evaluated collectively to guide the program commitments, benchmarking and resources library. Looking long-term, as the OSA refines its annual reporting methodologies internally, the organization will continue to engage founding participant trade associations such as IADC and AXPC as well as stakeholder trade associations like IOGP. The goal of this collaboration is simply to strengthen alignment on reporting data which in turn improves data quality and confidence in analytical conclusions.

INDUSTRY SHARING AND LEARNING

A key long-term objective of the OSA is to bridge industry knowledge through sharing of practices and learnings between the industry, regulators and the public. The OSA implements many tools to foster this sharing. Through standing work teams, conferences, forums and webinars, safety and health professional experts collaborate and share strategies, information and best practices to prevent and reduce incidents. These activities provide a forum where all companies – operators, drilling contractors and service companies – who are equally invested in having safe operating practices can discuss safety topics through open and honest conversations. As a collective, the industry benefits from a stronger collaboration and standardization of safety practices across operators and contractors.



2023 OSA MEMBERSHIP SAFETY PERFORMANCE

INTRODUCTION

One of the objectives of the OSA is to use data to determine where the industry currently stands in terms of E&P onshore safety and track performance over time. To avoid potential duplication in reporting, the OSA has opted to present the data by company type: combined – operators and service companies, only operators, only service companies, and drilling contractors. After the final sentence of the opening paragraph, please add the following sentences. For greater context within the upstream onshore segment, the data presented in this report is based only on OSA member performance, not industry-wide data. However, in 2023, OSA operators accounted for 32% of the total wells spud in onshore U.S. operations. No other such data collection exists for the upstream onshore industry - underscoring the importance of the this dataset and it's alignment with OSA's mission to push for better standardization and alignment of safety data that is reported and published in the oil and gas industry.

For the third iteration of the OSA data collection, which covered calendar year 2023, 28 operator and service companies reported Serious Injuries and Fatalities (SIF) event data and Well Control Incident (WCI) data to the OSA. The respondents consist of 19 Operators, with a response rate of 100%, and 9 Well Service Companies, with a response rate of 82%. This is an increase in participation from the 2022 data collection, during which the OSA received SIF data from 18 operator and service companies and WCI data from 17 operator and service companies. All seven eligible OSA participant drilling companies reported their incident data to the International Association of Drilling Contractor's (IADC) Incident Statistics Program (ISP). Because of the different reporting mechanisms, the data presented across the three company types does not align completely. Furthermore, as the OSA matures and continues to work towards aligning the definition of a SIF across the industry, this may introduce some variability into the SIF data collected by the OSA.

The OSA will utilize this data to work towards achieving goals outlined by our guiding principles – committing to the reduction of incidents, driving industry improvement, working together to improve safety and building a safe workplace.

2023 HIGHLIGHTS



28 companies shared incident information with the program. Including 19 operators and 9 service companies. The drilling contractors report to IADC. That report will be summarized later in the report.



OSA participant companies range from **25 employees** to **over 90,000 employees**.



In 2023, **58 actual SIF events** and **385 potential SIF events** were reported to the OSA by **28 companies**.



The **actual SIF rate** for 2023 was **0.023 per 100 full-time workers**, and the **Potential SIF rate** for 2023 was **0.150**.



Line of Fire was the top hazard for both actual and potential SIFs.



In 2023, companies reported **22 WCIs classified** as Level 1 or Level 2.

OSA DEFINITION OF SIF

The OSA defines a SIF as an incident or near miss that results in or has the potential to produce a fatal or life-altering injury or illness. Life-altering injuries or illnesses result in permanent or significant loss of a body part, organ function or otherwise permanently changes or disables that person's normal life activity.

Incidents can be classified as actual or potential SIFs. Identifying potential SIFs involves some subjectivity, but these incidents provide a key learning opportunity for the industry.

SIF events may also be referred within the industry as near misses, significant near misses, serious exposure, potentially serious incidents or high potential events.

Disclaimer: Data published in the OSA's 2024 Annual Report are based on data voluntarily reported by (OSA) member companies for U.S. operations. Although the OSA reviews reported data to identify internal inconsistencies, in general the OSA is not able to verify the accuracy of reported data. The OSA therefore cannot guarantee the accuracy of the data and disclaims any liability in connection with the data.

SERIOUS INJURY AND FATALITY DATA

Incidents can be classified as actual or potential SIFs. Identifying potential SIFs involves some subjectivity, but these incidents provide a key learning opportunity for the industry. The concept of a SIF event has evolved within the safety professional community over the last several decades and is not unique to the oil and gas industry. Historically, focus has been placed on addressing total recordable injury rates (TRIR), as defined by the Occupational Safety and Health Administration (OSHA), and progress has been made in successfully reducing these types of incidents. Now, many companies are advancing in their journey towards safety excellence by moving beyond TRIR and expanding their focus to the elimination of serious injuries and life altering events. These events may also be referred to as near misses, significant near misses or high potential events.

For the 2023 annual Reporting, the OSA collected the count of SIF events by common hazard, broken out by actual and potential events. For all actual SIFs, the OSA requested an associated incident report also be submitted. The OSA also collected the total hours worked for onshore U.S. operations in 2023 and used these hours to calculate event and consequence rates. Due to confidentiality guidelines, the 2021 and 2022 datasets exclude service company information. However, the 2023 data includes both service company and operator data.

COMBINED OPERATOR & SERVICE COMPANY DATA

Actual SIF Data

In 2023, the actual SIF rate for all companies was 0.023 per 100 full-time workers, a negligible increase from 0.022 in 2022. Operators reported an actual SIF rate of 0.021, while service companies reported an actual SIF rate of 0.032. There were 58 actual SIFs reported for all companies, including 46 actual SIFs for operators and 12 for service companies.

TABLE 1: ACTUAL SIF RATES PER 100 FULL-TIME WORKERS

Year	2021	2022	2023
All Companies	0.008	0.022	0.023
Operators	0.008	0.022	0.021
Service Companies	-	-	0.032

TABLE 2: ACTUAL SIF EVENT COUNTS

Year	2021	2022	2023
All Companies	11	39	58
Operators	11	39	46
Service Companies	-	-	12

Of the 58 actual SIFs reported for all companies in 2023, line of fire accounted for (36%) events, followed by Other (19%) and energy isolation (10%). Line of fire remains the most frequently reported common hazard to the OSA, consistent with the previous two years. The figures and tables below detail the distribution of actual SIFs by common hazard for operators and service companies.

TABLE 3: COUNT OF ACTUAL SIF EVENTS BY COMMON HAZARD: OPERATORS & SERVICE COMPANIES

Common Hazard	2021	2022	2023
Line of Fire	7	12	21
Confined Space	0	0	0
Energy Isolation	3	3	6
Safe Mechanical Lifting	0	4	5
Bypassing Safety Controls	0	7	4
Work at Heights	0	7	4
Driving	0	0	3
Hot Work	0	1	3
Work Authorization	1	0	1
Other	0	5	11
Total	11	39	58

FIGURE 4: ACTUAL SIF EVENTS BY COMMON HAZARD: OPERATORS & SERVICE COMPANIES

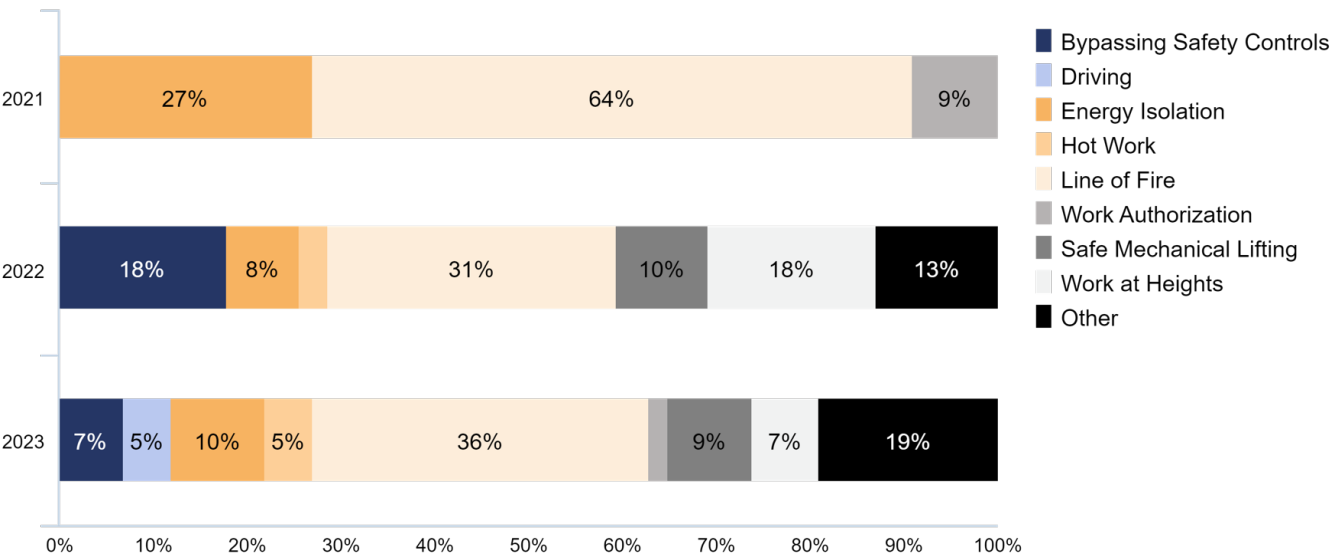


TABLE 4: COUNT OF ACTUAL SIF EVENTS BY COMMON HAZARD: OPERATORS

Common Hazard	2021	2022	2023
Line of Fire	7	12	15
Confined Space	0	0	0
Energy Isolation	3	3	5
Safe Mechanical Lifting	0	4	5
Bypassing Safety Controls	0	7	4
Work at Heights	0	7	3
Driving	0	0	2
Hot Work	0	1	3
Work Authorization	1	0	1
Other	0	5	8
Total	11	39	46

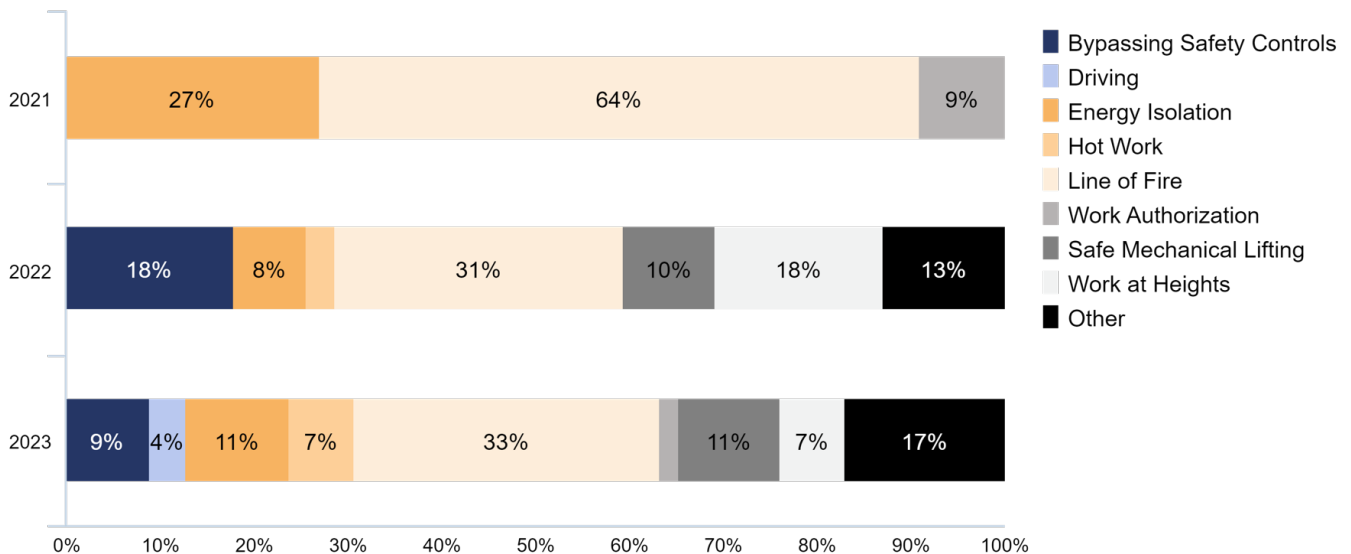
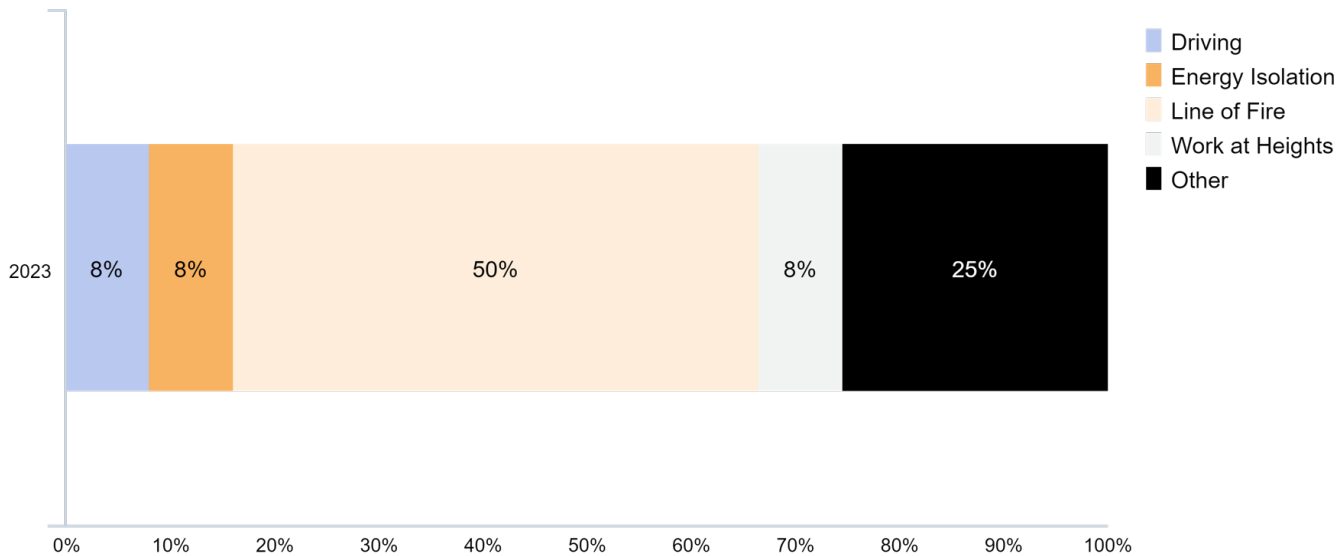
FIGURE 5: ACTUAL SIF EVENTS BY COMMON HAZARD: OPERATORS

TABLE 5: COUNT OF ACTUAL SIF EVENTS BY COMMON HAZARD: SERVICE COMPANIES

Common Hazard	2023
Line of Fire	6
Confined Space	0
Energy Isolation	1
Safe Mechanical Lifting	0
Bypassing Safety Controls	0
Work at Heights	1
Driving	1
Hot Work	0
Work Authorization	0
Other	3
Total	12

FIGURE 6: ACTUAL SIF EVENTS BY COMMON HAZARD: SERVICE COMPANIES



The OSA received a SIF incident report for 45 (78%) of the actual SIF events reported for 2023. Based on the SIF incident reports, there were 6 events where at least one fatality occurred, resulting in 6 fatalities, which is a fatality rate of 0.002 per 100 full-time workers. All fatalities reported were reported by operators. Additionally, there were 41 events where at least one life-altering injury or illness occurred, resulting in 44 life-altering injuries and illnesses, which is a rate of 0.017 life-altering injuries and illnesses per 100 full-time workers.

TABLE 6: ACTUAL FATALITY RATES PER 100 FULL-TIME WORKERS

Year	2021	2022	2023
All Companies	0.001	0.003	0.002
Operators	0.001	0.003	0.003
Service Companies	-	-	0.000

Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.



TABLE 7: ACTUAL FATALITY COUNTS

Year	2021	2022	2023
All Companies	2	5	6
Operators	2	5	6
Service Companies	-	-	0

Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.

TABLE 8: ACTUAL LIFE-ALTERING INJURY AND ILLNESS RATES PER 100 FULL-TIME WORKERS

Year	2021	2022	2023
All Companies	0.005	0.014	0.017
Operators	0.005	0.014	0.017
Service Companies	-	-	0.016

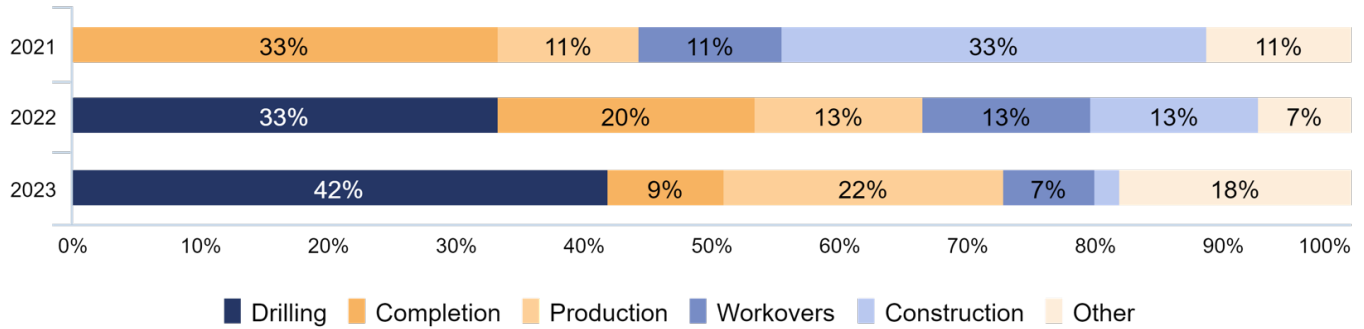
Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.

TABLE 9: ACTUAL LIFE-ALTERING INJURY AND ILLNESS COUNTS

Year	2021	2022	2023
All Companies	7	25	44
Operators	7	25	38
Service Companies	-	-	6

Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.

**FIGURE 7: ACTUAL SIF EVENTS BY STAGE OF OPERATION:
OPERATORS & SERVICE COMPANIES**



Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.



TABLE 10: COUNT OF ACTUAL SIF EVENTS BY STAGE OF OPERATION: OPERATORS & SERVICE COMPANIES

Common Hazard	2021	2022	2023
Drilling	0	10	19
Production	1	4	10
Completion	3	6	4
Workovers	1	4	3
Construction	3	4	1
Other	1	2	8
Total	9	30	45

Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.

For the calendar year 2023, the most frequently reported stage of operation was drilling, during which the leading common hazard for actual SIF events was Line of fire (47%). Line of fire is the most frequently reported common hazard, representing 35% of actual SIF events with an associated incident report.

TABLE 11: COUNT OF ACTUAL SIF EVENTS BY STAGE OF OPERATION BY COMMON HAZARD: OPERATORS & SERVICE COMPANIES (2023)

Common Hazard	Completion	Construction	Drilling	Production	Workovers	Other	Total
Line of Fire	0	0	9	4	0	3	16
Energy Isolation	1	0	1	2	1	0	5
Safe Mechanical Lifting	1	1	2	0	1	0	5
Bypassing Safety Controls	1	0	1	1	1	2	5
Other	0	0	3	1	0	1	5
Driving	0	0	0	1	0	2	3
Hot Work	1	0	1	1	0	0	3
Work at Heights	0	0	2	0	0	0	2
Work Authorization	0	0	0	1	0	0	1
Total	4	1	19	10	3	8	45

Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.

Potential SIF Data

In 2023, the potential SIF rate for all companies was 0.150 per 100 full-time workers, down slightly from 0.172 in 2022. Operators reported a potential SIF rate of 0.158, while service companies reported a potential SIF rate of 0.104. There were 385 potential SIFs reported for all companies, including 346 potential SIFs for operators and 39 for service companies. Incident reports were not required for potential SIFs; therefore, the learning value of the incidents is limited to the information voluntarily provided by companies.

TABLE 12: POTENTIAL SIF RATES PER 100 FULL-TIME WORKERS

Year	2021	2022	2023
All Companies	0.156	0.172	0.150
Operators	0.156	0.172	0.158
Service Companies	-	-	0.104



TABLE 13: POTENTIAL SIF EVENT COUNTS

Year	2021	2022	2023
All Companies	214	303	385
Operators	214	303	346
Service Companies	-	-	39

Data is from SIF Incident Reports. Some actual SIF events did not have an associated incident report.

Of the 385 potential SIFs, line of fire was again the common hazard with the highest reported number of potential incidents (39%), followed by work at heights (15%). The distribution of common hazards involved with potential SIFs in 2023 is similar to those in previous years. The figures and tables below detail the distribution of potential SIFs by common hazard for operators and service companies.



TABLE 14: COUNT OF POTENTIAL SIF EVENTS BY COMMON HAZARD OPERATORS & SERVICE COMPANIES

Common Hazard	2021	2022	2023
Line of Fire	79	82	149
Work at Heights	18	36	56
Energy Isolation	23	36	46
Other	40	69	45
Driving	13	11	32
Safe Mechanical Lifting	15	37	20
Hot Work	8	9	15
Work Authorization	7	10	12
Confined Space	3	4	6
Bypassing Safety Controls	8	9	4
Total	214	303	385

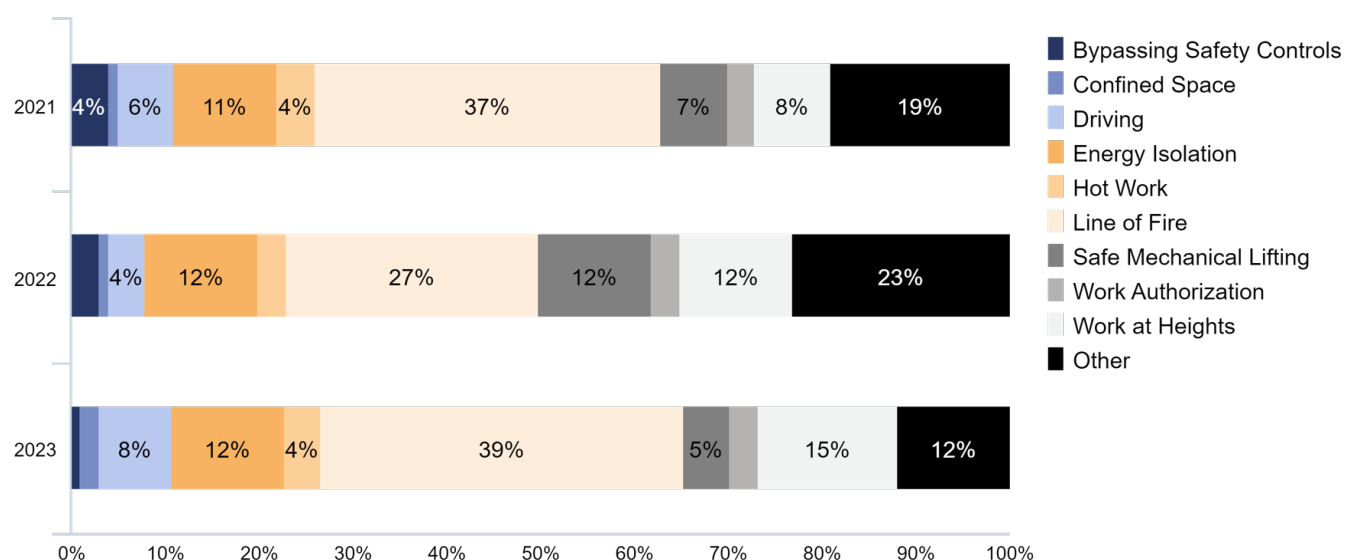
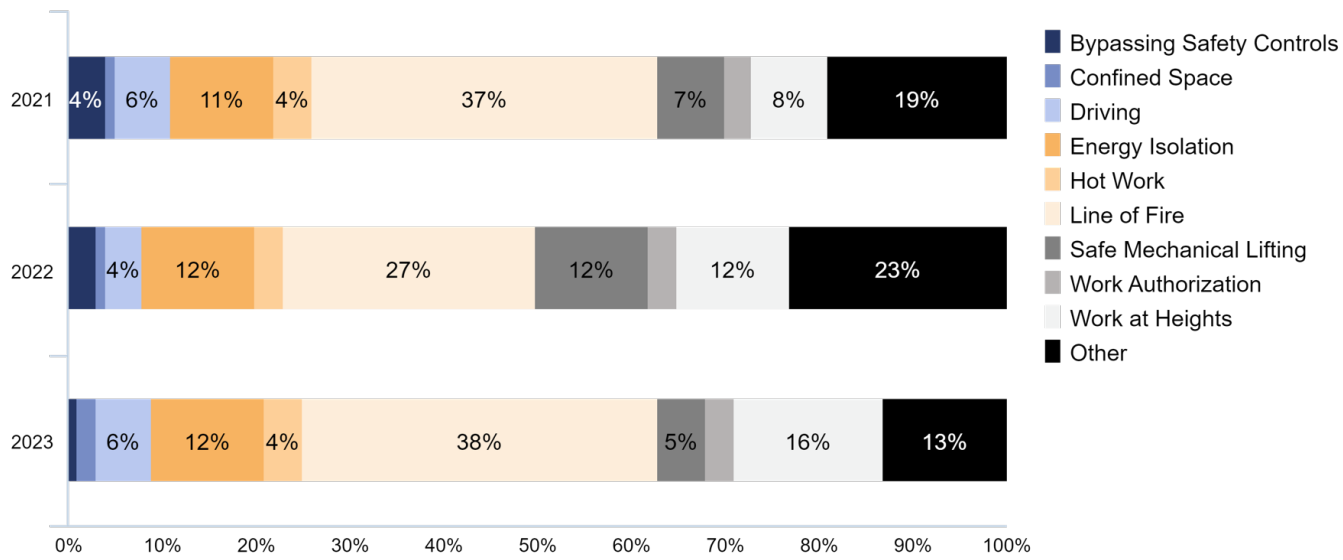
FIGURE 8: POTENTIAL SIF EVENTS BY COMMON HAZARD: OPERATORS & SERVICE COMPANIES

TABLE 15: COUNT OF POTENTIAL SIF EVENTS BY COMMON HAZARD: OPERATORS

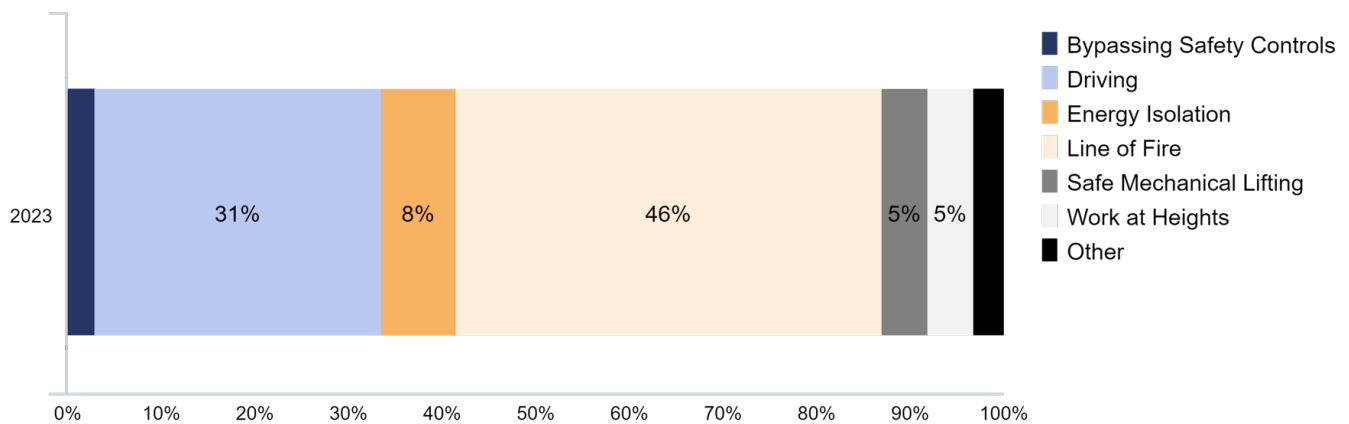
Common Hazard	2021	2022	2023
Line of Fire	79	82	131
Work at Heights	18	36	54
Other	40	69	44
Energy Isolation	23	36	43
Driving	13	11	20
Safe Mechanical Lifting	15	37	18
Hot Work	8	9	15
Work Authorization	7	10	12
Confined Space	3	4	6
Bypassing Safety Controls	8	9	3
Total	214	303	346

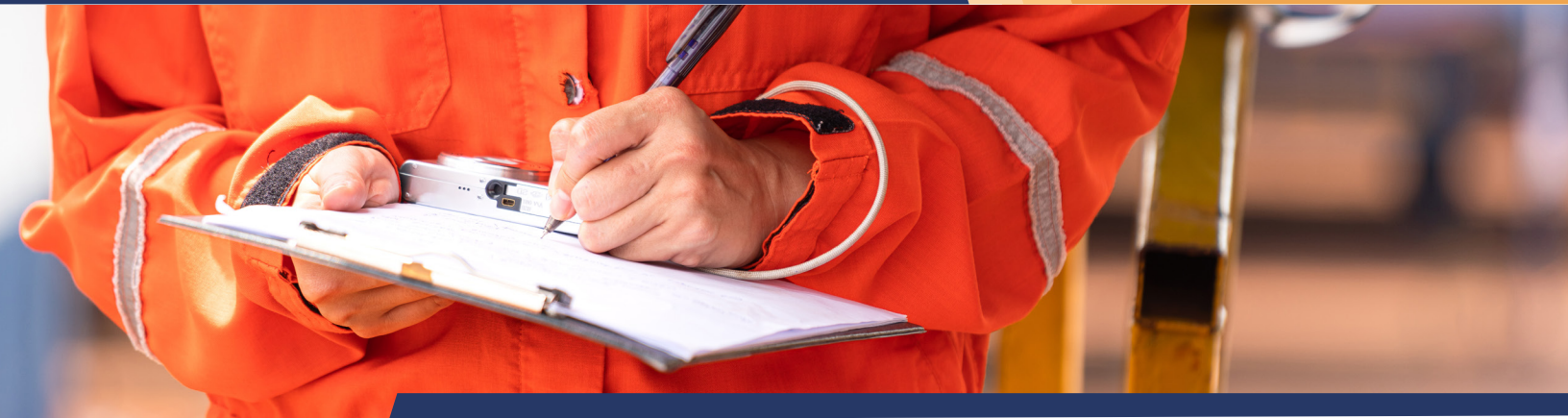
FIGURE 9: POTENTIAL SIF EVENTS BY COMMON HAZARD: OPERATORS



**TABLE 16: COUNT OF POTENTIAL SIF EVENTS BY COMMON HAZARD:
SERVICE COMPANIES**

Common Hazard	2023
Line of Fire	18
Driving	12
Energy Isolation	3
Safe Mechanical Lifting	2
Work at Heights	2
Bypassing Safety Controls	1
Other	1
Hot Work	0
Work Authorization	0
Confined Space	0
Total	39

**FIGURE 10: POTENTIAL SIF EVENTS BY COMMON HAZARD:
SERVICE COMPANIES**



WELL CONTROL INCIDENT DATA

The OSA defines a Well Control Incident (WCI) as the loss of well control and well control barriers. The OSA collected the count of WCI by stage of operation, broken out by Level 1, 2, 3 and 4. Levels 1, 2 and 3 were required, and Level 4 was optional for submission. For Level 1 and 2, the OSA asked companies to also submit an incident report.

Definition	
Level 1	A well control event where uncontrolled flow of hydrocarbons or other fluids occurs and results in a surface release or hazardous underground flow.
Level 2	Unintended influx or kick managed with a defined well control method but with complications. No uncontrolled flow occurs.
Level 3	Unintended Influx or Kick managed with a defined well control method but with no complications. No uncontrolled flow occurs.
Level 4	Proactive identification of improvements in well control equipment, training, processes or maintenance to prevent a well control incident.

In 2023, as reported to the OSA, there were 6 Level 1 WCIs and 16 Level 2 WCIs. All reported WCIs came from operators, while service companies reported zero WCIs in 2023. The rate per 100 full-time workers for Level 1 was 0.002, compared to 0.003 in 2022, while the rate for Level 2 was 0.006, compared to 0.011 in 2022.

TABLE 17: WCI RATES PER 100 FULL-TIME WORKERS: OPERATORS

Year	2021	2022	2023
Level 1	0.002	0.003	0.002
Level 2	0.015	0.011	0.006

For 2023 Level 1 WCIs, the most common stage of operation was well intervention (50%), whereas in 2022, the most common stage of operation for a Level 1 WCI was initial completion (50%). The Level 2 WCIs reported for 2023 were primarily attributed to drilling (56%). In 2022, the Level 2 WCIs occurred during well intervention (58%). The figures and tables below detail the distribution of WCI by stage of operation for operators. Service companies are excluded since they reported zero WCIs.

TABLE 18: WCI COUNTS BY LEVEL: OPERATORS

Year	2021	2022	2023
Level 1	3	6	6
Level 2	20	19	16



FIGURE 11: LEVEL 1 WCI BY STAGE OF OPERATION: OPERATORS

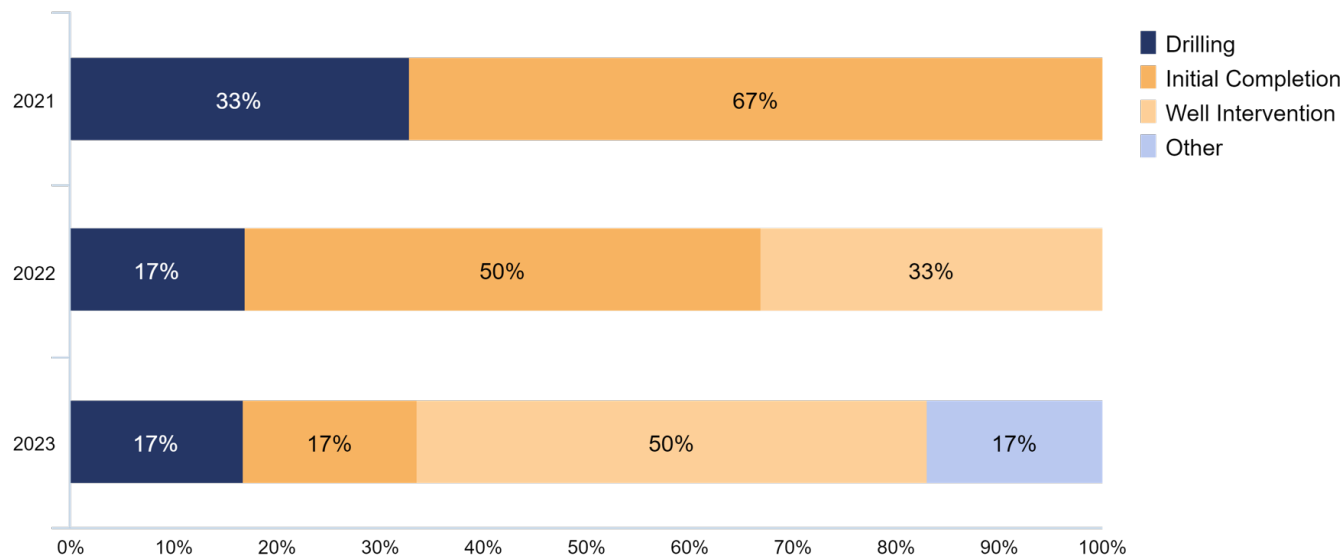
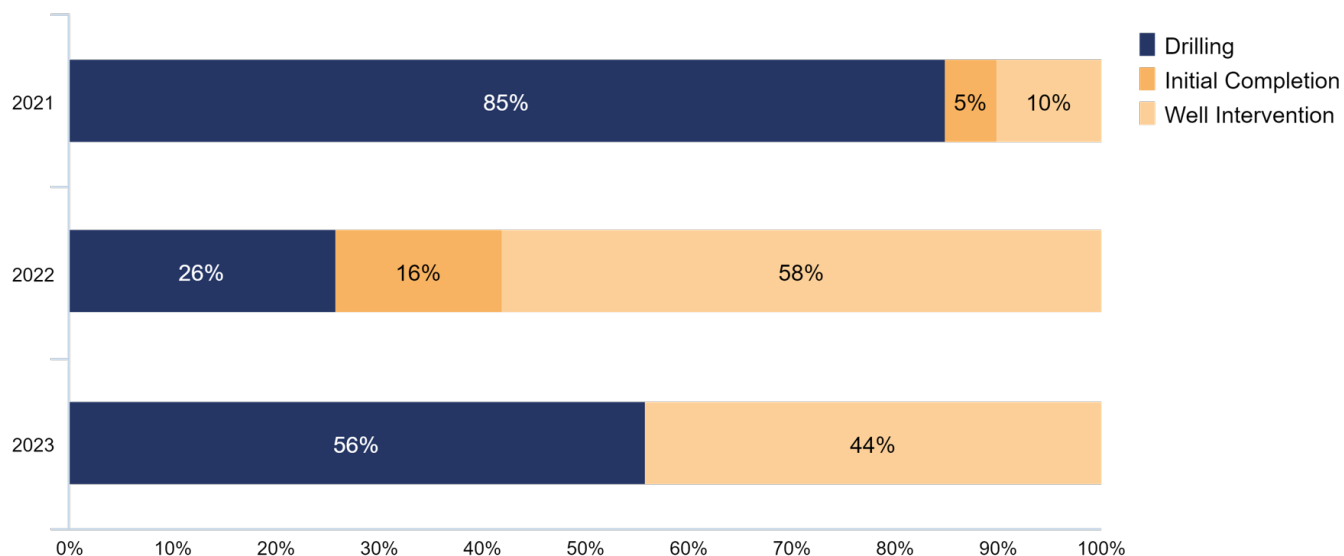


TABLE 19: COUNT OF LEVEL 1 WCI BY STAGE OF OPERATION: OPERATORS

Stage of Operation	2021	2022	2023
Well Intervention	0	2	3
Initial Completion	2	3	1
Drilling	1	1	1
Abandonment	0	0	1
Other	0	0	0
Total	3	6	6

FIGURE 12: LEVEL 2 WCI BY STAGE OF OPERATION: OPERATORS**TABLE 20: COUNT OF LEVEL 2 WCI BY STAGE OF OPERATION: OPERATORS**

Stage of Operation	2021	2022	2023
Drilling	17	5	9
Well Intervention	2	11	7
Initial Completion	1	3	0
Abandonment	0	0	0
Other	0	0	0
Total	20	19	16

DRILLING CONTRACTOR DATA IADC

Since 1962, the IADC Incident Statistics Program (ISP) has tracked safety and accident information for the drilling industry.

1

To record data reflecting accident experience which can be compared to other industries.

2

To identify causes and trends of drilling industry injuries.

3

To provide a means of recognizing rig crews for outstanding safety performance.

Participation in the ISP is voluntary and open to all drilling contractors. Accordingly, the information shared below on onshore U.S. land incidents includes information shared by both OSA drilling company participants as well as other drilling contractors that have activity in this space. OSA does not review submissions to the ISP for accuracy or represent that the data includes all ISP submissions. For any additional questions about this data set, please reach out directly to IADC at isp@iadc.org.

Participating companies report all work-related recordable injury or illness cases that occur to participant employees (those assigned to rigs as well as shore based administrative and support personnel). Cases are reported according to the most appropriate category: Fatality (FTL), Lost-Time Incident (LTI), Restricted Work/Transfer Case (RWTC), or Medical Treatment Only (MTO). A fatality is a work-related injury or illness that results in death. Fatalities are included when calculating the Lost Time Incident (LTI) incidence rate and frequency rate. A Lost Time Incident (LTI) is a work-related incident (injury or illness) to an employee in which a physician or licensed health care professional recommends days away from work due to the incident. A Restricted Work/Transfer Case (RWTC) occurs when an employee cannot perform all of the routine job functions but does not result in days away from work. A Medical Treatment Only (MTO) incident is any work-related injury or illness requiring medical care or treatment beyond first aid (regardless of the provider of such treatment) that does not result in a Restricted Work/Transfer Case (RWTC) or Lost Time Incident (LTI). A Days Away/Restricted or Transfer (DART) case describes the number of recordable injuries and illnesses that resulted in days away from work, restricted work activity and/or job transfer that a company has experienced in any given time frame. Please note, the reporting definitions for the ISP data collection differ from the SIF and WCI reporting definitions used by the OSA in its annual data collection.



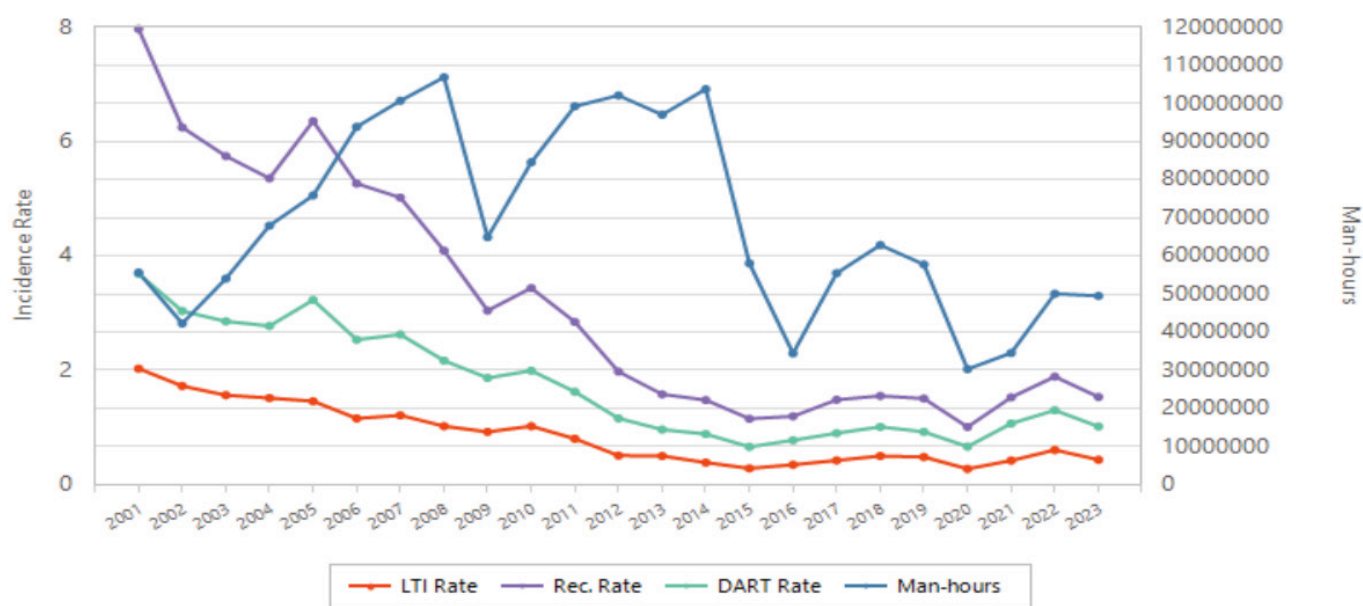
Below is a high-level summary of the ISP 2023 U.S. Land Totals. You may find a much more detailed analysis of this information at IADC's ISP website located at <https://iadc.org/health-safety-environment/iadc-2023-isp-program-annual-report-index>

The following information was provided by 20 drilling contractors, including all 7 OSA member drilling contractors with activities in the U.S. onshore space.

TABLE 21: ISP 2023 U.S. LAND TOTALS

	Total
Total Man-Hours	49,512,314
Total Medical Treatment Incidents	128
Total Restricted Work Incidents	144
Total Lost Time Incidents	105
Total Fatalities	3
Total Recordables	380
MTO Incidence Rate	0.52
RWC Incidence Rate	0.58
LTI Incidence Rate	0.44
LTI Frequency Rate	2.18
Dart Incidence Rate	1.02
Dart Frequency Rate	5.09
Recordable Incidence Rate	1.53
Recordable Frequency Rate	7.67

FIGURE 13: U.S. LAND TOTAL INCIDENCE RATES VS MAN-HOURS





ONSHORE SAFETY ALLIANCE
Learn more at: onshoresafetyalliance.org

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