

ONSHORE SAFETY ALLIANCE





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The Onshore Safety Alliance Annual Report is intended to highlight and communicate key highlights and 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 2022 Reporting Year are based on data voluntarily reported by exploration and production operators operating in the United States. Although OSA reviews reported data to identify internal inconsistencies and unusual periodto-period changes, in general, OSA is not able to verify the accuracy of 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) saw substantial growth over the course of 2023 in key areas such as shared learnings; safety data analysis; and expanded membership. Below is a review of the progress seen in these three areas during 2023 that will guide our plans for 2024. Without question, the OSA is evolving as a voluntary, dues-free initiative with the primary goal of maintaining safety while reducing and eliminating serious injuries and fatalities in upstream onshore operations.

Sharing of Safety Related Learnings: New in 2023, the OSA hosted two industry safety share forums that were basin-specific in nature and gave the alliance an opportunity to expand its network of partnerships with local trade organizations. These basin-specific events also provided OSA and non-OSA member organizations (such as operators, drilling contractors and service companies) the ability to convene in a conducive environment. This allowed for open discussion and sharing of key safety learnings, past incidents and emerging trends in safety data.

Targeting events at the basin-level proved especially beneficial in highlighting common safety challenges seen in the field. Basin United, a local Permian trade association, teamed with the OSA to hold the first industry safety share



forum in Midland in May. The Petroleum Alliance of Oklahoma partnered with us for the second forum in Oklahoma City in August.

Looking ahead to 2024, the OSA intends to hold additional industry safety share forums. The OSA hopes to repeat its forums in the Permian Basin and in Oklahoma, as well as add similar events in high-volume operational areas such as the Appalachian Basin, the Williston Basin and the inter-mountain basins of the Rocky Mountains. Supporting content – safety bulletins, webinars and workshops – will be tailored to address and reinforce issues common to each basin.

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

Next year, the OSA will continue collecting and benchmarking participants' safety data. The OSA is also looking to collaborate with our partner and non-partner trade associations to adjust our reporting protocols

and ensure data we collect is consistent with data collected across the broader industry. Aligning reporting methodologies and standardizing the reported data provides us confidence in recognizing key safety data trends.

Growing the OSA's Membership: Since last year, the OSA has grown from 29 member companies to 38 member companies. Four new operators (Antero Resources, Ascent Resources, Diamondback Resources and Encino Energy) joined. Meanwhile, two new drilling contractors, Independence Contract Drilling and Precision Drilling, were added. Finally, three new service companies – Pruitt Tools, SB Directional and SLB – joined the OSA in 2023. Next year, the OSA will continue to let our events and content generation spur new member growth. We also plan more active engagement with our partner trade associations and will continue to leverage those relationships to grow the OSA.

To sum up, the OSA saw substantial growth in 2023, owing to a resurgence of in-person events that enabled collaboration and sharing of safety learnings. We also greatly expanded our data reporting efforts. Finally, we are proud to report strong overall growth as an organization, adding nine new member companies. As your OSA leadership, we would like to thank our members for their commitment to advancing and achieving our mission. We look forward to working with you and building on our collective momentum in 2024.



VICKY JACKSON NIELSEN

Hess OSA Chair





API OSA Manager



OSA PARTICIPANTS

Building an alliance of operators, drilling contractors, service companies and trade associations working together to protect our workers and improve safety.

OPERATORS AND PRODUCERS











OSA PARTICIPANT INSIGHTS

COLLABORATING AS AN INDUSTRY TO ADVANCE SAFETY

The OSA has been a game-changer for our organization. Safety is not just a priority for us; it's a way of life. OSA has not only allowed us to enhance our safety initiatives but has also showcased our dedication to making the industry safer for everyone."



Craig McMillin VP, HSE and Carbon bp

At bp, safety comes first and is foundational to everything we do, the safety of our workforce, and the communities around us. The OSA has proven to be a remarkable partner to help us reduce and ultimately eliminate Serious Injury and Fatality (SIF) incidents.

What sets OSA apart is its focused collaborative approach. It brings together industry leaders who share a common vision and purpose - to make safety the top priority in onshore operations. This alliance enables us to learn from one another, exchange best practices and collectively address the most complex safety challenges.

The impact of OSA on our organization has been substantial. The benefits we've seen are multifaceted:

- The knowledge sharing within OSA has enriched our safety programs with innovative ideas and approaches. The insights gained from fellow alliance members have been invaluable in driving our safety culture forward.
- The collective problem-solving fostered by OSA has provided us with a unique perspective on our safety initiatives. By collaborating with like-minded organizations, we have been able to tackle safety challenges in a more comprehensive and effective manner.
- Our participation in OSA has positioned us as an industry leader in safety. This recognition has strengthened our reputation and relationships with stakeholders, enhancing our standing in the industry. It's a testament to our commitment to safety and our willingness to go the extra mile to ensure that every individual returns home safely.

COLLABORATION ACROSS INDUSTRY SEGMENTS

38 PARTICIPATING COMPANIES EMPLOYING OVER 470,000 OIL AND GAS WORKERS operators employing over 228,000 oil and gas workers

drilling contractors employing over **37,000** oil and gas workers

service companies employing over 205,000 oil and gas workers



OSA PROGRAM SUMMARY

MISSION

The OSA is a voluntary industry coalition committed to working together to reduce serious injuries and fatalities (SIFs) in U.S. onshore oil and gas exploration and production.

SERIOUS INJURIES AND FATALITIES

OSA DEFINITION

A serious injury and fatality (SIF) event is 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.

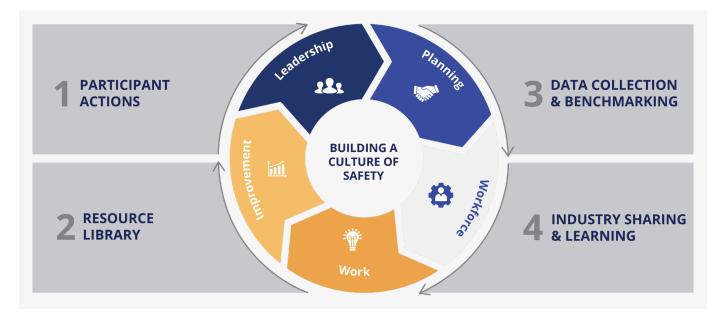
BACKGROUND

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.

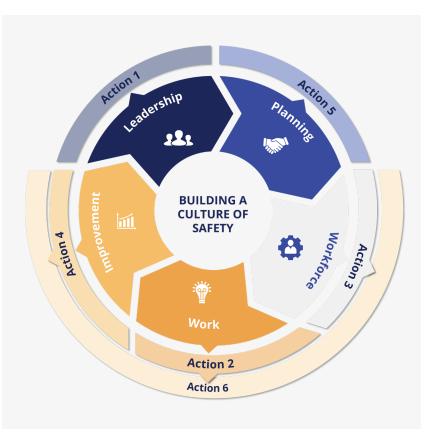




LEADERSHIP	 Demonstrated commitment Visible leadership Objectives & resources
PLANNING	StandardsHigh risk identification, evaluation & planningOperational deviation planning
WORKFORCE	 Training & qualifications Communication & engagement Oversight & feedback
WORK	 Methods, procedures & safe work practices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

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 six 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.



PARTICIPANT ACTION 1: Participate in and Support the Onshore Safety Alliance

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

PARTICIPANT ACTION 2: Implement a Life Saving Actions Program

AREA:Implement a program, typically called LIFE SAVING ACTIONS (LSA), within yourWorkorganization 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 3: Ensure Worker Awareness and Knowledge of Life Savings Actions

AREA:Require that your employees on location have completed an orientation with a focus onWorkforceall 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 4: Implement a SIF Incident Investigation and Learning Program

AREA:	Apply:
Improvement	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: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:	Take the following steps to improve the effectiveness of your well control programs:
Workforce	Create a well control barrier philosophy appropriate within your organization.
Improvement	Verify that appropriate worksite personnel understand and maintain well control
Work	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.

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**.





DATA COLLECTION AND BENCHMARKING

Participating companies also share SIF and well control incident data to help provide better safety benchmarking and 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, identify trends to better target where improvement is needed within the industry and provide robust benchmarking for individual participants to assess how their performance is measuring against peers while maintaining individual company privacy. All shared data is aggregated or non-attributable and evaluated collectively to guide the program commitments, benchmarking and resources library.

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.

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 partner 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.



2022 SAFETY PERFORMANCE

Disclaimer: Data published in the OSA's 2023 Annual Report are based on data voluntarily reported by 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.

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. In order to avoid potential duplication in reporting, the OSA has opted to present the data broken into three categories based on company type: operator, drilling contractor and service company.

For the second iteration of the OSA data collection, which covered calendar year 2022, 18 operator and service companies reported Serious Injuries and Fatalities (SIF) event data and 17 operator and service companies reported Well Control Incident (WCI) data directly to the OSA. This is an increase in participation from the 2021 data collection, during which the OSA received SIF data from 13 operator and service companies and WCI data from 12 operator and service companies¹. All five eligible OSA participant drilling companies reported their incident data to the International Association of Drilling Contractor's Incident Statistics Program (ISP). Because of the different reporting mechanisms, the data presented across the three segments may not exactly align. 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.

¹The number of operator and service companies that participated in the 2021 data collection differs from what was included in the 2022 OSA Annual Report given a change in company tracking methodology.

2022 HIGHLIGHTS



OPERATOR DATA

The data in this section will focus solely on the 15 operator companies that reported SIF data and WCI data. This represents an operator response rate of 88%.

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 OSHA, and progress has been made to successfully reduce these types of incidents. Now, many companies are advancing in their journey towards safety excellence by moving beyond TRIRs 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 2022 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 2022 and used these hours to calculate an overall SIF rate, as well as a rate by common hazard for Actual and Potential SIFs. As reported to the OSA, in 2022, there were 39 Actual SIF events and 303 Potential SIF events. The overall Actual SIF rate for 2022 was 0.022 per 100 full-time workers, and the Potential SIF rate for 2022 was 0.172. The SIF rates increased relative to 2021 for both Actual and Potential SIFs.

Year	Actual SIF	Events Potential SIF	Events
2022	0.022	0.172	





Of the 39 Actual SIFs, the majority (31%) were attributed to Line of Fire. There were 5 events where a fatality occurred and 25 events where a life-altering injury or illness occurred.

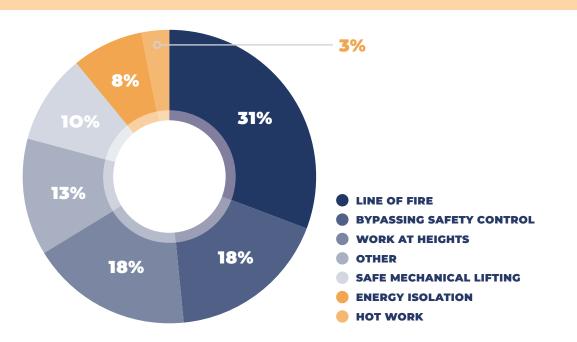


FIGURE 1: ACTUAL SIF EVENTS BY COMMON HAZARD (2022)

TABLE 2: ACTUAL SIF EVENTS BY STAGE OF OPERATION (2022)

Common Hazard	Completion	Construction	Drilling	Production	Workovers	Other	Total
Line of Fire	3	0	5	0	1	0	9
Bypassing Safety Controls	3	1	0	2	1	0	7
Work at Heights	0	2	3	1	0	0	6
Safe Mechanical Lifting	0	1	1	0	1	0	3
Energy Isolation	0	0	0	1	1	1	3
Hot Work	0	0	0	0	0	1	1
Other	0	0	1	0	0	0	1
Work Authorization	0	0	0	0	0	0	0
Confined Space	0	0	0	0	0	0	0
Driving	0	0	0	0	0	0	0
Total	6	4	10	4	4	2	30

Data is from SIF Incident Reports. Some Actual SIF Events did not have an associated incident report.

Of the 303 Potential SIFs, Line of Fire was again the common hazard with the highest reported number of potential incidents (27%). It should be noted that 23% of the reported potential SIFs were attributed to the Other category for common hazards. Incident reports were not required for potential SIFs, therefore the learning value of the incidents attributed to the Other category is limited to the information voluntarily provided by companies.

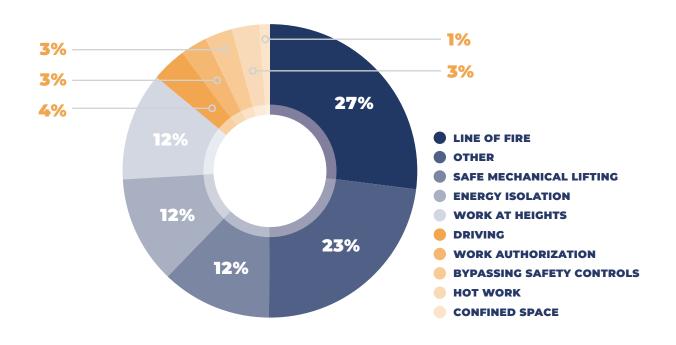


FIGURE 2: POTENTIAL SIF EVENTS BY COMMON HAZARD (2022)



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 operators to also submit an incident report.

TABLE 3: DEFINITIONS OF WCI LEVELS

	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.

As reported to the OSA, in 2022, there were 6 Level 1 WCIs and 19 Level 2 WCIs. The rate per 100 full-time workers for Level 1 was 0.003, while the rate for Level 2 was 0.011. Half of the well control incidents occurred during the stage of operation Initial Completion.

TABLE 4: WCI BY STAGE OF OPERATION (2022)

Stage of Operation	Level 1	Level 2
Well Intervention	1	12
Drilling	1	4
Initial Completion	3	2
Abandonment	0	0
Other	0	0
Total	5	18

TABLE 5: WCI RATE PER 100 FULL-TIME WORKERS

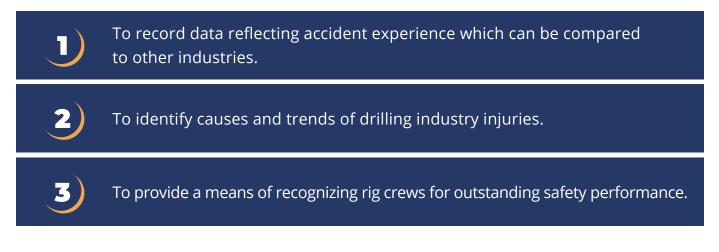
Year	Level 1	Level 2
2022	0.003	0.011

TABLE 6: DRILLING WCI BY TYPE OF DRILLING

Drilling Type	Level 1	Level 2	Total
Overbalanced or Conventional	0	3	3
Other	1	1	2
Total	1	4	5

DRILLING CONTRACTOR DATA

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



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 workrelated 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.



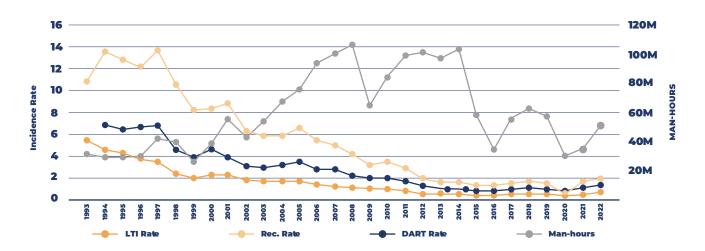
Below is a high-level summary of the ISP 2022 US Land Totals. You may find a much more detailed analysis of this information at IADC's ISP website located at https://iadc.org/health-safety-environment/iadc-2022-isp-program-annual-report-index/

The following information was provided by 22 drilling contractors with activities in the U.S. onshore space.

TABLE 7: ISP 2022 U.S. LAND TOTALS

	Total
Total Man-Hours	50,070,227
Total Medical Treatment Incidents	149
Total Restricted Work Incidents	177
Total Lost Time Incidents	144
Total Fatalities	6
Total Recordables	476
MTO Incidence Rate	0.60
RWC Incidence Rate	0.71
LTI Incidence Rate	0.60
LTI Frequency Rate	3.00
Dart Incidence Rate	1.31
Dart Frequency Rate	6.53
Recordable Incidence Rate	1.90
Recordable Frequency Rate	9.51

FIGURE 3: U.S. LAND TOTAL INCIDENCE RATES VS MAN-HOURS



SERVICE COMPANY DATA

In order to maintain the confidentiality of submissions, the OSA is withholding Service Company data from this edition of the annual report. In the future, we hope to expand this data collection effort to include more Well Service Companies.





ONSHORE SAFETY ALLIANCE Learn more at: onshoresafetyalliance.org

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