



The “gold standard” for contractor  
safety management guidance

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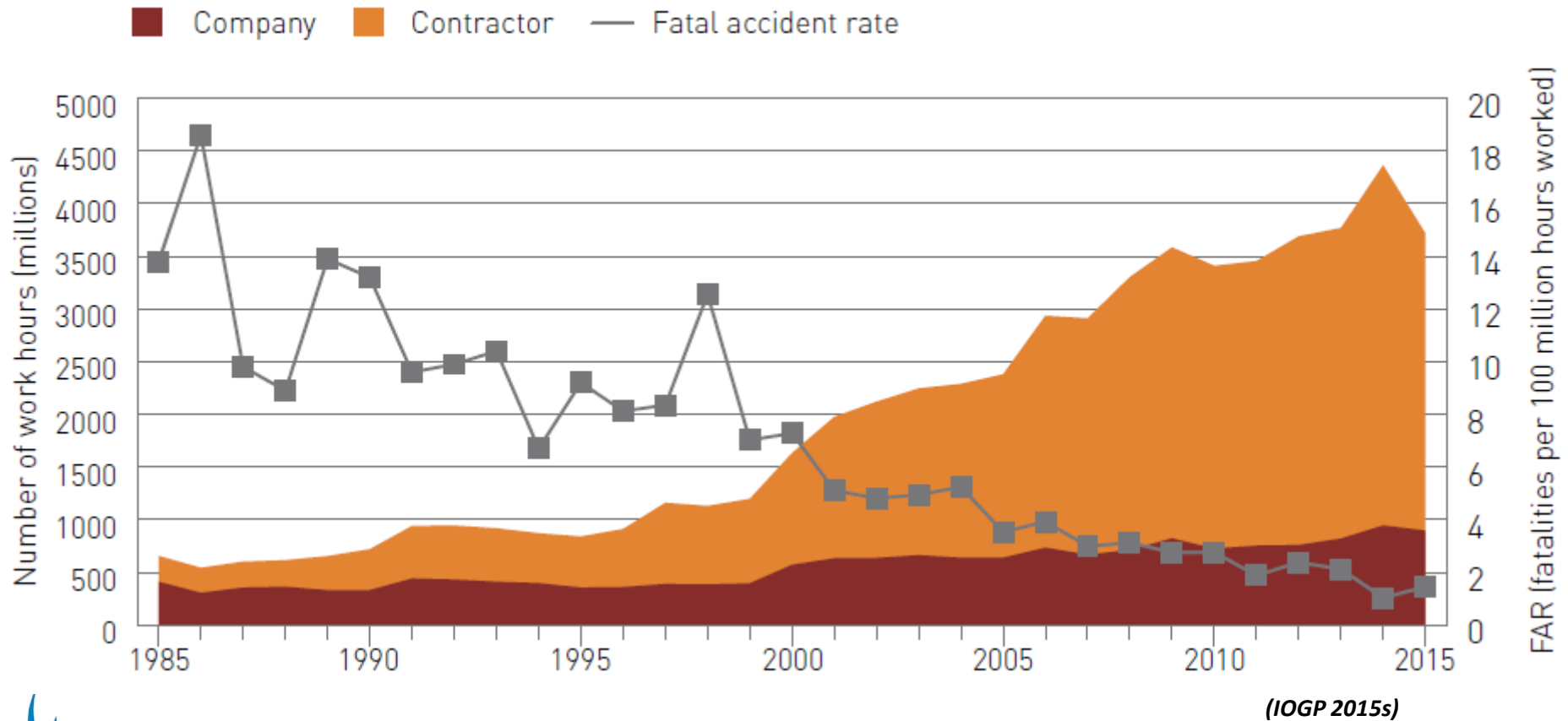


# Agenda

- Importance of contractor management
- The “gold standard”
- Guidance contents
- Taking this concept further
- Global industry best practices & US usage
- Industry outcomes
- Upcoming revisions
- Conclusions/Recommendations



# IOGP reported work hours & FAR

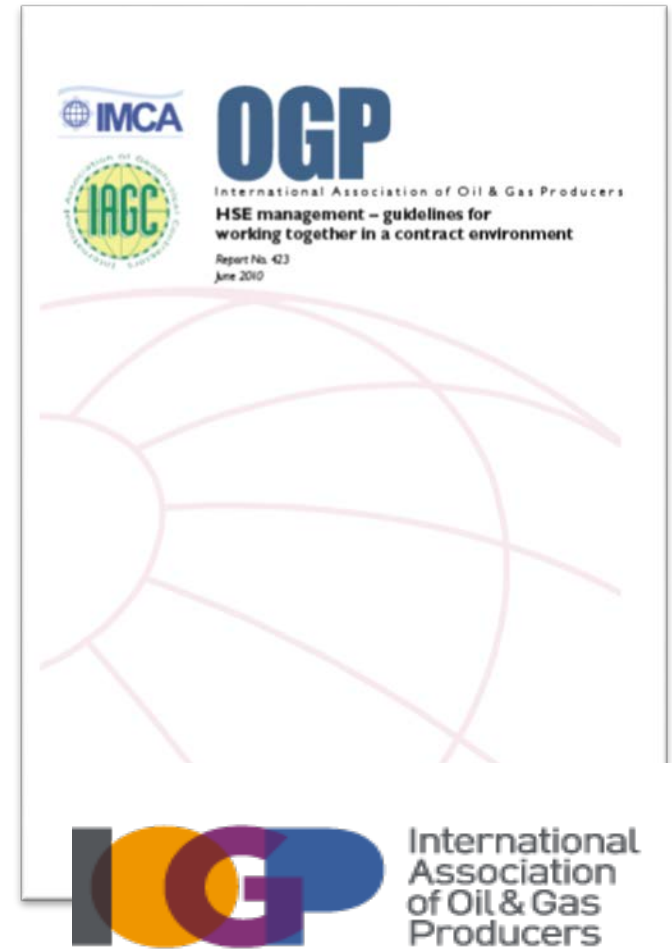


# The “gold standard”



(Agnico-Eagle Mines Limited)

**IOGP Report 423: *HSE management – guidelines for working together in a contracting environment***



# US contractor management (CM) guidance

- **API RP 2220** – *Contractor Safety Performance Process* – Third Edition, October 2011
- **API RP 2221** – *Contractor & Owner Safety Program Implementation* - Third Edition, August 2011
- **API RP 76** – *Contractor Safety Management for Oil and Gas Drilling and Production Operations* – Second Edition, Reaffirmed January 2013
- **IADC** - *Health, Safety and Environment Case Guidelines for Land Drilling Units* - Issue 1.0.1, 27 July 2009





# Limitations of US guidance

- **API RP 2220** – Process description very brief, mainly about developing safety programs, improving contractor's performance
- **API RP 2221** – For refining & petrochemicals
- **API RP 76** – Process description is brief, mainly a long Standardized Safety Questionnaire
- **IADC** - Developing safety cases not a full CM process



# IOGP document history

- Report 210 issued in 1994 (in aftermath of Piper Alpha)
  - *Guidelines for the Development and Application of Health, Safety and Environmental Management Systems*
- *HSE management – guidelines for working together in a contracting environment*
  - First issued as Report 6.64/291 in September 1999
- After revision in 2010, Report 291 became **Report 423** (current version)



# IOGP 423 - an 8 phase process

- Phase 1 – Planning
- Phase 2 – Capability assessment
- Phase 3 – Tender and award
- Phase 4 – Pre-mobilization
- Phase 5 – Mobilization
- Phase 6 – Execution
- Phase 7 – De-mobilization
- Phase 8 – Evaluation and close-out

Joint Client / Contractor activities

Client

Contractor





# Phases 1 & 2

## Planning

Scope of work / context  
& risk assessment

Establish HSE evaluation  
criteria and capability  
assessment protocol

HSE capability assessment

Establish bidders list

Contractors responds to HSE  
capability assessment  
questionnaire and if requested  
HSE audits

**DATA BASE of Suppliers**  
Historical record  
Prior registration  
New contractors

## HSE capability assessment



# Phase 3

## Tender and award

Bid documentation  
preparation & development of  
evaluation criteria

Bid document evaluation  
and clarification

Award contract

Contractor submits bid,  
including draft key HSE  
documentation

HSE Plan including remedial  
actions as agreed

***The initial risk assessment or hazard list should become part of the bid document package***



# Phase 4 & 5

## Pre-mobilisation

Post award planning, including completion of HSE plan including interfacing/bridging aspects

Pre-mobilisation verification audit

Preparation & selection of subcontractors

## Mobilisation

Communication of HSE plan - commence orientation & site-specific training

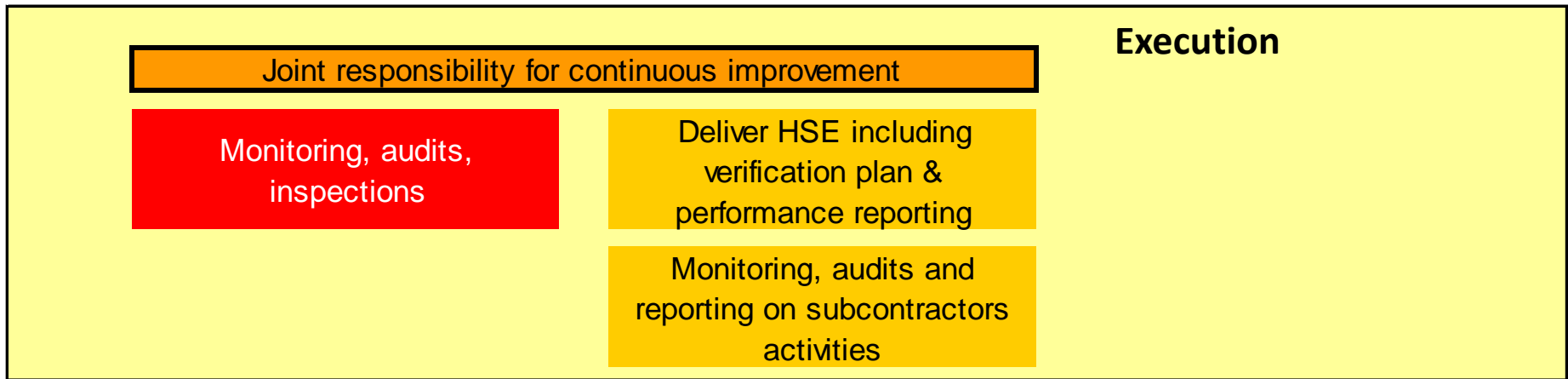
HSE field review or audit

Mobilisation including subcontractors

***A key facet is client and contractor working together from phase 4 onwards***



# Phase 6



# Phases 7 & 8

## De-mobilisation

Review of de-mobilisation aspects of HSE plan / Reassess de-mobilisation risks

Acceptance of work and restored site

De-mobilisation, including subcontractors

## Final evaluation & close-out

Review

Final evaluation and close-out report

Final evaluation and close-out report

DATA BASE of Suppliers

**This document describes an easily applied Contractor Management process**



# Additional content in Appendices

- HSE responsibilities for client and contractor key personnel
- Contactor HSE capability assessment and scoring system
- HSE plan guidance



# Contract taken further in geophysical sector

- *Managing HSE in a geophysical contract (IOGP 432)*
  - Generic management system requirements (Table 1) for geophysics
  - Requirements for specific risk areas (Table 2) for geophysics



# Example Table 2

**Table 2 – Minimum expectations for the control of specific risk areas**

	Minimum expectation required to control the hazard(s)/risk(s)	Remark, alternative or exception	Reference
<b>2.1 Safety critical equipment &amp; activities</b>			
2.1.1 Equipment inventory	An inventory of all equipment, machinery and plants that require regular preventative maintenance should be available, e.g.: <ul style="list-style-type: none"> <li>• Vehicles</li> <li>• Vessels</li> <li>• In water equipment</li> <li>• Small boats, engines</li> <li>• Generators</li> <li>• Trailers</li> <li>• Fire detection and control equipment</li> <li>• Medical equipment</li> <li>• Air conditioners/heaters</li> <li>• Cranes, winches, hoists</li> <li>• Workshop equipment (i.e. welding sets)</li> <li>• Compressors</li> <li>• Water pumps</li> </ul>		S5 S6 E5 E11







# Global industry best practices

1. Comprehensive **HSE management systems (MS)** at both client and contractor
2. Client utilizing a **rigorous process for managing contractors**
3. **Robust contract** between client and contractor including detailed HSE requirements
4. **Bridging or interface document** that links the two MSs stating which company's procedure/process take precedence to address each hazard
5. A **project specific HSE plan** or safety case by the contractor



# Best practices barely used in onshore US

- **HSE management systems** at client & contractor companies
  - Most common practice seen, but to varying degrees
- **A process for managing contractors**
  - Not prevalent in US industry, at client or contractor companies
- **A contract w/HSE requirements** between client/contractor
  - Many US contracts based on IADC fill-in-the blanks *Daywork Drilling Contract – US* but HSE not covered (Nov 2013)
- **Bridging or interface document**
  - Rarely seen in US onshore
- **Project specific HSE plan or safety case**
  - IADC Safety Case Guideline but rarely used in US



# Reasons for low US uptake

- Less resource commitment
  - Many small and mid-size oil & gas companies vs globally (especially after shale revolution)
  - Similarly, more small and mid-size contractors vs globally
- Perceived cost of safety?
- Not heard of the guidance?





# Aspects of US industry (especially onshore)

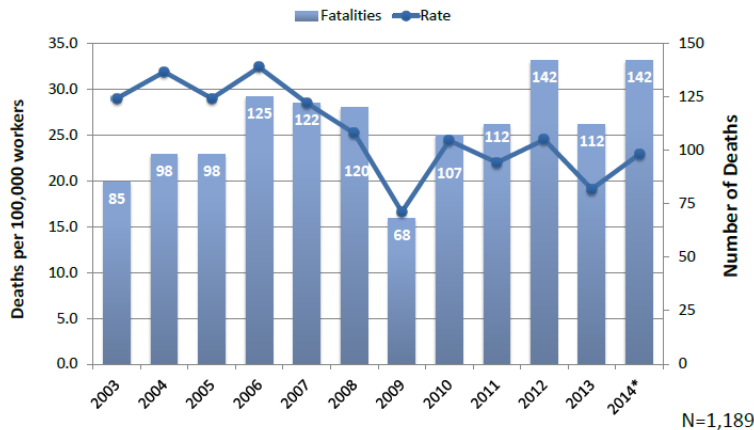
- Generally does not apply all global industry best practices
- Companies frequently work to regulatory compliance
- Industry best practices can exceed regulation requirements
- Some positive things being done but more is needed
  - Center for Offshore Safety
  - STEPS Network
  - NIOSH FOG database
- US oil & gas fatality rate was 6 times higher than all other industries between 2003 and 2013 <sup>1</sup>

## Source:

1. Retzer et al (NIOSH), Paper 569, Fatalities in the US Oil & Gas Extraction Industry: Recent Trends and New Details, presented at the ASSE Professional Development Conference in Dallas, June 2015

# Industry outcomes

Number and Rate of Fatal Work Injuries  
U.S. Oil & Gas Extraction Industry, 2003-2014



Note: Fatality counts from BLS Census of Fatal Occupational Injuries. Worker Estimates from BLS Quarterly Census of Employment and Wages (2013). Rate per 100,000 workers per year. Includes NAICS 211, 213111, 213112. \*Data for 2014 are preliminary.

June 8, 2015

From NIOSH – Retzer (2016)

- **Fatality rates are dropping**
- **But when compared . . . .**

Fatalities Fatal accident rate (FAR)

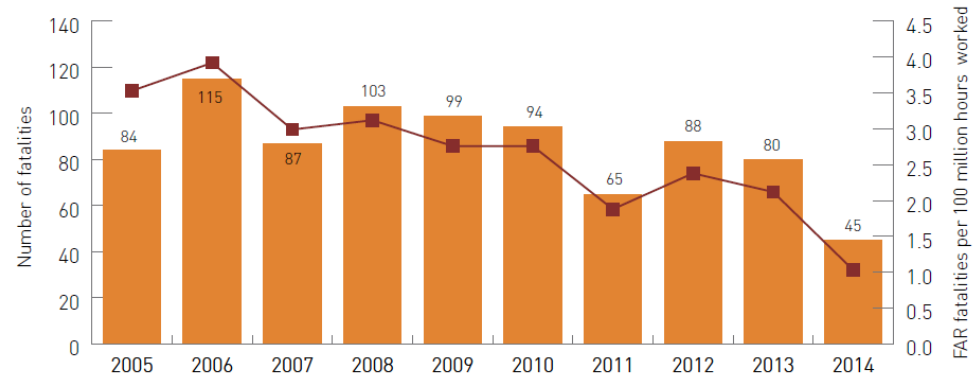


Figure 1: Number of fatalities and fatal accident rate (2005–2014)

From IOGP Report 2014s (2015)



# Industry fatality rates

	<b>United States</b> Oil & gas industry includes many small & mid-sized companies	<b>Worldwide</b> stats from IOGP members (50+ large companies operating in over 100 countries)
<b>2013</b>	<b>19 deaths</b> per 100,000 full time workers <sup>1</sup>	<b>4.3 deaths</b> per 100,000 full time workers <sup>2</sup>
<b>2014</b>	<b>23 deaths</b> per 100,000 FTW <sup>3</sup>	<b>2.1 deaths</b> per 100,000 FTW <sup>2</sup>
<b>2015</b>	TBD	<b>2.9 deaths</b> per 100,000 FTW <sup>4</sup>

## Sources:

1. Retzer et al (NIOSH), Paper 569, Fatalities in the US Oil & Gas Extraction Industry: Recent Trends and New Details, presented at the ASSE Professional Development Conference in Dallas, June 2015
2. IOGP Report 2014s, Safety performance indicators – 2014 data, June 2015
3. Retzer, K. (NIOSH), Assessing Fatalities in Oil & Gas Extraction Workers, SPE HSSE Study Group, Denver April 2016
4. IOGP Report 2015s, Safety performance indicators – 2015 data, June 2016



# Industry outcomes

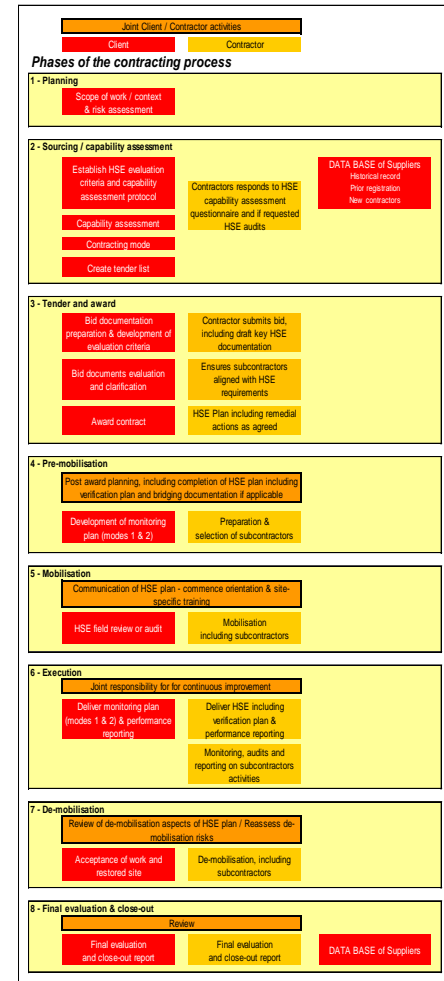
- **US oil & gas fatality rate (primarily onshore) was 4.4 to 10.9 times higher than the published rate for global oil & gas companies (for 2013-2014)**
- Global industry uses these best practices:
  - Management systems
  - Contractor management process
  - Contract with HSE requirements
  - Bridging or interface document
  - Project specific HSE Plan



# IOGP 423 currently bring revised

- Risk based throughout all phases
- Contractor verifying risk controls are being effectively managed, and monitoring by client
- Working together collaboratively
- Contractor using same process for managing sub-contractors
- Addressing management system gaps through bridging

(Blackhall et al, 2016)





# Conclusions

- A consistent and standardized approach to HSE management in a contract environment can only improve US oil & gas industry safety performance (especially onshore)
- With more use of this approach US oil & gas fatality rates can be further reduced



# Recommendations

- Recommend more companies in the US oil & gas industry utilize this guidance document
  - Clients for managing contractors
  - Contractors for managing subcontractors
- Recommend more companies in US utilize global industry best practices





**Thank You!**  
**Any questions?**

