

WorkSafeBC Regulators Update Forum

Update on the Oil and Gas Industry in BC

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Introduction

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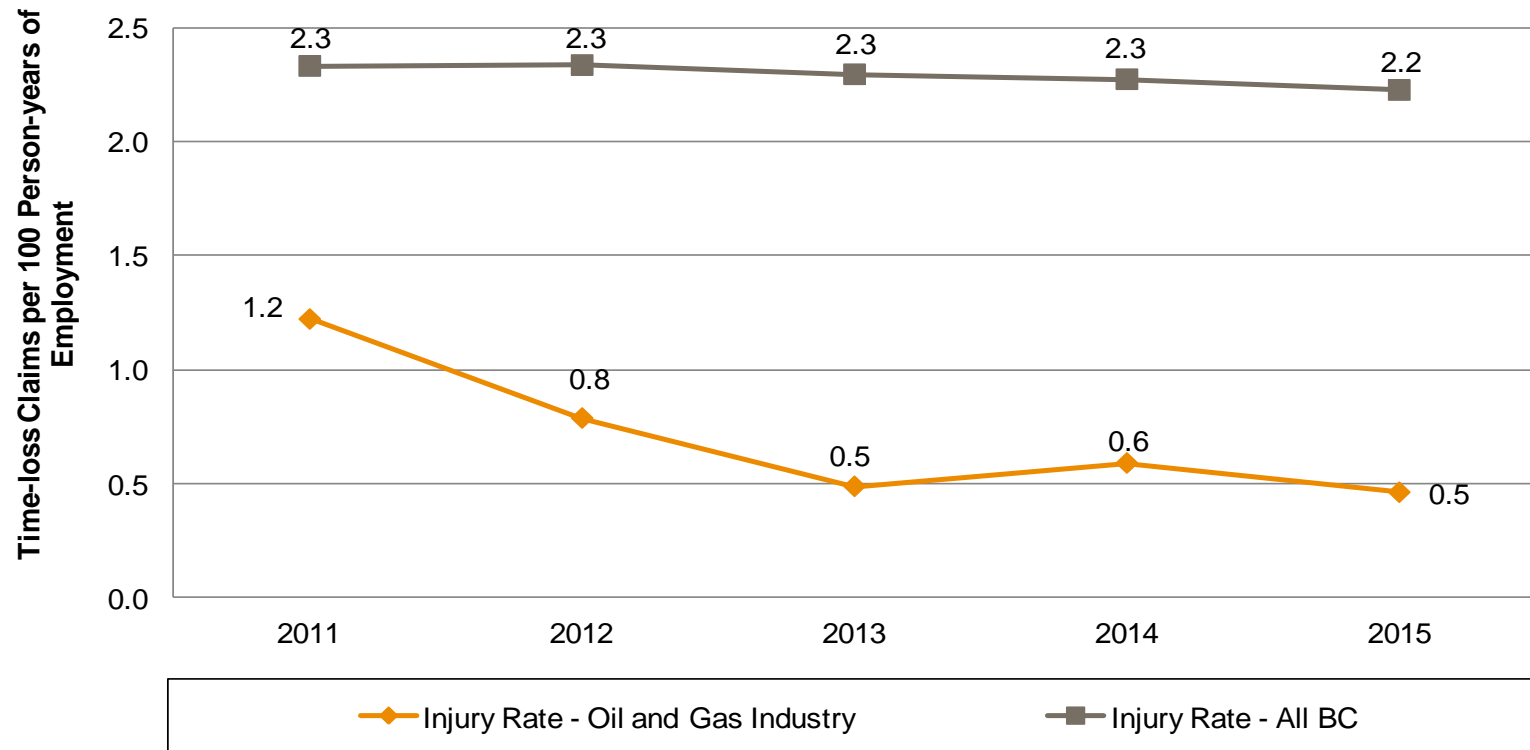
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Presentation Agenda

1. Improvements in the Oil and Gas Industry in 2016?
2. What are some of the issues of concern that have come up this past year?
3. Prevention Activities
4. Oil and Gas Initiatives for 2017
5. Key Findings
6. Changes

What is the Oil and Gas sector doing well?

Injury Rate Trend



The Injury Rate for the selected CUs remains lower than the Injury Rate for all BC CUs combined.

Issues of Concern - Cranes

2016 - serious crane incidents in O/G

- Recent incident involved failure of rigging during dual crane critical lift, part of rig move
- Large load (derrick) dropped; minor injuries to 2 workers that could have been a double fatality

Concerns include:

- Workers doing rigging are experienced in work being done; properly trained
- Instructions for lifting derrick are followed
- Lifting points are identified and used
- All critical lifts have proper lifting plans and hoisting supervisor

WSBC has developed a crane inspection checklist to assist employers in crane use, inspections and setup



Issues of Concern – Flash Fires

2 significant flash fire resulting in serious injuries

- 1) Cleaning of large water hub storage tank; vessel access opened, workers cleaning tank with wand; pulling waste sludge with a vac truck when an explosion occurred. Worker thrown off scaffold; suffered extensive burns & serious fractures to lower body and pelvis
- 2) Well completions operations utilizing degasser separator unit; flow from well began to overwhelm capacity of separator; vapors migrated across lease to a lighting plant. Worker heard motor, attempted to shut motor off; was unsuccessful and explosion occurred. Fire consumed equipment on site.



Issues:

- 1) Failing to do risk assessment and control of ignition sources
- 2) Failing to adequately monitor for volatile hydrocarbons
- 3) Failing to follow established SWP for degassing wells

Issues of Concern – Loss of well Control when initiating a Frack

Workers in process of initiating fracking operation; well head failed, fluids from well released back to surface. Specialized well control crew required to ensure integrity and stability of well.

Incident occurred when well head used allowed well bore fluids under pressure to come to surface through attachment systems for the well head.

Issues: failing to follow mfg's specifications for use and installation of equipment; inadequate risk assessment for well completion operations including development and establishment of SWP.

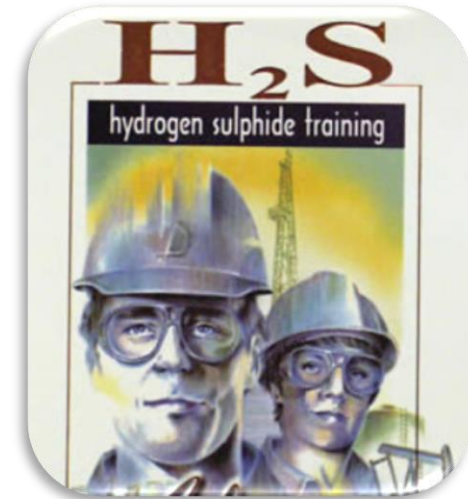


Issues of Concern – H₂S

H₂S knock down: 3 workers performing abandonment work. Fluid from operation flowing back to service rig tank; 3 of 4 workers standing on tank overcome by H₂S. 4th worker suited and masked up; was able to sound alarm and initiate rescue. Workers revived and transported to hospital. 4th worker followed proper procedures.

Issues:

- Failure to conduct adequate risk assessment; equipment used on previous sour locations
- Failure to follow established SWP including assessment of required PPE and respiratory protection (the 3 workers knocked down were not wearing any respiratory protection or personal monitor)



Emerging Issues

In 2016 - received claims for 144 deaths. 85 were the result of occupational disease resulting from previous overexposures

Response - occupational disease is a major focus. Survey your work to determine areas of possible exposures for your workers (and your contractors if you are a PC/owner)

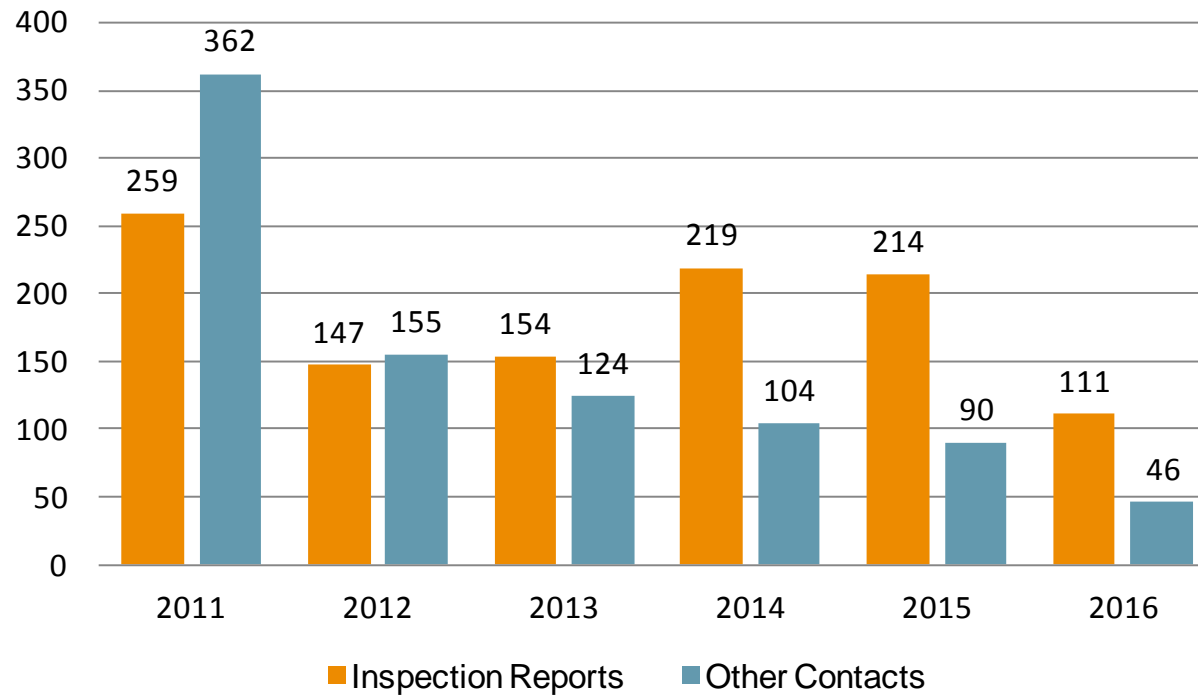
Appropriate ECP's need to be developed and implemented to eliminate or mitigate risks associated with exposures.

Key areas of concern include NORMS, Silica, Oil Based Drilling Fluids, Mercury, Benzenes and Noise.

New areas of concern:

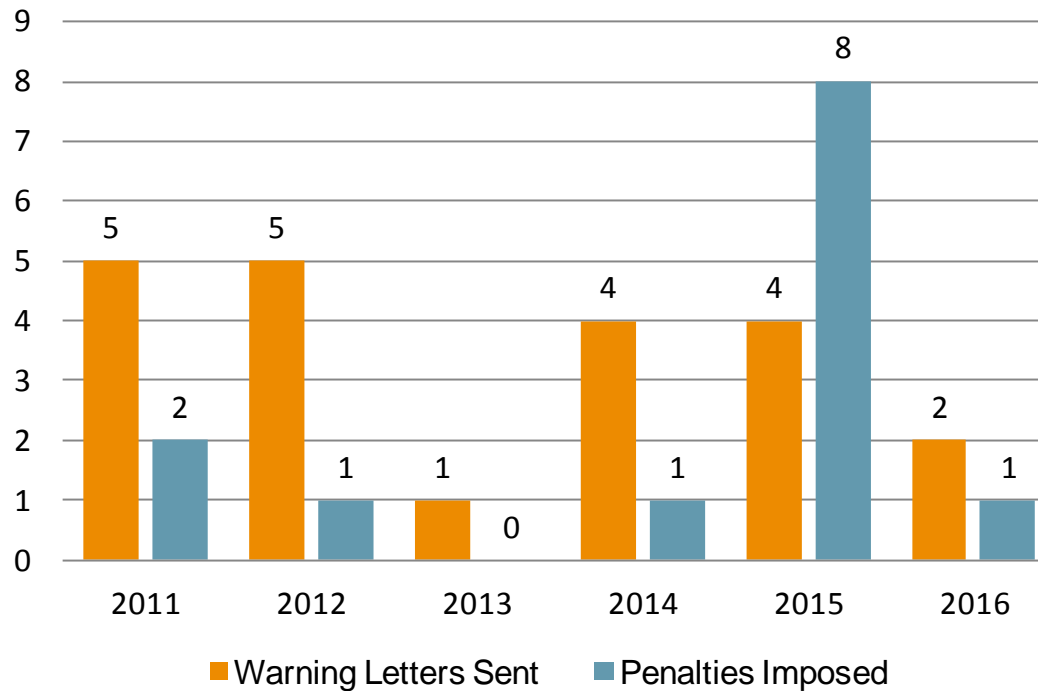
- ultraviolet light (Sun Safety) - in Canada, 1 in 3 of all new cancer diagnosis is for skin cancer
- Lead – commonly encountered when removing old paint

Prevention Activity



Note: 2016 is currently August YTD.

Penalties & Warning Letters



Note: 2016 is currently August YTD.

Most Common Regulation Paragraph associated with a document – O&G Industry Combined (2011 - 2016 YTD)

Regulation Paragraph	Counts
WCA194(1)	228
WCA194(2)	170
WCA118(2)(b)	85
WCA115(2)(e)	60
WCA118(2)	44
WCA173(1)	43
OHS23.5(2)	39
WCA175(2)(b)	35
WCA187(2)	32
Other	2713
Total:	3449

2017 Oil & Gas Industry Initiative

Outline of the Strategy

- In last few years, upstream oil and gas industry has faced unprecedented economic downturn
- Serious injuries - 30% of claims & 63% of claims costs
- In 2017, focus of strategy to address high risk activities
- Key focus areas include:
 - High risk operations
 - Occupational exposures
 - Targeted field inspections on oil and gas lease sites
 - Support industry associations and Enform

2017 Oil and Gas Industry Initiative

2017 Plan

Targeted Sectors:

1) Oil and Gas Drilling Sector

- Serious injuries - 46% total claims, 80% total claims costs
- ID types of hazardous energy; Partner with CAODC
- **30** inspections - focus on proper controls/lock out of hazardous energy sources

2) Well Servicing

- STD Duration > double provincial average
- Workers exposed to > 100 X exposure limit of silica
- Targeted enforcement on fracturing operations; Enform ECP template for silica - **10** planned inspections
- **20** inspections of facilities - flash fires and explosions
- **30** inspections - temporary high pressure piping

2017 Oil and Gas Industry Initiative

2017 Plan (continued)

Targeted Sectors:

3) Oil and Gas Faller Program

- Provincial manual falling CU injury rate is > 29
- Provide technical & process input, guidance and expertise
- Support Enform/CAGC/CAPP in extensive evaluation of BCFSC's new faller competency model

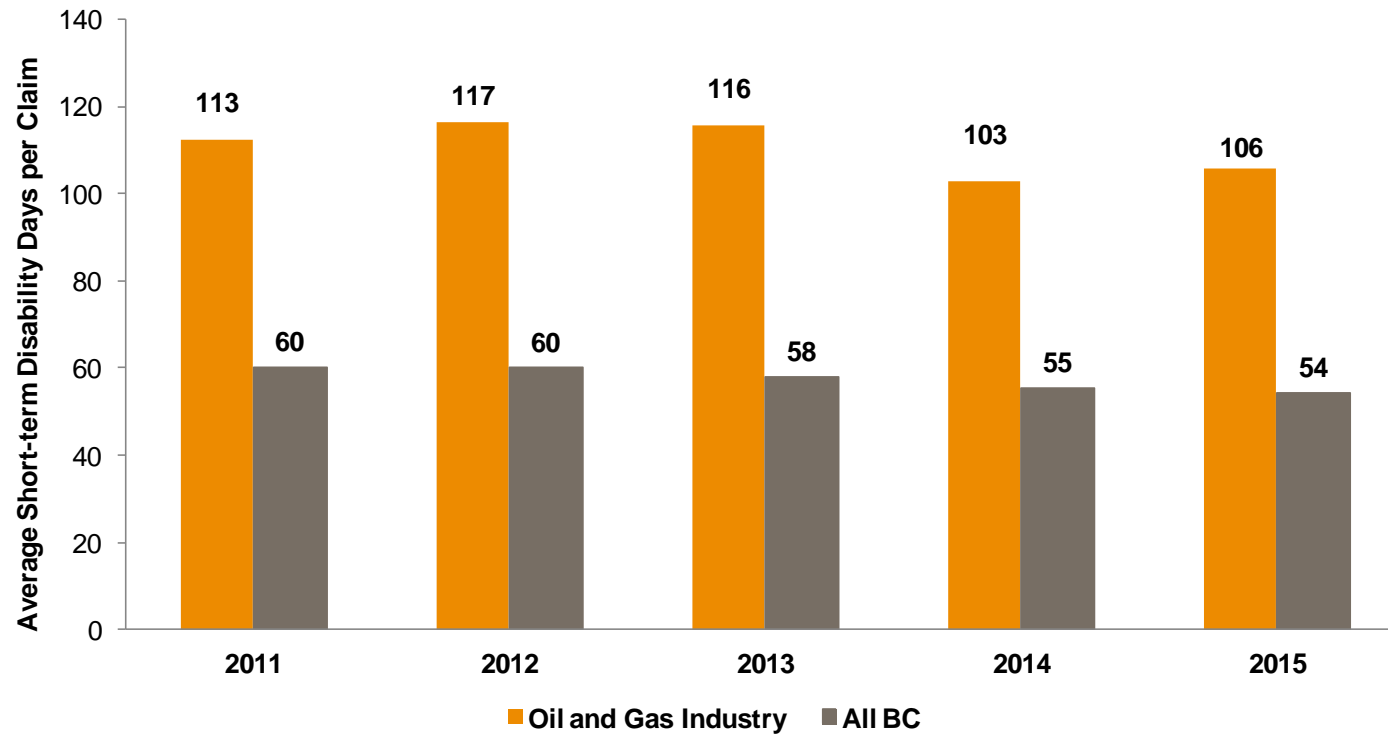
4) Pipeline Construction – LNG projects

- 30% increase in no. of registered pipeline contractors
- Designated Prevention Officer team for LNG projects
- Pipeline construction training to Prevention team
- Possible development of add'l pipeline related resources
- **10** targeted inspections of Pipeline projects

Key Findings

- In 2015, there were 1,496 employers in selected CUs, a 2% decrease over past five years
- Injury Rate for the 6 CUs remain lower than the Injury Rate for BC CUs combined
- Average Short-Term Disability Duration (work days lost per claim) for the selected CUs is significantly higher than all BC
- Between 2011 and 2016 YTD, there were 8 work-related deaths

STD Duration – Five Year Trend



Base Rates

Classification Unit #	CU Description	2011	2012	2013	2014	2015	2016	% Change from 2015 to 2016
704002	Oil or Gas Drilling	\$2.73	\$2.28	\$1.95	\$1.98	\$2.09	\$1.82	-12.9%
704003	Oil or Gas Field Servicing	\$2.72	\$2.24	\$1.88	\$1.80	\$2.06	\$1.70	-17.5%
704009	Seismic Exploration	\$2.96	\$2.31	\$1.94	\$1.77	\$2.22	\$1.93	-13.1%
704010	Diamond Drilling, Seismic Drilling, or Shot Hole Drilling	\$8.41	\$7.87	\$7.49	\$6.94	\$5.69	\$4.67	-17.9%
713018	Oil or Gas Production	\$1.32	\$1.19	\$1.18	\$1.28	\$1.07	\$1.03	-3.7%
767005	Oil or Gas Transmission (oil or gas pipeline)	\$0.67	\$0.53	\$0.59	\$0.62	\$0.71	\$0.81	14.1%

Changes to OHSR and WCAct in 2017



Bill 35 and Bill 9 effective May 1st: provides for changes to JOSH committee roles and responsibilities, consultation with committees, training for committee & worker representatives

- 11 areas of Regulation revisions including Part 23 - line restraint; effective August 1, 2017
- New Storage racking regulations for January 1, 2018
- WHMIS policies and regulations have been aligned to reflect the changes to the GHS
- Exposure levels for Lead and Silica have been updated
- New footwear amendment as of April 7, 2017
- For more information follow this link:
- <https://www.worksafebc.com/en/law-policy/learn-about-law-policy/law-and-policy-announcements>