

WorkSafeBC Regulators Update Forum

The state of the O/G industry in BC

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Introduction

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Presentation Agenda

- 1 What has the O/G industry been doing well this past year?
- 2 What are some of the areas of concern that have come up this past year? By Sector
- 3 Emerging issues for 2014
- 4 Planned changes for 2014/2015

What is the Oil and Gas sector doing well?

- Strategic planning
 - O/G Producers are providing the regulator with an overview of their Corporate OHS plans
 - Annual, bi-annual, quarterly
 - These plans have included elements discussed in Banff
 - The presentations also include **their** identified "RISK" areas
 - Sharing of Successes and challenges
 - These sessions have included activity forecasting
 - Provides the regulator with Operational Insight
 - Mutual benefit around building Channels of communication and Understanding



Geophysical-Field Issues

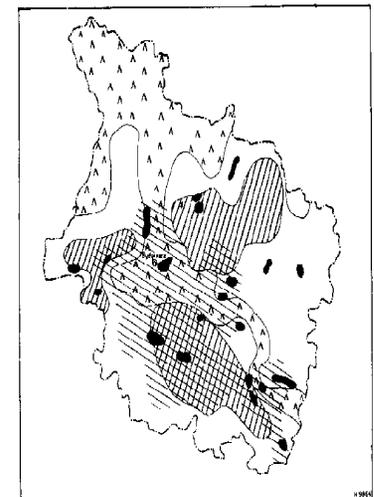
A serious incident this past summer. A faller was struck in the back by a danger tree that fell out of the canopy when the worker was falling trees into standing timber on a heli portable seismic line. Worker suffered a broken back.



-1st serious falling incident since 2007 implementation of the BC Faller Training Standard

-**Issues**- falling danger trees (DT) into standing timber, no escape route constructed, lacking of an adequate falling plan, lack of qualified supervision, HETS extraction was done within a standing canopy of DT

-**Response**- Planning of the activities which begins with the owner, documented, amended to reflect changes in work and levels of RISK, sight specific falling plans, ensure that Qualified falling supervisors are providing active oversight of the work inspecting and correcting as needed.



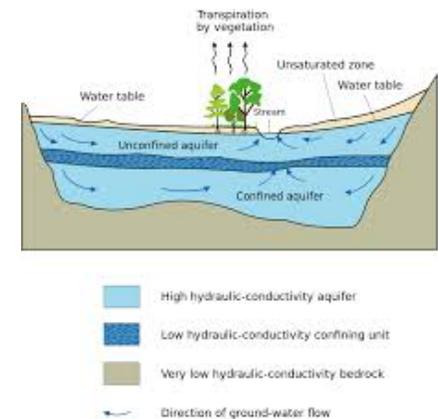
▨ Forests with preponderance of wood industry
▨ Areas of intensive agriculture
▨ Industrialized area
● Appearance of important raw materials

Drilling-Field Issues

Shallow water aquifers entrained with sour gas.

Issues: in 2006 following a blowout and fatality in NE BC (2005) the BC Oil and Gas Commission issued a bulletin and Alert around the potential to encounter shallow gas aquifers when drilling north of Fort St John (potential to be sour).

Response- The alert identified the need to ensure that rigs were equipped with appropriate diverters for surface drilling and monitoring equipment to detect potential gas levels. Also, the OHS requirements for reporting of incidents need to be reviewed and policy and procedures in place to ensure immediate reporting to of these events to WSBC.(WCAct 172 and Policy).



Drilling-Field Issues con't

A worker suffered a serious crushing injury to their arm when a top drive was inadvertently lowered onto their arm when changing out a bushing in the slips.



Issue- lack of lockout practice and understanding of the application of Lockout, Lack of specific Safe Work Procedures and access to manufacturer's instructions on the proper use and maintenance of their equipment.

Response- ensure that ALL ancillary equipment used on your rigs can be isolated and locked out, that specific lockout procedures are developed and implemented for this equipment and ensure that the manufacturer's instructions for the safe use and maintenance of this equipment is available to workers on the rig (Top drives, Iron roughnecks, iron derrick man, Pipe handling equipment, lay down equipment, power tongs etc)

Well Servicing- Field Issues



An explosion and fire at an Oil Field waste disposal facility which resulted in two workers suffering serious third degree burns. This occurred as they were unloading volatile liquids and solids at the site. The vac truck was destroyed and the waste facility suffered considerable damage.

Issue- lack of adequate Safe Work Procedures for unloading of hazardous waste, proper disclosure of the nature of hazardous waste at pickup points, failing to consider the associated hazards and risks of blending waste in the tank of the vac truck. As well, not having Exposure Control Plans (ECP's) for workers hauling the waste and those receiving the waste. Failing to adequately control ignition sources when unloading volatile hydrocarbon based wastes.

Response- full and proper disclosure of the hazardous nature of Oil field waste at the pickup point (manifests), SWP for the safe handling and transport of the product including loading and unloading, Risk Assessment and management of the process when blending hazardous waste, ECP's in place to protect workers from potential over exposures and control of all ignition sources.

Well Servicing- Field Issues con't



Two separate incidents in Well and Pressure testing. In the well testing incident a worker was struck by a component part of piping that failed with an ensuing explosion and fire. (workers suffered serious burn injuries)

Pressure testing, pressuring up the piping and a hammer union failed and struck a worker.

Issues- not ensuring that the piping is assembled in accordance with SWP and assembling the piping with constrictions in the line resulting in a pressure chamber effect with a resulting explosion, fire and the assembly being blasted apart. The pressure testing incident pressuring up a high pressure line when workers were in the hazard zone, the union failed due to not be assembled correctly, no do not enter signage in place for the hazard zone.

Response- ensuring that all well testing pressure testing component parts are installed correctly and in accordance with OHSR, applicable standrds and defined SWP which includes ensuring that all parts are compatible, high pressure lines are adequately restrained and workers are kept out of the hazard zone when the lines are pressured up.

Production-Field Issues

While doing remediation on a production location a worker was struck by an excavator bucket up against a disposal tank and suffered numerous broken bones (chest and arms) and a punctured lung.

Issues- site planning and coordination when working on a congested site that is active. Ensuring that SWP are established, communicated and followed when working near mobile equipment and all workers are wearing appropriate High Vis apparel.

Response- ensure that site planning and coordination covers both the hazards associated with the work on site but also interaction on an active production site. All work around mobile equipment is controlled and that proper direct communication between operators and ground workers including visual contact is maintained at all times. Ensure that any High Vis apparel used is not blending in with the colour of the equipment of back ground of the work area. (in this case the workers coveralls were red and the disposal tank was red.)



Owner/PC-Field Issues



Inspections of various Oil and Gas sites this past year have encountered a number of situations in which the Well site manager/ supervisor had not received any form of orientation or training by their employer in the companies OSH program and systems.

Issue- all workers including Oil and Gas company representative need to be oriented and trained by their employer. Well site Managers/ Supervisors function in a role representing the Producer and need to know what is involved in administering the companies OSH Program and Policies at the site. The OHSR requires these representatives to be **qualified** in this coordinating role, administering the OSH program and representing the Producer in ensuring that activities at the site are coordinated and compliant with the OHSR.

Response- ensure that all of your well site managers and supervisors are qualified to function in their role. Provide orientation and training and follow-up to ensure that they are functioning properly as the representative for your company at your sites ensuring the safety of all workers employed at your worksites.

Emerging Issues



The concerns related to potential overexposure of workers to Hazardous Substances in Oil and Gas operations- Oil field waste, drilling fluids, silica, mercury, diesel fume, benzene, noise all are viewed as latent health problems for our workers.

Pressure drilling, we highlighted an incident last year in which a worker suffered severe 4th degree burns when saturated with a flammable drilling fluid following the rupture of a high pressure hose.

Issue- we are still seeing employers that have not implemented any form of monitoring and control programs to determine “ what actual and potential exposures to hazardous products being used or disposed at their worksites. Pressure drilling continues to expand in scope and risk. Especially in pursuit of shale gas for LNG into deep high pressure zones.

Response- develop appropriate comprehensive ECP's for all hazardous products you are using or handling to ensure your workers **Health** and Safety. The approach to pressure drilling may need an assessment which includes a detailed evaluation utilizing Process safety risk assessment tools to determine the nature and scope of the potential for catastrophic events and the required controls.

Planned Changes 2014/2015



The PRD department at WorkSafeBC has developed comprehensive work plans and Public Hearings for OHSR amendments over the next two years: **2014** includes Public hearings for:

- **Part 4** General Conditions- avalanche assessment and emergency lighting,
- **Part 5** Chemical and Biological agents- application and ignition sources,
- **Part 6** Substance Specific Requirements- new section on silica exposure,
- **Part 12** Tools and Equipment- new section adopting ANSI standards for roll on/off containers,
- **Part 13** Ladders, Scaffolds & Temporary work platforms-Update to current CSA standard Z271 and safe positioning and stability,
- **Part 20** Construction, excavation and Demolition-inspections with PEng, hazardous materials,
- **Part 24** Diving, Fishing and other Marine Ops- minimum crew for diving,
- **Part 26** Forestry Ops- new bull boards section
- **Part 28** Agriculture- remove an obsolete biohazard requirement
- **Part 34** Rope access for emergencies a new section

Planned Changes 2014/2015



PRD work plans for 2015 include the following areas of review:

- **Part 4** General Conditions- introduce a new requirement for risk assessment in all workplaces, update to storage racking requirements, guardrails and handrails harmonized with CSA and ANSI standards
- **Part 5** Chemical and Biological Agents- updates to Combustible dust requirements
- **Part 6** Substance specific- asbestos inventory requirements
- **Part 8** PPE- updates to eye and face protection and buoyancy equipment
- **Part 12** Tools and Machinery- safeguarding for dynamometers
- **Part 14** Cranes and Hoists-capacity indicator change, testing load limit devices, definitions of light duty material hoists
- **Part 16** Mobile Equipment- full review and update of section
- **Part 20** Construction, Excavation- NOP requirements expanded, concrete form work plans
- **Part 21** Blasting- testing of circuits, misfires, seismic blasting
- **Part 22** Underground Workings- update credentials for supervisors
- **Part 23** Oil and Gas- flow piping restraint requirements

Planned Changes 2014/2015

How do I keep informed of these proposed Regulation Changes?

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