

# Welcome to the MOL Explosives Blitz webinar

- Thank you for joining us!
- We will be getting started at 10:00 a.m. EST
- To access the audio portion of this webinar, please phone:
  - 1. 866. 613. 5223
  - Access code: 3 7 5 5 2 0 0
- We will have the phone lines on mute for the presentation.
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  - 1. 888. 730. 7821 ext.0

Ministry of Labour Blitz - Explosives

Webinar - May 15, 2014



# Webinar co-hosts

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# Housekeeping notes

- Please note the 'CHAT BOX' in the top right hand corner of your screen. At any time during the presentation, feel free to type in your questions. Alternatively, you may send an email to [barryaustin@workplacesafetynorth.ca](mailto:barryaustin@workplacesafetynorth.ca) and he will respond at a later date. We may answer some questions as we go, but most will be answered after the presentation.
- During the webinar, the phone line is set up so that you're able to hear us, but we can't hear you. Please use the chat box for questions or assistance with the webinar.
- This presentation will be available on WSN's website soon after the webinar. We'll provide the link at the end of the presentation

# AGENDA

- Ministry of Labour presentation
  - Storage, Use and Handling of Explosives in Surface and Underground Mines
- Workplace Safety North presentation
  - Overview of a Safe Explosives program
- Q & A

# STORAGE, USE AND HANDLING OF EXPLOSIVES IN SURFACE AND UNDERGROUND MINES

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## JULY - AUGUST 2014

**Ministry of Labour**  
May 15, 2014

## NOTES

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The material in this internal training presentation is being provided as information only. It is not intended to replace the Occupational Health and Safety Act (OHSA) or the regulations and reference should always be made to the official version of the legislation and regulations.

It is the responsibility of the workplace parties to ensure compliance with the legislation and to seek independent legal advice where questions remain.

## WHY IS THE MOL DOING AN EXPLOSIVES BLITZ?

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- Between April 1, 2011 and March 31, 2014, the Ministry of Labour issued 256 orders related to contraventions of the explosives storage and handling requirements set out in Regulation 854 (Mines and Mining Plants) under the Occupational Health and Safety Act (OHSA).
- The potential for serious or fatal injury, as well as significant property damage, is always present where explosives are used.
- The security and accountability for explosives and detonators must be maintained to ensure that explosives are not removed from mine sites and are only used for their intended purposes.
- Workers must be properly trained before being assigned to use and/or handle explosives.



## IMPORTANT NOTE RE: EXPLOSIVES BLITZ

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- While this presentation explicitly references specific sections of Regulation 854 to highlight some key focus areas that MOL inspectors will be looking for compliance with during this blitz, employers should be aware of all of the regulatory requirements relating to explosives which are set out in Part VI (sections 121 to 154).
- During the blitz, MOL inspectors will be check for compliance with these and any other relevant regulatory provisions (for example, ventilation in underground magazines as per section 252)
- MOL inspectors may also check for compliance with requirements in the OHSA (for training, procedures, etc.) or other regulations that apply to mines and mining plants

# BLITZ FOCUS: Magazines and Equipment

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## INSPECTIONS DURING THE BLITZ WILL FOCUS ON:

- Requirements related to magazines located on surface and underground. (*Reg. 854, Section 123*)
- Weekly inspections and magazine log books are completed. (*Reg. 854, Section 127*)
- There is proper housekeeping, cleanliness and proper disposal of packaging and wrappings at magazines. (*Reg. 854, Section 128(1)*)
- There are procedures for inspection and cleaning of equipment used with explosives prior to servicing or repairs. (*Reg. 854, Section 135.0.1(10)*)
- There are procedures for storage areas that are not magazines. (*Reg. 854, Section 125 (4)*)

# BLITZ FOCUS: Explosives Inventory Controls

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## INSPECTIONS DURING THE BLITZ WILL FOCUS ON:

- Weekly magazine inspections are conducted and reports detailing the quantities of explosives stored in the magazine, as well as the physical condition of the magazine and the explosives, are made. (*Reg. 854, Section 127*)
- The oldest explosives if not defective within the magazine are used first. (*Reg. 854, Section 128(3)*)

# BLITZ FOCUS: Damaged Explosives Disposal

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## INSPECTIONS DURING THE BLITZ WILL FOCUS ON:

- A written procedure has been established for the safe disposal of damaged explosive products. (*Reg 854, Section 128(4)*)
- The procedure for the safe disposal of damaged explosives is communicated to workers.

# BLITZ FOCUS: Explosives Handling

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## INSPECTIONS DURING THE BLITZ WILL FOCUS ON:

- Procedures for safe handling of explosive products have been developed.
- Workers assigned to transport and handle explosives have been trained in explosives handling procedures.
- Equipment used to transport explosives are properly maintained and equipped with required warning devices. (*Reg 854, Section 131, 135*)
- Precautions and procedures for transporting explosives with mobile equipment or shaft conveyance are communicated and enforced. (*Reg 854, Section 133*)

## BLITZ FOCUS: Reporting to the MOL

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### INSPECTIONS DURING THE BLITZ WILL FOCUS ON:

- Employers are submitting the required “Notice of Use or Storage” annually or prior to use as appropriate. (*Reg 854, Section 123(4)*)
- Employers have been and will continue to report to the MOL any occurrence of defective explosive products as required. (*Reg 854, Section 21(g)*)
- Employers have been and will continue to report to the MOL any occurrence of careless placing or handling of explosives as required. (*Reg 854, Section 122(3)*)

# Explosives



# 1. Construction and Inspections of Surface Magazines and Equipment

- Have explosives magazines on surface been designed and constructed in compliance with relevant legislation and using proper engineering standards?
  - Federal Requirements
  - Construction
  - Location of Surface Magazines



# 1. Construction and Inspections of Surface Magazines and Equipment – Cont'd

Are magazines on surface inspected by competent persons on an established frequency, considering the following:

- Notifications/Licences
- Capacity/quantity
- Security
- Housekeeping
- Signage
- Rotation of stock
- Electrical hazards
- Compatibility of product
- TACN

## 2. Construction and Inspection of Underground Magazines and Equipment

Are underground explosive magazines located and constructed in compliance with legislation and using proper engineering standards?

- Construction/Location
  - Distance to shaft
  - Electrical systems
  - Future development
  - Security
  - Surrounding area
  - Access

## 2. Construction and Inspection of Underground Magazines and Equipment Cont'd

Are underground explosive magazines and storage areas inspected by competent employees on established frequency considering the following:

- Capacity/Quantity
- Housekeeping
- Signage
- Rotation of Stock
- Electrical Hazards
- Ventilation
- Product Compatibility
- TACN
- Detonators

## 2. Construction and Inspection of Underground Magazines and Equipment Cont'd

- Underground explosive storage areas that are not magazines
  - Locations/Quantities
  - Recording of Locations

### 3. Protection from Sources of Ignition

- Are storage areas designed and built with the appropriate standards ensuring all sources of possible inadvertent initiation have been identified?

## 4. Inspection Reports

- Inspection reports
  - Are inspection reports written
  - Are they kept for a time
  - Are checklists used for inspections
  - Are deficiencies recorded and corrected in timely fashion
  - Is there a classification system for identified deficiencies
- Are there special storage requirements for trial products?
- Is there a program in place to prevent unauthorized use of trial products?

# 5. Inventory and Control – Explosive Products and Equipment

- Is there an inventory of all equipment that is used with detonator and explosives products?
- Is there a formal procurement policy for the purchase and commissioning of equipment related to explosives and their use?
- Are records kept for explosives received and issued?
- When explosive products are received, are checks made to ensure purchase order specifications are met?

## 5. Inventory and Control – Explosive Products and Equipment Cont'd

- Have any issues with compatibility between new and existing product been identified prior to a product being introduced on surface or underground?
- When establishing trials for explosive products has a formal risk assessment been completed identifying the scope and timeframes associated with the testing?



## 5. Inventory and Control – Explosive Products and Equipment Cont'd

- Have all personnel been made aware of the testing of new product including end users maintenance, emergency response and supervision?
- Have mill, dry/custodian, security, maintenance personnel been made aware of reporting/handling procedures?

## 6. Disposing of old and /or Damaged Explosive/Detonator Products

- Has a risk assessment been done on the hazards of disposing of old or discarded detonators and explosive products?
- Has a procedure been developed regarding the safe disposal of damaged explosive products?
- Is the standard procedure implemented, communicated and enforced?

# 7. Administration

- Has the Joint Health and Safety Committee been involved as the Regulations prescribe?
- Are explosives magazines in the control of a competent person?

## 8. Maintenance of Explosives Related Equipment

- Is there a preventative maintenance program in place for equipment related to explosives and blasting?
- Has a procedure been developed for the pre-inspection of equipment to be serviced on site or sent off site for service?

## 8. Maintenance of Explosives Related Equipment Cont'd

- Is there a formal program in place to ensure all supplier notifications are shared with appropriate user and maintenance personnel?
- Is there a formal maintenance program for the central blast system that includes isolation from detonating cables, power lighting and communication cables and pipes, rails and other continuous metal circuits?

## 9. Transportation and Handling

- Are written procedures established for employees transporting explosive materials:
  - on surface
  - in the shaft
  - Underground
- Are written procedures established for the guarding of blasts for:
  - surface
  - underground
- Is there a written procedure for post-blast examination following all blasts?

## 9. Transportation and Handling – Cont'd

Are written procedures established for blasting which include:

- preparation of face/bench
- drilling in face and/or bench
- secondary blasting
- misfires
- smoking
- signage
- barricades
- flyrock
- remote drilling
- Squeeze slashes
- construction projects
- air traffic
- wind direction/speed

## 9. Transportation and Handling – Cont'd

Are written procedures established for secondary blasting that cover:

- chutes
- crushers
- passes
- hang-ups
- grizzlies
- draw points
- oversize muck
- storage bins



## 9. Transportation and Handling – Cont'd

- Are written procedures established for blasting in the vicinity of diamond drill holes?
- Is there a written standard established that controls and/or restricts the use of radio transmitters around detonators, magazines and blast sites?
- Have workers been provided instruction on the dangers of handling explosives?
- Is there a program established for the monitoring of lightning and electrical storms?
  - Surface
  - Underground

# 10. Training

- Have appropriate employees received formal training involving the use of explosive materials such as:
  - transporting/handling
  - storing
  - loading
  - inspections
  - flyrock- prevention of damage to surroundings, protection of blaster and site personnel.

## 10. Training – Cont'd

- Is refresher training provided to employees involved in the handling and use of explosive materials?
- Have all personnel/public, who may be at risk of exposure, been identified and trained in hazard identification related to explosive products?
  - New workers, young workers and temporary workers
  - Security
  - dry personnel
  - maintenance personnel.

# 11. Emergency Preparedness

- Has an emergency preparedness risk assessment been completed, looking specifically at explosives?
- Has the findings of this risk assessment been formalized in the policies and procedures at the site?

# 11. Emergency Preparedness (Cont'd)

- Have the workers/staff/emergency responders received training on emergency measures to be taken in case of fire/flood/fall of ground, etc.?
  - Location of fire extinguishers and instructions as per use, explosive fire how will a fire be handled.
- Has the emergency response plan been communicated to other responders Mutual Aid agreements etc. Surface Fire Brigades?

# 12. Investigation/Reporting Requirements

- Have standards been established to comply with explosive legislative requirements:
  - notices
  - inspections
  - licences
  - signage
- Are incidents involving explosive materials formally investigated?
- Is there a process to ensure that recommendations arising from an investigation are dealt with in an established time frame?
- Are appropriate agencies notified when incidents occur?

# 12. Investigation/Reporting Requirements Cont'd

Is there a system in place to ensure identified deficiencies are corrected in a timely manner:

- explosive legislative requirements
- training
- inspections
- transporting of explosives
- blasting vicinity of diamond drill holes
- radio transmitters around detonating materials
- incident investigation
- storage requirements
  - surface
  - underground
- purchasing/delivery of explosives?

# 12. Investigation/Reporting Requirements

## Cont'd

- Is there a system to regularly report on reasons why deficiencies are not corrected in the time frame established?
- Is there a system to implement recommendations made in various program activities:
  - incident investigation
  - formal training
  - refresher training
  - transporting of explosives
  - engineering standard modifications



# 12. Investigation/Reporting Requirements

## Cont'd

- Is there a system to regularly report on the reasons why JHSC recommendations may not be implemented?
- Are audits conducted of the “explosives” program element at least every two years? Part of your Management Health and Safety Program.

# 12. Investigation/Reporting Requirements Cont'd

- Are audit results analyzed to determine the effectiveness of the explosives program element:
  - managing and planning
  - training
  - inspections and corrective action
  - standard operating procedures and best practices
  - incident investigation
  - communication
  - engineering and control systems
  - purchasing products and services?

# 12. Investigation/Reporting Requirements Cont'd

- Are the results of these audits shared with appropriate personnel?
- Are action plans developed to deal with the findings of the analysis? Follow up to audits as continuous improvement.

# Thank you

- This presentation and corresponding checklist can be found on our website at:

[www.workplacesafetynorth.ca/Explosives](http://www.workplacesafetynorth.ca/Explosives)

- Please complete our Webinar Evaluation Form:

<https://adobeformscentral.com/?f=QHUquNXRg3NzSFVd81hFFQ>