



## **NEW AFTON MINE**

### **FOLLOW UP HEALTH AND SAFETY AUDIT**

**July 16 & 17, 2013**

**Part Two**

**(DETAILED)**

**Report**

PREPARED BY

MINISTRY OF ENERGY, MINES

MINES AND MINERAL RESOURCES



# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<b>Section 1.3.1 Authority to Enter a Mine:</b>	
<b>Subsection: 1.3.2 Posting</b> <i>Is there “only authorized persons” notice posted on all road entrances to the mine?</i>	
<u>Initial Audit - Inspector Comments:</u> There are signs posted and the main access to the site is controlled by 24/7 security.	<u>Score</u> 5
<u>Initial Audit - Manager’s Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager’s Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Section 1.6.9 Occupational Health and Safety Managerial Responsibility:</b>	
<b>Subsection 1.6.9(1) Health and Safety Program:</b> <i>Has the Manager developed a Mine Health and Safety program and has it been reviewed recently by the OHSC?</i>	

Scoring: **Maximum points available per subsection = 5**

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**5.** All components of the element are present, in place, being monitored and working. **4.** Most components of the element are present, minor improvements needed or additional training is required. **3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft format. **1** .The element is not present; however, the mine has made attempts to develop it or it is outdated. **0.** The element is not present at the mine.



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<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The mine does have an Occupational Health and Safety Manual in draft form. There are also elements of the program in the safety management system, but neither of these have been reviewed by the JOHSC	
<u>Initial Audit - Manager's Reply:</u>	
Health and Safety Program Manual is currently being revised for publication and will be reviewed with JOHSC once complete	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The latest revision –SAF-FRM-073 July 2013 is now completed. Two of the three JOHSC co-chairman have reviewed the manual. This manual should be reviewed annually.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Has the Manager developed a Mine Health and Safety Policy? Is it in Writing?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There were two safety polices posted. One was a Corporate policy and one was a site policy. Both read the same but one was not signed.	
There needs to be one policy for the site and that is the one that should be posted.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

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<u>Initial Audit - Manager's Reply:</u>	
Health & Safety Policy has been revised, signed copies have been posted	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There is now only one Safety Policy signed and posted	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Does the safety policy set forth Company safety Program Objectives?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The site policy speaks of the Management teams commitment but only in general terms.	
<u>Initial Audit - Manager's Reply:</u>	
Policy has been revised and management team commitments are clearly defined	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
A review of the policy does show Managements commitments and Company objectives.	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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## Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Does the safety policy Identify the authority/accountability or responsibility of workers and management?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The policy speaks of Responsibilities and Accountabilities being transferred to employees but does not define or outline what they are.	
<u>Initial Audit - Manager's Reply:</u>	
Policy has been revised and has defined the responsibilities and accountabilities that are transferred to employees	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Accountability and Responsibilities for Management and Workers are now identified in the safety policy	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Is the safety policy posted in conspicuous locations?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
One or both of the safety policies were posted throughout the site.	5

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## Part One – Application of Code and General Rules

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<u>Initial Audit - Manager's Reply:</u>	
Only signed copies will be posted and we will post the Corporate and site policies	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Is it reviewed/reissued on an annual basis?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The most recent posted policy was dated October 15, 2012 but the General Manager's signature was not on it. It was admitted that although the policy had been re-dated it had not been reviewed for quality or content.	
<u>Initial Audit - Manager's Reply:</u>	
Signed copies have been posted, document has been controlled on SharePoint to ensure that only the signed version is available for posting.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Safety Policy SAF-POL-001 has been updated and signed June 10, 2013	5

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b> <i>Are workers familiar with the safety policy?</i>	
<u>Initial Audit - Inspector Comments:</u> Employees interviewed stated they were aware of a policy but were not sure what it said.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Started reviewing Policy with employees and have also reviewed in JOHSC tours through employee interactions. Policy reviewed by JOHSC committee	
<u>Audit Follow Up – Inspector Comments:</u> Employees are much more aware of the policy and what it says and what it means. Annual review is required.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b> <i>Is it communicated to new employees?</i>	

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<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The safety policy is not covered in the new hire orientation.	
<u>Initial Audit - Manager's Reply:</u>	
Safety policy is covered the new hire orientation	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Safety Policy SAF-POL-001 in now included in the New Hire orientation package	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<b><i>Is it discussed during regular staff/team/workgroup meetings?</i></b>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The records presented did not show the policy had been reviewed at any meetings.	
<u>Initial Audit - Manager's Reply:</u>	
Started to review the policy at meetings and will continue. Reviewed with all Development crews. Reviewed with all Production crews.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The first review with all Employees was completed June/July 2013.	5

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<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(b) Health and Safety Program :</b>	
<i>Have general safety rules been developed?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Some general rules are reviewed in the new hire orientation and some are in the OHS manual, (which is in draft form and not reviewed).	
<u>Initial Audit - Manager's Reply:</u>	
Orientation has been revised and more general rules defined.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
A review of the Orientation package and the Safety Manual show there has been more General rules added and reviewed.	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(b) Health and Safety Program :</b>	
<i>Are workers familiar with general safety rules?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The majority of the workers interviewed indicated they were aware of the general rules but felt they needed to be reviewed more often.	4
<u>Initial Audit - Manager's Reply:</u>	
General rules will be reviewed by all departments on an annual basis and delivered by departments.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(c) Health and Safety Program :</b>	
<i>Have Safe Work Procedures been developed on a departmental basis?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Safe Operating Procedures are being developed on an ongoing basis using a Job Hazard Analysis process for each Department. Some departments are further along in this process than others.	4

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<u>Initial Audit - Manager's Reply:</u>	
Work Procedures are continually being developed on a regular basis	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1)(c) Health and Safety Program :</b>	
<i>Have the safe work procedures been reviewed with all relevant workers?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is an employee training matrix in place that tracks which SOP's are reviewed by which employee. It was also noted that some of the SOP's are also being reviewed at crew meetings. This process needs to be expanded to capture all training.	4
<u>Initial Audit - Manager's Reply:</u>	
SOP's have been attached to equipment training and are being reviewed with relevant workers as per assigned tasks.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(e) Health and Safety Program :</b> <i>Is there a provision for regular monthly crew safety meetings?</i>	
<u>Initial Audit - Inspector Comments:</u> There are formal monthly meetings being held with minutes being kept.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current Process will continue	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(f) Health and Safety Program :</b> <i>Are there procedures developed for accident and serious incident investigations?</i>	

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<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There are procedures developed in the OHS manual, which needs to be published. There has been formal accident investigation training done, but the process needs to be published and reviewed.	
<u>Initial Audit - Manager's Reply:</u>	
A procedure for serious accidents and investigations is published in procedures library and is currently under review.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Procedure SAF-POL-004 has been developed and is in the Safety Manual. It has to be properly implemented.	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1)(g) Health and Safety Program :</b>	
<i>Are there procedures for monthly safety tour inspections?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is a procedure outlined in SOP procedure SAF-FRM-088	5
<u>Initial Audit - Manager's Reply:</u>	
Safety Inspections are a corporate KPI requirement for management and is compliant to corporate guidelines.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (2) Health and Safety Program :</b>	
<i>Does the OHSC regularly review the mine Health and Safety program for completeness and effectiveness and submit its findings to the manager?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
In review of the minutes from the OHSC it appears that some of the safety program elements are being discussed but the committee needs to expand their focus to more parts of the program.	4
<u>Initial Audit - Manager's Reply:</u>	
Review with JOHSC	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.1 Occupational Health and Safety Managerial Responsibility:</b>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part One – Application of Code and General Rules

July 16 & 17, 2013

<b>Subsection 1.6.1 Health and Safety Committee:</b>	
<i>Is there a health and safety committee established in accordance with section 1.6.1?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is a committee that is comprised of New Gold employees and Contractors, which creates a rather larger committee. This appears to have an impact on the committee's ability to work on the bigger picture elements of the safety program.	
<u>Initial Audit - Manager's Reply:</u>	
Reviewed committee size and structure of JOHSC. Restructuring currently in progress, Quarterly meetings have been organized to aid with the restructuring process	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
With the reduction of the number of JOHSC members the committee feels they are effective. The introduction of quarterly meeting with Senior Management is a positive step in developing a working relationship with the committee. The Co-Chair feel they now know the direction they want to take, they are getting the right people on the committee, they have the support of Management and have gained more respect with the work force.	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.3 Inspections:</b>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<b>Subsection 1.6.3(1) Health and Safety Committee:</b> <i>Does the committee conduct regular monthly inspections?</i> <ul style="list-style-type: none"> <li>All hazard areas are identified and inspected regularly</li> <li>Substandard conditions are documented in writing</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> <p>The records show that regular monthly inspections are being done, with minutes kept. It was noted that at the time of this audit the hazard rating that was being used previously for items found during the inspection has been dropped from the present process. The reason for this needs to be reviewed.</p>	<u>Score</u>
<b>Initial Audit - Manager's Reply:</b> <p>Reviewing and re-implementing the hazard ranking system.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>There is a hazard risk matrix developed to be used for planned inspections, now it has to be more widely utilized.</p>	<u>Adjusted Score</u> <p>4</p>
<b>Audit Follow Up - Manager's Reply:</b> <p><a href="#">Click here to enter text.</a></p>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <p><a href="#">Click here to enter text.</a></p>	<u>Adjusted Score</u>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <p><a href="#">Click here to enter text.</a></p>	
<b>Subsection 1.6.3(2) Health and Safety Committee:</b> <i>Does the Committee meet after their inspection?</i> <i>Are minutes of this meeting prepared including a description of conditions found during the inspection?</i> <i>Are Action and follow-up plans are developed specifying what will be done, by whom, when?</i> <i>Are the minutes posted in a conspicuous place and filed with the Manager?</i>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Review of the records show that minutes of the Inspections are being kept with action items identified. These action items are put in the site's Corrective Action tracking system for implementation and monitoring.	4
<u>Initial Audit - Manager's Reply:</u>	
Process will continue and be revised as required.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.4 Inspections:</b>	
<b>Subsection: 1.6.4(3) Health and Safety Committee:</b>	
<i>Are the OHSC Minutes posted in a conspicuous place and filed with the Manager?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Minutes from the OHSC were observed posted throughout the site.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 1.6.5 Accident Investigations:</b>	
<b>Subsection: 1.6.5 Health and Safety Committee:</b>	
<i>Do the OHSC co-chairpersons or their designate participate in investigations of medical aids and dangerous occurrences as required in 1.7.1 of the HSRC?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
In review of the records, they showed that the OHSC co-chair persons or designates are involved sometimes but not on a consistent basis. There were many AI reports that did not have a safety representative signature on them.	
<u>Initial Audit - Manager's Reply:</u>	
Involvement of JOHSC has been increased and Safety representative is approving/signing off on all Accident investigation reports.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
In review of the INX electronic system the names of those JOHSC reps that were involved in the investigation are identified but there is no formal sign off. The JOHSC minutes did shows Dangerous Occurrence reports were being reviewed by the JOHSC.	4

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.7 Cooperation with the OHSC:</b>	
<b>Subsection: 1.6.7 (1,2,3) Health and Safety Committee:</b> <i>Do all persons working at the mine cooperate with the OHSC by;</i> <ul style="list-style-type: none"> <li>• <i>Providing facility to carry out its inspections and investigations</i></li> <li>• <i>Allowing access to all records and reports</i></li> <li>• <i>Correcting hazards as noted by the agreed date by the OHSC?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There appears to be good cooperation with the OHSC. It is worth noting that at the time of this audit there appeared to be a good working relationship between the Surface and Underground OHSC representatives.	5
<u>Initial Audit - Manager's Reply:</u>	
Current Process will continue	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection: 1.6.7 Health and Safety Committee:</b> <i>Is there a system in place to ensure follow-up and implementation of committee recommendations?</i>	
<u>Initial Audit - Inspector Comments:</u> The action items identified from the OHSC are put into the site Corrective action process for tracking. The OHSC should be reviewing the status of these items at each monthly meeting to ensure action has been implemented.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> The Committee is reviewing the status of all corrective actions based on committee recommendations	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<b>Subsection: 1.6.7 Health and Safety Committee</b> <i>Is the Committee involved in the development of:</i> <ul style="list-style-type: none"> <li>• Safety program elements</li> <li>• Program measurements</li> <li>• Safe work procedures</li> <li>• Training for workers</li> </ul>	
<b>Initial Audit - Inspector Comments:</b>  Records show the OHSC has started to look at these aspects but due to the size and structure of the committee, the review is a complicated process. Records also show the committee spends most of its time looking at the physical conditions of the mine and less time on the behaviours, processes and procedures that show the effectiveness of the program	<u>Score</u>
<b>Initial Audit - Manager's Reply:</b>  Process has been developed to encourage more employee interactions by the JOHSC. The Safety program elements will be reviewed by the JOHSC committee. The committee is spending more time looking at procedures and committee effectiveness.	
<b>Audit Follow Up – Inspector Comments:</b>  The JOHSC has changed it's primary focus to one of looking at the broader elements of the Health and Safety Program. It is also looking at how to improve elements like planned inspections.	<u>Adjusted Score</u>
<b>Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> Click here to enter text.	<u>Adjusted Score</u>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>Section 1.6.8 Committee Training:</b>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<b>Subsection: 1.6.8 OHSC training:</b> <i>Has the OHSC received any training?</i>	
<u>Initial Audit - Inspector Comments:</u>  This topic was a point of some frustration for the OHSC. It was stated that a training plan had been developed for the committee for the year but for some reason was not followed through with. The records also showed that not all OHSC representatives had accident investigation training. This topic of training for the OHSC needs to be reviewed and a commitment made to get the training done.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u>  Hygiene and MSI training has been completed and delivered to more than 50% of the committee and Accident investigation training will be scheduled for all members this year. Two worker co-chairs and a worker rep toured an underground mine at another property to gain knowledge on committee effectiveness.	
<u>Audit Follow Up – Inspector Comments:</u>  Now that the JOHSC understands it's role they have better opportunity to evaluate the Training needs of the committee.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u>  <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>  <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>  <a href="#">Click here to enter text.</a>	
<b>Section 1.11.1 Occupational Health and Safety Managerial Responsibility:</b>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<b>Subsection: 1.11.1(2) Training in the Workplace:</b> <i>Is there a comprehensive orientation and safety training program for new workers, including hazard awareness and reporting, general safety rules, safe work procedures, safety and health policy, safety Committee emergency procedures, etc?</i> <i>Does this training include all Managers/Supervisors?</i>	
<b>Initial Audit - Inspector Comments:</b> There is a new hire orientation process in place at the mine. Some of the Personnel safety rules that are identified in the Health and Safety Reclamation code are not reviewed in this orientation. There were no records provided that showed that Managers or Supervisors had received any new hire orientation.	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> Records show that Supervisors and Managers have received a new hire Orientation. Personal safety rules are stated in the orientation process	
<b>Audit Follow Up – Inspector Comments:</b> Evidence was presented that showed Management and Supervisors have received the new hire orientation. The Personal Safety rules that were missing from the New Hire Orientation package have noow been added.	<b>Adjusted Score</b> 5
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection: 1.11.1 Training in the Workplace</b> <i>Are workers given task specific safety training on how to do each task safely including being informed of hazards associated with the task?</i>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>Initial Audit - Inspector Comments:</u> Specific task hazard analysis is done through the use of the Job Hazard analysis process, which helps in the development of SOPs for each task. In review of the records they do not clearly show that all relevant workers get this task hazard training.	<u>Score</u> 
<u>Initial Audit - Manager's Reply:</u> Working through all employees to ensure relevant SOP's are reviewed and signed off.	
<u>Audit Follow Up – Inspector Comments:</u> This is an ongoing process and progress was noted.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection: 1.11.2.Training in the Workplace:</b> <i>Is there a recording system developed for recording all training received by workers and supervisors?</i>	
<u>Initial Audit - Inspector Comments:</u> There was, at the time of this audit, an Excel spreadsheet that was being used to track employee training which a very labour intensive system to use was. There is a new system being introduced, the INX-Health Data/Incident Entry Management system which appears will make this tracking process a lot more manageable.	<u>Score</u> 3

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Second component of INX- Intuition is slated to be complete by December 2013. This component will track all employee training.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
his is training tracking is still an ongoing process. The INX system has not yet been developed to have this training tracked and is still being managed through and excel spreadsheet system. No Change to this element.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Part 1 – Total out of 150</b>	<b>135</b>
<b>Part 1 – Percentage out of 100%</b>	<b>90%</b>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<b>Section 2.1 Workplace Health Hazard Management Program:</b>	
<b>Subsection: 2.1.3(1) Workplace Monitoring Program</b>	
<i>Has a written program to ensure a hazard free environment been established in accordance with the "Workplace Monitoring Procedures Manual"? Is there a written program and is it reviewed on a regular basis?</i>	
<u>Initial Audit - Inspector Comments:</u> On three occasions a consulting company has conducted workplace monitoring for the mine: May 2009, Oct. 2011 and May 2012. In 2009, exposures to noise, silica, and respirable combustible dust were assessed and lighting, radon gas, and gamma radiation surveys were conducted. In 2011, exposures to noise, silica, and respirable combustible dust were re-assessed and heat stress monitoring was conducted. In 2012, noise, silica, and respirable combustible dust were again assessed and concentrations of fourteen airborne metals, including mercury, were assessed underground, a second gamma radiation survey was conducted and the heat stress monitoring program was re-evaluated. This work has been complemented by ongoing monitoring conducted by the mine for noise, silica, respirable combustible dust, and three metals (nickel, magnesium and chromium).	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Continued monitoring will take place	
<u>Audit Follow Up – Inspector Comments:</u> The site has recently written a new Workplace Monitoring Program. The program touches on the key components which are expected by the Ministry. At the time of the audit the program has not yet had an opportunity to be exercised in the workforce and no data for the revamped SEGs have been compiled. The Ministry looks forward to the implementation of this program which has the potential to be industry leading.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two– Occupational Health

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection: 2.1.3(1) Anticipation/Recognition of Hazards</b> <ul style="list-style-type: none"> <li>• <i>Are work areas being assessed to anticipate/recognize occupational health hazards?</i></li> <li>• <i>Does the program identify the potential health hazards?</i></li> <li>• <i>Does the program identify the locations of these hazards?</i></li> <li>• <i>Does the program identify the workers exposed? Including grouping workers of similar exposures together (SEG)?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Hazards have been identified and SEGs have been developed. In 2009, the consultant hired to conduct workplace monitoring categorized approximately 65 employees into similar exposure groups, and in 2011, the consultant categorized approximately 230 employees into similar exposure groups. The mine currently employees approximately 800 people, including contractors. SEGs should be reviewed and adjusted on a regular basis.  Methodology for identification of hazards and their respective locations is unclear. It remains unclear if all hazards have been identified (organic vapours? cement dust? Are surface labourers exposed to noise? etc). For the majority of SEG's (all except SEG 1), the workers exposed have been identified.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Hygienist has been recruited and is currently reviewing the SEG's, methodology is also being reviewed.	
<u>Audit Follow Up – Inspector Comments:</u> To ensure all workers have been appropriately included in the workplace monitoring program, new SEGs have been developed	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

through interviewing supervisors in each department. These SEGs will continue to be refined through interviewing workers, conducting job-shadowing and reviewing Standard Operating Procedures (SOPs). Quantitative data will be used to further refine SEGs once available. This work is in its infancy and the Ministry looks forward to full implementation of the Workplace Monitoring Program.	4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.1.3 (1)(2)/2.1.1/2.1.2 Evaluation of Hazards</b> <ul style="list-style-type: none"> <li>• <i>Does the program specify the frequency of monitoring?</i></li> <li>• <i>Does the program specify the evaluation methods used to determine the exposure levels of workers?</i></li> <li>• <i>Are worker's trained in conducting the program? Is monitoring being conducted?</i></li> <li>• <i>Are records of the monitoring program being kept?</i></li> <li>• <i>Are employees exposed to airborne concentrations of chemical agents or noise in excess of the levels specified in the Code or 1994-95 TLVs?</i></li> <li>• <i>Are TWA concentrations calculated based on Ceq formula when shifts are longer than 8 (eight) hours</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p>A considerable amount of personal samples have been collected. Program sampling frequencies appear to be chosen based on qualitative information/professional judgment. Sampling frequency for newly identified SEG has not yet been established. Recommended sampling frequencies are not consistently being met. For example, three personal samples have been taken for welding fumes, too few to ascertain compliance.</p>	
<p>Samples taken by the consultant in 2012 were area samples, rather than personal sampling for airborne contaminants.</p>	
<p><u>Initial Audit - Manager's Reply:</u> More welding fume samples have been taken to increase statistical significance. Full time hygienist has been recruited to expand on the current program.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> The addition of a full-time Hygienist will ensure that the potential of the Workplace Monitoring Program will be realized. The site has continued to evaluate person exposures to silica, respirable dust, diesel particulate matter, welding fumes and noise on an ongoing basis. Additional welding fume samples have been collected to achieve a statistically meaningful sample. Through the development and implementation of the Exposure Assessment Strategy (i.e. the revised workplace monitoring program) additional hazards will be evaluated, identified and addressed. A new monitoring schedule is currently in development based on the new exposure groups. The targeted completion for the new monitoring schedule is end of Q3 2013.</p>	<p><u>Adjusted Score</u></p>
	<p>3.5</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<b>Subsection 2.1.3/2.2.1/1.9.1 Control of Hazards</b> <ul style="list-style-type: none"> <li>• <i>Does the program specify the controls in place for the hazard?</i></li> <li>• <i>Are controls being developed/implemented to reduce worker exposures?</i></li> <li>• <i>Has the manager taken all reasonable and practicable measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers?</i></li> <li>• <i>Where practicable, has the manager instituted controls at the source to ensure that workers are not exposed to a level of any physical, chemical, or radiation hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations, and has the manager required that persons wear effective personal protective equipment in any situation where control at the source, as required by section 1.9.1(2), is impractical.</i></li> </ul>	
<b>Initial Audit - Inspector Comments:</b> <p>There is limited evidence to show that quantitative data from collected samples is being used to make recommendations for the implementation of controls. Data should be analyzed appropriately to ensure that workers' exposure profiles fall within acceptable limits. For example, current monitoring results from SEG 8 and SEG 1 for silica quartz demonstrate that employee's exposure profiles lie above the safe working limit.</p>	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> <p>Occupational Hygiene committee discuss results from readings and develop action plans. Information is captured in meeting minutes. Controls were put in place to control exposures in SEG1 and 8, these exposures were related to road dust which was controlled by suppressing dust using a water truck. When roads are dry, workers call dispatch to notify the road crew to have the roads watered.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>The revised Workplace Monitoring Program is in its infancy, which includes a plan for a statistically valid methodology for data analysis. At the time of the audit, the collection of quantitative monitoring data and its subsequent analysis in line with the revised program had not yet occurred. Statistical analysis of previously collected data has been minimal. Quantitative data was not reviewed at the time of the audit. Upon review of the monitoring data it may be determined that additional controls are necessary. The program is moving in a positive direction and the Ministry acknowledges and commends this positive step forward.</p>	<b>Adjusted Score</b> <p>3</p>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>  
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>2.2.1 Workplace to be hazard free</b>	
<b>Subsection: 2.2.1</b> <i>Is there an effective housekeeping program developed and implemented to ensure:</i> <ul style="list-style-type: none"> <li>• <i>That all workplaces and travel ways are maintained in a safe condition?</i></li> <li>• <i>Materials and equipment are stored in a manner so as not to endanger persons?</i></li> <li>• <i>Appropriate action is taken whenever necessary to maintain</i></li> </ul>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p><u>Initial Audit - Inspector Comments:</u></p> <ul style="list-style-type: none"> <li>• Areas in the mill had water unable to drain such as at the filter press and at a smelly, catchment area without a drain by the south door.</li> <li>• In the mill, the sag in the conveyer belt leading to the pebble crusher caused coarse ore to fall from conveyer and scatter all over the floor, making a considerable mess. Similarly, the magnetic roller separator used to pick steel out of the ore was not aligned properly. Coarse steel-containing rocks are being picked up and dropped over walkways and under conveyer belt. A buildup of dust and rock under the head end of S3 conveyer in the mill was also observed.</li> <li>• Underground, there were a number of areas leading up to where operators worked or accessed (operator access to Crusher cab, lower work ladder and catwalk at bottom of crusher, access area to a diamond drill platform) that had loose rock and other debris that could lead to tripping hazards. Given that trends of ankle injuries were seen in the records review, this should be an area of housekeeping focus.</li> <li>• A pump in one underground area was off, resulting in a significant buildup of water in the travel way. Upon observing the water build up the mine captain took initiative to have the area cleaned.</li> <li>• Employees report having observed rodents in the permanent underground refuge station. Mouse traps have been set in the area, however it is not known if the rodent problem has been resolved.</li> </ul> <p>Upon review of incident reports, recommendations for control measures were often made but were not always adequate or signed off as completed. When not completed, it is unknown whether hazards are controlled.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Crews have been made aware of recent incidents and a greater emphasis has been placed on workplace housekeeping in morning meetings. Said areas will be inspected and hazards removed immediately.</p> <p>Published SOP in place for Mine ops relating to housekeeping which includes refuse, standing water, tramp steel, etc. Will review with crews.</p> <p>Permanent dewatering system is in the process of being developed.</p> <p>Traps are checked on a regular basis and a few rodents have been captured. No further reports of rodents noted.</p> <p>Review incident report procedure with all shifters and recorded in matrix.</p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted</u>
Catchment area in the mill nearly empty, with no irritant smell. No pump yet installed in the confined space area.	<u>Score</u>
<p>As the mine is aware, there may be a trend of ankle injuries, from slips and falls. Upon review of some incidents and conversations with workers, housekeeping as well as boot style may be contributing factors. Ms. Martinovic is currently working with the warehouse to trial different types of boots. Some incidents recommended bringing in piles of muck to fill in puddles to improve walking surfaces. The approach from the haul road side of the old crusher cab underground had an example of poor housekeeping where rock debris had built up at the foot of the cement platform leading to the catwalk. Regular housekeeping by workers assigned to an area on a shift may assist to avoid any build up of debris. Continuous work needed in this area.</p> <p>Smoking in the workplace introduces a health hazard. This practice was observed in underground locations where other workers, who were not smoking, were present.</p> <p>A leak was observed at the top of the Flash Flotation Cell and at the Rougher Feed Sampler in the Mill.</p> <p>There is room for improvement with the set up at the table containing a number of buffers near the flotation cells in the mill (e.g. open containers left out, lack of secondary containment, etc).</p>	3.5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted</u>
Click here to enter text.	<u>Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two– Occupational Health

July 16 & 17, 2013

Section 1.11 Training	
<b>Subsection: 1.11.2/1.8.1/1.8.2 Respirators</b>	
<ul style="list-style-type: none"><li>• Does the manager supply properly fitted PPE? I.e. is respirator fit testing being conducted? Are records being kept?</li><li>• Does the manager ensure that the equipment is adequate for its purpose?</li><li>• Are workers wearing the PPE?</li><li>• Are workers instructed in the use and maintenance of the equipment, the reasons for it, and its location and limitations?</li><li>• Is a record of the training maintained?</li></ul>	
<u>Initial Audit - Inspector Comments:</u> Fit testing is being conducted and employees are being instructed in the use and maintenance of the equipment. Employees report that respiratory protection can be obtained from the warehouse without a fit test being conducted. At the time of inspection, the respirator protection program provided to the Ministry appears to be draft form, as it lacks a document control number, lacks a title, and had not been assigned with a revision number.  An appropriate respirator was observed being used during a grinding task in the shop.	<u>Score</u>  
<u>Initial Audit - Manager's Reply:</u> Respiratory program has been developed and published, workers are fit tested by the Safety department prior to being issued a respirator	
<u>Audit Follow Up – Inspector Comments:</u> The respiratory program has now been published and the majority of workers on site are being fit tested by a trained individual with	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p>the Safety department prior to being issued a respirator.</p> <p>Diamond Drillers work with a number of controlled products, some of them in powder form and carcinogenic. At the time of inspection, the drillers were not using a half mask respirator for handling such products. A risk assessment should be conducted to evaluate whether a half mask respirator should be used. Some of the diamond drillers have been issued half mask respirators but have not been fit tested, nor trained on appropriate maintenance and storage of the PPE.</p> <p>Half mask respirators have been supplied to staff in the lab with combined cartridges for acid gas and particulate matter. In the event of a spill/ventilation failure, employees should be aware that, should they require protection against a workplace hazard other than which their cartridges are designed to protect them against (e.g. organic vapours), their current PPE may not suffice. At the time of inspection it was agreed upon that a list indicating the appropriate cartridge to use for a given spill would be developed and would accompany the spill kit. Appropriate cartridges should be readily available in the event of a spill.</p> <p>At the time of inspection in the PAX reagent mixing area (where strong vapours were noted) half mask respirators were being stored in lockers. Sealed plastic bags or other closable pouches were not being used.</p>	<p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>1.6.9/1.1.2 Musculoskeletal Disorder Prevention</b></p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<b>Subsection: 1.6.9 (1)(h) _Musculoskeletal Disorder Prevention Program</b> <i>Has the Manager developed a written MSD prevention program for the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries?</i>	
<b>Initial Audit - Inspector Comments:</b> A Wellness Program including some content on MSD Prevention in the form of a presentation was reviewed. It recognized some risk factors related to MSD but often focused on behavioural changes to reduce the exposure to risks associated with MSD. It did not reference how to evaluate the severity of risk factors or control through the application of a hierarchy of controls. Symptoms and early reporting are not discussed. This training does not meet the requirements for training for the OHSC.	<b>Score</b>  
<b>Initial Audit - Manager's Reply:</b> An MSD program has been developed, 84% of the OHSC committee has received MSD training	
<b>Audit Follow Up – Inspector Comments:</b> Training materials previously provided by the Ministry have been customized and are in use to deliver this program on site. Lisa Martinovic has taken the lead on this and is the primary trainer onsite to deliver these materials.  What is the manager's plan to ensure training may continue following OHSC turnover or should Ms. Martinovic require assistance?	<b>Adjusted Score</b> 4
<b>Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> Click here to enter text.	<b>Adjusted Score</b>  
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<b>Subsection 1.6.9 (1)(h)/1.1.2 /1.11.1(2) MSD Prevention Program</b> <ul style="list-style-type: none"> <li>Has the Manager developed a Mine Health and Safety Program which includes the following sections:</li> <li>(h) a written preventative training program, acceptable to the chief inspector, to educate OHSC members in the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries</li> <li>Are ½ the worker representative and ½ the management representatives trained?</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> The Wellness program presentation which contained some MSD Prevention content was reviewed. Training records for this training were not provided. Lisa Martinovic, Andrew Bryant, Kevin Mihalicz and Jackson Chamberlain have attended training on this topic offered by this Ministry. At least half of the OHSC requires training so that OHSC knowledgeable on this content can effectively be involved in investigations or site inspections and assessments where tasks risk associated with MSD may need to be identified, evaluated and controlled.	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> Provided MSD training to 84% of JOHSC.	
<b>Audit Follow Up – Inspector Comments:</b> Training records for the OHSC and for supervisors who have received this training was provided. Thank you for also providing this training to supervisors; this will be beneficial to the safety program as supervisors will better equipped to prevent and investigate related injuries. Interviewed supervisors demonstrated understanding of some of the content and application.	<b>Adjusted Score</b> 5
<b>Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> Click here to enter text.	<b>Adjusted Score</b> 

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><b>Subsection 1.11.1 MSD Prevention Program</b></p> <p><i>Have workers been trained in the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries as it relates to their work?</i></p> <p><i>Has the manager ensured that, with respect to musculoskeletal disorder prevention,</i></p> <p style="padding-left: 40px;">(1) <i>workers are adequately trained to do their job or are working under the guidance of someone who has competency both in the job and in giving instruction, and</i></p> <p style="padding-left: 40px;">(2) <i>ensure that all employees receive thorough orientation and basic instruction in safe work practices</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p> <p>The Wellness presentation includes some information on risk factors associated with MSD and some instruction on body mechanics. Early reporting and signs and symptoms are not emphasized. Training records were not provided.</p> <p>Some additional training records regarding 1 hr sessions: "Ergonomic Risk Presentation" and "Office Ergonomics Training" were provided. Training was conducted by a consultant ergonomist April 26/27, 2011. A summary of the training content was not provided.</p> <p>Some workers interviewed demonstrated some working knowledge of possible injury risk related to overexertion activities associated with their work. This was more apparent in the more experienced workforce so is not clear whether this has been learned through experience, previous workplaces or information presented at this mine.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>12 Supervisors have completed similar MSD Prevention training as the JOHSC. Crew talk presentations regarding MSD Prevention have been distributed to the supervisors to present to their crews. Also waiting for the training program from the MoM to go live for current workforce as another option for education. MSD Prevention Orientation presentation has been included in the orientation program.</p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up – Inspector Comments:</u> New hires are provided with MSD Prevention education at orientation. Training records for supervisors who have received this training was provided. Thank you for also providing this training to supervisors; this will be beneficial to the safety program as supervisors will better equipped to prevent or investigate related injuries.  The existing workforce will be provided with MSD Prevention education at crew safety meetings; instructional materials have been circulated to all supervisors this month following the supervisor training. July 15, 2013 this material was first reviewed with the first existing crew. Please confirm when completed.  In March 2013, approx. 91 workers and some contractors who work on crews who operate the C-frame jumbo were provided with education regarding MSD risk factors and adjustments they can make to decrease risk associated with awkward and static postures in their cabs. Those operators interviewed recall this training and have been making adjustments as they work to assist in mitigating awkward postures. Some complaints were raised about the current arm rests in the C-frames jumbos as the adjustability was not intuitive and the arm rests simply got in the way of some larger statured operators. Some even questioned if the arm rests were actually broken but were not sure. An audit of these arm rests with a consultation with the manufacturer may prove the arm rests useful versus the workforce simply removing them as they are confusing and in the way.  Following the completion of more ergonomic assessments, MSD prevention education that is job/task specific will be able to be presented to trainees and existing workers which will further enhance MSD Prevention.	<u>Adjusted Score</u>  5
<u>Audit Follow Up - Manager’s Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>Subsection 1.9.1</b> <i>(1) With respect to ergonomics has the manager taken all reasonable and practicable measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers,</i> <i>(2) Has the manager taken a proactive approach to musculoskeletal disorder prevention? Are safety tours addressing workstation design being conducted, area job demand analyses being done, and is research into hazards and controls being conducted?</i>	
<b>Initial Audit - Inspector Comments:</b> Several office ergonomics assessments "Ergonomic Spot Audit Checklist" had been completed by a consultant. It is unknown if the recommendations contained within were put into place and effective.  A Physical Demands Analysis had also been completed for the Mill Control Room but it did not contain any recommendations or evaluation of risk associated with any physical demands. A finger-tip adjustable work surface was installed and will be effective in reducing symptoms associated with static postures at this work task, providing control room operators adjust their posture regularly.  No other evidence of ergonomics assessments underground or within surface operations was provided. Proactive inspection tours with respect to MSD related hazards may have revealed: 1.C-frame jumbo: noted cramped space for operator's with some visibility difficulties. Drill operation console actually articulates (handle at left side) which changes the angle of the controls to increase comfort and adjustability for workers but was stuck. Recommend this be fixed and demonstrated to drill operators to help reduce static and awkward postures related to this task. 2. Underground crusher cab – small area needs better suited furniture (more narrow profile chairs, cabinets) for this small space. Also foot-rung on main operator's chair a hazard for tripping.	<b>Score</b>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two– Occupational Health

July 16 & 17, 2013

### Initial Audit - Manager's Reply:

#1- SAP work order issued for both C frame Drilling Rigs (SAP# 308 –10020984 310 –10020985 )

Ergonomic assessment completed on Gyro cab and design recommendations have been approved and the workstation is now installed. The development crusher is now only used for 1-2 hours/shift. Foot rung on operator's chair will be removed (Development Captain). Currently sourcing appropriate foot rest and chair.

A presentation regarding posture as a risk factor and how to adjust the C frame drill has been delivered to 4 crews. Physical demands analyses are currently being performed on all jobs on site. Risk factors will be identified and proactive assessments will be completed.

### Audit Follow Up – Inspector Comments:

Ergonomics Assessments were reviewed re: the Sandvik Bolter, Gyratory Crusher Cab, Warehouse, and of an office setting in Tech

Adjusted

Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p>Services:</p> <ul style="list-style-type: none"> <li>Following the work order, an ergonomic assessment was conducted on the C-frame and in March 2013, approx. 91 workers and some contractors who work on crews who operate the C-frame jumbo were provided with education regarding MSD risk factors and adjustments they can make to decrease risk associated with awkward and static postures in their cabs.</li> <li>An ergonomic assessment was reviewed on the Gyro Cab. Recommendations are in place. There are some opportunities for improvement in the installation of task lighting (as current lighting leads to glare), a repositioning of the right hand monitors currently blocking a direct sight-line to the left side dump position (could be repositioned above monitors at centre of desk), and a repositioning of the CPU from under the desk to a protected cabinet/area to avoid damage from kicking.</li> </ul> <p>OHSC members participating in safety tours and meetings are identifying some ergonomic hazards of handling (reference 8572, 10838) work area design (ref 5128) seating (ref 8562) and rest breaks (ref 5131). To gain further experience hazard identification and assessment, it is recommended that additional persons with training participate in ergonomic assessments.</p> <p>Excellent work in this area. The assessments were well done and provide recommendations based on a hierarchy of controls outlining the most effective means of reducing risk to workers. It is recommended that additional persons also participate on future assessments to provide experience for OHSC members to assist on investigations.</p>	<p>5</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

### Subsection 3.3.5/1.9.1

*With respect to ergonomics has the manager:*

*(2) where practicable, instituted controls at the source to ensure that workers are not exposed to a level of any physical, chemical, or radiation hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations.*

#### **Materials Handling**

*Where a materials handling task endangers the safety of the persons doing the work, does the manager ensure that:*

- 1. the physical parameters of the handling task are redesigned or*
- 2. mechanical lifting aids or personal protective equipment is provided, or*
- 3. the work area where the work is carried out is redesigned to eliminate unsafe condition conditions relating to floor surfaces, lighting, or obstruction to materials handling, or*
- 4. a combination of (1), (2), or (3) is implemented.*

#### **Initial Audit - Inspector Comments:**

Flocculent-mill: due to the design of where the flocculent is stored, handled and poured into a hopper in the mill, workers are exposed to lifting tasks in excess of recommended weight limits due to how the 25 kg bag is handled to complete this task. To reduce physical demands associated with handling this 25 kg bag, workers would benefit from an elevation in the floor surface which could be accomplished by installing grating across the containment ledge to raise the standing surface in front of the hopper for ease of lifting bag to dump into the hopper and a ledge to place the bag on to cut it then dump in the hopper. A reduction in the carrying distance of the flocculent would also decrease risk associated with this handling task.

Incident reports were reviewed where handling injuries occurred. Investigators need to consider engineering controls to more effectively reduce the need for items to be handled vs. simply recommending workers should “take their time”.

In the new Assay lab and in the warehouse, lifting aids and carts were available for workers to use when needed. In the warehouse, large items were being stored on pallets for safer lifting by a forklift instead of by hand.

#### **Score**

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u> Improving the ergonomics of the flocculent area has been identified as a project and will be managed by the Project Group. More effective controls during incident investigations have been covered in the JOHSC and Supervisor MSD Prevention training sessions.	
<u>Audit Follow Up – Inspector Comments:</u> Flocculent handling has been redesigned to reduce manual handling. Although it is recognized that this task is performed infrequently, handling of the 25kg bags still occurs and involves lifting from a bent over position from a tote. There may still be some room for improvement to further decrease handling and any associated risk. It is recommended that the task as it is designed is assessed with an objective means (ergonomic checklist) to determine if any risk remains with the modifications.  There has not been any MA or LTI related to MSD since the initial audit. Therefore a FA was reviewed where a worker reported low back pain March 10. A cart for moving heavy items was recommended as an effective engineered method of reducing risk.  OHSC members participating in safety tours and meetings identified some ergonomic hazards of handling (reference 8572, 10838) work. To gain further experience hazard identification and assessment, it is recommended that additional persons with training participate in ergonomic assessments.	<u>Adjusted Score</u> 4.5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

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### Subsection 2.9.1/1.9.1

*Where the equipment, work procedure, or working condition in a work area has caused injurious inflammation of muscles, tendons, or bursae of the upper limbs of the persons doing the work, and it is demonstrated to be from repetitive or forceful use, the Chief Inspector shall, where practicable, require implementation of one or more of the following preventive measures:*

1. *Modification of work procedures or equipment to reduce physical demands on affected body areas*
2. *A rescheduling of work to permit safe adjustment to unaccustomed task requirements*

*Or where practicable, institute controls at the source to ensure that workers are not exposed to a level of any physical, hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations.*

#### Initial Audit - Inspector Comments:

Several incident reports were reviewed where workers were involved in incidents where an overexertion injury occurred. Recommendations were often limited to behavioural controls and administrative controls such as adding a worker to the task. These controls are not as effective as using engineering methods of control or redesign to reduce risk. Also, as recommendations were not always signed off as complete, it is unknown if this was consistently completed.

Overall, the low quality of investigation reports with respect to MSD Prevention is directly related to the lack of training of those involved in MSD-related investigations.

#### Score

#### Initial Audit - Manager's Reply:

JOHSC have been trained in MSD prevention which will improve corrective actions related to MSD. RTW coordinator reviews all MSD related injury reports and works with supervisor to make appropriate recommendations. To date 12/27 supervisors have been trained in MSD Prevention. Second session to occur June 7/13.

#### Audit Follow Up – Inspector Comments:

Thank you for extending this training to the supervisors. This training will enhance their investigative skills and

#### Adjusted

#### Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

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<p>following recommendations to reduce risk to workers. Injury/incident report template appears to improve the tracking and sign off:</p> <ul style="list-style-type: none"> <li>Incident dated April 12th involving a broken arm as a result of falling off of a ladder was reviewed. Investigation concluded the fall a result of selecting the wrong hand tool for the job. Could this job have been done more safely if it had been designed to maintain 3point contact on the ladder? Perhaps a working platform or better design to access the work to be done would have prevented the fall? This was not discussed in the investigation report.</li> <li>An ankle injury May 13 resulted in a recommendation of fixing a flooded walk area with fill to smooth out the walking surface; an effective engineered control.</li> </ul> <p>There has not been any MA or LTI directly related to chronic MSD since the initial audit.</p>	4
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>2. Hazards</b></p>	
<p><b><i>Subsection 2.1.4 Oxygen Content of Air</i></b></p> <p><i>Do persons work or remain in any section of the Mine where they may be exposed to air with less than 19.5% oxygen without an alternate air supply?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u> A number of unidentified (unmarked) confined spaces were observed in the mill. The Ministry has been informed that a review is underway to identify all confined spaces and have them adequately identified.</p>	<p><u>Score</u></p>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

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<u>Initial Audit - Manager's Reply:</u> All confined spaces in the mill have been identified and labelled	
<u>Audit Follow Up – Inspector Comments:</u> A consultant was brought in to evaluate confined spaces, identify potential hazards within confined spaces, create entry and rescue plans and label confined spaces. The majority of the spaces observed are now in compliance with the code. There were a number of unlabeled confined spaces at the waste water treatment circuit.  At the Assay Lab there is a tank of liquid argon inside a small room accessible from the rear of the building. Should the cylinder or lines coming from the cylinder develop a leak oxygen may be displaced resulting in an IDLH atmosphere.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

### **Subsection 2.5.1/2.5.2/2.5.3/2.5.4/2.5.5/2.5.6 Abrasive Blasting**

#### No Silica or Lead:

*Is abrasive blasting material containing 1% or more free silica or lead being used?*

*Is all abrasive blasting and similar operations,:*

- when carried out within a building, conducted in an isolated enclosure to prevent injury to persons?*
- when carried out outside a building, conducted in a place and manner to prevent injury to persons?*

*Do the enclosures have sufficient exhaust ventilation to ensure that a continuous inward flow of air is maintained at all openings in the enclosure during the blasting operation?*

#### Protective Equipment:

*During abrasive blasting operations are air-supplied hoods or respirators suitable for the work supplied and work, together with gloves, leggings, and clothing designed to protect the employees from dust, and projected abrasive or other material?*

*Does air supplied to the hood or respirator meet the requirements of CSA Standard CAN3Z180, 1-M85 "Compressed Breathing Air and System," as updated from time to time, and is the volume of air supplied sufficient for respiration and to prevent the entry of contaminants into the hood or respirator, and not less than 105 L per minute at the mask?*

#### Nozzles and Valves:

- 1. Are blast cleaning nozzles equipped with an operating valve which must be held open manually and the normal operation of this valve not defeated?*
  - Is there support provided on which the nozzle can be secured when not in use?*
- 2. In addition to the operating valve required by subsection (1), is there another operating control readily accessible to the operator to enable the flow of abrasives to be stopped immediately?*

#### Workers to Be Removed:

*Are persons not required to assist in abrasive blasting or a similar operation which release harmful substances to the atmosphere, removed from contaminated areas?*

*Where such removal is not practical, are the exposed persons advised of the hazard and supplied with suitable personal protective equipment which they shall wear?*

**Initial Audit - Inspector Comments:**

**Score**

**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

The Ministry was informed there is no abrasive blasting being conducted on site.	n/a
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u> n/a
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.3.1/2.3.2 Asbestos</b> <i>The manager shall ensure that</i> (1) as effective, less hazardous, asbestos-free substitutes become available and practical for such items as brake lining, insulation, and fire retardant materials, they shall be used, (2) where there is no substitute available for an asbestos-containing material, a procedure acceptable to the chief inspector is developed to protect the health of persons using, maintaining, or exposed to such material, (3) notwithstanding subsection (2), items containing crocidolite asbestos are not to be used at a mine, (4) spraying of asbestos, or material containing more than 1% of asbestos, is prohibited, and (5) protective clothing and equipment made of material containing asbestos is used in such a manner as to prevent the release of asbestos fibres. <i>Where any work involves the use, handling, or disposal of asbestos or materials containing asbestos, the manager shall ensure that the procedures outlined in the manual "Safework Practices for Handling Asbestos Revision 10 1996" published by WorkSafe BC are followed, and that the inspector and the OHSC are notified of the procedures.</i>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
An asbestos survey was conducted under previous supervision. The results of the asbestos survey could not be located at the time of the audit. Employees were aware that some building walls were asbestos containing. Signs need to be mounted on the asbestos containing walls to indicate they should not be disturbed.	
<u>Initial Audit - Manager's Reply:</u> Survey has been located and reviewed, bulletin has been sent site wide for review communicating areas that could possibly contain asbestos and all renovation work has to be approved by the Safety department.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
A safety alert has been sent out to site to inform employees that the Administration building, the maintenance shop, and the warehouse contain asbestos. At the time of the audit, employees who were asked about asbestos containing areas could either not recall the bulletin at all or could not remember which areas were potentially affected. This may be a result of the frequency with which safety alerts are sent out and due to the possibility that they may be forgotten after a period of time. New employees or contractors would not have seen the safety alert. Though, as presented in Manager's Reply, the Safety Department may be engaged for renovations, consideration should be given to the risk of asbestos material being disturbed during routine work, such as routine electrical work (as per Golder report, electrical system insulating materials are assumed to be asbestos containing).	3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

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<b>Subsection 2.3.5 Hazardous Dust</b> <i>Is dust being removed by suitable means (wet sweeping or shovelling, vacuuming or being suppressed) where it could become a hazard by restricting vision, or could cause a fire or explosion or be potentially hazardous if inhaled or ingested?</i>	
<b>Initial Audit - Inspector Comments:</b> <p>Dry sweeping was observed in the shop and indications of dry sweeping were observed in the mill (broom and dust pile without indication of dust collecting agent or use of water). Previous dust monitoring results suggest that inhaled dust may be potentially hazardous due to elevated levels of silica quartz.</p> <p>The site has taken positive steps to mitigate potential dust issues. Dust suppressant has been applied to roadways and DustFoam is being added to ore.</p>	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> <p>Click here to enter text.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>Control measures have been put in place to control dust at the Pebble Crusher.</p> <p>In general, most roads underground are being sprayed with greater frequency. Inspectors accessing the pit portal access road encountered extended areas of dust as the road had not recently been maintained.</p> <p>Major dust accumulations were observed by the mechanical inspectors at the reclaim feeders under the coarse ore pile. If this is a usual occurrence is there a means of engineering this hazard from occurring?</p> <p>Dustbane sweeping compound has been used in the past for dry sweeping but is being phased out as it contains crystalline silica. The product was observed onsite.</p>	<b>Adjusted Score</b> <p>3.5</p>
<b>Audit Follow Up - Manager's Reply:</b> <p>Click here to enter text.</p>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <p>Click here to enter text.</p>	<b>Adjusted Score</b> 

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>Subsection 2.3.9 (1)(2)/2.3.10/2.3.11 Radiation</b> <i>Is equipment which emits harmful levels of infrared or ultraviolet radiation shielded to protect employees from exposure to such radiation?</i> <i>Is PPE supplied to and worn by persons who could become exposed to harmful radiation levels?</i> <i>Are employees exposed to non-ionizing radiation which exceeds the recommendations contained in the publication "Safety Code 6, Recommended Safety Procedures for the Installation and Use of Radio Frequency and Microwave Devices in the Frequency Range of 10 MHz to 300 GHz", published by Health and Welfare, Canada?</i> <ol style="list-style-type: none"> <li>Are workers being exposed to ionizing radiation levels greater than:             <ol style="list-style-type: none"> <li>4.0 Working Level Months (20 millisieverts) of radon decay products per year averaged over 5 years, and 10.0 Working Level Months (50 millisieverts) in a single year?</li> <li>20 millisieverts (2 Rem) of gamma radiation per year averaged over 5 years, and 50 millisieverts (5 Rem) in a single year?</li> <li>A combination of radon decay products and gamma radiation totalling 20 millisieverts averaged over 5 years or 50 millisieverts in a single year?</li> </ol> </li> <li>Are workers provided and wearing a gamma radiation dosimeter if measurements indicate exposure to gamma radiation greater than 5.0 microsieverts per hour (0.5 millirem per hour) at 0.5 meters from the source?</li> <li>Are all radioactive materials used, handled, stored, transported, and disposed of in accordance with the Canadian Nuclear Safety Commission Regulations?</li> </ol>	
<b>Initial Audit - Inspector Comments:</b> This section appears to be within compliance.	<b>Score</b> 5
<b>Initial Audit - Manager's Reply:</b> Current standards will be maintained	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

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<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<p><b>Subsection 2.3.12 ISOCYANATES</b></p> <p><i>Where paints, protective coatings, adhesives, or insulating materials containing isocyanate compounds or other compounds that have similar sensitizing effects are being applied, persons shall be protected from the airborne contaminants by</i></p> <p><i>(1) where practicable, performing the work in an isolated enclosure having sufficient exhaust ventilation to ensure that contaminated air is not released from the enclosure into areas where unprotected persons can enter, and</i></p> <p><i>(2) where methylene bisphenyl isocyanate is used, ensuring that a supplied-air respirator (SAR) approved by NIOSH or MSHA is worn by all exposed persons, in accordance with the following concentrations:</i></p> <ul style="list-style-type: none"> <li><i>up to 2 mg/m<sup>3</sup>: SAR or SCBA,</i></li> <li><i>up to 5 mg/m<sup>3</sup>: SAR operated continuous flow, or SCBA,</i></li> <li><i>up to 10 mg/m<sup>3</sup>: positive pressure, full facepiece SAR,</i></li> <li><i>up to 100 mg/m<sup>3</sup>: positive pressure, full facepiece SCBA, and</i></li> <li><i>Emergency or planned entry into unknown concentrations or immediately dangerous to life or health: positive pressure, full-facepiece SCBA, or positive pressure full-facepiece SAR with an auxiliary positive pressure SCBA.</i></li> </ul> <p><i>(3) A respirator type shall be selected in accordance with assigned protection factors as outlined in Table 2 of CSA Standard Z94.4-93</i></p>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two– Occupational Health

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<p>The Ministry was informed there are no isocyanates on site. However, products (e.g. WHMIS controlled products) can be brought onto site without a central check for materials containing isocyanate compounds or other compounds that have similar sensitizing effects. It remains unclear whether there are such products on site. It was recently confirmed (after the onsite audit) that New Afton conducted a trial for a new type of resin rebar with an isocyanate containing material. It is unclear what safe work procedures and controls were used. A substitute for this product should be considered and if this isocyanate containing product will be used appropriate safe work procedures and controls must be developed.</p>	<p>3</p>
<p><u>Initial Audit - Manager's Reply:</u> Chemical approval process was developed and all chemicals need approval before coming on to site. A risk assessment was completed on the MICON product and control measures put in place for use.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> 4,4' –Methylenediphenyl diisocyanate (Micon) is being used on site. The TLV for this product is 0.005 ppm. If workplace exposures may exceed this concentration, an organic vapor cartridge with a particulate pre-filter should be used. If the concentration of 4,4' –Methylenediphenyl diisocyanate may exceed 0.05 ppm, a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus) should be used. This product should only be used in with adequate ventilation. The odor and irritancy of this material are inadequate to warn of excessive exposure.</p> <p>Goggles/face shield and chemically resistant gloves should also be considered for use with this product.</p> <p>A Job Hazard Assessment has been completed. The JHA does not include stipulations for respiratory protection. Protective mechanisms are important to evaluate in the context of potential isocyanate exposure.</p> <p>At the time of the audit the Ministry was informed that products which are direct ordered do not have a check and balance to ensure that controlled products are approved before being put into use.</p>	<p><u>Adjusted Score</u></p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.7.1 Lasers</b> <i>Are laser emitting devices being classified and used in accordance with the procedures outlined in ANSIZ136.1 – 1993 – “American National Standard for the Safe Use of Lasers”?</i>	
<u>Initial Audit - Inspector Comments:</u> The Ministry was informed that lasers are not being used on site. Pit monitoring equipment may involve the use of lasers. Upon request, the site did not produce an SOP for the use of lasers. Given the lack of information provided this item was not reviewed.	<u>Score</u> n/a
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Not Evaluated	<u>Adjusted Score</u> n/a
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<b>Subsection Noise 2.6.1 NOISE</b>	
<i>Mufflers Required:</i> <i>If practicable is machinery or equipment which, when operating, expose the operator or persons in the vicinity to noise levels in excess of those prescribed in Table 2-2, Part 2, for unprotected ears, fitted with a properly maintained muffler or other noise reducing device?</i>	
<u>Initial Audit - Inspector Comments:</u> Noise levels in the mill were loud. It is unknown whether any assessment has taken place to identify areas that could be controlled. Of the vehicles that were observed, all were outfitted with mufflers.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Noise monitoring was conducted in the mill and will continue	
<u>Audit Follow Up – Inspector Comments:</u> No change from previous audit. As part of the revised Workplace Monitoring Program sound surveys will be conducted to identify areas where engineering controls can be put into place to reduce noise levels. Of the vehicles that were observed, all were outfitted with mufflers	<u>Adjusted Score</u>
	3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1 .The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.





# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<b>Subsection 2.8.1/2.8.2 Illumination</b> <u>Lighting Standards:</u> <i>Do all working places have suitable and adequate lighting in accordance with the ANSI/IES Standard RP-7-1991: "American National Standard Practice for Industrial Lighting", as updated from time to time, unless otherwise authorized by the Code?</i> <u>Surface Illumination:</u> <i>Is there a separate and independent emergency source of illumination at all places where a hazard could be caused by a failure of the normal lighting system?</i> <u>Is the emergency lighting:</u> <ol style="list-style-type: none"> <li>1. <i>Where it is a section of a permanent installation, turn on automatically when the normal lighting fails?</i></li> <li>2. <i>Providing adequate illumination to allow employees to initiate emergency shutdown procedures and leave their work areas safely?</i></li> <li>3. <i>Tested as frequently as necessary to ensure that it will function when required?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u> Poor lighting was observed in the mill in certain areas. A number of light fixtures between the SAG mill and the floatation circuits had filled with water and burnt out.  It would appear there is no practical way to assess whether emergency lighting in the emergency exit culvert and at intake conveyer is in working order (cutting power to that circuit would mean cutting power to the conveyer also).	<u>Score</u>  
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> New LED lights in areas of the Con Shed and mill appear to provide good illumination (not quantitatively measured).	<u>Adjusted Score</u>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p>Overhead lights in the Gyro Crusher cab cause glare on the windows affecting a direct view of dumping haul vehicles. As a result, operators are not using lights in this cab which has resulted in a dimly lit room and could lead to errors or increased time needed for inputting data at the computers. Task lighting that can be repositioned as needed would provided necessary lighting and reduce glare.</p> <p>An emergency light in the Mill requires service. There was no evidence to suggest that emergency lighting was being checked regularly to ensure it remains operational. Annual emergency lighting checks are planned over the next few months by a contracted technician. There was no emergency lighting along the conveyer between pebble crusher and the mill.</p>	4
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 2.10.1 (1)(2)(3) HEAT AND COLD STRESS:</b> <i>Is there a program to control for heat or cold stress?</i> <i>Is it a problem?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u> A program for Heat Stress is in place. It includes education and a hierarchy of controls to mitigate heat exposure. High temperatures had been reported to have been observed in the underground workings. It was unconfirmed whether testing had been done to monitor conditions. A program for Cold Stress was not demonstrated in the materials provided.</p>	<p><u>Score</u></p>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<p><u>Initial Audit - Manager's Reply:</u> Heat Stress Kit for measuring heat in work areas is stored in the Foot wall refuge station. Supervisors are instructed to use this if they or any workers have any concerns in any particular work area. A program to manage cold stress is under development.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> The workforce received education regarding heat stress in July (A crew: July 2, 4, 10; B crew: July 2, 12, 15; C crew: July 3, 4, 5, 9, 15; and D crew: July 3, 15) A heat stress policy is in place but had some conflicting information regarding trigger points for monitoring with the instructional materials provided to the workforce. Corrections were made at the time of the follow-up audit.  A draft of a cold stress policy was provided. The safety department plans to finalize the draft later this year before the onset of cold weather. Cold stress training records were not reviewed.</p>	<p><u>Adjusted Score</u> 4</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Section 2.4 Harmful Chemical Exposure</b></p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<b>Subsection 2.4.1 (1)(2)(3) EMERGENCY WASH FACILITIES</b> <i>Are eye wash equipment, emergency water baths or showers or other suitable means immediately available to effectively cleanse the affected body areas where persons may be exposed to corrosive or other chemicals harmful to the eyes or skin?</i> <ol style="list-style-type: none"> <li><i>Emergency shower facility shall provide a tempered supply of potable water for a minimum of 15 minutes?</i></li> <li><i>In cases where it is not practical to install a permanent facility portable eye wash stations and/or portable emergency wash facilities may be installed as applicable</i></li> <li><i>Are provisions taken to ensure that water supplies and eye wash isotonic fluids are protected from freezing and are adequately maintained?</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b> <p>A plumbed emergency shower wash was installed in the assay lab.</p> <p>At the time of the audit, emergency wash facilities were not being tested regularly in the mill. Tags to record regular checks were blank. When testing the eyewash stations, water lines were initially plugged, causing white foamy water to spray a few feet in the air until the lines had cleared. Water supplied to emergency wash stations in the mill was not tempered. There was no eye wash station near the DustFoam addition point/storage where ore enters the mill. DustFoam is particularly toxic to the eyes.</p> <p>Some eyewash stations underground were in poor condition (very dusty). At one eyewash station in the underground shop, the eyewash solution had been removed from its holder, placed nearby, and replaced by an empty energy drink can. There was no eyewash station in proximity to the DustFoam addition point in transfer chamber 4/5.</p>	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> <p>Eyewash stations in the mill are being tested regularly. One has been installed at the DustFoam addition tote in the reclaim chamber. One will be installed at U4/U5 DustFoam tote.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>Plumbed eyewash stations in the mill are linked to an alarm in the control room. Water is plumbed from the potable water supply.</p>	<b>Adjusted Score</b> 

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p>Inconsistent states of readiness were found regarding various eye wash stations on the property (equipped as well as those with missing expiration dates, missing tags, missing tag information, missing eye cups)</p> <p>An emergency shower was not available in the underground shop. Deficiencies were noted with the proximity of an eyewash station in the slick line area.</p> <p>As sumps may contain controlled products which may pose a hazard to eyesight, it was agreed upon that eyewash stations should be installed at each sump. The one sump which had an eyewash station in place at the time of the inspection had an empty eyewash bottle in the station.</p>	<p>3</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

### Subsection 2.4.2 (1) (2) (3) Harmful Chemical Exposure

- (1) Are shower or wash facilities and separate areas for street and work clothing provided where the nature of the work causes a person's clothing or skin to be contaminated with substances which could cause injury or endanger the health of the person or contaminate other areas on or off the minesite?
- (2) Are means for cleaning contaminated clothing or is suitable protective clothing provided where contaminated clothing is not to be removed from the minesite?
- (3) Do persons exposed to contaminants:
  - Cleanse affected skin areas as soon as practicable?
  - Not consume or handle food or tobacco products until hands and face are free of contamination?
  - Ensure contaminated clothing is removed and disposed of?
  - Not leave the mine at end of shift until all affected skin areas have been cleansed of contamination?

#### Initial Audit - Inspector Comments:

In the underground shop refuge station/break room, soap and a means to dry hands was not available. There were other areas where people take breaks underground that had no means available for washing hands.

Clean and dirty areas are provided in the Mine Dries both at the Mine Operations area as well as at the Truck Shop. Contaminated clothing is washed on site by contractors and measures are in place to neutralize the shotcrete which accumulates on coveralls worn underground.

Shower facilities are provided to all personnel at the Mine Dries and employees are encouraged to use them after returning to surface from underground.

There is evidence that personnel are using tobacco underground but it is unclear whether these workers, as a general rule, are cleansing their hands and face before use. Contaminated clothing is gathered in the Mine Dry in designated bins and washed by contract employees.

#### Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u> Washing facilities within the permanent refuge station, as well as in the trailerized toilets located throughout the mine.	
<u>Audit Follow Up – Inspector Comments:</u> <p>Cold water is available in the underground shop lunchroom although it did not appear to be being used as a water jug with hand pump was placed in the sink instead. This may be because the water is connected to the hot water tap and not the cold. Nothing runs from the cold side when turned on so persons may have thought it was disconnected or preferred the pumped water as it was not as cold. Reasons unknown. A means of drying hands was not available.</p> <p>Trailerized toilets underground with wash facilities were equipped and operable.</p> <p>At the time of the audit it appeared that PPE used for PAX mixing was being re-used and stored in lockers in the PAX mixing area. PPE that is to be re-used should be decontaminated before storage.</p>	<u>Adjusted Score</u> <p>4</p>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <p>Click here to enter text.</p>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 2.11 Lunchrooms and Sanitary Conveniences</b>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

### Subsection 2.11.1/2.11.8 Water

*Has the Manager provided a source of cool, potable drinking water complying with the Safe Drinking Water Guidelines of the Ministry of Health in locations that:*

- *Are reasonably accessible to employees?*
- *Are kept clean and in a sanitary condition?*
- *Are designed to permit the water to be dispensed and drunk in a sanitary manner?*

*Temperature of washing water:*

*Does water used for personal washing exceed 60 degrees Celsius at any outlet, or is it mixed directly with steam?*

#### Initial Audit - Inspector Comments:

Potable water is available in most areas on surface. In areas, such as the Safety Trailer, where the water is not potable, bottled water is provided. Posted signage indicating that the water is not for consumption is inconsistent throughout the property, for example: signage was missing in the women's dry in the shop, shop "cafeteria", underground shop break-room.

Samples are being taken of the potable water system with some frequency however the Mine Operations trailers, which are the end of the potable water line, are not being sampled. There are two individuals with a water treatment ticket. They are both also mill operators and often too busy to monitor the potable water system themselves, thus requiring assistance.

The non-potable water supply, which is used for hygiene purposes (including washing in lunch rooms), is not monitored for water quality.

Employees are encouraged to get water before heading underground and an ice machine is provided on surface to keep water cooler longer. Once underground there are a few key locations where workers can refill their water such as the permanent refuge station.

#### Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<p><u>Initial Audit - Manager's Reply:</u></p> <p>Quarterly monitoring program implemented for hygienic water. Potable system is monitored for coliforms monthly (when operational), as per IHA (Drinking Water Regulations). Cl and turbidity monitoring frequency needs improvement, this will be addressed by Water Treatment Plant monitoring and operations SOP will be completed by May 15. Non-potable signage has been reviewed and posted as need be.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>An increasing number of employees are being trained to oversee the supply and distribution of water. Each crew now has at least one certified operator, or at least one employee that has completed the training and is currently accruing the necessary hours to be a certified operator.</p> <p>Due to issues with the chlorine addition point at the water treatment plant, the potable water line is currently signed as non-potable. Water continues to be treated. The mine plans to implement a new set up for treating water which should reduce the number of leaks/failures with the current system.</p>	<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p>Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

### Subsection 2.11.3/2.11.4 Lunchrooms

*Where 7 or more persons regularly congregate to eat food, other than where the mining activity of an open pit mine is preformed, is a lunchroom provided which:*

- 1) *Is heated, lighted, and ventilated?*
- 2) *Has or be located near facilities for persons to wash with cold and hot running water and dry their hands?*
- 3) *Does not have an entrance through a toilet facility?*
- 4) *Contains sufficient fire retardant receptacles with lids, which are used by employees to dispose of all waste food, paper, and other related material, and the containers emptied regularly?*
- 5) *Has suitable seating facilities equipped with backrests and tables with impervious top surfaces which is kept in clean and sanitary condition?*
- 6) *Is constructed of materials which can be, and is, maintained in a clean condition?*
- 7) *Has the following minimum dimensions:*
  - a. *No. of Persons*      *sq. m / Person*
  - b. *25 or less*      *1.2 (min. size. 6 sq. m.*
  - c. *26 to 74*      *1*
  - d. *75 to 149*      *0.66*
  - e. *150 to 499*      *0.56*
  - f. *500 or more*      *0.46*
- 8) *Be located in an area away from process chemicals and contaminants?*

*Where more than 3 persons and fewer than 7 persons regularly congregate to eat food, other than where the mining activity at an open pit mine is preformed, is an eating area provided which complies with 2.11.3 (1), (4), (5), (6), (7), and (8), and provided with facilities for persons to clean their hands?*

Initial Audit - Inspector Comments:

Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<ol style="list-style-type: none"> <li>1) Lunchrooms all appear to be heated, lighted and ventilated adequately.</li> <li>2) In the underground shop refuge station/break room, soap and a means to dry hands was not available. There were other areas where people take breaks underground that had no means available for washing hands, such as in refuge stations.</li> <li>3) The entrances to lunchrooms do not pass through a restroom facility.</li> <li>4) Waste containers appear to be adequate for the locations and seemed to be emptied regularly.</li> <li>5) Tables and chairs were in good shape, generally clean and were in adequate supply. Seats with backrests were available in all designated break areas.</li> <li>6) As above</li> <li>7) The lunchrooms appeared adequate in size.</li> </ol> <p>There were chemicals stored in the permanent refuge station which doubles as a lunchroom underground however these chemicals were segregated away from the area where personnel would eat and therefore was found to be acceptable.</p>	
<p><u>Initial Audit - Manager's Reply:</u> Means to wash hands is needed for the footwall shop refuge station.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> Cold water is available in the underground shop lunchroom although it did not appear to be being used as a water jug with hand pump was placed in the sink instead. This may be because the water is connected to the hot water tap and not the cold. It was unknown if it was potable. Nothing runs from the cold side when turned on so persons may have thought it was disconnected or preferred the pumped water as it was not as cold. Reasons unknown. Soap was provided but a means of drying hands was not available.</p>	<p><u>Adjusted Score</u> 3</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>Subsection 2.11.5/2.11.7 Mine Dry</b> <ol style="list-style-type: none"> <li><i>The Manager shall provide separate facilities for male and female employees to wash and shower, and to change and dry their clothing</i> <ul style="list-style-type: none"> <li><i>At a surface mine where persons are subject to dusty, dirty, or wet conditions</i></li> <li><i>At an underground mine and this facility shall include separate storage facilities for street clothes and working clothes</i></li> </ul> </li> <li><i>The facilities shall have separate approaches with signs clearly indication for which gender they have been provided.</i></li> </ol> <p><i>Location of Mine Dry:</i>  <i>Is the mine dry adequately heated, lighted and ventilated, kept clean and sanitary, and have one shower for every 7 persons leaving work at the same time?</i></p>	
<b>Initial Audit - Inspector Comments:</b> The dries located in the shop were clean, organized and adequate. Separate facilities for male and female employees are available and are of sufficient quantity to meet the requirements of this subsection. There was a lack of signage visible at the entrances to the Mine Ops Mine Dries to indicate which doors led into the male Dry and which led into the female.	<b>Score</b> 4
<b>Initial Audit - Manager's Reply:</b> Signs to be posted	
<b>Audit Follow Up – Inspector Comments:</b> Not evaluated.	<b>Adjusted Score</b> 
<b>Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> Click here to enter text.	<b>Adjusted Score</b> 

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>		
<p><b>Subsection 2.11.9/2.11.10/2.11.12 Toilet Facilities</b></p> <p><i>Are there separate toilet facilities for male and female employees:</i></p> <ul style="list-style-type: none"> <li>• <i>having separate entrances</i></li> <li>• <i>with signs clearly indicating for which gender they have been provided?</i></li> </ul> <p><i>On the surface of a mine, are washroom facilities conveniently located and equipped with:</i></p> <ul style="list-style-type: none"> <li>• <i>One toilet and one urinal for every 25 male employees or fraction thereof, and one toilet for every 9 female employees or fraction thereof, except where the maximum number of employees on any shift is fewer than 6 when one toilet is required?</i></li> <li>• <i>One wash basin, or equivalent facility, provided with hot and cold running water for every 15 employees or fraction thereof?</i></li> <li>• <i>A means for drying hands hygienically?</i></li> <li>• <i>Adequate heat, light, and ventilation?</i></li> </ul> <p><i>Toilets are:</i></p> <ul style="list-style-type: none"> <li>• <i>Of the water flushing type or other sanitary design, located in an individual compartment with a door that locks, and with walls and floor of a finish or material that can be easily cleaned?</i></li> <li>• <i>Fitted with an open-front seat and provided with a reasonable supply of toilet paper?</i></li> <li>• <i>Provided with a clothes hook and lighting where electricity is available?</i></li> <li>• <i>Kept clean and sanitary, and any waste products shall be disposed of regularly?</i></li> </ul>		
<p><u>Initial Audit - Inspector Comments:</u></p>		<p><u>Score</u></p>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Two- Occupational Health

July 16 & 17, 2013

<p>There were no signs indicating an entrance to the men's dry on surface from the parking lot.</p> <p>Inspected washrooms on surface and underground were clean, stocked, operable and equipped with hooks.</p> <p>In almost all areas separate toilet facilities were provided for male and female employees however in the Safety Trailer there is only one toilet facility which must be shared by both genders.</p> <p>In those areas that did have separate toilet facilities there were separate entrances leading into both.</p> <p>The Mine Operation's Mine Dry did not have signage at each door to indicate which door led into the male side and which door led into the female side.</p> <p>There are an adequate number of toilets and urinals for employees and an adequate number of wash basins.</p> <p>There are hygienic options, either paper towel and/or automatic hand driers in each restroom.</p> <p>Heat, light and ventilation are adequate for all facilities.</p> <p>The toilets were generally as prescribed in this subsection however some, such as in the Safety Trailer, were not fitted with an open front seat.</p> <p>Some clothes hooks, such as in one of the toilets in the Mine Operations Building, appear to have once had a clothes hook but it is now missing.</p>	4
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Signs will be posted to Indicate Mens or ladies</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Not evaluated.</p>	<p><u>Adjusted Score</u></p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p>Click here to enter text.</p>	<p><u>Adjusted Score</u></p>

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1 .The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



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<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><b>Section 2.12 Medical Surveillance Programs</b></p> <p><b>Subsection 2.12.1 Medical Surveillance Programs 2.12.1(1)(a,b,c)</b></p> <p><i>Are medical surveillance programs in place where necessary? E.g. blood lead for fire assay workers, high silica exposures?</i></p> <p>1. <i>The Manager shall notify the Chief Inspector when he believes there is a need for a medical surveillance program, for persons:</i></p> <ul style="list-style-type: none"> <li><i>In a dust exposure occupation</i></li> <li><i>Exposed to excessive noise</i></li> <li><i>Exposed to any chemical, physical, or radiation agent specified by the Chief Inspector</i></li> </ul> <p>2. <i>A medical surveillance program, when required by the Chief Inspector, shall be modeled after the "Guidelines for Standard Practice for Medical Monitoring Programs" issued by the Chief Inspector and shall be of a form satisfactory to him.</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p> <p>The Medical Surveillance Program still appears to be in its infancy. There are plans at the Corporate Level to advance this program in the coming year but at this point much work is still to be done. The corporate level has communicated that the intention is to implement mandatory medical screening, an action that contravenes the code.</p> <p>There were no records available to suggest evidence of Lung Function Testing for any employees. Audiometric testing is in place and is being conducted by on-site contractors (Security/First Aid). Baseline blood lead testing has been completed for employees who will be working in the Assay Lab.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Medical surveillance program in development stage</p>	

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<u>Audit Follow Up – Inspector Comments:</u> A written medical surveillance program has been developed that satisfies code requirements. It may be appropriate to review occupational exposure information for other hazards that can lead to adverse health consequences (e.g. heavy metal exposure from welding, or other) to assess them for inclusion in the medical surveillance program.	<u>Adjusted Score</u>
	4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.12.3 (1)(2) Advising Workers</b> <i>1. The Manager shall advise persons working in a dust, excessive noise, chemical, physical, or radiation exposure occupation, of the nature of the health risks and that a medical surveillance program is available, and the person, at his option, may choose to participate in the program. A person participating in the medical surveillance program may attend the doctor of his choice to undergo the examinations and tests required 2.12.1 (2).</i>	
<u>Initial Audit - Inspector Comments:</u> In speaking with a number of individuals at the mine most were aware of the audiometric testing but were not aware of any other medical surveillance programs that might be available.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Medical surveillance program in development stage	
<u>Audit Follow Up – Inspector Comments:</u> Unchanged from last audit. A presentation is being developed and in future will be added to the new employee orientation.	<u>Adjusted Score</u>
	2

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## Part Two- Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.12.4.(1) (a, b,c,d,e) 2.12.4 (2)</b> <i>Does the medical surveillance program, required by section 2.12.1 ensure that each person examined or clinically tested is:</i> <ul style="list-style-type: none"> <li><i>Aware of the nature of the health risks and effects for which he is being examined</i></li> <li><i>Advised on his medical fitness to work</i></li> <li><i>Advised of any work restrictions resulting from his medical condition</i></li> <li><i>Instructed in health precautions required</i></li> </ul> <i>Provided with a copy of the results of the medical examination</i>	
<u>Initial Audit - Inspector Comments:</u> For the extent of audiometric testing only, interviewed workers reported that upon completion of their audiometric testing the results of the test was shared with them, they were advised of deficiencies and the personnel conducting the testing actively promoted the use of hearing protection in areas of concern. As personnel were unaware of any other medical surveillance they could not make comment on these factors outside of audiometric testing.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Other programs are in the development stage	
<u>Audit Follow Up – Inspector Comments:</u> The newly published Medical Surveillance Program addresses these components. Once employees have been screened it is	<u>Adjusted Score</u>

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reasonable that these components will be addressed. The Ministry looks forward to seeing this program come to fruition.	3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.12.5 (1) (2) Maintenance of Records</b> <i>Personal medical records shall be maintained on a confidential basis by the physician or nurse, and shall not be made available to the Manager or any other person, except as required by statute, without the informed written consent of the individual?</i>	
<u>Initial Audit - Inspector Comments:</u> There was no evidence to suggest any contradictions to this subsection.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Personal Medical records will continue to be handled with confidentiality	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.12.6 Chemical Analysis</b> <i>Whenever a chemical analysis is required for biological monitoring is it carried out at a laboratory acceptable to the Chief Inspector?</i>	
<u>Initial Audit - Inspector Comments:</u> There was no evidence to suggest any contradictions to this subsection.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.12.7 Programs at Owner's Expense</b> <i>All medical examinations and tests performed on a person during a medical surveillance program shall be done at the owner's or agent's expense and the expense shall not be passed on to that person.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>

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It appears the company has been paying for medical surveillance tests, as per draft policy.	5
<u>Initial Audit - Manager's Reply:</u> Process will continue	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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<b>Subsection 2.12.2/2.12.4 (2)/2.12.5 (2) Hearing Conservation Program</b> <i>A hearing conservation program is developed and followed that includes:</i> <ul style="list-style-type: none"> <li>Noise measurement</li> <li>Education and training</li> <li>Engineered noise control</li> <li>Hearing protection</li> <li>Posting of noise hazard areas</li> <li>Hearing tests</li> <li>Annual program review</li> <li>Audiometric Testing</li> </ul> <i>Audiometric testing shall be carried out by a certified audiometric technician.</i> <i>Audiometric information shall be made available to the Chief Inspector.</i>	
<b>Initial Audit - Inspector Comments:</b> These components were addressed in a draft Hearing Conservation Program document. All components were present with the exception of a commitment to review the program annually.	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> Hearing Conservation program has been developed and will be reviewed annually.	
<b>Audit Follow Up – Inspector Comments:</b> The Hearing Conservation Program has been recently revised and published. The current program includes all components required. Audiometric testing continues on an ongoing basis. To date, the primary avenue for education of the workforce has been through audiometric testing. As such, employees that have not undergone audiometric testing may not have received training. Area noise surveys have not yet been conducted (noted above under section 2.6.1).	<b>Adjusted Score</b> 4
<b>Audit Follow Up - Manager's Reply:</b> Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted</u>
	<u>Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 2.13 WHMIS</b>	

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### **Subsection 2.13.1-2/2.13.19-20/2.3.4/2.3.6/2.3.8 CHEMICAL STORAGE & WASTE**

*Is the WHMIS program fully implemented including the storage and handling of hazardous products including those substances which are not controlled products but could cause adverse health effects?*

#### Proper containers:

*Are dangerous or potentially hazardous materials stored in containers designed, constructed and maintained to ensure proper containment of their contents?*

#### Hazardous Waste:

*Is hazardous waste material that could be detrimental to a person's health or could cause a fire or explosion:*

- *Stored in impervious containers?*
- *Labelled?*
- *Covered and located in well-ventilated areas?*
- *Collected, handled, sorted and disposed of by persons trained and wearing any necessary PPE?*

#### Flammable Waste Storage:

*Are waste materials containing solvents, grease, paints or other flammable substances stored in appropriate covered containers while awaiting disposal?*

#### Storage of Hazardous Materials:

*Are dangerous or potentially hazardous materials stored in designated storage areas:*

- *Acceptable to Inspector?*
- *Well ventilated?*

*Incompatible materials adequately separated?*

#### Initial Audit - Inspector Comments:

Flammable storage cabinets were in use in the surface shop. They were also to be put in place in the new assay lab. All hazardous waste material appears to be stored in containers which are designed to hold the contents. There were some containers, for example in the Underground Shop, where what appeared to be waste hazardous materials was not adequately labelled. Flammable waste storage was observed to be in appropriate covered containers.

#### Score

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<u>Initial Audit - Manager's Reply:</u> Continual auditing of labeling and storage will be conducted through workplace inspections	
<u>Audit Follow Up – Inspector Comments:</u> A flammable cabinet was needed in the Instrumentation shop. Some materials were improperly stored (in front of electrical panels) but corrected immediately. Some inadequate labelling of decanted and tote containers was noted throughout the property. As WHMIS refresher training is currently underway, the expectation will be that this will improve and should be audited by the mine without delay.  The trailer in which bulk PAX is stored outside the mill is showing signs of corrosion and there is some concern that the trailer may develop a leak which would increase the chances of moisture coming in contact with PAX (a water-reactive species which may give off Carbon Disulphide creating both a health concern and a potentially explosive atmosphere). Ventilation in the PAX storage trailer is currently insufficient; the mine is working to address this.	<u>Adjusted Score</u> 3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.13.5-10 CHEMICAL LABELLING</b> <i>Is the WHMIS program fully implemented including suppliers and workplace labelling?</i> <i>All hazardous products are properly identified and labelled.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>

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The majority of the site had appropriate labels located on chemicals and hazardous materials. There were some hazardous materials, such as in the Lube Oil Room of the Truck Shop and the Batch Plant which did not have placarding which would be easily identifiable.		
<u>Initial Audit - Manager's Reply:</u> WHMIS training is provided to workers at time of hire on. Labelling of products is ongoing, Hazardous substance and WHMIS PPT was provided to all employees onsite		
<u>Audit Follow Up – Inspector Comments:</u> Some inadequate labelling of decanted and tote containers was noted throughout the property. At the time of the audit, some controlled products were identified by touch/smell. As WHMIS refresher training is currently underway, the expectation will be that this will improve and should be audited by the mine without delay. As refresher training was already out of date at the time of the initial audit, the effectiveness of the WHMIS program may have deteriorated since then.		<u>Adjusted Score</u> 3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.		
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.		<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.		
<b><i>Subsection 1.6.9(d)/2.3.6 SAFE HANDLING/ WORK PROCEDURE</i></b> <i>Are there safe handling procedures for working with hazardous and potentially hazardous materials?</i> <i>Are workers trained to safely handle the material and wear any necessary protective clothing or equipment to safeguard their own and any other person's health and safety?</i> <i>An emergency spill plan has been developed to protect workers and the environment.</i> <i>Are spills or releases of hazardous waste materials cleaned up as soon as possible by trained persons and are they wearing any necessary PPE?</i>		

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<p><u>Initial Audit - Inspector Comments:</u></p> <p>Procedures are being used to handle hazardous and potentially hazardous materials safely. PPE is contained within the procedures and is being utilized as was evidence when speaking with Mill employees about the safe handling of reagents. An emergency spill plan has been developed and the site is in the process of stocking up their spill response trailer. Spills which have occurred on site are reported to the Environment Department, cleaned up and then the Environment Department follows up to ensure that the spill has been adequately cleaned.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Spill response trailer is stocked and a mock spill drill was completed.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Workers that are unable to identify controlled products in their work area may not handle them safely.</p> <p>A bucket of PAX was found on a catwalk in the Mill. Buckets are used to add PAX manually when automatic addition points do not supply sufficient PAX to the mill process.</p> <p>At the water treatment plant, it may be beneficial to store the Vitamin C (currently stored at warehouse) to improve proximity in the event of a chlorine spill.</p> <p>Additional barricading could be considered to reduce the potential for inadvertent exposure to lime for employees in the surrounding area of the mill when flushing lines.</p> <p>A number of absorbent pads used to collect a hydrocarbon product were identified on the basement floor of the mill, resulting in flammable/combustible material being left in the workplace. Secondary containment could be considered.</p>	<p><u>Adjusted Score</u></p> <p>3</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	

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<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 2.13.3-4 WORKER EDUCATION AND TRAINING</b> <i>Is the WHMIS program fully implemented including: Worker indoctrination and refresher training?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u> Training is given to new employees upon hire but there is currently no schedule for refresher courses. Many employees have worked on site for more than one year, yet records showed only three have been given a refresher course, as required annually.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u> WHMIS refresher to be delivered Annually, WHMIS presentation was provided to all employees and supervisors for review in PPT format and resides on SharePoint.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> WHMIS currently offered at orientation. Refresher training began July 11, 2013 (42 people trained) and is scheduled to be completed by end of August (hopes of 90% will have received training). Each Thursday a training session will occur to cover off all crews. As refresher training was already out of date at the time of the initial audit, the effectiveness of the WHMIS program may have deteriorated since then. As WHMIS refresher training is currently underway, the effectiveness should improve.</p>	<p><u>Adjusted Score</u> 3.5</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

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<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 1.6.9 (d)/2.13.11-18 SUPPLIER MATERIAL SAFETY DATA SHEETS</b>  <i>Are MSDS's in place, updated and available to all workers?</i></p> <ul style="list-style-type: none"> <li>• All hazardous products have current Material Safety Data Sheets</li> <li>• An up-to-date inventory exists of all hazardous products</li> </ul> <p><i>Workers who work with or in proximity have ready access to Material Safety Data Sheets.</i></p>	
<p><u>Initial Audit - Inspector Comments:</u> MSDS sheets were located in a few prominent locations such as within the shop. Upon inspection approximately 1 out of every 10 was out of date. Note that most that were out of date were only by a year or two.</p> <p>MSDS sheets were also available on the operation's network. It is unknown if these are automatically updated. MSDS appeared only available on supervisor's computers. Employees could not easily access MSDS.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u> Well net data base is used on the SharePoint network which is available to all employees directly or through their supervisors. Hard copies are also updated in several locations. Outdated MSDS's are being addressed.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> Hard copy MSDS were provided in the underground shop lunchroom. Some MSDS sheets laminated and provided at totes but this</p>	<p><u>Adjusted Score</u></p>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Two- Occupational Health

July 16 & 17, 2013

was not consistent.		3
The MSDS book in the Mill Control Room was evaluated by the Ministry and some of the sheets were out of date. At one location one of the binders containing a range of MSDS (by letter) could not be located at the time of inspection.		
<u>Audit Follow Up - Manager’s Reply:</u> Click here to enter text.		
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.		<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</u> Click here to enter text.		
Part 2 – Total out of 190		141.5
Part 2 – Percentage out of 100%		75%

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<b>Section 3.1 Impairment and Conduct</b>	
<b>Subsection 3.1.1 - Impaired Persons:</b>	
<i>Have all employees been instructed; that no persons shall enter, remain or be knowingly permitted to enter or remain in the mine if his/her ability is so impaired as to endanger his/her health or safety or that of another person.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This topic is adequately addressed in the Certification Fitness for Duty form that is given and discussed during orientation. There were no records showing the all employees have signed off on this certificate.	4
<u>Initial Audit - Manager's Reply:</u>	
Fitness for duty records are maintained by HR department	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.1.2 - Drugs and Liquor</b>	
<i>Are employees instructed that they will not possess liquor, or illegal drugs in or about the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This is adequately addressed in the Certification Fitness for Duty form that is given and discussed during orientation	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.1.3 - Improper Conduct</b>	
<i>Have employees been instructed to not engage in any improper conduct that might create or constitute a hazard to himself or any other person? Includes horseplay, scuffling, fighting, playing, practical jokes, or other.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was no evidence found showing where this topic is reviewed with employees.	
<u>Initial Audit - Manager's Reply:</u>	
This is in the new hire orientation under general rules.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This requirement was noted as being now in the orientation package	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.1.4 - Tampering with Safety Devices and Equipment</b>	
<i>Have employees been instructed that they shall not, without cause, render ineffective any device, equipment, or material provided for the protection of the health and safety of persons employed in, on or about a mine, or the safety of the public?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was no evidence found showing where this topic is reviewed with employees.	
<u>Initial Audit - Manager's Reply:</u>	
Is in the orientation and is reviewed with all employees at time of hire	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This requirement was noted as being now in the orientation package	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.2 General Safety Rules</b>	
<b>Subsection 3.2.1 - Age</b>	
<i>Are there any persons under the age of 18 years employed at the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was no person under the age of 18 years of age, found on site at the time of this audit.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

### Subsection 3.2.2 – Tallying

1. *Is there a system in place to account for all persons on the mining property?*
  - a. *Workers*
  - b. *Staff*
  - c. *Contractors*
2. *How is the system introduced to new persons coming onto the mine site?*

#### Initial Audit - Inspector Comments:

Access to the site is controlled at a secure gate where electronic cards are used to track persons going on and off site. It is the responsibility of the gate persons to account for those that have not signed out at end of day and report to the respective area should someone be unaccounted for.

Score

5

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted  
Score

#### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted  
Score

#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

### Subsection 3.2.3 – Working Alone

1. *Does a means exist for checking the well being of workers working alone and may not be able to secure assistance in the event of an injury or other misfortune?*
2. *Do the intervals between checks exceed 2.5 hours?*

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was no procedure developed at the time of this audit to address this topic.	
<u>Initial Audit - Manager's Reply:</u>	
There is currently an SOP being developed for Mine ops in regard to working alone and is in a draft state for sign off.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Working Alone SOP MIN-SWI-001 has been developed and now needs to be rolled out to all employees that could be impacted by this SOP	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.2.4 – Transportation of Persons</b>	
<ol style="list-style-type: none"> <li>Are there persons being transported in the box of a pickup truck or riding in a standing position?</li> <li>Are there persons boarding or leaving any vehicle while that vehicle is in motion?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No observations were made of persons being transported in the box of pickup trucks or in a standing position. There are records that show this having been discussed with employees.	4
<u>Initial Audit - Manager's Reply:</u>	
Continue to inform crews, riding in the box of pick-up trucks is not permitted.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.3 Working Conditions</b>	
<b>Subsection 3.3.2 – Hazardous Work:</b>	
<ol style="list-style-type: none"> <li>Are there any locations in the mine where persons are working overhead?</li> <li>How is employee safety being protected by not allowing them to enter into any location at a mine where persons are working overhead?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No such procedure was presented at the time of this audit.	0
<u>Initial Audit - Manager's Reply:</u>	
In the process of revising all applicable SOP's to include working overhead and review with all crews.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
MIN-SOP-002 was presented to this auditor as proof of this element but it is on the topic of open holes and does not address the requirement of this section. No change in score	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.3.3 Hazardous Work</b> <i>When persons are required to work or be near water, where drowning could be a risk:</i> <ol style="list-style-type: none"> <li>Has the Manager provided, at conspicuous locations, life-buoys equipped with heaving lines of adequate length which conform to Ministry of Transport (Canada) standards?</li> <li>If the person is required to work alone at these sites or be transported across water is that person provided with and wearing a personal floatation device conforming to Canadian Government Specifications Board Standard CAN/CGSB-65.7-M88?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u> There was no procedure in place at the time of this audit to address this topic. No life-buoys or flotation devices were observed in areas where drowning could be a risk.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Life preservers are installed and fall arrest equipment are installed at both sumps underground. Procedure for working around water in is the development stage.	
<u>Audit Follow Up – Inspector Comments:</u> There is now a procedure SAF-POL-009 developed for working around water. This procedure needs to be rolled out to all those that could be effected by this procedure. Life preserves were observed at the sumps.	<u>Adjusted Score</u>  4
<u>Audit Follow Up – Manager Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow up – Manager's Reply:</u> Click here to enter text.	<u>Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

Section 3.4 Hazardous Atmosphere – Confined Spaces	
<b>Subsection 3.4.1 Work in Confined Spaces</b>	
<i>Are written procedures developed and implemented for work in confined spaces where irrespirable, toxic or flammable atmospheres might be encountered?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was a draft procedure presented at the time of this audit but it was still under revision.	
<u>Initial Audit - Manager's Reply:</u>	
There is a procedure in place and has been published	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Confined Space Procedure SAF-SOP-009 has been developed and rolled out to the workers	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.4.2 Safe work Procedures</b> <i>The procedures required under section 3.4.1 shall include:</i> <ol style="list-style-type: none"> <li><i>1. The use of lifelines and safety belts wherever possible;</i></li> <li><i>2. When lifelines and safety belts cannot be used, sufficient resources with respiratory equipment capable of performing a rescue be stationed outside the confined space;</i></li> <li><i>3. Maintenance of an effective means of communication between persons inside and outside the confined space;</i></li> <li><i>4. Specified time intervals for making periodic visual contact with persons inside the confined space;</i></li> <li><i>5. Specific procedures to be followed whenever welding or burning operations are to be carried out in the confined space;</i></li> <li><i>6. Appropriate breathing apparatus and persons trained in its use, and readily available at every confined space in which person are working; Compressed air used for breathing complying with the requirements of CSA Standard CAN-3-Z180.1M85 Series</i></li> <li><i>7. Disconnection, blanking or blinding off pipes carrying substances that could be hazardous to the person entering the confined space;</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
These topics are outlined in the draft confined space procedure.	
<u>Initial Audit - Manager's Reply:</u>	
Procedure has been published	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Confined Space Procedure SAF-SOP-009 has been developed and rolled out to the workers	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.4.3 Tests of Confined Space</b> <i>Are persons without self-contained breathing apparatus instructed not to enter a confined space in which a harmful atmosphere might exist or develop until:</i> <ol style="list-style-type: none"> <li>1. Tests have been made to determine the nature and quantity of harmful vapours, gases, fumes, mists, dusts, and the oxygen content of the atmosphere inside the confined space and these test results recorded in a logbook kept for that purpose?</li> <li>2. The written work procedures under section 3.4.1 have been read and understood by the person and the required emergency and rescue procedures are in place?</li> <li>3. The confined space is being ventilated continuously by a natural or forced ventilation system?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
These items are covered in the Pre-Entry Check procedure SAF-FRM-006	4
<u>Initial Audit - Manager's Reply:</u>	
Annual reviews will be conducted on the procedures for accuracy, ongoing training will be provided.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.4.4 Test of Intervals</b> <i>Are tests of the atmosphere inside the confined space made at intervals during the work process to ensure that the quality of the air does not deteriorate and the test results shall be recorded as required by section 3.4.3 (1)?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Confined space procedure requires testing at 20 minute intervals.	4
<u>Initial Audit - Manager's Reply:</u>	
Annual reviews will be conducted on the procedures for accuracy	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.4.5 Confined Space Ventilation:</b> <i>Where tests made under 3.4.3 and 3.4.4 or any other test or examination indicates a harmful atmosphere or the presence of a harmful substance, is the confined space ventilated or cleaned, or both, and re-tested or re-examined to ensure that no person without self-contained breathing apparatus is allowed to enter the confined space unless:</i> <ol style="list-style-type: none"> <li><i>The atmosphere or substance in the confined space is no longer considered harmful according to the acceptable standards prescribed in part 2 of the Code</i></li> <li><i>The oxygen content of the atmosphere inside the confined space is not less than 18%</i></li> </ol>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This requirement is outlined in the confined space procedure.	4
<u>Initial Audit - Manager's Reply:</u>	
Annual reviews will be conducted on the procedures for accuracy	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.4.6 Wearing of Protective Equipment</b> <i>Where tests made under 3.4.3 and 3.4.4 indicate the presence of harmful or explosive substances and it is not practical to provide a safe, respirable atmosphere</i> <ol style="list-style-type: none"> <li>1. Do persons entering the confined space wear self-contained breathing apparatus and personal protective equipment?</li> <li>2. Is the concentration of flammable substances maintained below 20% of the lower explosive limit as determined by repeated testing?</li> <li>3. Are all possible sources of ignition eliminated or controlled where flammable substances exist?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This requirement is outlined in the confined space procedure.	4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Atmospheric gas tests are taken and necessary precautions are taken	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.6 Industrial First Aid</b>	
<b>Subsection 3.6.1 First Aid Supplies:</b>	
<i>Does the Manager provide and maintain first aid supplies and services as required by the WorkSafe BC?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The first aid room was clean and well organized. First aid records are kept in a locked cabinet. Instruments are sterilized with bleach. Inventory of first aid supplies is done at least monthly by first aid staff and replenished as required.	5
<u>Initial Audit - Manager's Reply:</u>	
Current standards will be maintained	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.6.3 First Aid Supplies</b> <i>How is a means of communication provided by which the services of a physician can be obtained expeditiously?</i>	
<u>Initial Audit - Inspector Comments:</u> A nurse or doctor, at the hospital emergency room, can be reached by phone. The hospital is less than 20 minute drive away. BC ambulance will come to the mine site or the mine ETV can transport a patient directly to the hospital.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current standards will be maintained	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

### Section 3.7 Mine Rescue

#### Subsection 3.7.1 Underground

##### *Mine Emergency Response Plan:*

*Is there a mine rescue emergency response plan?*

- *Developed*
- *Filed with the Chief Inspector*
- *Kept up to date*
- *Followed in the event of an emergency*
- *Contain all elements required in the Mine Emergency Response Plan Guidelines for the Mining Industry*

##### Initial Audit - Inspector Comments:

An initial plan was developed February 11/10. The latest revision is dated April 10/12 and filed with the Chief and contains the required elements.

##### Score

5

##### Initial Audit - Manager's Reply:

Continual review of the emergency response plan will be maintained

##### Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

##### Adjusted Score

##### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

##### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

##### Adjusted Score

##### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<b>Subsection 3.7.2 Underground</b> Are trained mine rescue teams established, maintained and equipped at underground mines where the number of employees underground at one time is less than: 1. 50, but greater than 10, 1 team? 2. Is greater than 50, 2 teams? 3. On every shift where there are less than 20 working underground at any one time there are four persons trained in mine rescue?	
Initial Audit - Inspector Comments:	Score
There are 44 employees trained in emergency response and mine rescue.	5
Initial Audit - Manager's Reply:	
Plans are to cap the Fire mine rescue brigade at 50 members based on the current size of the operation	
Audit Follow Up – Inspector Comments:	Adjusted Score
Click here to enter text.	
Audit Follow Up - Manager's Reply:	
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Inspector Comments:	Adjusted Score
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
Click here to enter text.	
<b>Subsection 3.7.4 Surface at Underground Mine</b> <i>At all underground mines where a surface fire can compromise people, plant, or equipment has the Manager ensured that sufficient trained personnel and equipment are available to provide fire suppression capability for the site?</i>	
Initial Audit - Inspector Comments:	Score
There are two fire engines and 44 employees trained in fire fighting. Team members are trained in structure-fire fighting at the fire department training facility in Kamloops. An underground fire truck and ambulance is budgeted to be purchased within the next year.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

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<u>Initial Audit - Manager's Reply:</u>	
Emergency response team size will maintained to ensure adequate coverage to the site	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.7 Mine Rescue Team</b> <i>Are the qualified members of a mine rescue team:</i> <ol style="list-style-type: none"> <li><i>1. In possession of a valid mine rescue certificate and a valid St. John "Standard" first aid certificate, or equivalent?</i></li> <li><i>2. Free from a beard, moustache, or sideburns that could interfere with the face piece seal of any breathing apparatus?</i></li> <li><i>3. Considered competent to act as a mine rescue team member by the person appointed as a trainer under section 3.7.9?</i></li> <li><i>4. Medically fit for the nature of the work required?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All team members have valid mine rescue and first aid certificates. They are clean shaven as required. They have annual medicals by "Nurse Next Door" and confirmed to be medically fit to be part of the mine rescue team.	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
No action required, full points awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.8 Mine Rescue Records</b> <i>Is there a record of all mine rescue training maintained at the mine site, and</i> <ol style="list-style-type: none"> <li><i>Is the logbook maintained by the qualified person appointed by the Manager, to conduct the training?</i></li> <li><i>Contains the particulars of the training, including the names of those participating and the trainer?</i></li> <li><i>Notes the condition of all equipment used during the training?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Records of all training are kept, who attended and what training was given. There are 4 Platoons, 4 Captains and 4 Lieutenants.	5
<u>Initial Audit - Manager's Reply:</u>	
No action required, full points awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.9 Mine Rescue Records</b>	
<i>Has the Manager:</i>	
<ol style="list-style-type: none"> <li>1. Appointed a qualified person as a trainer for mine rescue team members?</li> <li>2. Ensured that all mine rescue team members practice 8 hours during each 3 months the mine operates?</li> <li>3. Ensured that all mine rescue personnel are not underground at any one time except for rescue work or training?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Mike Owens is the trainer. Training is done every month except July and August. All team members are not underground at the same time.	5
<u>Initial Audit - Manager's Reply:</u>	
No action required, full points awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.10 Type of Breathing Apparatus</b>	
<i>Where self-contained breathing apparatus is required is it of a type approved by a recognized certification agency, and suitable for the intended work?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There are 12 BG4s and 6 more will be acquired. There are also PSS 7000 units on surface in the fire trucks and Oxy-K units cached underground.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.11 Mine Plan for Rescue Purposes</b>	
<i>Are the mine plans required under Part 6 of the Code readily available for the use of mine rescue teams?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Mine plans are available and updated monthly by Tech. Services.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.12 Mine Plan for Rescue Purposes</b> <i>Has the Manager appointed a qualified person:</i> <ol style="list-style-type: none"> <li>To be responsible for the care and maintenance of all rescue apparatus?</li> <li>For the entries into a logbook to be kept at the mine recording the condition of all equipment used for mine rescue or fire fighting?</li> <li>For the care of the rescue equipment storage room, and equipment caches?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>There are 6 trained technicians for the BG4s and current log sheets for each machine.</p> <p>There is no log book for ropes and the ropes are not tagged for identification.</p> <p>The equipment store room is a sea-can container, which is quite congested. There appears to be much new equipment and tools but a bigger storage space would be an advantage for organizing the gear. There are plans to build a new facility.</p>	

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<u>Initial Audit - Manager's Reply:</u>	
New Facility is completed, rope rescue trailer which will come with training and rope logging system slated to arrive at the end of June	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Rescue ropes have individual logs. There is a storage place for all rescue gear in the new fire hall and a servicing/charging facility for BAs. A rescue trailer is on order that will be outfitted with new rescue gear.	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.8.2 Survival Rescue Procedures</b>	
<ol style="list-style-type: none"> <li>Has the Manager of an underground mine established a training program in survival mine rescue, including the use of approved self-rescue apparatus, and the use of firefighting equipment in place at his mine?</li> <li>Are all persons, employed at the mine or not, instructed and trained in these procedures before entering the underground mine?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
During new employee orientation, training on W65 and fire extinguisher use is given. All visitors receive basic training as well.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.8.3 Instructor Emergency Procedures</b> <i>Has the Manager of the mine appointed a qualified person to instruct and establish a training program for all employees in basic emergency response, and fire fighting?</i>	
<u>Initial Audit - Inspector Comments:</u> During orientation, all employees receive training in the Code 1 procedure, refuge station instruction, fire extinguisher and W65 training.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

### Section 3.9 Fire Fighting

#### Subsection 3.9.1 Fire Fighting Equipment

1. *Is firefighting equipment provided and maintained at all locations at the mine where fire may endanger life?*
2. *Unless specified otherwise in this Code, the British Columbia Fire Code 1998 and subsequent supplements and revisions shall apply in determining the level of firefighting equipment and maintenance as prescribed in subsection (1).*

#### Initial Audit - Inspector Comments:

There fire extinguishers on most vehicles and in most areas on surface and underground. There are automatic deluge systems in the fuel bay and in the shops and conveyor transfer points. There are fire hydrants on surface in many locations, supplied by fresh water storage tanks. There are two fire trucks on surface.

#### Score

5

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

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#### Adjusted Score

#### Audit Follow Up - Manager's Reply:

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#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

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#### Adjusted Score

#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

### Section 3.10 Underground Fire Fighting

#### Subsection 3.10.1 Underground Fire Fighting

1. *Is firefighting equipment provided and maintained at all underground crusher stations, electrical installations, pump stations, shaft stations, tipples, conveyors, service garages, fuelling stations, and where a fire hazard may exist?*
2. *Are a suitable number of fire extinguishers of a specified capacity provided and maintained at each stationary diesel motor, transformer substation and any splitter panel?*
3. *Is the location of the firefighting equipment required by sections 3.10 (1) and (2) such that, in the event of a fire, the direction of the mine ventilation air flow will not prevent or hamper the effective use of the equipment?*

#### Initial Audit - Inspector Comments:

Extinguishers are found in all locations where a fire hazard may exist. However, not all fire extinguishers have tags indicating when they were last inspected (e.g.: the deluge system and hand-held extinguishers in the underground fuel station).

#### Score

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

There was no fire extinguisher at 60 sump electrical panel. In the UG fuel bay, a wall-mounted extinguisher was blocked behind an oil drum. There was also an oil drum blocking access to the electrical switch panel in the fuel bay. The deluge system in the fuel bay is now tagged, showing regular maintenance of the system.

#### Adjusted Score

4

#### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

#### Adjusted Score

#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<b>Subsection 3.10.3 Underground Fire Fighting:</b>	
<i>Are inspections and if necessary, testing and maintenance of all firefighting equipment carried out by a qualified person at least once a month?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Not all fire extinguishers seen underground had date cards on them indicating when they were last checked. The fuel bay had an overhead auto discharge, nitrogen activated, dry chemical system. However, there was no tag indicating when it was last checked. It was not determined who is responsible for checking this equipment.	
<u>Initial Audit - Manager's Reply:</u>	
Investigate required training to inspect fire suppression system in the fuel bay. Designated personnel on Production Cave crew check all fire extinguishers underground. An audit to identify all underground extinguishers and checklists is planned.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The fuel bay deluge system is now tagged, indicating regular checking of the system. Oil drums are blocking an extinguisher and an electrical panel in the fuel bay.	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.10.4 Fire Fighting Plans:</b>	
<ol style="list-style-type: none"> <li>Is the position of all fire fighting pipe lines, hydrant valves, fire stations and fire cabinets shown on a plan drawn to scale of not less than 1:2,500 with a metric scale bar and a marked north point?</li> <li>Is the plan updated at intervals not exceeding three months?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

A surface plan was seen with the location of fire hydrants marked.	5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 3.12 Gas Detectors</b>	
<b>Subsection 3.12.1 Approved Detector</b> <i>Is every device used for the detection of flammable or noxious gas at a surface or underground mine of a type approved for such use by a recognized testing agency?</i>	
<u>Initial Audit - Inspector Comments:</u> 6 Altair testers were observed in the mine rescue room (LEL, O2, CO, CO2, H2S and NO2). The docking stations bump test the units each day. Acklands has a contract to service these units regularly.	<u>Score</u> 5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

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<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.12.2 Servicing Detectors</b>	
<i>Has the Manager appointed a qualified person to be responsible for maintaining the appliances used for detection of flammable or noxious gases?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Acklands has a contract to service the detectors. Marcel Syens from MSA, Vancouver has come on one occasion to service some of the units.	
<u>Initial Audit - Manager's Reply:</u>	
Not sure as to why full points were not awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Acklands service the detectors annually. Individual users of detectors are responsible for bump testing their own monitors. A contract is being developed with Industrial Scientific for remote monitoring of the status of detectors. If a detector is faulty, this company will send a replacement unit.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.12.3 Use of Appliance</b> <i>Has the Manager appointed a qualified person to carry and use an appliance for the detection of flammable or noxious gas?</i> <i>Does the qualified person:</i> <ol style="list-style-type: none"> <li>1. Check the appliance for damage and ensure it is in proper working order before use</li> <li>2. Not use the appliance if found damaged or dysfunctional</li> <li>3. Take all reasonable precautions to prevent the appliance from being damaged</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The shift bosses and mine rescue members have taken on-line, gas detector training (MSA University). This self-study course is followed up with an interview with the trainer to confirm the employee understands how to use the unit.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.13 Evacuation</b>	
<b>Subsection 3.13.1 Procedures and Instructions</b>	
<i>Has the Manager of a mine:</i>	
<ol style="list-style-type: none"> <li>1. Prepared procedures for the safe evacuation of personnel from the mine, or part of the mine, if necessitated by an emergency?</li> <li>2. Posted copies of the procedure in conspicuous places at the surface and underground?</li> <li>3. Ensured that each employee receives instruction in the procedures prepared under subsection (1) and that he can recognize the emergency warning system and is familiar with the emergency escape routes from the mine?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The evacuation procedure is found in the "Code One" booklet and is posted. Instructions on the procedure are given during new employee orientation.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.13.2 Emergency Warning System</b> <i>Has the Manager developed and maintained a system acceptable to an Inspector for warning all employees, whether underground or in buildings on surface, of an emergency requiring prompt evacuation of their work places?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
A stench gas system is used to warn employees underground. The stench warning is activated remotely or manually if the automatic system is down. On surface, a phone system and radio backup is used for warning employees.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three– Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

### Subsection 3.13.3 Test of System

*Is a test of the warming system required under section 3.13.2 that does not involve evacuation of key process personnel carried out at least once every 12 months on a production shift, and does the Manager ensure that key process personnel unable to evacuate are knowledgeable with the warning system, and the evacuation procedure?*

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
A surprise test of the stench warning system was done on October 12, 2011. After the test, a review was done to determine which employees smelled the stench, (if not then why?) and how long it took employees to evacuate.	5

<u>Initial Audit - Manager's Reply:</u>
<a href="#">Click here to enter text.</a>

<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

<u>Audit Follow Up - Manager's Reply:</u>
<a href="#">Click here to enter text.</a>

<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>
<a href="#">Click here to enter text.</a>

### Subsection 3.13.4 Report of Test

*Is a report of all emergency warning system tests, including their effectiveness, produced in a timely manner by the Manager, reviewed by the OHSC and kept on file at the mine?*

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
OHSC members were involved in the test of the system but there is no record of the test being discussed at an OHSC meeting.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Three- Personnel Safety and Emergency Preparedness

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Test conducted Dec. 24, test was discussed at JOHSC meeting	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There was not a specific reference in the JOHSC minutes that the test was discussed but it was stated that the discussion took place. Another test is scheduled for November/13.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Part 3 – Total out of 195</b>	<b>184</b>
<b>Part 3 – Percentage out of 100%</b>	<b>94 %</b>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Section 4.1 Buildings - General</b>	
<b>Subsection 4.1.1 Design and Construction</b>	
<i>Are the buildings constructed in accordance with the British Columbia Building Code?</i>	
<ul style="list-style-type: none"><li>• <i>Drawing of the buildings available on site</i></li><li>• <i>Services that are buried such as water, sewer and electrical are available in plan form</i></li><li>• <i>The plans have been updated</i></li><li>• <i>Work supervised by a professional engineer</i></li></ul>	
<u>Initial Audit - Inspector Comments:</u>  The buried services and building drawings for the new infrastructure meets the requirements of the code, however the buried services and building drawings for the old Afton infrastructure is out-dated and incomplete.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u>  All buried services at the Old Afton site were identified in Summer 2011. A re-survey to confirm was conducted in Fall 2012. Drawings and documents are kept up-to-date by survey dept.	
<u>Audit Follow Up – Inspector Comments:</u>  Drawings were provided for the structures of the old Afton shop, however the buried services drawings for this older infrastructure are incomplete. Mine officials indicated that if excavating is to be conducted in this area, the excavation would be done using a vacume truck to excavate.  <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>  4
<u>Audit Follow Up - Manager's Reply:</u>  <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>  <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.1.4 Access to Work Areas</b>	
<i>Are emergency exits clearly marked and designed to provide quick and unimpeded exit?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All emergency exits provided an unimpeded exit.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.1.5 Equipment Entraceways to Buildings</b>	
<i>Are all the vertical doors installed with a sensing device along the lower edge where applicable?</i>	
<u>Initial Audit - Inspector Comments:</u> An overhead power operated vertical door in the mill has a non-functional “bump stop” device on the lower edge of the door. The doors checked in the shop were equipped with “momentary switches” and were compliant.	<u>Score</u>
<u>Initial Audit - Manager’s Reply:</u> Door will be audited and faulty door will be rectified. The door switch has been changed to operate only when the down button in held, door will stop when button released.	
<u>Audit Follow Up – Inspector Comments:</u> All doors checked in the shop and mill were equipped with momentary switches and appear to meet the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager’s Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.1.6 Storage of Materials</b>	
<i>Are all materials stored or stacked in an appropriate manner?</i>	
<u>Initial Audit - Inspector Comments:</u> Ventilated storage cabinets in the shop were being used to store non-dangerous materials, while aerosol spray cans were being stored on work benches and tool boxes. <a href="#">Click here to enter text.</a>	<u>Score</u>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
Supervisors and crews have been addressed to be aware of the correct use of the ventilated cabinets.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Compliance in this section was good.	5
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 4.1.7 – 4.1.9 Handrails and Guardrails</b> <i>Are standard guardrails installed where applicable?</i> <ul style="list-style-type: none"> <li>• <i>Designed and constructed properly</i></li> <li>• <i>Openings, pits in floors, roof walkways or accessible work areas properly secured</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All hand railings checked met the requirements of the code.	
Click here to enter text.	
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 4.2 Buildings – Surface</b>	
<b>Subsection 4.2.1 Repair Shops</b>	
<i>Is the repair shop located in such a way for adequate drainage away from the shop?</i>	
<ul style="list-style-type: none"> <li>• Adequate parking</li> <li>• Signage adequate where applicable</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> The repair shops on the surface and underground were in compliance with this part. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. Click here to enter text.	<u>Adjusted Score</u> 5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Section 4.3 Fuel Pipelines Underground Mines</b>	
<b>Subsection 4.3.8 Fire Protection and Control:</b> Every fuel storage tank shall: <ol style="list-style-type: none"> <li>1. Have a means of accurately determining the amount of fuel it contains</li> <li>2. Be identified as to its contents and that it is a fire hazard area</li> <li>3. Be surrounded by a dike or curb capable of containing 110% of its storage capacity</li> </ol>	
<u>Initial Audit - Inspector Comments:</u> The fuel tank supplying fuel to the auxiliary generator at the mill does not have signs identifying the contents of the tank; this tank does not have a fire extinguisher located at the tank. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Signs and extinguishers installed	
<u>Audit Follow Up – Inspector Comments:</u> Fire extinguishers have been provided in auxillary generator area, however the new fuel station could use more fire fighting equipment and needs placards. There is a bulk propane storage area near the offices that has no fire extinguishers. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 4.4 Fixed Equipment</b>	
<b>Subsection 4.4.1 Fall Arresting Devices</b>	
<i>Are there appropriate fall arrest where applicable?</i>	
<u>Initial Audit - Inspector Comments:</u> Activities requiring fall arrest were good; all workers observed were using appropriate fall arrest when needed. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. Click here to enter text.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.1 Fall Arresting Devices</b> <i>Does all the fall arrest comply with the relevant design and performance requirements of CSA?</i>	
<u>Initial Audit - Inspector Comments:</u> All fall arresting devices were of the required type and were in good condition. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.4.2 / 4.4.3 Moving Parts of Machinery</b>	
<i>Unless situated so as to prevent a person from coming into accidental contact are all moving parts adequately guarded?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was a barrier gate in the jaw crusher left open and therefore left a drive for the screen deck exposed to worker contact. Other guarding appeared to meet the requirements of the code.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
Area was cleaned up and the gate was closed	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
A guard was not replaced at the end of the sag mill. Guard was replaced when it was found.	4
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.4.3 Grinders</b> <i>Are there suitable safety devices available when grinders are being used?</i> <ul style="list-style-type: none"> <li>• Rest Properly Adjusted</li> <li>• Eye and face protection</li> <li>• Inspected and maintained regularly</li> <li>• Proper exhaust system (other than hand-held)</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> One hand grinder without a guard and two bench grinders that needed to have the rest adjusted were found; these grinders were taken out of service. <a href="#">Click here to enter text.</a>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> Guards and tool rests installed and adjusted	
<b>Audit Follow Up – Inspector Comments:</b> Several bench grinders in the mill and at Fountian tire were found to have improperly adjusted rests and no ventilation. These grinders were removed from service at the time of discovery. <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 3
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.4.7 Welding and Burning Equipment</b> <i>Is there safety procedure developed by the mine for the safe transportation or use of torches or welding equipment?</i> <ul style="list-style-type: none"> <li>• Use of fastened safe caps</li> <li>• Stored in upright and secured position</li> <li>• Stored in well ventilated area</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> Compressed gas cylinder storage and use was good in general. However, there were some improperly stored cylinders in the jaw crusher area. <a href="#">Click here to enter text.</a>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> Cylinders were removed from the area	
<b>Audit Follow Up – Inspector Comments:</b> Fire extinguishers are compressed gas cylinders and there are several in the mill and shop areas that will need to be properly mounted not just set on the floor. <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 4
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.4.9 Lifting Devices</b> <i>All lifting devices shall be designed, constructed and installed in accordance with recognized standards and good engineering practices:</i> <ul style="list-style-type: none"> <li>• <i>Maximum load marked on structure</i></li> <li>• <i>Are the safety devices checked and tested regularly</i></li> <li>• <i>Maintenance and inspection recorded</i></li> </ul>	
<b>Initial Audit - Inspector Comments:</b> Several lifting devices were found in the mill, shop, and underground that will not displaying their rated loads. <a href="#">Click here to enter text.</a>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> In the process of labeling all lifting devices	
<b>Audit Follow Up – Inspector Comments:</b> There are still a number of lifting devices in the Mill which are not load rated. <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 3
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.4.10 Install Fire Protection</b> <i>Is there suitable type and size of fire extinguisher provided at all fire hazard areas?</i> <ul style="list-style-type: none"> <li>• Fire suppression system (sprinklers, foam, etc.)</li> <li>• On underground fixed equipment containing more than 10L flammable fluids</li> <li>• On surface in buildings and structures adjacent to opening and underground mine</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> The fuel tank for the auxiliary generator at the mill does not have a fire extinguisher. <a href="#">Click here to enter text.</a>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> Multiple extinguishers in place.	
<b>Audit Follow Up – Inspector Comments:</b> Fire extinguishers have been provided in auxillary generator area, however the new fuel station could use more fire fighting equipment and needs placards. There is a bulk propane storage area near the offices that has no fire extinguishers. <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 4
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.4.11 Boilers and Engines Near Underground Workings:</b> <i>Is there any part of a steam boiler or stationary internal combustion engine installed within 30m of any part of the collar of a shaft or openings to underground workings</i>	
<b>Initial Audit - Inspector Comments:</b> No such steam boilers or stationary engines were observed near any portals. <a href="#">Click here to enter text.</a>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 5
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.12 Engine Exhausts:</b> <i>Is the exhaust of an internal combustion engine temporarily or permanently installed within or outside a building prevented from re-entering the building?</i>	
<b>Initial Audit - Inspector Comments:</b> No engines found had exhausts that could enter a building. <a href="#">Click here to enter text.</a>	<b>Score</b>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.13 Fans for Supplying Underground Ventilation:</b> <i>Are all fans supplying ventilating air to underground workings and structures:</i> <ul style="list-style-type: none"> <li>• <i>Containing fans constructed of non-combustible material?</i></li> <li>• <i>Provide a means for reversing the direction of air flow?</i></li> <li>• <i>Procedure for reversing only by the mine's authorization?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The fans checked appeared to meet the requirements of this section of the code.	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.16 Conveyor Belts</b> <i>Are all conveyors provided with a walkway or other acceptable access for maintenance and inspection?</i> <ul style="list-style-type: none"> <li>• Pull cords to stop conveyors in an emergency</li> <li>• Conveyors; are they re-set manually</li> <li>• Start up warning device</li> <li>• Delay of 10 seconds</li> <li>• Head, tail drives, tension pulleys guarded</li> <li>• Conveyors longer than 15m (inside building or enclosed) belt slip detection</li> <li>• Policy and procedure for clean-up around conveyors</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Guarding, pull-cording, start-up horns and procedures appear to meet the requirements of the code.	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.17 &amp; 4.4.18 Steam and Compressor Plant Operation:</b> <i>Has the Manager developed a procedure for the operation of compressor plants?</i> <ul style="list-style-type: none"> <li>Does it conform to the safety regulation</li> <li>Temperature shutdown devices (exceeds 30kw)</li> <li>Carbon monoxide monitoring (supply air U/G)</li> <li>Is the monitor tested monthly and recorded</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> All devices checked appeared to meet the requirements of the code. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up – Inspector Comments:</u>		<u>Adjusted Score</u>
This item was not checked during this follow-up audit.		5
<a href="#">Click here to enter text.</a>		
<u>Audit Follow Up - Manager's Reply:</u>		
<a href="#">Click here to enter text.</a>		
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>		<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>		
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>		
<a href="#">Click here to enter text.</a>		
<b>Subsection 4.4.20 Portable Ladders</b> <i>Are all portable ladders meeting the CSA Standard CAN Z11 M81?</i>		
<u>Initial Audit - Inspector Comments:</u>		<u>Score</u>
Portable ladder compliance was good; all portable ladders checked were good.		
<a href="#">Click here to enter text.</a>		
<u>Initial Audit - Manager's Reply:</u>		
<a href="#">Click here to enter text.</a>		
<u>Audit Follow Up – Inspector Comments:</u>		<u>Adjusted Score</u>
This item was not checked during this follow-up audit.		5
<a href="#">Click here to enter text.</a>		

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 4.4.21 Construction of Portable Ladders</b> <i>Are all the portable wooden ladders that are constructed at the mine meeting the requirements of HSR Code?</i> <ol style="list-style-type: none"> <li>1. Side rails 38x39mm</li> <li>2. Cleats (rungs) 21x89mm</li> <li>3. If nail is a filler block use between cleats</li> <li>4. Width between cleats 500mm</li> <li>5. Material used of #2 grade</li> </ol>	
<u>Initial Audit - Inspector Comments:</u> Portable ladder construction appeared to meet the requirements of the code. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. Click here to enter text.	<u>Adjusted Score</u> 5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>4.6 Mobile Equipment – Underground Mine</b>	
<b>Subsection 4.6.1 Diesel Equipment Underground:</b> <i>Does the Manager have written procedures for the operation of diesel-powered equipment underground?</i> <ul style="list-style-type: none"> <li><i>Fuel used meet the CAN/CGSB Standard (is a copy of the fuel specification at the mine.</i></li> <li><i>Is equipment left running when not personally being attendant?</i></li> <li><i>Has a cool down period been established by the OHSC when vehicles are parked.</i></li> <li><i>Is the master switches turned off when the operator leaves the vehicle?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Most of the requirements of this section were good. However, several pieces of underground mobile equipment were observed being shut down with no cool down period. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> There is a Procedure for shutting down diesel engines	
<u>Audit Follow Up – Inspector Comments:</u> All machines checked during this follow-up audit met the requirements of this section. Click here to enter text.	<u>Adjusted Score</u> 5

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## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>4.7 Trackless Diesel Powered Equipment</b>	
<b>Subsection 4.7.1 Trackless Diesel Powered Equipment:</b> <i>Do the self-propelled underground vehicles comply with the requirements of CAN/CSA M424.3-90?</i>	
<u>Initial Audit - Inspector Comments:</u> All pieces of underground equipment checked, met the requirements of this section. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. Click here to enter text.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>CSA M424.1 – 88 Trackless Diesel Powered Equipment</b>	
<i>Does the company have copies of the underground diesel certification numbers on file?</i>	
CSA M424.2-90	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All equipment checked met the requirements of this section.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>CSA M424.1 – 88 Trackless Diesel Powered Equipment</b> <i>Are the maintenance records up to date on the underground diesel equipment?</i> <i>CSA M424.2-90</i>	
<u>Initial Audit - Inspector Comments:</u> All equipment records checked met the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

### 4.8 Flammable Materials

#### Subsection 4.8.1 & 4.8.3 General Requirements:

*Are there any flammable materials stored within 30m of a mine portal, shaft or other mine openings?*

- *Flammables flashpoint of less the 52 degrees Celsius (need copy of fuel spec.)*
- *Method of transportation*
- *Storage underground (containers etc;)*
- *Amount of supply underground (per day oil and grease)*
- *Flammable materials shall be storage in an area approved by the mine Manager*

#### Initial Audit - Inspector Comments:

Some compressed gas cylinders were found at the Alimak shafts were stored closer than 30m to the shaft.

[Click here to enter text.](#)

#### Score

#### Initial Audit - Manager's Reply:

Removed from area

#### Audit Follow Up – Inspector Comments:

All flammable materials checked during this follow-up audit met the requirements of this section.

[Click here to enter text.](#)

#### Adjusted Score

5

#### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

#### Adjusted Score

#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>4.9 Mobile Equipment</b>	
<b>Subsection 4.9.1 Back-up Alarm</b>	
<i>Is all the equipment in excess of 7,000kg gross vehicle weight equipped with a back alarm?</i>	
<u>Initial Audit - Inspector Comments:</u> All equipment checked had functional/suitable back-up alarms. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.2 Transmission Interlock</b>	
<i>Does all equipment with fluid drive transmission have an interlocking system to prevent the unit from being started and put in motion?</i>	
<u>Initial Audit - Inspector Comments:</u> All equipment checked had functional transmission interlock devices. <a href="#">Click here to enter text.</a>	<u>Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.3 Fire Extinguisher</b>	
<i>Is all the equipment carrying at least one fire extinguisher of adequate size and proper type?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Several pick-up trucks were found that did not have a suitable fire extinguisher.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
Extinguisher being installed	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
All vehicles checked had suitable fire extinguishers.	5
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 4.9.4 Vehicle Requirements</b> <i>All rubber tired mobile equipment over 7000 kg gross vehicle weight shall have a minimum of two wheel chocks which shall be used whenever necessary.</i>	
<u>Initial Audit - Inspector Comments:</u> A scissor lift truck was found underground that did not have the required wheel chocks on the machine. Overall compliance with wheel chocks was good. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Proper wheel chocks installed on Scissor truck	
<u>Audit Follow Up – Inspector Comments:</u> Wheel chock compliance was good. Click here to enter text.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.9.4 Vehicle Requirements</b> <i>Does the equipment have the appropriate safety devices:</i> <ul style="list-style-type: none"> <li>• <i>Firmly secured seat (as well as passenger)</i></li> <li>• <i>Seat belts</i></li> <li>• <i>Clearance lights &amp; Reflectors</i></li> <li>• <i>Windshield</i></li> <li>• <i>Mirrors</i></li> </ul>	
<b>Initial Audit - Inspector Comments:</b> One scoop underground was found that had a side window missing. <a href="#">Click here to enter text.</a>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> Window replaced	
<b>Audit Follow Up – Inspector Comments:</b> All vehicles checked met the requirements of this section. <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 5
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.9.5 Vehicle Requirements</b> <i>Does a vehicle, other than a vehicle used directly for production in an operation open pit:          Shall have in addition to the equipment required for highway driving, be equipped with:</i> <ul style="list-style-type: none"> <li>• a whip antenna that is fitted with a flag and lamp high enough to be visible to the drivers of all production vehicles or</li> <li>• a flashing light mounted above the cab of the vehicle?</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> All personal carriers checked met the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u>
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.9.6 Fire Suppression for Underground Mines</b> <i>All mobile equipment capable of containing more than 25L of flammable fluids and used in underground mines shall be fitted with a manually activated multi-nozzle fire suppression system. Is the activation of the system possible from each side of the machine and at the operators cab?</i> <i>Does the activation of the system shut the engine down?</i>	
<b>Initial Audit - Inspector Comments:</b> All machines checked had a suitable fire suppression system. <a href="#">Click here to enter text.</a>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 5
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.7</b> <i>Are vehicles that are regularly or primarily used as personnel carriers suitable for the intended purpose?</i>	
<b>Initial Audit - Inspector Comments:</b> The seat belts on some personal carriers were non-functional and need to be repaired. <a href="#">Click here to enter text.</a>	<b>Score</b>

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## Part Four– Buildings, Machinery and Equipment

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<u>Initial Audit - Manager's Reply:</u>	
All seat belts are inspected during the units 200 hr PM, all non-functional seat belts repaired or replaced during PM.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
All vehicles checked met the requirements of this section.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.9</b>	
<i>Does the name plate visible to the operator showing manufacturer, serial number, and maximum rated load. Load grade decal?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All machines checked met the requirements of this section.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 4.9.11 / 4.9.12 Rollover Protective Modifications</b> <i>Does all the equipment have ROPS that is required in accordance with the HSR Code?</i> <ul style="list-style-type: none"> <li>• ROPS permanently marked</li> <li>• Seat belts</li> <li>• Properly labelled</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> All ROPS/FOPS checked met the requirements of this section. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. Click here to enter text.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.14 tires and Rims</b> <i>Does the Manager have a tire and rim procedure developed?</i>	
<u>Initial Audit - Inspector Comments:</u> This operation is using the Fountain Tire procedure. This procedure meets the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
	5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.9.15</b>	
<i>Are trucks with dump boxes being equipped with a permanently attached device for securing or locking the box in a raised position, or carrying suitable equipment on board for this purpose?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All vehicles checked had the required devices on the vehicle.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.17 Parking Brake</b>	
<i>Are all vehicles equipped with a proper activating park brake?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All vehicles checked had a suitable functional parking brake.	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.19</b>	
<i>Trucks having a manufacturer's rated gross vehicle weight in excess of 45,000 kg shall be subjected to downgrade braking tests such that at least once a year 50% of the fleet is tested, and every truck in the fleet is tested at intervals not exceeding 3 years. Is this testing up to date?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is no documentation available for the annual brake testing on the haulage trucks in use on the surface projects.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
Surface contractor has completed brake test on all units and the records are with Gord Wanner.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Brake testing has been conducted, however the testing procedure needs to be up-dated to include the accurate measurements discussed with mine officials. (Accurate load weight, speed and stopping distance including brake lag time)	3
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 4.9.20 Auxiliary Steering</b> <i>Do all vehicles, which require auxiliary steering, meet the provision of the HRS Code? Stored energy devices depressurize when engine is shut down.</i>	
<u>Initial Audit - Inspector Comments:</u> All vehicles checked met the requirements of this section. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. Click here to enter text.	<u>Adjusted Score</u>
	5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

4.11 Lock-Out Procedures	
<b>Subsection 4.11.1 Lock-Out Procedures</b> <i>Has the mine developed a lockout procedure, which includes all the provisions as decided in this part of the Code?</i> <ul style="list-style-type: none"> <li>• Tagging procedures</li> <li>• Power disconnects</li> <li>• Provision for draining stored energy</li> <li>• Appropriate lock-outs (mobile equipment, etc.)</li> <li>• Use of a watchman</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>  There are two lock-out procedures in use at this mine, a new one in the mill and the old one on the used for the rest of the mine.  In the shop area, it was observed that a worker was using a departmental lock as a personal protection lock; persons other than the worker had keys to this lock.  <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u>  New Policy has been rolled out and procedural development is ongoing	
<u>Audit Follow Up – Inspector Comments:</u>  One lockout procedure is now in place and being used, however tags are not being used for the Isolation Officers locks being placed on the devices in the group lockout process. It is being assumed that mechanics are qualified to act as Isolation Officers without being trained and designated as Isolation Officers, stated as being required in the lockout procedure. The three Inspectors that reviewed the procedure, found it to be confusing and difficult to identify the various roles and responsibilitys of the different officers and workers in the procedure. As per 4.11.1 (3) no mention is made in the procedure of the need to remove a lock that has been forgotten, there is a seperate procedure available for the removal of a forgotten lock in place, however is is not mentioned in the lock-out procedure.  <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>  3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>4.12 Lifting Devices – General</b>	
<b>Subsection 4.12 Manually-Operated Hoists and Winches</b>	
<i>Is there a suitable inspection and maintenance program in place?</i>	
<ul style="list-style-type: none"> <li>• <i>NDT inspection</i></li> <li>• <i>Safety checks</i></li> <li>• <i>Logbooks where applicable</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> The annual inspection and NDT records were requested for these devices, but no documents were provided. Mine officials assured me that these tests had taken place.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> NDT records are in Maintenance planning	
<u>Audit Follow Up – Inspector Comments:</u> NDT testing is being done and the record keeping is improved.	<u>Adjusted Score</u> 5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<b>4.13 Raise climbers</b> <b>Subsection 4.13 raise climbers</b> <i>Are the following in place for raise climbers</i> <ul style="list-style-type: none"> <li>• <i>NDT inspection</i></li> <li>• <i>Safety checks by mechanics and operators</i></li> <li>• <i>Logbooks up to date</i></li> <li>• <i>Identification plate</i></li> <li>• <i>Brakes</i></li> <li>• <i>Emergency switch</i></li> <li>• <i>Communication device</i></li> <li>• <i>Fire extinguisher</i></li> <li>• <i>Emergency escape procedures in place</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The annual inspection and NDT records were not complete for the entire rail assembly; all other requirements for this section appear to have been met.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
Need more clarification on what the Ministry requires regarding the rails. Further discussion required.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There is still not documentation demonstrating that the rails are being tested.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>4.14 Temporary Work Platforms</b>	
<b>Subsection 4.14.1</b>	
<i>Is there scaffolding or temporary work platforms being used, are they being constructed and maintained in accordance with WCB Occupational Health and Safety Regulation 13?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Scaffolding observed in use was properly set up and secure.	
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>4.18 Miscellaneous Hoisting Equipment</b>	
<b>Subsection 4.18.6</b>	
<i>Log book; defects noted, maintenance and repairs noted, supervisor has examined, dated and signed at least weekly by to verify that log book is being used. Is log book in place and current?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Worker daily entries were not consistent and the supervisor weekly sign-off was not done every week, this was observed in the shop area.	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
Log books are up to date and located in the cementation offices.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Checks of log books were fairly good, however the crane at the top of the pebble crusher had no log book entries at all, worker or supervisor.	3
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.18.7</b>	
<i>Are the name, model, and serial number assigned by the manufacturer clearly visible and legible on every crane, hoist, and derrick?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All of these devices checked met the requirements of the code.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not checked during this follow-up audit.	5
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 4.18.8</b> <ul style="list-style-type: none"> <li>• A permanent, clearly visible, and legible sign shall be affixed to each crane, derrick, and hoist showing the safe working load.</li> <li>• The safe working load shall be marked on the load block and superstructure of hoisting equipment.</li> <li>• Is this signage in place and visible?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> All lifting devices checked met the requirements of this section. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. Click here to enter text.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.18.10 Controls</b> <i>Are all the controls of the cranes, derrick, or hoist clearly marked to show its functions?</i>	
<u>Initial Audit - Inspector Comments:</u> All crane controllers checked met the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> This item was not checked during this follow-up audit. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>Subsection 4.18.10 Controls</b>	
<i>Are there signs on the crane structure, visible to an operator, clearly indicating the direction of the hook, bridge, and trolley motions, compatible with those marked on the controls?</i>	
<u>Initial Audit - Inspector Comments:</u> Many cranes in all areas of the mine do not have this control depiction.  <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Crane control depictions being installed on units as needed	
<u>Audit Follow Up – Inspector Comments:</u> We were shown these depictions while traveling in a pickup truck, however these depictions have not been put in place.  <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 3
<u>Audit Follow Up - Manager's Reply:</u>  <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>  <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>  <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>4.20 Rigging</b>	
<b>Subsection 4.20 Use of Riggings and Fittings</b>	
<i>Are all the rigging and fittings used and assembled properly?</i>	
<u>Initial Audit - Inspector Comments:</u> Several lifting jigs and bins were found that did not display their rated load, some of these devices may not have been certified by an engineer (looked homemade).  <a href="#">Click here to enter text.</a>	<u>Score</u>  
<u>Initial Audit - Manager's Reply:</u> These are being looked at and removed from service if they do not meet code	
<u>Audit Follow Up – Inspector Comments:</u> There are still several jigs and bins which require load ratings, no real change. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 2
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Four– Buildings, Machinery and Equipment

July 16 &17 , 2013

<b>4.21 Slings</b>	
<b>Subsection 4.21 Requirements</b>	
<i>Are all the slings marked with the safe working load, have the manufacturer's identification, not damaged and in good working condition?</i>	
<u>Initial Audit - Inspector Comments:</u> Several fiber webbing slings were found that had sufficient damage to them that they should be taken out of service. These slings were removed from service at the time they were found. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Regular inspections of slings are conducted in the workplace and removed from service	
<u>Audit Follow Up – Inspector Comments:</u> Several fiber webbing slings were found that had sufficient damage to them that they should be taken out of service. These slings were removed from service at the time they were found. <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 3
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Part 4 – Total out of 260</b>	<b>236</b>
<b>Part 4 – Percentage out of 100%</b>	<b>91%</b>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

Section 5.1.1 / 5.2.1 / 3.2.1 Application of Electrical Rules	
<b>Subsection 5.1.1 / 5.2.1 / 3.2.1 Codes and Standards</b> <ul style="list-style-type: none"> <li><i>The Manager shall develop a plan, approved by a registered electrical engineer, for the use of electrical energy at any mine, and the plan shall be forwarded to the Chief Inspector prior to introduction of electricity to the mine. A plan shall also be required for any increase in capacity of an existing installation by more than 500KVA.</i></li> <li><i>The plan referred to shall show the area's at the mine where the energy is to be transmitted and used, including schematic drawings.</i></li> <li><i>Is there a copy of CSA M421-00 "Electricity in Mines" on the mining property?</i></li> </ul>	
<b>Initial Audit - Inspector Comments</b> <p>This mine has an electrical system that has been developed by utilizing some existing infrastructure, updating and installation of new equipment. Although not all drawings were reviewed during this audit there are sufficient and up to date electrical plans available. Most if not all the plans have been developed by professional engineers. Copies of M421-11 are available, however some workers interviewed were not aware of this CSA standard and how it applies to mining.</p>	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> <p>As we are still in construction of some areas of the mine and upgrades or changes to the existing infrastructure are ongoing, electrical drawings are being revised as required and posted or made available on SharePoint.  Each electrical worker on site will receive a copy of CSA Standard M421-11 by the end of January 2013. They will then be required to study the standard and write an exam based on some of the more pertinent rules for this mine.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>Online drawings in the UG subs were redlined drawings. The drawings need to be updated and the revised drawing posted in the substations. In discussions with workers, electrical workers were given copies of M421 and later tested on the content. The distribution of M421 and the follow up quizzes is very encouraging.</p>	<b>Adjusted Score</b> <p>4</p>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
Section 5.2.1 Notices and Information	
<b>Subsection 5.2.1 &amp; 3.2.2 of M421-00 Notices and Information</b> <i>All Mines:</i> <ul style="list-style-type: none"> <li>• Only authorized persons shall work on or be in charge of electrical equipment or systems.</li> <li>• Only authorized persons undertake installation of and repairs, extensions, or changes to electrical equipment or systems.</li> <li>• Have practices and procedures been developed, implemented and updated as needed to ensure employees are properly trained in electrical safe practices?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> This operation has a well defined electrical department. Interviews with the maintenance superintendent, electrical general foreman and supervisors along with electrical workers were conducted. It is clear that only authorized and qualified workers are in charge of the electrical system and only these people undertake installation and repairs to the equipment and systems. There is no formal electrical safety program in place at the time of the audit. The plan as I understand is in draft and will contain practices and procedures when complete. <a href="#">Click here to enter text.</a>	<u>Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
The electrical safety program is in the development stage, ESPS will be on site Feb 4th 2013 to carry on with the development and roll out of training and program facilitation.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Contact with Terry Becker (ESPS) has been made and ESPS is helping to develop an electrical safety program. To date the Safety program is still in the draft process. This auditor did see parts of the draft and was told that the draft is nearly ready for release for worker input.	3
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

Section 5.4.1 Isolating Switchgear	
<b>Subsection 5.4.1 (1) (2) &amp; 3.2.6 of M421-00 Isolating Underground Workings</b> <i>Is the electrical switchgear installed?</i> <ul style="list-style-type: none"> <li>• Each circuit shall have a provision for locking and tagging of the disconnection means</li> <li>• Operate by a qualified person</li> <li>• Easily accessible for repairs or operation</li> <li>• Fixed in a vertical position</li> <li>• Recessed from haulage ways and protected from physical damage</li> <li>• Located where water cannot accumulate</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> <p>During the audit electrical switch gear installation was inspected all over the mine including surface and underground. The vast majority of the switchgear is new or reconditioned and is installed as required by the code. The only deficiency noted was the ventilation fan installations in the mill had disconnects mounted horizontally, high above any access point to workers without the use of a ladder.</p> <p><a href="#">Click here to enter text.</a></p>	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> <p>The ventilation fan disconnect switches are mounted close to the fans for lockout purposes when working on the fans. They are readily accessible from the crane work platform which would be used to access the fans. There has been a work notification input into our CMMS to investigate and possibly relocate the disconnect switches to a more feasible location. This is scheduled for completion by Feb 15, 2013.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>This ventilation disconnects were not reviewed during the follow up audit.</p>	<b>Adjusted Score</b> 4

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 5.5.1 / 5.5.3 Trailing Cable Use and Repair</b>	
<b>Subsection 5.5.1, 5.5.2 &amp; 4.6.3 of M421-00 Protective Equipment and Defective Cables</b> <ul style="list-style-type: none"> <li>• <i>Whenever persons are handling energized trailing cables suitable protective equipment is being utilized</i></li> <li>• <i>Damaged cables are inspected by qualified persons before they are returned to service</i></li> <li>• <i>All permanent repairs to damaged trailing cables shall be made by qualified persons who shall examine and test the cables before they are allowed to go back into service</i></li> <li>• <i>Trailing cables shall be routed to avoid damage and be kept visible by being mounted on suitable markers at regular intervals throughout the cable route. Cable couplers shall be suitably supported off the ground</i></li> <li>• <i>Suitable strain relief shall be provided at the connection of the cables to machines</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> The trailing cables used at this mine are primarily for mobile equipment underground. All the cables inspected appear to be repaired properly. Cables underground are primarily routed high on the back to prevent damage. Cables on the surface primarily are marked and mounted on cable stands. Strain relief protection at this mine in the underground workings should be reviewed. Additional strain relief could be utilized at some of the jumbo and Drill switchgear attachments as well as the mobile equipment. Click here to enter text.	<u>Score</u>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
All of our underground equipment comes equipped with strain relief from the manufacturer. Addition strain reliefs are installed on the cable couplers when they are installed in their new locations. A work Notification has been input into our CMMS system to audit this practice.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Cables were not reviewed during the follow up audit.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 5.6.1 Submersible Pumps</b>	
<b><i>Subsection 5.6.1 Ground Fault Protection</i></b>	
<ul style="list-style-type: none"> <li><i>All submersible pumps supplied by portable training cable shall be provided with ground fault protection to limit ground fault current to a maximum of 25 amps and automatically isolate the supply in the event of a fault</i></li> <li><i>Submersible pumps operating at voltages in excess of 300 volts shall, (after Jan. 1, 2001) be supplied by shielded portable power cable and have ground fault protection and ground check monitoring</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The inspector did not review a great number of submersible pumps during this audit but those that were looked at did not reveal any deficiencies.	
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
All 600 volt substations feeding submersible pumps are equipped with resistance grounding limiting ground fault current to 15 amps max, and Startco SE-325 or SE-330 NGR Monitor relays to automatically isolate the supply in the event of a fault. All submersible pumps that are installed at New Afton on surface or underground are installed with type SHD-GC shielded trailing cable and Startco SE-105 ground fault/ground check relays. These systems are function tested upon installation and at least once annually thereafter. Test reports are kept and are available upon request.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Submersible pumps were not reviewed during the follow up audit.	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

Section 5.7.1 / 5.7.2 Supply Systems for Mobile Electrical Equipment	
<b>Subsection 5.7.1 / 5.7.2 &amp; 3.5.5, 3.5.6 of M421-00 System Testing and Record of Testing</b> <ul style="list-style-type: none"><li>Supply systems for mobile electrical equipment shall be tested before being put into service and at least once a year thereafter in order to prove the effectiveness of the ground fault tripping and the ground conductor monitoring circuits</li><li>A record of the tests shall be kept at the mine and shall be available for examination</li><li>The supply shall be grounded through a neutral grounding device that limits the ground-fault voltage to 100 volts or less and de-energizes in less than 1's if ground fault current exceeds 20% of the prospective ground fault current</li><li>The ground conductor monitoring shall de-energize the supply in less than 0.5's if the ground check conductor opens, the ground return conductor opens, or the ground check conductor shorts to ground</li></ul>	
<u>Initial Audit - Inspector Comments</u> <p>Documentation has been developed and maintained showing the regular testing of the supply systems for mobile equipment. All the installations inspected during this audit were fed from a supply that was grounded through a neutral grounding resistor. It could not be easily determined whether the NGR would limit the current as required or whether the monitoring of the supply would de-energize in the prescribed time, but the installed looked at appear to have the proper setting on the protective relays.</p> <p><a href="#">Click here to enter text.</a></p>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <p>All 600 volt substations feeding mobile electrical equipment are equipped with resistance grounding limiting ground fault current to 15 amps max, and Startco SE-325 or SE-330 NGR Monitor relays to automatically isolate the supply in the event of a fault. All mobile electrical equipment at New Afton is supplied with type SHD-GC shielded trailing cable and Startco SE-105 ground fault/ground check relays. These relays are set to de-energize the supply in the event of a fault of 0.5 amps for 0.1 second. These systems are function tested upon installation and at least once annually thereafter. Test reports are kept and are available upon request. There has been a PM program implemented with our CMMS to document and track all of the ground fault relay settings. This is to be audited on a regular basis to ensure that the settings are current and have not been adjusted. Documentation will be maintained with the CMMS.</p>	
<u>Audit Follow Up – Inspector Comments:</u> <p>System testing was not reviewed during the follow up audit.</p>	<u>Adjusted Score</u> 4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
Section M421-00 Testing and Calibration of Protective Devices	
<b>Subsection 3.5.4 of M421-00 Testing and calibration of Protective Devices</b> <ul style="list-style-type: none"> <li>Except for fuses, each protective device for an installation operating at a voltage in excess of 750 volts shall be tested to confirm that the device prevents the equipment from being operated in excess of its rating</li> <li>These tests shall be performed before initial use and after every three years of use, and the result shall be recorded in a record book</li> </ul>	
<u>Initial Audit - Inspector Comments</u> All the protective relays looked at during this audit appear to be tested in accordance with 3.5.4. <a href="#">Click here to enter text.</a>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> Testing and calibration was not reviewed during the follow up audit.	<u>Adjusted Score</u> 5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section M421-00 Movable Equipment</b>	
<b>Subsection 4.6.1, 4.6.2 of M421-00</b>	
<ul style="list-style-type: none"> <li>• <u>Movable Switch Houses</u> <ul style="list-style-type: none"> <li>a. <i>Disconnecting means shall be manually operated three phase ganged visi-blade type. It shall be suitably rated, installed at the point of power entry and key interlocked with the circuit breaker or interrupter</i></li> <li>b. <i>The circuit breaker shall be complete with devices necessary to provide overcurrent and ground fault protection</i></li> <li>c. <i>Control devices requiring adjustment or reset shall not be located inside the high voltage section of the switch house enclosure</i></li> </ul> </li> <li>• <u>Movable Substations</u> <ul style="list-style-type: none"> <li>a. <i>The substation supporting structure must be suitable for moving over rough terrain, or shall be fitted with adequate lifting attachments to allow lifting onto other transport</i></li> <li>b. <i>Power transformers shall be of the totally enclosed type or shall be enclosed within a substantial chain link fence. Warning signs must be posted at the entrance to the transformer enclosure with the words "DANGER: HIGH VOLTAGE"</i></li> <li>c. <i>Protection of interconnecting cables to 2 or more movable structures must be protected by a circuit breaker and the cables must not exceed 5m in length</i></li> <li>d. <i>The neutral grounding device shall be mounted as close as practical to the transformer neutral.</i></li> </ul> </li> </ul>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<p><u>Initial Audit - Inspector Comments:</u></p> <p>Substations were reviewed extensively during this audit and it is to be noted that stationary substations will be include in this section. Portable substations underground looked at during this audit did not reveal any deficiencies. The permanent substations at various locations on the surface will require more signage “<i>DANGER: HIGH VOLTAGE</i>” <i>posted on the fence.</i></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager’s Reply:</u></p> <p>More signs will be installed. A work notification has been input into our CMMS to audit the number of additional signs required and will be installed when they arrive on site.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Signage at the substations was not reviewed during the follow up audit.</p>	<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager’s Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<b>Subsection 4.6.2.2 &amp; 4.6.2.3 of M421-00 Station Ground Electrodes and Resistances:</b> <ul style="list-style-type: none"> <li>Each Movable Substation shall be grounded to a station ground electrode that meets the requirements of Rules 36-302 (1), (2), and (3) of CSA Standard C22.1</li> <li>The station ground electrode shall be designed and installed to prevent the transfer of potentials in excess of 100 volts from the station ground electrode to any connected mobile electrical equipment. The resistance of the station ground electrode shall be measured and the ground-fault protection tested after installation or relocation of the substation</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> The electrical system feeding the underground movable substations includes a separate grounding conductor carried to the surface. There is additional grounding installed at the substation locations underground.	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> A program will be put in place to measure the resistance of the grounding conductor to ensure that it is still connected to the main ground grid for the mine site.	
<b>Audit Follow Up – Inspector Comments:</b> There is a ground wire carried through the mine from surface and regular testing is ongoing.	<b>Adjusted Score</b> 5
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

Subsection M421-00 Electrical Equipment Rooms	
<b>Subsection 4.2 M421-00 Electrical Equipment Rooms</b> <ul style="list-style-type: none"><li><i>Electrical equipment rooms must ensure the best practical protection against fire propagation, water and dust ingress and corrosive atmospheres</i></li><li><i>They shall be sufficiently ventilated to maintain equipment at safe temperatures</i></li><li><i>Lighting levels must be sufficient to enable all equipment to be easily distinguished and all instruments and labels to be easily read</i></li><li><i>An emergency lighting system shall be provided</i></li><li><i>A fire extinguishing device shall be provided at each electrical equipment room or vault</i></li></ul>	
<u>Initial Audit - Inspector Comments:</u> <p>A significant number of electrical equipment rooms were looked at during this audit both on the surface and the underground. As most of the equipment rooms are new very few deficiencies were noted on the surface. The primary concern with the underground equipment rooms was the excessive heat developing at the main transformer distribution locations. Temperatures were noted at 4 locations with ambient being in the range of 95-115 degrees Fahrenheit. This over temperature condition must be addressed immediately.</p> <p><a href="#">Click here to enter text.</a></p>	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <p>As a temporary immediate measure, portable fans have been installed in the U/G ERU's to mitigate the heat. Twice daily ERU temperature readings show that this has dropped the room temperature by at least a few degrees F in all ERUs. A permanent solution involves the redesign of the air filtration system of the ERU'S. This is to include the direct extraction of the heat from the VFD'S installed in the ERU'S. Construction of the new system is set to begin in early February and will be completed by late March or early April 2013. ERU transformer nameplates state insulation class of 220 degrees C and a temperature rise of 80 degrees C. Actual transformer temperatures have been observed in the 70-80 degree range, maximum temperature recorded was 85 degrees C. An alarm will be generated if transformer temperature reaches 100 degrees C, and transformer feeder breakers will open if the temperature reaches 120 degrees C.</p>	
<u>Audit Follow Up – Inspector Comments:</u> <p>Records were provided to this auditor that shows significant improvement with regards to lowering ERU temperatures. The reconfiguring of the cooling ducts has made a big difference in operating temperatures. However 2 ERUs have not had the ventilation reconfigured with one ERU having a temperature of approximately 100 degrees.</p>	<u>Adjusted Score</u> 3

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## Part Five – Electrical Power Systems

July 16 & 17, 2013

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

### Subsection M421-00 Quick Connect Cable Couplers

#### Subsection 3.4.4 M421-00

##### 3.4.4.1

*A quick-connect coupler used to join portable power cables or a cable and a flange-mount receptacle, operating at a voltage in excess of 300 V, shall have*

- (a) a mechanical fastening arrangement, to join the coupler, with a tensile strength greater than that of the portable power cable;*
- (b) strain-relief devices suitable for the intended portable power cable;*
- (c) a means to prevent the ingress of moisture;*
- (d) a means to mechanically lock the coupler, where the circuit voltage exceeds 750 V;*
- (e) a pin arrangement such that*
  - (i) the ground conductor makes before and breaks after the phase conductors; and*
  - (ii) the ground-check circuit makes after and breaks before the phase conductors; and*
- (f) ground-fault protection and ground-conductor monitoring at the source of supply.*

##### 3.4.4.2

*Notwithstanding Clause 3.4.4.1, if a disconnect switch is mechanically or electrically interlocked with a receptacle for a portable-power-cable plug, and if quick-connect couplers are not used downstream, ground-fault protection and ground-conductor monitoring shall not be required.*

#### Initial Audit - Inspector Comments:

This operation primarily uses UEE type couplers. These couplers are either mechanically or electrically interlocked. During this audit no deficiencies were noted with respect to the use of couplers.

[Click here to enter text.](#)

Score

#### Initial Audit - Manager's Reply:

The UEE cable couplers used at New Afton meet all the requirements of this section, and have performed very well for us here.

#### Audit Follow Up – Inspector Comments:

Couplers were not reviewed on the follow up audit.

Adjusted  
Score

5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

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Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section M421-00 5.4.1 General</b>	
<b>Subsection:</b> <i>Switchboards and switchgear shall</i> <ul style="list-style-type: none"> <li>a) <i>be protected against physical damage;</i></li> <li>b) <i>be guarded in such a manner that access by unauthorized persons can be prevented, if there are exposed live parts;</i></li> <li>c) <i>be separated from an explosives storage area by at least 15 m when measured along mine workings;</i></li> <li>d) <i>have clearances around them to permit safe access for inspection, maintenance, and repairs;</i></li> <li>e) <i>be installed on a fire-resistant foundation; and</i></li> <li>f) <i>be in such a location as to minimize the spread of fire.</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Switchboards and other electrical equipment inspected during this audit were in compliance with this subsection. Parking of mobile equipment in front of portable substations underground should be discouraged as several no post barriers were noted as being “bumped into” during the inspection.	
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u> Concrete blocks are used to guard the entrance of the U/G substation. These blocks are use in various locations in the mine; they may show signs of wear from where they were last used. It is part of our regular communications that these blocks are not to be used as bumper blocks, parking directly in front of the substation is not encouraged, and this subject comes up frequently in regular safety talks.	
<u>Audit Follow Up – Inspector Comments:</u> This item was not reviewed during the follow up audit.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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## Section M421-00 Conveyor Systems

### 4.4.3 Conveyor systems

#### 4.4.3.1

An electrically driven conveyor shall have the following:

(a) pull-cords (see [Clause 4.4.3.2](#)) for stopping the conveyor at accessible locations along the conveyor.

The pull-cords shall be within easy reach of persons at such locations;

(b) when the conveyor is started automatically by remote control, or when a portion or portions of the conveyor are not visible from the operator's position, a start-up warning device; and

(c) head, tail, drive, deflection, and tension pulleys guarded at any pinch point that is or can become accessible.

#### 4.4.3.2

A pull-cord required by [Clause 4.4.3.1](#) shall

(a) operate a manual-reset-type switch that stops the conveyor;

(b) be designed and arranged so that it operates the associated switching device and generates the emergency stop signal when

(i) the pull-cord is pulled in any direction;

(ii) a perpendicular pulling force of less than 200 N is applied to the pull-cord; and

(iii) a perpendicular deflection of the pull-cord of less than 400 mm occurs;

(c) be able to withstand, without breaking, a tension force ten times greater than is necessary to generate the emergency stop signal; and

(d) incorporate a visual indicator to show which device has been operated where more than one switching device is necessary.

Scoring: **Maximum points available per subsection = 5**

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**3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<p><u>Initial Audit - Inspector Comments:</u></p> <p>Conveyor systems were reviewed and inspected during this audit both on the surface and underground portions of this mine. All new installations are compliant with this section of the code with respect to installation of safety devices. The only area of concern was the varying degrees of tightness of the pull cords. Please note the requirements of this section in 4.4.3.2 (b) (ii) and (iii). Seasonal adjustment may be required to meet the criteria defined in this section.</p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>As part of our regular preventative maintenance program, the pull cords are inspected regularly for correct operation and functionality. Pull cord slack is adjusted if needed at the time of the inspection.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Pull cords were not reviewed during the follow up audit.</p>	<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<b>Section M421-00 Grounding</b>	
<b>Subsection 5.6</b>	
<b>5.6.1 Grounding Circuit</b>	
<i>The grounding circuit from underground to surface shall consist of at least one copper conductor interconnected and bonded with metallic parts of the electrical system, unless equally effective means are provided.</i>	
<b>5.6.2 Inspection</b>	
<i>The grounding network shall be inspected periodically for continuity and assessed for adequate capacity.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The separate grounding circuit from surface to underground was inspected at numerous locations and no deficiencies were noted. As discussed with electrical supervision a conscious effort is required to review and make visual inspections to this system on a continual basis to ensure its integrity and meet the requirement of 5.6.2.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
A preventive maintenance task will be implemented in our CMMS to inspect and measure the ground conductor throughout the mine. Program will be in place by the end of Q1 2013.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This auditor was informed that a PM had been generated and meter(s) were either ordered or available.	
	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

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### **Subsection 3.5**

#### **3.5.5 Ground-Fault Protection**

*Where ground-fault protection is used, the supply shall be*

- a) grounded through a neutral-grounding device that limits ground-fault voltage to 100 V or less; and*
- b) de-energized in less than 1 s if ground-fault current exceeds 20% of the prospective ground-fault current (see Appendix A).*

#### **3.5.6 Ground-Conductor Monitoring**

*Where ground-conductor monitoring is used, the supply shall be de-energized by a fail-safe circuit in less than 0.5 s, and a de-energized supply shall not become energized if*

- a) the ground-check conductor opens;*
- b) the ground-return conductor opens; or*
- c) the ground-check conductor shorts to ground.*

*A ground-conductor monitoring system shall have an open-circuit voltage of less than 100 V and shall continuously indicate ground-circuit continuity.*

### **3.6 Grounding**

#### **3.6.1 Circuit-Opening Devices in Grounding Conductors**

*A circuit-opening device shall be permitted in the neutral-to-ground connection on any star-connected generator whenever two or more generators are required to be operated in parallel. Procedures for opening and closing these devices shall be instituted to ensure operator safety.*

#### **3.6.2 Neutral-Grounding Devices**

*A neutral-grounding device shall be*

- a) continuously rated, except when ground-fault tripping is provided;*
- b) monitored so as to de-energize the supply in less than 60 s if the neutral-grounding device opens; and*
- c) connected as close as practical to the supply neutral.*

#### **3.6.3 Ground-Fault Indication**

##### **3.6.3.1**

*A device required by Rule 10-106 (2) of CSA Standard C22.1 shall be provided with*

- a) short-circuit protection; and*
- b) disconnecting means such as a general-use switch.*

*A ground fault shall be investigated and removed without delay.*

##### **3.6.3.2.**

*Where an audible or visible alarm is used to indicate a ground fault, such alarm shall continue signalling to indicate the fault until the fault is cleared.*

**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Initial Audit - Inspector Comments:</u> There is extensive use of ground fault protection and monitoring taking place at this operation both underground and on surface. All the equipment has been recently installed and all installations inspected met the requirements of this section.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Every 600 volt branch circuit fed from an underground portable substation has its own individual ground fault relay protecting the circuit, and most branch circuits fed from surface substations have as well.	
<u>Audit Follow Up – Inspector Comments:</u> Ground fault protection was not reviewed during the follow up audit.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<b>Section M421-00 Travelling Cranes</b>	
<b>Subsection 3.4</b>	
<b>3.4.6.1</b>	
<i>Electric overhead travelling cranes shall meet the requirements of CSA Standard B167.</i>	
<b>3.4.6.2</b>	
<i>Each crane shall be equipped with</i>	
<ul style="list-style-type: none"> <li><i>a) an upper-limit switch that prevents the crane block from reaching its upper limit of travel; and</i></li> <li><i>b) a lower-limit switch if operation of the crane requires the hook to leave sight of the operator at its lower limit of travel.</i></li> </ul>	
<b>3.4.6.3</b>	
<i>A circuit breaker or load-break switch for interrupting the power supply to the crane shall be provided in the cab.</i>	
<b>3.4.6.4</b>	
<i>Each service crane shall be provided with a form of dead-man control.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The surface cranes that this inspector reviewed were in compliance with this section with respect to electrical requirements.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
A program is in place for regular inspection and testing of all overhead cranes on site.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Cranes were not reviewed during the follow up audit.	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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## Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

### Part Five – Electrical Power Systems

July 16 & 17, 2013

2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

### Subsection 3.3

#### 3.3.6.1

*Electrical supply lines shall be installed in accordance with CSA Standard CAN/CSA-C22.3 No. 1 or the applicable standard of the jurisdiction.*

#### 3.3.6.2

*Overhead supply line clearances referred to in CSA Standard CAN/CSA-C22.3 No. 1 require additional clearances as noted in Clauses 4.3.1.1 and 4.3.1.2 of that Standard (see Clause B2 of this Standard).*

#### 3.3.6.3

*Notwithstanding the requirements of Table 2 and Clause 4.3.1.1 of CSA Standard CAN/CSA-C22.3 No. 1, minimum vertical clearances in Table 3 of this Standard shall be increased where haulage vehicles are frequently used (see Clause B1 of this Standard). Minimum vertical clearances shall be increased by*

- a) the amount by which the combined vehicle and load height exceeds 4.15 m;*
- b) the amount of snow pack; and*
- c) the amount by which banked shoulders, crests, or road maintenance increases road elevation.*

#### 3.3.6.4

*Vertical clearances specified in Clause 3.3.6.3 do not provide for the travelling of cranes, shovels, drills, and other oversized equipment having unusual dimensions. Clauses 3.3.6.5 and 3.3.6.6 relate to the movement of this special equipment underneath or alongside energized supply lines but are not intended as a procedure for working in the vicinity of energized supply lines.*

#### 3.3.6.5

*When special equipment is moved, and where the equipment will encroach on the minimum clearances listed in Table 4, the supply lines shall be isolated and grounded. When the movement is under the supervision of qualified personnel, the clearances in Table 3 shall be permitted.*

#### 3.3.6.6

*Personnel involved in the movement of special equipment in the vicinity of energized overhead supply lines shall minimize the electric-shock hazard in the event of accidental contact by*

- a) operating the equipment from a position on the equipment that is not in direct contact with earth;*
- b) having all grounds persons/safety watchers maintain a safe stand-off distance from the equipment;*
- c) using only prearranged visual signals or radio communications. Hard-wired communication systems shall not be used between the equipment and persons on the ground; and*
- d) ensuring only persons required for the move are directly involved.*

Initial Audit - Inspector Comments:

Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<p>The electrical distribution overhead lines at this operation have primarily been installed by a qualified contractor. The assumption is and cannot be disputed by visual observation is that the overhead supply lines have been installed to meet the requirements of the code. The notwithstanding clauses defined in 3.3.6.3 through to 3.3.6.6 cannot be emphasized enough as there have been far too many occurrences of equipment coming into contact with high voltage lines at various other mining operations in the province in the last few years.</p>		
<p><u>Initial Audit - Manager's Reply:</u></p> <p>The overhead distribution system has been installed by a qualified contractor that specializes in overhead power distribution system construction and maintenance. The overhead power distribution system that crosses any road way has the height of the lowest conductor clearly marked on signage installed on either side of the line as it crosses the road way. The posted heights have recently been audited and new, larger signs are going to be installed at each location. Sign size has been increased to 24"x 24".</p>		
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Overhead lines were not reviewed during the follow up audit. This auditor was told that during the recent shut down much of the powerline was inspected and maintenance on components was completed.</p>		<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>		<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

### Section M421-00 Work on Live Equipment

#### Subsection 3.2

##### 3.2.5.1

*With the exception of utility work and work on electric furnaces and plating tanks, repairs or alterations shall not be carried out on live equipment.*

##### 3.2.5.2

*Notwithstanding Clause 3.2.5.1, if adjustments, tests, or calibrations are performed while equipment is live, all necessary precautions shall be taken to ensure that the work can be done safely.*

##### 3.2.8 Notices to Workers

*Where a hazard exists from inadvertent access to or interference with electrical apparatus, durable notice signs of sufficient size shall be effectively posted that*

- a) prohibit unauthorized personnel from handling or interfering with electrical apparatus;*
- b) warn of danger and indicate the highest voltage in use;*
- c) provide instructions for communication with the supervisor of the electrical equipment;*
- d) advise of the procedure to be followed in case of electrical fire; and*
- e) contain directions for the procedure to be followed to rescue persons in contact with live electrical conductors, and for the resuscitation of persons from the effects of electrical shock.*

*The requirements of Items (c), (d), and (e) are not obligatory where adequate mine emergency procedures are in place.*

#### Z462 Workplace Electrical Safety

##### 4.1.2 Purpose

*The practices and procedures specified in this Standard are intended to provide for the safeguarding of workers relative to electrical hazards in the workplace.*

Initial Audit - Inspector Comments:

Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<p>In discussion with management and workers during this audit it is apparent that the practice of working on live electrical equipment is discouraged. That being said there is not any formal training or a formal Workplace Electrical Safety program developed and implemented at this mine. There is a plan in place to provide training and a draft program is being developed.</p>	
<p><u>Initial Audit - Manager's Reply:</u></p> <p>A large percentage of the electrical safety program is centered on electrical safety with policies and procedure developed. The procedures will support the policies. The program will also consist of online training and testing, as well as class room instructional training. Next meeting is scheduled for Feb 4th 2013.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Progress towards an electrical program is slow in developing and is not well communicated to electrical workers at site. It is recognized that these programs are difficult to design and implement. Basic procedures could be in place and expanded upon as the program is built.</p>	<p><u>Adjusted Score</u></p> <p>3</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

Section M421-00 Wiring Methods - Underground	
<b>Subsection 5.2</b>	
<b>5.2.1 Conductors</b>	
<i>Conductors, cables, or portable power cables supplying power to fixed equipment at voltages-to-ground in excess of 150 V shall be protected by armour, conduit, or other similar mechanical means or by suitable location.</i>	
<b>5.2.2.2</b>	
Portable power cables shall meet the requirements for FT5 rating as specified in CSA Standard C22.2 No. 0.3.	
<b>5.2.2.3</b>	
<i>Mine power cables without armour jackets, installed after January 1, 2001, shall meet the requirements for FT5 rating as specified in CSA Standard C22.2 No. 0.3.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
It is difficult if not impossible to determine if every piece of cable is in compliance but there was ample evidence that most of the cabling used underground at this mine is in compliance. <a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
All cable that has been purchased for the construction of this mine has been purchased from a reputable electrical wholesaler; the spec that was issued to the wholesale company included all the standards that must be met to supply the cable.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Cabling was not reviewed during the follow up audit.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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## Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

### Part Five – Electrical Power Systems

July 16 & 17, 2013

2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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**Section M421-00 Installation of Transformers and Capacitors**

**Subsection 5.3:**

**5.3.1 Surface Transformers — Flash Point Less than 275 degree C**

*A transformer containing a liquid having a flash point less than 275 degree C, and installed on the surface in the vicinity of the escapeway or entrance to an underground mine*

- a) shall be located at least 15 m from a headframe, shaft house, portal house, adit, or combustible building attached to such a structure;*
- b) shall be mounted on a non-combustible pad designed so as to contain the liquid from the largest transformer and prevent spill from seeping into and entering the mine, shaft house, portal house, adit, headframe, or other building; and*
- c) may be located beside a fireproof building that is attached to the headframe, shaft house, adit, or portal house if there are no openings in the part of the building adjacent to the transformer through which smoke or heat can enter the building.*

**5.3.2 Underground Transformers — General**

*A transformer installed in an underground mine shall*

- a) be protected against physical damage;*
- b) be guarded in such a manner that access by unauthorized persons can be prevented, if there are energized exposed parts;*
- c) be separated from an explosives storage area as follows:*
  - i. when the transformer is over 5 kV•A, by a distance of at least 15 m of undisturbed rock or a distance of at least 60 m of open space; or*
  - ii. when the transformer is 5 kV•A or less, by a distance of at least 15 m of open space;*
- d) be rated for the ambient temperature;*
- e) have clearances around it to permit safe access for inspection, maintenance, and repairs;*
- f) be mounted on a fireproof foundation and in such a location as to minimize the spread of fire;*
- g) not be used where flooding is likely to occur; and*
- h) be provided with an enclosure that meets the requirements of Rule 2-400 of CSA Standard C22.1.*

Initial Audit - Inspector Comments:

Score

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<p>All the transformers inspected at this mine both on the surface and underground were compliant with this section. Of note this inspector is not able to confirm that the underground transformers are rated for the high ambient temperatures that are being experienced at some locations.</p> <p><a href="#">Click here to enter text.</a></p>		
<p><u>Initial Audit - Manager's Reply:</u></p> <p>The underground substations are all equipped with temperature monitoring relays that are designed to trip the main switch open if the core temp gets higher than 150 degrees C. ERU transformer nameplates state insulation class of 220 degrees C and a temperature rise of 80 degrees C. Actual transformer temperatures have been observed in the 70-80 degree range, maximum temperature recorded was 85 degrees C. An alarm will be generated if transformer temperature reaches 100 degrees C, and transformer feeder breakers will open if the temperature reaches 120 degrees C.</p> <p>The redesign of the air management system in the underground substations will address the higher than normal ambient temperatures. Construction will begin in February 2013, starting with ERU2 and moving to the next ERU that has the next highest ambient temperature.</p>		
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Transformers were not reviewed during the follow up audit.</p>		<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>		<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

### Section M421-00 Installation of Storage Batteries

#### Subsection:

##### 5.5.1 Location

*Stationary-type storage batteries whose aggregate capacity is 5 kW at the 8 h discharge rate shall be located in storage-battery rooms or in areas with equivalent enclosures.*

##### 5.5.2 Installation

*Storage-battery and battery-charging areas shall comply with the following:*

- a) they shall be located so as to prevent damage by mobile equipment;*
- b) they shall be ventilated by an adequate amount of fresh air to ensure the diffusion of hazardous gases that are produced;*
- c) battery-charging stations shall be equipped with adequate fire-fighting apparatus suitable for fighting Class C fires;*
- d) no open flame is permitted, except as defined in Item (g);*
- e) smoking shall be prohibited;*
- f) electrical apparatus shall be enclosed in an approved enclosure or otherwise located to ensure that no possibility for ignition exists; and*
- g) battery repairs may be undertaken after all due precautions to ensure the dissipation of flammable gases have been taken. Battery charging shall be discontinued for the duration of the time taken to effect the repair.*

##### 5.5.3 Disposal

*The electrolyte of storage batteries shall be removed and neutralized before the batteries are scrapped or stored for salvage.*

#### Initial Audit - Inspector Comments:

The unit substation batteries were not reviewed properly during this audit. An internal audit of these installations should be undertaken to ensure proper ventilation is provided. No other deficiencies were noted by this inspector.

Score

#### Initial Audit - Manager's Reply:

A preventative maintenance task will be developed by the end of Q1 to address this inspection.

#### Audit Follow Up – Inspector Comments:

Battery installs were not reviewed during the follow up audit. Batteries in the subs were being checked on a routine but these inspections reports were not reviewed by this auditor.

Adjusted  
Score

4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section M421-00 Trackless Mobile Electrical Equipment</b>	
<b>Subsection 5.10.2</b>	
<b>5.10.2.1</b>	
<i>Clause 5.10.2 applies to the source of power, isolation, ground-fault protection, ground-wire monitoring, portable power cable, multiphase bus system, slip rings, and take-up reel.</i>	
<b>5.10.2.2</b>	
<i>A transformer supplying power to mobile electrical equipment shall</i>	
<ul style="list-style-type: none"> <li>a) have a minimum kV•A rating of 25% of the maximum kV•A rating of the mobile electrical equipment; and</li> <li>b) be supplied by load-break isolating devices for the primary supply to the transformer and by a secondary circuit supplying power to the mobile electrical equipment.</li> </ul>	
<b>5.10.2.3</b>	
<i>Portable power cables used to supply ac power to mobile electrical equipment shall</i>	
<ul style="list-style-type: none"> <li>a) meet the requirements of CSA Standard CAN/CSA-C22.2 No. 96;</li> <li>b) meet the requirements of Table 12A of CSA Standard C22.1 for the rated load current of the mobile electrical equipment. Voltage drop shall not exceed the design criteria for the system;</li> <li>c) have cable-entry connectors and conductor terminations that will not be adversely affected by normal operation of the mobile electrical equipment;</li> <li>d) have cable-entry connectors that prevent the entry of water, dust, and other environmental conditions to junction boxes and switch boxes;</li> <li>e) be suspended or made secure when installed outside the radius of operation of the mobile equipment;</li> <li>f) when spliced, have electrical and mechanical characteristics equivalent to that of the cable; and</li> <li>g) when spliced, be subjected to an insulation voltage test equal to the rating of the cable.</li> </ul>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<p><u>Initial Audit - Inspector Comments:</u></p> <p>Only two pieces of mobile equipment were inspected during this audit due to time constraints. Neither of these two installations revealed any deficiencies.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>All transformers, trailing cables and other parts of the distribution system supplying power to mobile electrical equipment at this mine meet the requirements of this section.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Mobile equipment was not reviewed during the follow up audit. Moveable equipment will be reviewed on following inspections. Discussion with the Safety department representative with regards to training for the contract diamond drillers as to how the drillers were handling energised cables.</p>	<p><u>Adjusted Score</u></p> <p>5</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

### 5.10.2.5 continued

Electrical equipment installed on the vehicle shall meet the following requirements:

- a) all enclosures shall meet the Type-4 requirements of CSA Standard CAN/CSA-C22.2 No. 94;
- b) each motor or group of motors shall have separate disconnecting means, overload protection, and ground-fault protection. Acceptable specialized drives shall be exempt;
- c) all motors shall be of the totally enclosed type;
- d) all high-voltage and low-voltage ac wiring and terminations shall be clearly identified, separated by suitable barriers from automotive circuits and terminals, and have a flame-test rating of FT2 as specified in CSA Standard C22.2 No. 0.3; and
- e) high-voltage or low-voltage ac supply shall not be used to power or drive any automotive electrical device such as lights, battery-charging circuits, gauges, horns, warning devices, solenoids, or radio control equipment.

### 5.10.2.5

Electrical equipment installed on the vehicle shall meet the following requirements:

- a) all enclosures shall meet the Type-4 requirements of CSA Standard CAN/CSA-C22.2 No. 94;
- b) each motor or group of motors shall have separate disconnecting means, overload protection, and ground-fault protection. Acceptable specialized drives shall be exempt;
- c) all motors shall be of the totally enclosed type;
- d) all high-voltage and low-voltage ac wiring and terminations shall be clearly identified, separated by suitable barriers from automotive circuits and terminals, and have a flame-test rating of FT2 as specified in CSA Standard C22.2 No. 0.3; and
- e) high-voltage or low-voltage ac supply shall not be used to power or drive any automotive electrical device such as lights, battery-charging circuits, gauges, horns, warning devices, solenoids, or radio control equipment.

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Only two pieces of mobile equipment were inspected during this audit due to time constraints. Neither of these two installations revealed any deficiencies.	
<u>Initial Audit - Manager's Reply:</u>	
The electrical systems installed by the manufacturer on mobile electrical equipment at this mine meet the requirements of this section.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not reviewed during the follow up audit. Will be reviewed on regular inspection tours.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Five – Electrical Power Systems

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Part 5 – Total out of 115</b>	<b>97</b>
<b>Part 5 – Percentage out of 100%</b>	<b>84%</b>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Six – Mine Design and Procedures

July 16 &17, 2013

<b>6.1 Work System Appraisal</b>	
<b>Subsection 6.1.1 Who is responsible for Ventilation</b>	
<i>Has the manager appointed a qualified person to be responsible for all aspects of ventilation in the mine?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Ahsan Chaudry Mining Engineer EIT.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 6.3 Manager - Underground</b>	
<b>Subsection 6.3.1(2) Escape Plan</b>	
<i>Is there an escape route plan for each level or working area showing the main routes of egress from the active workings, sites of all underground refuge stations, and ventilation as required in section 6.3.2(5)?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes dated Sept 2012	<u>Score</u> 5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.1(1) Escape Plan</b> <i>Are they posted in a conspicuous place accessible to all persons working underground?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Access/Egress schematics are posted in all refuge stations underground and updated monthly	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(1) General</b>	
<i>Are the following available for inspection:</i>	
<ul style="list-style-type: none"> <li><i>An accurate and up-to-date copy of the plan of the underground workings?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Oct 1, 2012 presentation Oct,16, 2012 to Audit team	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(2) Escape</b>	
<i>Are the following available for inspection:</i>	
<ul style="list-style-type: none"> <li><i>A copy of the current emergency and rescue plan required by 6.3.1(2)</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Reviewed	4

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## Part Six – Mine Design and Procedures

July 16 &17, 2013

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<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.2(3)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li><i>A separate underground plan of every level showing all workings, including shafts, tunnels, diamond drill holes, dams, bulkheads, electrical substations, explosives storage, shop areas, permanent seals and stoppings,</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Yes, Very detailed, drill holes on drive layout. Complete on many layers.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.2(4)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li>Vertical mine sections at suitable intervals and azimuths, showing all shafts, tunnels, drifts, sloped roadways, rooms, stopes, diamond drill holes and the location of the top of the bedrock, surface of, and type of, the overburden and the bottom and surface of any known body of water or watercourse or material likely to flow,</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Daily with cave information from TDR and seismic data.	<u>Score</u>
	4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<b>Subsection 6.3.2(5)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li>A ventilation plan showing the normal direction and volume of the main air currents and the location of permanent fans, ventilation doors, fire doors, stoppings and connections with adjacent mines, and</li> </ul>	
Initial Audit - Inspector Comments:	Score
Yes ,information is on the drawings	4
Initial Audit - Manager's Reply:	
Click here to enter text.	
Audit Follow Up – Inspector Comments:	Adjusted Score
Click here to enter text.	
Audit Follow Up - Manager's Reply:	
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Inspector Comments:	Adjusted Score
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
Click here to enter text.	
<b>6.3. Manager - Underground</b> <b>Subsection 6.3.3 Shiftboss Plans</b> <i>Does the shiftboss have current development plans for the assigned area of responsibility indicating the size, dip and length of all development headings?</i>	
Initial Audit - Inspector Comments:	Score
Yes, on daily sheets provided by engineering.	4

Scoring: **Maximum points available per subsection = 5**

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## Part Six – Mine Design and Procedures

July 16 &17, 2013

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<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.3(1) Shiftboss Plans</b> <i>Do they indicate adjacent or disused workings?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Show old caved area, new development and new cave area.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.3(2) Shiftboss Plans</b> <i>Are drill holes that are within 8m of a heading indicated on the map?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Map inspected	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.3(3) Shiftboss Plans</b> <i>Are the drill holes that extend into mine workings clearly marked?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, 10 M radius marked in maps	<u>Score</u> 4

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.3(4) Shiftboss Plans</b> <i>Are the collars of these drill holes whether on surface or underground located and plugged as required?</i>	
<u>Initial Audit - Inspector Comments:</u> Protocol is to plug but many historic surface holes not grouted.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> No blasting occurs while personnel underground. Any exception covered by specific JHA.	
<u>Audit Follow Up – Inspector Comments:</u> The surface needs to be guarded when there is potential for a DDH to surface, to intersect the blast	<u>Adjusted Score</u> 3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.5 Effective Ground Support</b>	
<i>Has the manager ensured that an effective ground support system has been properly installed and maintained?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, been audited by Michael Cullen P. Eng MEMNG consultant.	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.5 Qualified Person Qualified Person</b>	
<i>Is there a ground control plan developed by a qualified person?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Andy Davies, Al Chan, Cory	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.5 Quality Control</b> <i>Is there a quality control program in place to ensure that the ground control program or ground support systems are installed and maintained according to the directions of a qualified person?</i>	
<u>Initial Audit - Inspector Comments:</u> Check surveys on Convergence in cave area, plus surface measurements.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
<a href="#">Click here to enter text.</a>	
<b>6.4 Mine Shift Boss – General Rules</b>	
<b>Subsection 6.4.1(1)(2)</b>	
<i>Does a certified shiftboss inspect all active headings at least twice per shift?</i>	
Initial Audit - Inspector Comments:	Score
Yes but record keeping needs improvement, could not track what heading had been inspected.	
Initial Audit - Manager's Reply:	
We now log our gas tests. We have created a new 5 point card with a spot for two onshift signatures with gas readings also	
Audit Follow Up – Inspector Comments:	Adjusted Score
Gas tests are in the 5 point card plus in the shifter's log	5
Audit Follow Up - Manager's Reply:	
<a href="#">Click here to enter text.</a>	
2 <sup>nd</sup> Audit Follow Up - Inspector Comments:	Adjusted Score
<a href="#">Click here to enter text.</a>	
2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.4.1(1)(2) Shiftboss</b>	
<ul style="list-style-type: none"> <li>Do the shift bosses have current tickets?</li> <li>Are the first aid and transportation endorsements current?</li> </ul>	
Initial Audit - Inspector Comments:	Score
Yes, Reviewed	4

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<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.4.2 &amp; 3 Log Book</b> <i>Is there a shift log recording the activities in each heading that is signed by the examining shiftboss and countersigned by the corresponding shiftboss?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> There needs to be a tamper proof record for the shifters log, ,bound book with numbered pages	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

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### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### 6.8 Mine Plans

##### Subsection 6.8.1(1) Duty to Keep Plans - Surface

*Are updated accurate mine plans prepared in accordance with the Code and good engineering practice as follows:*

*A surface plan showing the*

- *claims, licences or leases on which mining is being carried out, and*
- *all lakes, watercourses,*
- *naturally unstable ground, such as peat bogs or sloughs,*
- *main roads,*
- *railways,*
- *power transmission lines,*
- *buildings,*
- *shaft openings, adits,*
- *surface workings,*
- *diamond drill holes collared on the surface,*
- *dumps,*
- *dams, tailings ponds and their overflow channels,*
- *topographic contours, and*
- *any abandoned, adjacent or historical workings.*

##### Initial Audit - Inspector Comments:

Yes, in place Jane McCaw has this document

##### Score

4

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<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.8.3 Failure to Post Plans:</b> <i>Is the traffic control plan prepared and available, showing:</i> <ul style="list-style-type: none"> <li>• Maximum allowable speeds for the vehicles in use</li> <li>• Rules for passing, "STOP" and "Yield Rules"</li> <li>• Priority rules for various vehicles</li> <li>• Rules for the night operation</li> <li>• Maximum operating grades, emergency run-off protection, shoulder barriers</li> <li>• Other information to ensure the safe operation of all types of vehicles in the minesite including but not limited to, single lane traffic areas, X-over areas</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Yes in place for pit access.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.10. Dumps</b>	
<b>Subsection 6.10.1(4) Dumping at Open Holes</b> <i>Has the manager required a qualified person to ensure:</i> <i>(4) where material is to be dumped from a vehicle into a bin, raise, or other opening, provide and maintain a barrier of sufficient size and strength and anchored sufficiently to prevent the vehicle from inadvertently entering the bin, raise, or opening,</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, a design is in place and designed to take the heaviest vehicle underground. Designed by Core Engineering .	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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<b>Subsection 6.10.1(5) Dumping Prohibited</b>	
<i>Has the manager required a qualified person to ensure:</i>	
<i>(5)where dumping is prohibited or hazardous, prevent dumping by placing across the entrance a barrier sufficient to prevent access and a sign that reads "No entry for dumping purposes,"</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No barrier or sign was noted	
<u>Initial Audit - Manager's Reply:</u>	
Signage has been made and have been installed.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Signs noted while on U/G tour	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.12 Mine Openings</b>	
<b>Subsection 6.12.1 Two Exits</b>	
<i>Prior to production has the mine provided a second exit?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, The access decline and the conveyor decline	5

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<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.12.2 Distance between Exits</b> <i>An auxiliary exit shall not at any point be less than 30 m from the main entrance to underground workings of the mine and shall be separated by solid strata. Is this so?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Access decline is the secondary access	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.12.4 Ease of Travel</b>	
<i>Does the auxiliary exit afford easy passage and is it provided with good and substantial ladders from the deepest working to the surface, or with hoisting apparatus, which shall constantly be available for use?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All ramps at present time,	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.12.5 New Mine</b>	
<i>Where an underground mine is being developed, have the shafts and raise openings to the surface been provided with a substantial collar secured to the bedrock, comprised of concrete or other material that will perform in the same manner as concrete and is not expected to deteriorate?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Concrete collars on all Vent Raises	5

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.13 Refuge Stations</b>	
<b>Subsection 6.13.1 Location</b> <i>Where a workplace in an underground mine is more than 300 m from a mine portal or from a shaft station which is used to access that workplace, has the manager provided and maintained, in a suitable location for that workplace, a refuge station in accordance with section 6.13.3?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, all well equipped	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.13.3 Construction and Equipping</b> <i>Is the underground refuge station</i> <ol style="list-style-type: none"> <li>1) <i>clearly identified, constructed of non-combustible material, and of sufficient size to accommodate all</i></li> <li>2) <i>persons working in the vicinity,</i></li> <li>3) <i>equipped with a supply of air, a supply of water, a means of communicating with the surface, a means of sealing to prevent entry of gas, and first aid equipment,</i></li> <li>4) <i>equipped with a plan of the mine clearly showing all emergency exits, and</i></li> <li>5) <i>located</i> <ol style="list-style-type: none"> <li>a. <i>100 metres from explosives magazines,</i></li> <li>b. <i>100 metres from flammable materials storage, and</i></li> </ol> </li> <li>6) <i>(c) constructed or located in such a manner to prevent inadvertent entrance or damage by vehicles, or</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes locations are meeting requirements and meet and exceed requirements. Mine designed a independent means of supplying air, water and communications to the main refuge station. This is a first in BC	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.16 Underground Mobile Equipment</b>	
<b>Subsection 6.16.1 Clearances</b>	
<ul style="list-style-type: none"> <li>Where any mobile equipment is operating, has a minimum clearance of 2 m in excess of the maximum width of the vehicle been maintained? The vehicle shall be fitted with an approved roll-over-protective structure ROPS or falling object protection structure (FOPS).</li> <li>Has a minimum clearance of 300 mm above the ROPS or FOPS been maintained?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> In some areas of the exploration decline, the clearance is not here but safety bays were developed during construction.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.17 Safety Stations</b>	
<b>Subsection 6.17.1 Safety Stations</b>	
<i>Where the Inspector has allowed a reduction in the clearances in 6.15.2 and 6.16.1, do the safety stations meet the following criteria?</i>	
<ol style="list-style-type: none"> <li>1) <i>be plainly marked,</i></li> <li>2) <i>be clean and free of obstructions,</i></li> <li>3) <i>be cut as close to perpendicular as is practical to the haulage way, and</i></li> <li>4) <i>if made after 1990, be at least</i> <ol style="list-style-type: none"> <li>a. <i>1 m in depth, in addition to the clearance between the vehicle and the wall,</i></li> <li>b. <i>the height of the roadway or 2 m whichever is least, and</i></li> <li>c. <i>1.5 m in width?</i></li> </ol> </li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes throughout the access decline and the conveyor decline, some housekeeping is required as garbage is accumulating is some.	
<u>Initial Audit - Manager's Reply:</u>	
Have been cleaned.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
House Keeping is a on going issue and needs improvement.	3

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.19 Equipment Operation - General</b>	
<b>Subsection 6.19.1 Operators Responsibility</b>	
Are the operators:	
<ol style="list-style-type: none"> <li>1. using their seatbelts</li> <li>2. driving with their lights on</li> <li>3. where required, is the vehicle flashing light on at all times or does it have a flag equipped whip antenna light?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u> Yes good compliance	<u>Score</u>
	4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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## Part Six – Mine Design and Procedures

July 16 &17, 2013

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.19.2 Log Book to be Maintained</b>	
<i>Has the manager provided and maintained an effective logbook system for each unit of mobile equipment over 7000 kg gross vehicle weight where</i>	
<i>(a) the vehicle operator notes the operating condition prior to operating of the vehicle</i>	
<i>(b) note any unsafe conditions, and</i>	
<i>(c) a qualified person making repairs, notes any repairs made and if the vehicle is safe to operate?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Operator compliance 90%	
Mechanic compliance 50 %	
Mechanical dept need more training on Log books	
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
The Log book procedure as per the Code is not being followed. New Afton, The mine needs to comply with the Code.	3
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.19.3 Examination of Equipment</b>	
<i>Does the operator do a pre-op check?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes , several noted	4

Scoring: **Maximum points available per subsection = 5**

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<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.19.4 Signing Logbook</b> <i>Does every notation made in the logbook, maintenance record, and every other record relating to the condition of the equipment show the time and date of the entry and the name of the person who made the entry?</i>	
<u>Initial Audit - Inspector Comments:</u> Needs improvement	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u>	
<u>Audit Follow Up – Inspector Comments:</u> Does not comply with the Code, Repairs not being noted in Log book	<u>Adjusted Score</u> 2.5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.24 General Mine Rules</b>	
<b>Subsection 6.24.2 Water Sprays</b> <i>Wherever practicable, are water sprays or other dust suppression means and devices being used at every dusty place where work is carried out and where it is impractical to do so, is personal protective equipment supplied and worn by all persons working in that location?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, system need review and ongoing maintenance	<u>Score</u> 
<u>Initial Audit - Manager's Reply:</u> Timed water spray systems continue to be advanced throughout the mine. Every N.G worker U/G has been fit tested and supplied ( check with Melissa) with a respirator. Every draw point has water spray systems set up and inspected by monthly and results forwarded to dispatch to pass along information to allow repairs to be fast tracked. Ongoing coaching with crews regarding dust control. Air/ water atomisers now implemented for use in all large bell blasts, good positive feedback from crews on this initiative.	
<u>Audit Follow Up – Inspector Comments:</u> Conveyor decline in good condition,Access decline dusty. Conveyor decline blocked by broken down vehicle, traffic detoured to access decline, very busy and very dusty, needs to be plan in place when when this type of event happens.	<u>Adjusted Score</u> 3.5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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<b>Subsection 6.24.3 Drilling Dry</b>	
<i>Are powered rock drills being used in a mine without a water jet or other device capable of suppressing dust?</i>	
<u>Initial Audit - Inspector Comments:</u> None observed	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.25 General - Underground Rules</b>	
<b>Subsection 6.25.1(1) Scaling</b>	
<i>Before any work is begun in an underground mine do the workers check their workplaces for hazardous or dangerous conditions and make it safe before continuing?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, in policy SOP 006, in work place inspection	<u>Score</u> 4

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<u>Initial Audit - Manager's Reply:</u>	
Workers utilize the five point Safety system on a daily basis and checklist for workplace inspections is completed/checked off and signed by worker and supervisor	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.25.2 Travel Ways</b>	
<i>Are all work places, travel ways and other areas that may be frequented by mine personnel regularly inspected and maintained by check scaling as conditions warrant and re-supported as may be prudent and that adequate tools and supplies are provided?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes	3
<u>Initial Audit - Manager's Reply:</u>	
Quarterly rotating ramp inspections.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Geo Tech have a very good program in place and the system for transfer information to the crews is comprehensive	4

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## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.25.3 Overhead Holes</b>	
<i>Where persons are working in any location which is below and open to a haulage or travel way on the level above, is the workplace securely covered or otherwise closed off from the haulage or travel way?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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## Part Six – Mine Design and Procedures

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<b>Subsection 6.25.3 Cover Holes</b>	
<i>Are the tops of every millhole, manway, sump, drain hole or other opening covered or otherwise adequately protected to prevent inadvertent access?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Sump next to Fueling bay needs bumper block	
<u>Initial Audit - Manager's Reply:</u>	
Block will be installed	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.25.3 Working a Manway</b>	
<i>Where manways are being repaired or in active use, are they closed off and are warning signs posted at all entrances?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Manway between conveyor transfer CTC 3 -4 needs warning signage	
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Signed and gated	5

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.25.4 Work Near Abandoned Areas</b> <i>If required does the manager have an approved work procedure for work that is to be carried out within 30 m of abandoned or old workings, or any accumulation of water or unconsolidated material, or any other substance that may flow?</i>	
<u>Initial Audit - Inspector Comments:</u> In progress with the cave and the break through to the pit.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Subsidence plan in place that includes barricades and exclusion zones.	
<u>Audit Follow Up – Inspector Comments:</u> Yes in place	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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<b>Subsection 6.25.5 Check Breakthroughs</b> <i>No connection between mine workings shall be made through to until a thorough examination of the workings toward which the active heading is advancing has been made and has shown that the work can proceed in a safe manner. Where required, is there a procedure is in place?</i>	
<b>Initial Audit - Inspector Comments:</b> Yes, procedure in place	<b>Score</b> 5
<b>Initial Audit - Manager's Reply:</b> Click here to enter text.	
<b>Audit Follow Up – Inspector Comments:</b> Click here to enter text.	<b>Adjusted Score</b> 
<b>Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> Click here to enter text.	<b>Adjusted Score</b> 
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> Click here to enter text.	
<b>Subsection 6.25.6 Jumbo Drills</b> <i>Are the drills stopped prior to persons proceeding beyond the front of the drill controls of an underground jumbo drill?</i>	
<b>Initial Audit - Inspector Comments:</b> Yes, procedure in place	<b>Score</b> 4
<b>Initial Audit - Manager's Reply:</b> SOP in place, reviewed with crews regularly.	
<b>Audit Follow Up – Inspector Comments:</b> Click here to enter text.	<b>Adjusted Score</b> 

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.26 Rock Passes</b>	
<b>Subsection 6.26.1 No Water</b>	
<i>Has the Chief Inspector approved an operating procedure to introduce water into an ore or waste pass, a loading pocket, coal silo, hopper, storage bin or a completed large diameter borehole for any purpose?</i>	
<u>Initial Audit - Inspector Comments:</u> No procedure as this is not done	<u>Score</u>
	5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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<b>Subsection 6.26.1 No Water</b>	
<i>Is the operating procedure being followed?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.26.2 Procedure to Remove Water</b>	
<i>Has the manager provided a plan for the safe removal of water or saturated Material from any ore or waste pass that contains water or saturated material that will flow?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, procedure in place for mucking bored raises	4
<u>Initial Audit - Manager's Reply:</u>	
SOP in place, JHA done where necessary.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.27.4 Guardrail</b> <i>Where a stairway ends in direct proximity to dangerous traffic or other hazards, have detour guardrails been installed?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, on conveyor transfer points	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Six – Mine Design and Procedures

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<b>6.30 Flammable Waste and Scrap - Underground</b>	
<b>Subsection 6.30.1 Scrap Removal</b>	
<i>Is the waste, including waste timber, being removed from the underground mine on a regular basis and is not being piled up nor permitted to decay in the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No, there is waste material collecting underground, housekeeping needs to be improved	2
<u>Initial Audit - Manager's Reply:</u>	
Check DMG bins on Mine Captain's tours, discuss with shifters the importance of removing garbage. We have developed a housekeeping SOP and assigned areas of responsibility, have also posted these designated areas throughout the mine both on surface and underground. A program where waste is being removed on a daily basis from the mine has been implemented. Very little timber is being used in the mine.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.30.2 Flammable Scrap</b>	
In an underground mine, or in or about a headframe or shaft-house, is the flammable refuse being	
<ol style="list-style-type: none"> <li>1) deposited in covered, fire-resistant containers, and</li> <li>2) removed at least weekly from the mine, headframe, or shaft-house?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No covered fire resistant containers were noted	

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<u>Initial Audit - Manager's Reply:</u>	
Steel containers being used. Auditing to ensure covers are in place and investigating flammable covers.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The container lids have a hole which would not contain a fire	3
<u>Audit Follow Up - Manager's Reply:</u>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	
Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.31 Sulphide Dust</b>	
<b>Subsection 6.31.1 Sulphide Dust</b>	
<i>In any underground mine where the sulphur content of the ore is high and a sulphide dust explosion has occurred, has the manager implemented an approved scheme for minimizing the danger from a sulphide dust explosion that includes</i>	
<ol style="list-style-type: none"> <li>1) <i>provision for ensuring that all persons are removed to a place of safety prior to blasting, taking into consideration the mine layout and the ventilation circuits, and if necessary, removed to the surface of the mine,</i></li> <li>2) <i>provision for ensuring that all accessible headings, raises, and other workplaces within 30 m of a blasting site are washed down to remove dust prior to blasting, and</i></li> <li>3) <i>any other measures that could reduce the risk of a dust explosion or lessen the consequences if one should occur.</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Very little sulphides in the mine, ore very discriminated.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.33 Ventilation Standard</b>	
<b>Subsection 6.33.1 Ventilation Standard</b>	
<i>Is the return air from all working places, whenever practicable, routed directly to the return airway?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Partially now and when VR 7 is complete air quality will improve.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Initial Audit - Manager's Reply:</u>	
As noted.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Ventilation much improved	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>6.35 Underground Mine Heating</b>	
<b>Subsection 6.35.1 Mine Air Heaters</b>	
<i>Has an Inspector given written permission for the mine to install the furnaces or devices for heating mine air?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, G MacDonald has given permission.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.36 Auxiliary Ventilation</b>	
<b>Subsection 6.36.1 Auxiliary Ventilation</b>	
<i>Has the manager ensured that all workings that are removed from the main ventilation circuit have an adequate supply of ventilating air?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes aux ventilation in place and used where required and identified drive layouts, level plots all indicate ventilation flows	<u>Score</u>
	4
<u>Initial Audit - Manager's Reply:</u> SOP submitted in November 2012 regarding aux ventilation, currently going through the review and sign off process	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<b>Subsection 6.36.2 Manager's Rules</b> <i>Where auxiliary ventilation systems are necessary, has the manager of the underground mine prepared rules and procedures for the installation and use of auxiliary ventilation systems and, in the case of a coal mine, for the degassing of headings. Is a copy of this procedure posted at a conspicuous location at the mine?</i>	
<u>Initial Audit - Inspector Comments:</u> Rules and procedures were not noted to be posted.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> MIN-SOP-043 Aux Ventilation Underground: has been updated, located on document server. Vent management plan exists and is audited to those standards by vent techs.	
<u>Audit Follow Up – Inspector Comments:</u> Reviewed MIN SOP 043	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.36.4 Exhaust from a Compressor</b> <i>Is compressed air being used for ventilation other than clearing blast fumes and smoke since the exhaust from any compressed air machine shall not be considered as ventilation</i>	
<u>Initial Audit - Inspector Comments:</u> No	<u>Score</u> 5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.37 Ventilation Monitoring</b>	
<b>Subsection 3.37.1 Air Measurements</b>	
<i>Has the manager of the underground mine ensured that the measurements of the quantity of air flowing are taken at the main fan, in all airways, and at all major ventilation splits at intervals not exceeding three months?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Air measurements are taken weekly	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.37.2 Diesel Equipment Ventilation</b> <i>In a mine or part of a mine in which diesel equipment is operating underground</i> <i>(1) are measurements of the quantity of air flowing being taken at intervals not exceeding once a week,</i>	
<u>Initial Audit - Inspector Comments:</u> Shifters take gas reading daily and record in shift log. Reported twice day on 5 point safety cards. It is also on Daily shifters pass down. Shift cross over record.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<b>Subsection 6.37.2 Diesel Equipment Ventilation</b>	
<i>(1) are tests being made at least once a shift, in the general body of the air, on the exhaust side of the operating diesel equipment, for nitrogen dioxide or oxides of nitrogen and other gases specified by an inspector,</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Shifters take gas reading daily and record in shift log. Reported twice day on 5 point safety cards. It is also on Daily shifters pass down. Shift crossover record.	4
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.37.3 Recording</b>	
<i>Are the measurements required to be taken under sections 6.37.2(1) and 6.37.2(2) being recorded in a book kept for that purpose?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Records are kept in the shift log. All on the electronic back up available for review.	4
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.38 Doors and Regulators</b>	
<b>Subsection 6.38.1 Door Closing</b>	
<i>Do the doors used for regulating or controlling ventilation close automatically and are they provided with a suitable device for opening or closing them?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes in place on doors that are in operation and will be installed on future doors	<u>Score</u>
	4
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<b>6.40 Unventilated Workings</b>	
<b>Subsection 6.40.1 Prevention of Access</b>	
<i>Where any part of the underground mine that is not being ventilated has the manager ensured that these parts</i>	
1) <i>are effectively barricaded to prevent inadvertent entry</i>	
2) <i>are posted with signs warning that entry is prohibited,</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Barricades were noted	
<u>Initial Audit - Manager's Reply:</u>	
Installed signage in NXC, AAC3, UAC3	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Signage was in place where required	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Six – Mine Design and Procedures

July 16 &17, 2013

<b>Subsection 6.40.1 Ventilation</b>	
<i>Where any part of the underground mine that is not being ventilated has the manager ensured that these parts:</i>	
1) <i>have been examined by a qualified person for the following prior to anyone entering or being permitted to enter these parts</i> a) <i>oxygen deficiency,</i> b) <i>t he presence of toxic or noxious gases, fumes, mists, vapours, or dust, and</i> c) <i>any other dangerous condition.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes by shift boss	
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Records are much improved	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Part 6 – Total out of 320</b>	<b>276</b>
<b>Part 6 – Percentage out of 100%</b>	<b>86%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<b>Section 8.1 Magazines</b>	
<b>Subsection 8.1.1 (1) Permit Required</b>	
<i>Has the Manager applied for and received an Explosives Storage and Use Permit from the Inspector before a magazine was put into service, or modified, or before carrying out any maintenance work including the installation of lighting or heating?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The permit for the surface explosives magazine is: #BC-1081; mine #0300614, expires May 25, 2016. Detonators are not stored on surface.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.1 (2) Permit Required</b>	
<i>Has the Manager ensured that the magazine meets the current regulations and standards of the Explosives Act (Canada)?</i>	
<i>Note: The new standards were established by NRCAN and upgrades must be completed by May 31, 2006?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine is a standard steel construction magazine. Mine security check the magazine twice per day for tampering and photograph the magazine each inspection.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.4 Flammable Material</b>	
<i>Is there flammable material stored in a magazine, or nearer to a magazine than the distance required in NRC Explosives Branch "Blasting Explosives and Detonators Storage, Possession, Transportation, Destruction and Sale (8 meters)?"</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The outside of the magazine was free of flammable material. Inside the magazine there was some scrap lumber and a few cases of loading hose which should be removed.	
<u>Initial Audit - Manager's Reply:</u>	
Flammable material has been removed. A program of regular inspections has been set up.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Flammable material is removed from the magazine. Magazine is in good order.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Eight – Explosives

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 8.1.5 Magazine Signs</b> <i>Are the proper signs required in the Code in place?</i>	
<u>Initial Audit - Inspector Comments:</u> Proper warning signs were mounted on the fence surrounding the magazine compound.	<u>Score</u>
	5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Eight – Explosives

July 16 & 17 , 2013

<b>Subsection 8.1.6 (1) Magazine Rules</b>	
<i>Is there an authorized person in charge of the magazine, who inspects it on a weekly basis?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Authorized persons check the magazine at least twice per week. Security inspect the magazine compound and around the magazine twice per day.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.6 (2) Magazine Rules</b>	
<i>Is the magazine kept locked as required in the Code?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine is kept locked, as required. The mag. keys are kept in a lock box or locked desk in the office.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 8.1.6 (3) Magazine Rules</b> <i>Is there an up-to-date inventory kept in a logbook with every entry signed by the authorized person in charge?</i>	
<u>Initial Audit - Inspector Comments:</u> The magazine inventory is current and signed by an authorized person.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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**5.** All components of the element are present, in place, being monitored and working. **4.** Most components of the element are present, minor improvements needed or additional training is required. **3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft format. **1** .The element is not present; however, the mine has made attempts to develop it or it is outdated. **0.** The element is not present at the mine.





# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<b>Subsection 8.1.6 (4) Magazine Rules</b>	
<i>Is the magazine clean, dry and free from grit?</i>	
<u>Initial Audit - Inspector Comments:</u> The magazine is clean and dry.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.6 (7) Magazine Rules</b>	
<i>Is there any exposed iron or steel?</i>	
<u>Initial Audit - Inspector Comments:</u> There is no exposed iron or steel.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Eight – Explosives

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 8.1.6 (8) Magazine Rules</b> <i>Is the stock rotated, with the oldest stock being utilized first?</i>	
<u>Initial Audit - Inspector Comments:</u> Stock is rotated regularly. There was a minimum of product in the surface magazine at the time of inspection.	<u>Score</u>
	5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<b>Subsection 8.1.7 Posting Rules</b>	
<i>Are the rules for magazine operation and maintenance posted inside every magazine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine rules are posted inside. In surface and underground magazines.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.8 Storage of Detonators</b>	
<i>Are the rules regarding detonators being met?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Detonators are stored underground, in a sea-can container. The inside of the steel doors of the underground detonator storage are not covered with wood.	
<u>Initial Audit - Manager's Reply:</u>	
Wood liner installed.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Wood liner is installed in present detonator storage. The new magazine area is almost ready to go. It is well lit, shelves for detonators, concrete floors and an overhead crane to handle bulk ANFO bags.	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Eight – Explosives

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 8.1.9 No Smoking</b> <i>Any sign of smoking while handling explosives?</i>	
<u>Initial Audit - Inspector Comments:</u> There were no signs of smoking near explosives.	<u>Score</u>
	5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<b>Subsection 8.1.10 (1) Underground Explosive Storage</b> <i>In an underground mine, other than a coal mine, does any magazine established for the storage of more than a 24 hour supply of explosives, have the written approval of the Inspector?</i>	
<u>Initial Audit - Inspector Comments:</u> The inspector has given his approval of the underground magazine.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.10 (2) Underground Explosive Storage</b> <i>Are explosive storage boxes, holding not more than a 24 hour supply, clearly marked “Explosives?”</i> <i>Is there a current record of every magazine and explosive storage area?</i>	
<u>Initial Audit - Inspector Comments:</u> The contractor's boxes are marked “explosives”. There is presently only one underground storage area.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.10 (3) (a-d) Underground Explosive Storage</b> <i>In an underground mine are magazine, explosive container, or explosive storage areas:</i> <ol style="list-style-type: none"> <li>Located at least 60 meters from a shaft, hoist room, main access ramp, refuge station, transformer vault or a fuel storage or fuel transfer area?</li> <li>Located so that there is no possibility of a vehicle colliding with a storage container?</li> <li>Located so that in case of fire in the mine the explosives are not likely to become overheated?</li> <li>Conspicuously marked by "Explosives" sign or signs?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>The contractor's explosives boxes are not protected from accidental vehicle impact. The explosives storage is located an appropriate distance from mine infrastructure.</p> <p>It was reported that explosives are sometimes left on the loading truck between shifts. Unused explosives should be returned to the magazine or day box.</p>	
<u>Initial Audit - Manager's Reply:</u>	
<p>Discuss with contractor TMCC and implement solutions. Temporary day mag has been moved.</p> <p>Discuss at line up meetings with crews</p>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The contractor's explosives boxes are removed. No unused explosives were observed on the loading truck.	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 8.2 Blasting Certificates</b>	
<b>Subsection 8.2.1 through 8.2.7 Blasting Certificates</b> <i>Are all persons, conducting blasts, certified as per sections 8.2.1 – 8.2.7 of the HSRC?</i>	
<u>Initial Audit - Inspector Comments:</u> Blasting certificates are current.	<u>Score</u>
	5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

Section 8.3 Use, Care and Handling of Explosives	
<b>Subsection 8.3.2 (1) (2) (3) (4) Identification of Explosives</b> <i>Do all explosives have plainly marked or printed on the exterior of every original package:</i> <ol style="list-style-type: none"> <li><i>The name and place of business of the manufacturer and the date of its manufacture?</i></li> <li><i>The type and strength of the explosive, and the dimensions of the cartridge?</i></li> <li><i>The UN Classification number and the dangerous goods classification?</i></li> <li><i>When full cases of detonators, detonating cords, and boosters are received, the inner cartons are immediately marked with the magazine license number?</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b> Explosives cases are properly marked. Cases are not opened on surface.	<b>Score</b> 5
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<b>Section 8.7 Drilling Near Explosives</b>	
<b>Subsection 8.7.1 (1) Misfires</b>	
<i>Is the use of equipment restricted within this 8 meter distance except as provide in section 8.7.1, or under a procedure approved by the Inspector 8.8.1. (1) (2)?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is a procedure, approved by an inspector, for pre-loading production blastholes, which allows equipment to work within 8 m of a loaded hole. Misholes are washed or blown out to neutralize them.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 8.8. Misfires</b>	
<b>Subsection 8.8.1 (1) Surface Misfires</b>	
<i>Are misfired hole on the surface shall be clearly marked off for a distance of 8 meters around the collar of the hole and equipment restricted?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
N/A	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Eight – Explosives

July 16 & 17 , 2013

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Part 8 – Total out of 95</b>	<b>95</b>
<b>Part 8 – Percentage out of 100%</b>	<b>100%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Ten– Reclamation and Closure

July 16 & 17 , 2013

### Section 10.1 Mine Plan and Reclamation Program Information

#### Subsection 10.1.2 Producing Mines

*Does the mine have a permit authorizing the work from the Chief Inspector?*

*Does it include information on the following:*

- *Surface or underground development or production for coal and mineral mines, or major modification of existing producing coal and mineral mines of the buildings available on site*
- *Underground exploration requiring excavation, large pilot projects, bulk samples, trial cargos, test shipments*
- *Has work proceeded without the Chief Inspector granting a permit or authorization?*

Initial Audit - Inspector Comments:

Yes permits are in place M229 and TSF M229A

Score

5

Initial Audit - Manager's Reply:

[Click here to enter text.](#)

Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<b>Subsection 10.1.4 Mine Plans</b> <i>Does the mine have a plan that has the relevant information as requested by the Code?</i> <ul style="list-style-type: none"> <li>• <i>Baseline information</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> All information is in the permit application document and the application	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 10.1.4 Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (f)?</i> <ul style="list-style-type: none"> <li>• <i>Designs and details for dumps, open pits, impoundments, underground workings including areas that may be affected by subsidence, stockpiles, processing facilities, water management structures, water storage and /or water treatment facilities, haulage roads, road construction and significant transportation or utilities infrastructure, compatible with environmental protection, reclamation and mine closure?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> As builds are available for structures and reclamation report is due at year end.	<u>Score</u> 4

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
The Closure Report (both technical and costs) have been provided to Ministry (December 2012).	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 10.1.4 Mine Plans</b> Does the mine plan have the requirements of Part 10.1.4 (3) (g)? <ul style="list-style-type: none"> <li>• Designs for material handling and waste disposal procedures</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Waste disposal is handled by a contractor and dealt with off site. GFL waste oil, BFI waste for recycling. Storage of chemicals needs improvement, RheoTEC tank sitting in the yard with product still it exposed to the potential of being hit by a vehicle in winter conditions, also a tank of DELVO Stabilizer in the same condition. Waste oil storage area needs to be covered so it doesn't fill with water and float the hydrocarbons into the environment. Diesel fuel surface fueling station has diesel spilled on the ground and needs to have all contaminated soil removed and a system installed so it doesn't reoccur.	
<u>Initial Audit - Manager's Reply:</u>	
RheoTEC & Delvo tanks now removed and disposed of or stored appropriately. Waste oil pad has roof planned, (May if in budget). Diesel tanks will be decommissioned soon with the completion of surface fuel bay (end of February). Contaminated soil to be placed in Bioremediation cell.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Waste oil pad is moved to the old Teck shops and now under cover, Bioremediation cell designed and to be completed by mid Sept 2013.	4

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 (3h) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (h)?</i> <ul style="list-style-type: none"> <li>• <i>Salvaging and stockpiling of surface soils and overburden materials</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The mine has stockpiled 170,000 m3 of topsoil and 300,000 m3 of till	4
<u>Initial Audit - Manager's Reply:</u>	
We have a fresh estimate of salvageable soils that was obtained during the Closure Plan work. This will be reconciled against current stockpile, but for now we have more soil than was initially estimated in the application document. Correct number is 320,000m3 till.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1 .The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<b>Subsection: 10.1.4 (3i) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (i)?</i> <ul style="list-style-type: none"> <li>Source, use and water balance for any water required in the operation</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Fresh water comes from Kamloops Lake permit 139m3/min average is 124 m3 / min Water balance is not complete due to 3 different water balances and discussions on the water volume trapped in the tailings	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Draft Water Balance received from BGC, under review. Final closing memo due by April 15/13	
<u>Audit Follow Up – Inspector Comments:</u> Completed	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 10.1.4 (3j) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (j)?</i> <ul style="list-style-type: none"> <li>Overall site water balance</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Still work in progress	<u>Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
Draft Water Balance received from BGC, under review. Final closing memo due by April 15/13	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 (4b) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (4) (b)?</i> <i>Plan for environmental Protection that includes:</i> <ul style="list-style-type: none"> <li>Erosion control and sediment retention</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, but some erosion channels need to be improved before water leaves the property	
<u>Initial Audit - Manager's Reply:</u>	
Erosion Control and Management Plan completed under title "Vegetation and Soil Management Plan". Will be submitted with Annual Reclamation Report.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Slope below batch plant is planned for this summer to be reclaimed, not in progress yet	3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 10.1.4 (6) Mine Plans</b> <i>Does the mine plan have operational reclamation plans for the next five years that shows the progressive development of structures?</i>	
<u>Initial Audit - Inspector Comments:</u> Work in progress due from consultant December 2012.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Submitted to ministry in December 2012	
<u>Audit Follow Up – Inspector Comments:</u> Completed	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<b>Subsection: 10.1.5 Design Standards</b>	
<i>Are the impoundments, water management facilities and dams designed in accordance with the criteria provided in the Canadian Dam Association, Dam Safety Guidelines?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, audit by Geologic, Monte Christie still not complete	
<u>Initial Audit - Manager's Reply:</u>	
Audit performed, preliminary report available. Final report will be submitted by March 31, 2013	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 10.1.6 Design Standards</b>	
<i>Are the dumps designed in accordance with the Interim Guidelines of the British Columbia Mine Waste Rock Pile Research Committee?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Present dump is in pit and will be effected by the cave	4
<u>Initial Audit - Manager's Reply:</u>	
Not sure how we could not get a 5. We have a Stockpile Management Plan that has been approved by Ministry and is compliant. At the moment we have no waste rock dump other than those inherited from Teck.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 10.1.7 Design Standards</b> <i>Are the dumps designed so as to allow for re-contouring such that final reclamation is consistent with the approved end land use?</i>	
<u>Initial Audit - Inspector Comments:</u> Not required as they are in pit	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> The Batch plant slope is the only one I think this would relate to. We have a reclamation plan for that slope which will be carried out in Spring, 2013.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<b>Subsection 10.1.8 Design Standards</b>	
<i>Are the Tailings impoundments, water management facilities, dams and waste dumps designed by a professional engineer?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes Scott Elfen PE and stamped by Harry H. Kim P.eng	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Further to comment in audit, BGC are now the engineer of record.	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.9 Design Standards</b>	
<i>Are there plans for the prediction, and if necessary, the prevention, mitigation and management of metal leaching and acid rock drainage which shall be prepared in accordance with the Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia?</i>	
<u>Initial Audit - Inspector Comments:</u> Using MLARD program as laid out in permit and full data base on NG computer system.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> We fully comply with this. It should be a 5.	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 10.1.11</b> <i>Has the Owner, Agent or Manager notified the Chief Inspector in writing of any intention to depart from the mine plan and reclamation program authorized under sections 10.1.1 or 10.2.1 of the Code to any substantial degree?</i> <i>Has the Manager received the written authorization of the Chief Inspector prior to implementing the proposed changes?</i>	
<u>Initial Audit - Inspector Comments:</u> No Changes at this time	<u>Score</u>
	4
<u>Initial Audit - Manager's Reply:</u> New Closure Plan submitted. Any deviation will be provided to ministry for approval with Annual Reclamation Report.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

## Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<b>Section 10.5 Operations</b>	
<b>Subsection 10.5.1 Operations</b>	
<i>Did the operation of tailings or water management facility commence prior to an “as-built” report prepared by a professional engineer certifying that the facility was designed and constructed according to section 10.1.5 of this Code being submitted to the Chief Inspector and a permit to operate the facility was received?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes ,Reviewed by George Warnock P. Eng. MEMNG and signed off	5
<u>Initial Audit - Manager’s Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager’s Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</u>	
Click here to enter text.	
<b>Subsection 10.5.2 Operations</b>	
<i>Does the mine have an Operation, Maintenance and Surveillance (OMS) manual?</i>	
<i>Was this manual prepared and provided to an Inspector and to all employees involved in the operation of major dam or major impoundment, prior to commissioning?</i>	
<ul style="list-style-type: none"> <li><i>Is the manual revised regularly during operations, decommissioning and closure of the structure?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, In place	5

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# Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
Complete	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	Choose an item.
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 10.5.3 Operations</b>	
<i>Has the Manager submitted an annual dam safety inspection report prepared by a professional engineer on the operation, maintenance and surveillance of the tailings and water management facilities and associated dams to the Chief Inspector?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Not Due until March 31, 2013	
<u>Initial Audit - Manager's Reply:</u>	
Done and a preliminary report is available on request. Report will be submitted march 31 with Annual reclamation report	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Complete	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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## Ministry of Energy and Mines Health and Safety Follow Up Audit for New Afton

### Part Ten– Reclamation and Closure

July 16 & 17 , 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Part 10 – Total out of 90</b>	<b>85</b>
<b>Part 10 – Percentage out of 100%</b>	<b>94%</b>

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#### Scoring: **Maximum points available per subsection =**

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One Application of Code and General Rules

July 16 & 17 , 2013

<b>Section 1.3.1 Authority to Enter a Mine:</b>	
<b>Subsection: 1.3.2 Posting</b>	
<i>Is there "only authorized persons" notice posted on all road entrances to the mine?</i>	
<u>Initial Audit</u> <u>Inspector Comments:</u>	<u>Score</u>
There are signs posted and the main access to the site is controlled by 24/7 security.	5
<u>Initial Audit</u> <u>Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up</u> <u>Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up</u> <u>Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up</u> <u>Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up</u> <u>Manager's Reply:</u>	
Click here to enter text.	
<b>Section 1.6.9 Occupational Health and Safety Managerial Responsibility:</b>	
<b>Subsection 1.6.9(1) Health and Safety Program:</b>	
<i>Has the Manager developed a Mine Health and Safety program and has it been reviewed recently by the OHSC?</i>	
<u>Initial Audit</u> <u>Inspector Comments:</u>	<u>Score</u>
The mine does have an Occupational Health and Safety Manual in draft form. There are also elements of the program in the safety management system, but neither of these have been reviewed by the JOHSC	

Scoring: **Maximum points available per subsection = 5**

Page 1 of 23

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Initial Audit - Manager's Reply:</u>	
Health and Safety Program Manual is currently being revised for publication and will be reviewed with JOHSC once complete	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The latest revision –SAF-FRM-073 July 2013 is now completed. Two of the three JOHSC co-chairman have reviewed the manual. This manual should be reviewed annually.	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Has the Manager developed a Mine Health and Safety Policy? Is it in Writing?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There were two safety polices posted. One was a Corporate policy and one was a site policy. Both read the same but one was not signed. There needs to be one policy for the site and that is the one that should be posted.	
<u>Initial Audit - Manager's Reply:</u>	
Health & Safety Policy has been revised, signed copies have been posted	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There is now only one Safety Policy signed and posted	5

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b> <i>Does the safety policy set forth Company safety Program Objectives?</i>	
<u>Initial Audit - Inspector Comments:</u> The site policy speaks of the Management teams commitment but only in general terms.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Policy has been revised and management team commitments are clearly defined	
<u>Audit Follow Up – Inspector Comments:</u> A review of the policy does show Managements commitments and Company objectives.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b> <i>Does the safety policy Identify the authority/accountability or responsibility of workers and management?</i>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The policy speaks of Responsibilities and Accountabilities being transferred to employees but does not define or outline what they are.	
<u>Initial Audit - Manager's Reply:</u>	
Policy has been revised and has defined the responsibilities and accountabilities that are transferred to employees	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Accountability and Responsibilities for Management and Workers are now identified in the safety policy	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Is the safety policy posted in conspicuous locations?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
One or both of the safety policies were posted throughout the site.	5
<u>Initial Audit - Manager's Reply:</u>	
Only signed copies will be posted and we will post the Corporate and site policies	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b> <i>Is it reviewed/reissued on an annual basis?</i>	
<u>Initial Audit - Inspector Comments:</u> The most recent posted policy was dated October 15, 2012 but the General Manager's signature was not on it. It was admitted that although the policy had been re-dated it had not been reviewed for quality or content.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Signed copies have been posted, document has been controlled on SharePoint to ensure that only the signed version is available for posting.	
<u>Audit Follow Up – Inspector Comments:</u> Safety Policy SAF-POL-001 has been updated and signed June 10, 2013	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b> <i>Are workers familiar with the safety policy?</i>	

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Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Employees interviewed stated they were aware of a policy but were not sure what it said.	
<u>Initial Audit - Manager's Reply:</u>	
Started reviewing Policy with employees and have also reviewed in JOHSC tours through employee interactions. Policy reviewed by JOHSC committee	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Employees are much more aware of the policy and what it says and what it means. Annual review is required.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Is it communicated to new employees?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The safety policy is not covered in the new hire orientation.	
<u>Initial Audit - Manager's Reply:</u>	
Safety policy is covered the new hire orientation	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Safety Policy SAF-POL-001 in now included in the New Hire orientation package	5

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b> <i>Is it discussed during regular staff/team/workgroup meetings?</i>	
<u>Initial Audit - Inspector Comments:</u> The records presented did not show the policy had been reviewed at any meetings.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Started to review the policy at meetings and will continue. Reviewed with all Development crews. Reviewed with all Production crews.	
<u>Audit Follow Up – Inspector Comments:</u> The first review with all Employees was completed June/July 2013.	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1)(b) Health and Safety Program :</b> <i>Have general safety rules been developed?</i>	

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Some general rules are reviewed in the new hire orientation and some are in the OHS manual, (which is in draft form and not reviewed).	
<u>Initial Audit - Manager's Reply:</u>	
Orientation has been revised and more general rules defined.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
A review of the Orientation package and the Safety Manual show there has been more General rules added and reviewed.	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1)(b) Health and Safety Program :</b>	
<i>Are workers familiar with general safety rules?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The majority of the workers interviewed indicated they were aware of the general rules but felt they needed to be reviewed more often.	4
<u>Initial Audit - Manager's Reply:</u>	
General rules will be reviewed by all departments on an annual basis and delivered by departments.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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Part One – Application of Code and General Rules

July 16 & 17 , 2013

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Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1)(c) Health and Safety Program :</b>	
<i>Have Safe Work Procedures been developed on a departmental basis?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Safe Operating Procedures are being developed on an ongoing basis using a Job Hazard Analysis process for each Department. Some departments are further along in this process than others.	4
<u>Initial Audit - Manager's Reply:</u>	
Work Procedures are continually being developed on a regular basis	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1)(c) Health and Safety Program :</b>	
<i>Have the safe work procedures been reviewed with all relevant workers?</i>	

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Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is an employee training matrix in place that tracks which SOP's are reviewed by which employee. It was also noted that some of the SOP's are also being reviewed at crew meetings. This process needs to be expanded to capture all training.	4
<u>Initial Audit - Manager's Reply:</u>	
SOP's have been attached to equipment training and are being reviewed with relevant workers as per assigned tasks.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(e) Health and Safety Program :</b>	
<i>Is there a provision for regular monthly crew safety meetings?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There are formal monthly meetings being held with minutes being kept.	5
<u>Initial Audit - Manager's Reply:</u>	
Current Process will continue	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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Part One – Application of Code and General Rules

July 16 & 17, 2013

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1)(f) Health and Safety Program :</b> <i>Are there procedures developed for accident and serious incident investigations?</i>	
<u>Initial Audit - Inspector Comments:</u> There are procedures developed in the OHS manual, which needs to be published. There has been formal accident investigation training done, but the process needs to be published and reviewed.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> A procedure for serious accidents and investigations is published in procedures library and is currently under review.	
<u>Audit Follow Up – Inspector Comments:</u> Procedure SAF-POL-004 has been developed and is in the Safety Manual. It has to be properly implemented.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1)(g) Health and Safety Program :</b> <i>Are there procedures for monthly safety tour inspections?</i>	

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July 16 & 17 , 2013

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is a procedure outlined in SOP procedure SAF-FRM-088	5
<u>Initial Audit - Manager's Reply:</u>	
Safety Inspections are a corporate KPI requirement for management and is compliant to corporate guidelines.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (2) Health and Safety Program :</b>	
<i>Does the OHSC regularly review the mine Health and Safety program for completeness and effectiveness and submit its findings to the manager?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
In review of the minutes from the OHSC it appears that some of the safety program elements are being discussed but the committee needs to expand their focus to more parts of the program.	4
<u>Initial Audit - Manager's Reply:</u>	
Review with JOHSC	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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July 16 & 17 , 2013

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Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 1.6.1 Occupational Health and Safety Managerial Responsibility:</b>	
<b>Subsection 1.6.1 Health and Safety Committee:</b>	
<i>Is there a health and safety committee established in accordance with section 1.6.1?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is a committee that is comprised of New Gold employees and Contractors, which creates a rather lager committee. This appears to have an impact on the committee's ability to work on the bigger picture elements of the safety program.	
<u>Initial Audit - Manager's Reply:</u>	
Reviewed committee size and structure of JOHSC. Restructuring currently in progress, Quarterly meetings have been organized to aid with the restructuring process	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
With the reduction of the number of JOSOC members the committee feels they are effective. The introduction of quarterly meeting with Senior Management is a positive step in developing a working relationship with the committee. The Co-Chair feel they now know the direction they want to take, they are getting the right people on the committee, they have the support of Management and have gained more respect with the work force.	5

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July 16 & 17, 2013

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<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.3 Inspections:</b>	
<b>Subsection 1.6.3(1) Health and Safety Committee:</b> <i>Does the committee conduct regular monthly inspections?</i> <ul style="list-style-type: none"> <li>• All hazard areas are identified and inspected regularly</li> <li>• Substandard conditions are documented in writing</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The records show that regular monthly inspections are being done, with minutes kept. It was noted that at the time of this audit the hazard rating that was being used previously for items found during the inspection has been dropped from the present process. The reason for this needs to be reviewed.	
<u>Initial Audit - Manager's Reply:</u>	
Reviewing and re-implementing the hazard ranking system.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There is a hazard risk matrix developed to be used for planned inspections, now it has to be more widely utilized.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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July 16 & 17 , 2013

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.3(2) Health and Safety Committee:</b> <i>Does the Committee meet after their inspection?</i> <i>Are minutes of this meeting prepared including a description of conditions found during the inspection?</i> <i>Are Action and follow-up plans are developed specifying what will be done, by whom, when?</i> <i>Are the minutes posted in a conspicuous place and filed with the Manager?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Review of the records show that minutes of the Inspections are being kept with action items identified. These action items are put in the site's Corrective Action tracking system for implementation and monitoring.	4
<b>Initial Audit - Manager's Reply:</b>	
Process will continue and be revised as required.	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	

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Part One – Application of Code and General Rules

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<b>Section 1.6.4 Inspections:</b>	
<b>Subsection: 1.6.4(3) Health and Safety Committee:</b>	
<i>Are the OHSC Minutes posted in a conspicuous place and filed with the Manager?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Minutes from the OHSC were observed posted throughout the site.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 1.6.5 Accident Investigations:</b>	
<b>Subsection: 1.6.5 Health and Safety Committee:</b>	
<i>Do the OHSC co-chairpersons or their designate participate in investigations of medical aids and dangerous occurrences as required in 1.7.1 of the HSRC?</i>	

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<p><u>Initial Audit - Inspector Comments:</u></p> <p>In review of the records, they showed that the OHSC co-chair persons or designates are involved sometimes but not on a consistent basis.</p> <p>There were many AI reports that did not have a safety representative signature on them.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Involvement of JOHSC has been increased and Safety representative is approving/signing off on all Accident investigation reports.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>In review of the INX electronic system the names of those JOHSC reps that were involved in the investigation are identified but there is no formal sign off. The JOHSC minutes did shows Dangerous Occurrence reports were being reviewed by the JOHSC.</p>	<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><b>Section 1.6.7 Cooperation with the OHSC:</b></p>	
<p><b>Subsection: 1.6.7 (1,2,3) Health and Safety Committee:</b></p> <p><i>Do all persons working at the mine cooperate with the OHSC by;</i></p> <ul style="list-style-type: none"> <li>• <i>Providing facility to carry out its inspections and investigations</i></li> <li>• <i>Allowing access to all records and reports</i></li> <li>• <i>Correcting hazards as noted by the agreed date by the OHSC?</i></li> </ul>	

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<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There appears to be good cooperation with the OHSC. It is worth noting that at the time of this audit there appeared to be a good working relationship between the Surface and Underground OHSC representatives.	5
<u>Initial Audit - Manager's Reply:</u>	
Current Process will continue	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection: 1.6.7 Health and Safety Committee:</b>	
<i>Is there a system in place to ensure follow-up and implementation of committee recommendations?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The action items identified from the OHSC are put into the site Corrective action process for tracking. The OHSC should be reviewing the status of these items at each monthly meeting to ensure action has been implemented.	4
<u>Initial Audit - Manager's Reply:</u>	
The Committee is reviewing the status of all corrective actions based on committee recommendations	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection: 1.6.7 Health and Safety Committee</b> <i>Is the Committee involved in the development of:</i> <ul style="list-style-type: none"> <li>• <i>Safety program elements</i></li> <li>• <i>Program measurements</i></li> <li>• <i>Safe work procedures</i></li> <li>• <i>Training for workers</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Records show the OHSC has started to look at these aspects but due to the size and structure of the committee, the review is a complicated process. Records also show the committee spends most of its time looking at the physical conditions of the mine and less time on the behaviours, processes and procedures that show the effectiveness of the program	
<u>Initial Audit - Manager's Reply:</u>	
Process has been developed to encourage more employee interactions by the JOSHC. The Safety program elements will be reviewed by the JOHSC committee. The committee is spending more time looking at procedures and committee effectiveness.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The JOHSC has changed it's primary focus to one of looking at the broader elements of the Health and Safety Program. It is also looking at how to improve elements like planned inspections.	5

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 1.6.8 Committee Training:</b>	
<b>Subsection: 1.6.8 OHSC training:</b>	
<i>Has the OHSC received any training?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This topic was a point of some frustration for the OHSC. It was stated that a training plan had been developed for the committee for the year but for some reason was not followed through with. The records also showed that not all OHSC representatives had accident investigation training. This topic of training for the OHSC needs to be reviewed and a commitment made to get the training done.	
<u>Initial Audit - Manager's Reply:</u>	
Hygiene and MSI training has been completed and delivered to more than 50% of the committee and Accident investigation training will be scheduled for all members this year. Two worker co-chairs and a worker rep toured an underground mine at another property to gain knowledge on committee effectiveness.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Now that the JOHSC understands it's role they have better opportunity to evaluate the Training needs of the committee.	4

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 1.11.1 Occupational Health and Safety Managerial Responsibility:</b>	
<b>Subsection: 1.11.1(2) Training in the Workplace:</b>	
<i>Is there a comprehensive orientation and safety training program for new workers, including hazard awareness and reporting, general safety rules, safe work procedures, safety and health policy, safety Committee emergency procedures, etc?</i>	
<i>Does this training include all Managers/Supervisors?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is a new hire orientation process in place at the mine. Some of the Personnel safety rules that are identified in the Health and Safety Reclamation code are not reviewed in this orientation. There were no records provided that showed that Managers or Supervisors had received any new hire orientation.	
<u>Initial Audit - Manager's Reply:</u>	
Records show that Supervisors and Managers have received a new hire Orientation. Personal safety rules are stated in the orientation process	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Evidence was presented that showed Management and Supervisors have received the new hire orientation. The Personal Safety rules that were missing from the New Hire Orientation package have noow been added.	5

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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection: 1.11.1 Training in the Workplace</b>	
<i>Are workers given task specific safety training on how to do each task safely including being informed of hazards associated with the task?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Specific task hazard analysis is done through the use of the Job Hazard analysis process, which helps in the development of SOPs for each task. In review of the records they do not clearly show that all relevant workers get this task hazard training.	
<u>Initial Audit - Manager's Reply:</u>	
Working through all employees to ensure relevant SOP's are reviewed and signed off.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This is an ongoing process and progress was noted.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines Health and Safety Follow Up Audit for New Afton Mine

Part One – Application of Code and General Rules

July 16 & 17 , 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection: 1.11.2.Training in the Workplace:</b>	
<i>Is there a recording system developed for recording all training received by workers and supervisors?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was, at the time of this audit, an Excel spreadsheet that was being used to track employee training which a very labour intensive system to use was. There is a new system being introduced, the INX-Health Data/Incident Entry Management system which appears will make this tracking process a lot more manageable.	3
<u>Initial Audit - Manager's Reply:</u>	
Second component of INX- Intuition is slated to be complete by December 2013. This component will track all employee training.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
his is training tracking is still an ongoing process. The INX system has not yet been developed to have this training tracked and is still being managed through and excel spreadsheet system. No Change to this element.	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Part 1 – Total out of 150</b>	<b>135</b>
<b>Part 1 – Percentage out of 100%</b>	<b>90%</b>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Section 2.1 Workplace Health Hazard Management Program:

### Subsection: 2.1.3(1) Workplace Monitoring Program

*Has a written program to ensure a hazard free environment been established in accordance with the “Workplace Monitoring Procedures Manual”?  
Is there a written program and is it reviewed on a regular basis?*

#### Initial Audit - Inspector Comments:

On three occasions a consulting company has conducted workplace monitoring for the mine: May 2009, Oct. 2011 and May 2012. In 2009, exposures to noise, silica, and respirable combustible dust were assessed and lighting, radon gas, and gamma radiation surveys were conducted. In 2011, exposures to noise, silica, and respirable combustible dust were re-assessed and heat stress monitoring was conducted. In 2012, noise, silica, and respirable combustible dust were again assessed and concentrations of fourteen airborne metals, including mercury, were assessed underground, a second gamma radiation survey was conducted and the heat stress monitoring program was re-evaluated. This work has been complemented by ongoing monitoring conducted by the mine for noise, silica, respirable combustible dust, and three metals (nickel, magnesium and chromium).

#### Score

#### Initial Audit - Manager’s Reply:

Continued monitoring will take place

#### Audit Follow Up – Inspector Comments:

The site has recently written a new Workplace Monitoring Program. The program touches on the key components which are expected by the Ministry. At the time of the audit the program has not yet had an opportunity to be exercised in the workforce and no data for the revamped SEGs have been compiled. The Ministry looks forward to the implementation of this program which has the potential to be industry leading.

#### Adjusted Score

4

#### Audit Follow Up - Manager’s Reply:

Click here to enter text.

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection: 2.1.3(1) Anticipation/Recognition of Hazards</b></p> <ul style="list-style-type: none"> <li>• <i>Are work areas being assessed to anticipate/recognize occupational health hazards?</i></li> <li>• <i>Does the program identify the potential health hazards?</i></li> <li>• <i>Does the program identify the locations of these hazards?</i></li> <li>• <i>Does the program identify the workers exposed? Including grouping workers of similar exposures together (SEG)?</i></li> </ul>	
<p><u>Initial Audit - Inspector Comments:</u> Hazards have been identified and SEGs have been developed. In 2009, the consultant hired to conduct workplace monitoring categorized approximately 65 employees into similar exposure groups, and in 2011, the consultant categorized approximately 230 employees into similar exposure groups. The mine currently employees approximately 800 people, including contractors. SEGs should be reviewed and adjusted on a regular basis.</p> <p>Methodology for identification of hazards and their respective locations is unclear. It remains unclear if all hazards have been identified (organic vapours? cement dust? Are surface labourers exposed to noise? etc). For the majority of SEG's (all except SEG 1), the workers exposed have been identified.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u> Hygienist has been recruited and is currently reviewing the SEG's, methodology is also being reviewed.</p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up – Inspector Comments:</u> To ensure all workers have been appropriately included in the workplace monitoring program, new SEGs have been developed through interviewing supervisors in each department. These SEGs will continue to be refined through interviewing workers, conducting job-shadowing and reviewing Standard Operating Procedures (SOPs). Quantitative data will be used to further refine SEGs once available. This work is in its infancy and the Ministry looks forward to full implementation of the Workplace Monitoring Program.	<table border="1"> <tr> <td><u>Adjusted Score</u></td> </tr> <tr> <td>4</td> </tr> </table>	<u>Adjusted Score</u>	4
<u>Adjusted Score</u>			
4			
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.			
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<table border="1"> <tr> <td><u>Adjusted Score</u></td> </tr> <tr> <td></td> </tr> </table>	<u>Adjusted Score</u>	
<u>Adjusted Score</u>			
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.			
<p><b>Subsection 2.1.3 (1)(2)/2.1.1/2.1.2 Evaluation of Hazards</b></p> <ul style="list-style-type: none"> <li>• <i>Does the program specify the frequency of monitoring?</i></li> <li>• <i>Does the program specify the evaluation methods used to determine the exposure levels of workers?</i></li> <li>• <i>Are worker's trained in conducting the program? Is monitoring being conducted?</i></li> <li>• <i>Are records of the monitoring program being kept?</i></li> <li>• <i>Are employees exposed to airborne concentrations of chemical agents or noise in excess of the levels specified in the Code or 1994-95 TLVs?</i></li> <li>• <i>Are TWA concentrations calculated based on Ceq formula when shifts are longer than 8 (eight) hours</i></li> </ul>			
<u>Initial Audit - Inspector Comments:</u>	<table border="1"> <tr> <td><u>Score</u></td> </tr> </table>	<u>Score</u>	
<u>Score</u>			

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>A considerable amount of personal samples have been collected. Program sampling frequencies appear to be chosen based on qualitative information/professional judgment. Sampling frequency for newly identified SEG has not yet been established. Recommended sampling frequencies are not consistently being met. For example, three personal samples have been taken for welding fumes, too few to ascertain compliance.</p> <p>Samples taken by the consultant in 2012 were area samples, rather than personal sampling for airborne contaminants.</p>	
<p><u>Initial Audit - Manager's Reply:</u> More welding fume samples have been taken to increase statistical significance. Full time hygienist has been recruited to expand on the current program.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> The addition of a full-time Hygienist will ensure that the potential of the Workplace Monitoring Program will be realized. The site has continued to evaluate person exposures to silica, respirable dust, diesel particulate matter, welding fumes and noise on an ongoing basis. Additional welding fume samples have been collected to achieve a statistically meaningful sample. Through the development and implementation of the Exposure Assessment Strategy (i.e. the revised workplace monitoring program) additional hazards will be evaluated, identified and addressed. A new monitoring schedule is currently in development based on the new exposure groups. The targeted completion for the new monitoring schedule is end of Q3 2013.</p>	<p><u>Adjusted Score</u></p>
	<p>3.5</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.1.3/2.2.1/1.9.1 Control of Hazards

- Does the program specify the controls in place for the hazard?
- Are controls being developed/implemented to reduce worker exposures?
- Has the manager taken all reasonable and practicable measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers?
- Where practicable, has the manager instituted controls at the source to ensure that workers are not exposed to a level of any physical, chemical, or radiation hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations, and has the manager required that persons wear effective personal protective equipment in any situation where control at the source, as required by section 1.9.1(2), is impractical.

### Initial Audit - Inspector Comments:

There is limited evidence to show that quantitative data from collected samples is being used to make recommendations for the implementation of controls. Data should be analyzed appropriately to ensure that workers' exposure profiles fall within acceptable limits. For example, current monitoring results from SEG 8 and SEG 1 for silica quartz demonstrate that employee's exposure profiles lie above the safe working limit.

### Score

### Initial Audit - Manager's Reply:

Occupational Hygiene committee discuss results from readings and develop action plans. Information is captured in meeting minutes. Controls were put in place to control exposures in SEG1 and 8, these exposures were related to road dust which was controlled by suppressing dust using a water truck. When roads are dry, workers call dispatch to notify the road crew to have the roads watered.

### Audit Follow Up – Inspector Comments:

The revised Workplace Monitoring Program is in its infancy, which includes a plan for a statistically valid methodology for data

### Adjusted Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

analysis. At the time of the audit, the collection of quantitative monitoring data and its subsequent analysis in line with the revised program had not yet occurred. Statistical analysis of previously collected data has been minimal. Quantitative data was not reviewed at the time of the audit. Upon review of the monitoring data it may be determined that additional controls are necessary. The program is moving in a positive direction and the Ministry acknowledges and commends this positive step forward.	3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>2.2.1 Workplace to be hazard free</b>  <b>Subsection: 2.2.1</b> <i>Is there an effective housekeeping program developed and implemented to ensure:</i> <ul style="list-style-type: none"> <li>• <i>That all workplaces and travel ways are maintained in a safe condition?</i></li> <li>• <i>Materials and equipment are stored in a manner so as not to endanger persons?</i></li> <li>• <i>Appropriate action is taken whenever necessary to maintain</i></li> </ul>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

Initial Audit - Inspector Comments:	Score
<ul style="list-style-type: none"> <li>• Areas in the mill had water unable to drain such as at the filter press and at a smelly, catchment area without a drain by the south door.</li> <li>• In the mill, the sag in the conveyer belt leading to the pebble crusher caused coarse ore to fall from conveyer and scatter all over the floor, making a considerable mess. Similarly, the magnetic roller separator used to pick steel out of the ore was not aligned properly. Coarse steel-containing rocks are being picked up and dropped over walkways and under conveyer belt. A buildup of dust and rock under the head end of S3 conveyer in the mill was also observed.</li> <li>• Underground, there were a number of areas leading up to where operators worked or accessed (operator access to Crusher cab, lower work ladder and catwalk at bottom of crusher, access area to a diamond drill platform) that had loose rock and other debris that could lead to tripping hazards. Given that trends of ankle injuries were seen in the records review, this should be an area of housekeeping focus.</li> <li>• A pump in one underground area was off, resulting in a significant buildup of water in the travel way. Upon observing the water build up the mine captain took initiative to have the area cleaned.</li> <li>• Employees report having observed rodents in the permanent underground refuge station. Mouse traps have been set in the area, however it is not known if the rodent problem has been resolved.</li> </ul> <p>Upon review of incident reports, recommendations for control measures were often made but were not always adequate or signed off as completed. When not completed, it is unknown whether hazards are controlled.</p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Initial Audit - Manager's Reply:

Crews have been made aware of recent incidents and a greater emphasis has been placed on workplace housekeeping in morning meetings. Said areas will be inspected and hazards removed immediately.

Published SOP in place for Mine ops relating to housekeeping which includes refuse, standing water, tramp steel, etc. Will review with crews.

Permanent dewatering system is in the process of being developed.

Traps are checked on a regular basis and a few rodents have been captured. No further reports of rodents noted.

Review incident report procedure with all shifters and recorded in matrix.

## Audit Follow Up – Inspector Comments:

Catchment area in the mill nearly empty, with no irritant smell. No pump yet installed in the confined space area.

As the mine is aware, there may be a trend of ankle injuries, from slips and falls. Upon review of some incidents and conversations with workers, housekeeping as well as boot style may be contributing factors. Ms. Martinovic is currently working with the warehouse to trial different types of boots. Some incidents recommended bringing in piles of muck to fill in puddles to improve walking surfaces. The approach from the haul road side of the old crusher cab underground had an example of poor housekeeping where rock debris had built up at the foot of the cement platform leading to the catwalk. Regular housekeeping by workers assigned to an area on a shift may assist to avoid any build up of debris. Continuous work needed in this area.

Smoking in the workplace introduces a health hazard. This practice was observed in underground locations where other workers, who were not smoking, were present.

A leak was observed at the top of the Flash Flotation Cell and at the Rougher Feed Sampler in the Mill.

There is room for improvement with the set up at the table containing a number of buffers near the flotation cells in the mill (e.g. open containers left out, lack of secondary containment, etc).

## Adjusted

## Score

3.5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 1.11 Training</b>	
<b>Subsection: 1.11.2/1.8.1/1.8.2 Respirators</b> <ul style="list-style-type: none"> <li>Does the manager supply properly fitted PPE? I.e. is respirator fit testing being conducted? Are records being kept?</li> <li>Does the manager ensure that the equipment is adequate for its purpose?</li> <li>Are workers wearing the PPE?</li> <li>Are workers instructed in the use and maintenance of the equipment, the reasons for it, and its location and limitations?</li> <li>Is a record of the training maintained?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Fit testing is being conducted and employees are being instructed in the use and maintenance of the equipment. Employees report that respiratory protection can be obtained from the warehouse without a fit test being conducted. At the time of inspection, the respirator protection program provided to the Ministry appears to be draft form, as it lacks a document control number, lacks a title, and had not been assigned with a revision number.  An appropriate respirator was observed being used during a grinding task in the shop.	<u>Score</u>

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Part Two– Occupational Health

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u>	
Respiratory program has been developed and published, workers are fit tested by the Safety department prior to being issued a respirator	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<p>The respiratory program has now been published and the majority of workers on site are being fit tested by a trained individual with the Safety department prior to being issued a respirator.</p> <p>Diamond Drillers work with a number of controlled products, some of them in powder form and carcinogenic. At the time of inspection, the drillers were not using a half mask respirator for handling such products. A risk assessment should be conducted to evaluate whether a half mask respirator should be used. Some of the diamond drillers have been issued half mask respirators but have not been fit tested, nor trained on appropriate maintenance and storage of the PPE.</p> <p>Half mask respirators have been supplied to staff in the lab with combined cartridges for acid gas and particulate matter. In the event of a spill/ventilation failure, employees should be aware that, should they require protection against a workplace hazard other than which their cartridges are designed to protect them against (e.g. organic vapours), their current PPE may not suffice. At the time of inspection it was agreed upon that a list indicating the appropriate cartridge to use for a given spill would be developed and would accompany the spill kit. Appropriate cartridges should be readily available in the event of a spill.</p> <p>At the time of inspection in the PAX reagent mixing area (where strong vapours were noted) half mask respirators were being stored in lockers. Sealed plastic bags or other closable pouches were not being used.</p>	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>		
<p><b>1.6.9/1.1.2 Musculoskeletal Disorder Prevention</b></p>		
<p><b>Subsection: 1.6.9 (1)(h) Musculoskeletal Disorder Prevention Program</b>  <i>Has the Manager developed a written MSD prevention program for the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries?</i></p>		
<p><u>Initial Audit - Inspector Comments:</u>  A Wellness Program including some content on MSD Prevention in the form of a presentation was reviewed. It recognized some risk factors related to MSD but often focused on behavioural changes to reduce the exposure to risks associated with MSD. It did not reference how to evaluate the severity of risk factors or control through the application of a hierarchy of controls. Symptoms and early reporting are not discussed. This training does not meet the requirements for training for the OHSC.</p>		<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u>  An MSD program has been developed, 84% of the OHSC committee has received MSD training</p>		
<p><u>Audit Follow Up – Inspector Comments:</u>  Training materials previously provided by the Ministry have been customized and are in use to deliver this program on site. Lisa Martinovic has taken the lead on this and is the primary trainer onsite to deliver these materials.   What is the manager's plan to ensure training may continue following OHSC turnover or should Ms. Martinovic require assistance?</p>		<p><u>Adjusted Score</u></p> <p>4</p>

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Part Two– Occupational Health

July 16 & 17, 2013

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 1.6.9 (1)(h)/1.11.1(2) MSD Prevention Program</b> <ul style="list-style-type: none"> <li>Has the Manager developed a Mine Health and Safety Program which includes the following sections:</li> <li>(h) a written preventative training program, acceptable to the chief inspector, to educate OHSC members in the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries</li> <li>Are ½ the worker representative and ½ the management representatives trained?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> The Wellness program presentation which contained some MSD Prevention content was reviewed. Training records for this training were not provided. Lisa Martinovic, Andrew Bryant, Kevin Mihalicz and Jackson Chamberlain have attended training on this topic offered by this Ministry. At least half of the OHSC requires training so that OHSC knowledgeable on this content can effectively be involved in investigations or site inspections and assessments where tasks risk associated with MSD may need to be identified, evaluated and controlled.	<u>Score</u>  
<u>Initial Audit - Manager's Reply:</u> Provided MSD training to 84% of JOHSC.	
<u>Audit Follow Up – Inspector Comments:</u> Training records for the OHSC and for supervisors who have received this training was provided. Thank you for also providing this	<u>Adjusted Score</u>  

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>training to supervisors; this will be beneficial to the safety program as supervisors will better equipped to prevent and investigate related injuries.</p> <p>Interviewed supervisors demonstrated understanding of some of the content and application.</p>	5
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p>Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><b>Subsection 1.11.1 MSD Prevention Program</b></p> <p><i>Have workers been trained in the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries as it relates to their work?</i></p> <p><i>Has the manager ensured that, with respect to musculoskeletal disorder prevention,</i></p> <p style="padding-left: 40px;">(1) <i>workers are adequately trained to do their job or are working under the guidance of someone who has competency both in the job and in giving instruction, and</i></p> <p style="padding-left: 40px;">(2) <i>ensure that all employees receive thorough orientation and basic instruction in safe work practices</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p>	<p><u>Score</u></p>

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Part Two– Occupational Health

July 16 & 17, 2013

<p>The Wellness presentation includes some information on risk factors associated with MSD and some instruction on body mechanics. Early reporting and signs and symptoms are not emphasized. Training records were not provided.</p> <p>Some additional training records regarding 1 hr sessions: “Ergonomic Risk Presentation” and “Office Ergonomics Training” were provided. Training was conducted by a consultant ergonomist April 26/27, 2011. A summary of the training content was not provided.</p> <p>Some workers interviewed demonstrated some working knowledge of possible injury risk related to overexertion activities associated with their work. This was more apparent in the more experienced workforce so is not clear whether this has been learned through experience, previous workplaces or information presented at this mine.</p>	
<p><u>Initial Audit - Manager’s Reply:</u> 12 Supervisors have completed similar MSD Prevention training as the JOHSC. Crew talk presentations regarding MSD Prevention have been distributed to the supervisors to present to their crews. Also waiting for the training program from the MoM to go live for current workforce as another option for education. MSD Prevention Orientation presentation has been included in the orientation program.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> New hires are provided with MSD Prevention education at orientation.</p>	<p><u>Adjusted Score</u></p>

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Part Two– Occupational Health

July 16 & 17, 2013

<p>Training records for supervisors who have received this training was provided. Thank you for also providing this training to supervisors; this will be beneficial to the safety program as supervisors will better equipped to prevent or investigate related injuries.</p> <p>The existing workforce will be provided with MSD Prevention education at crew safety meetings; instructional materials have been circulated to all supervisors this month following the supervisor training. July 15, 2013 this material was first reviewed with the first existing crew. Please confirm when completed.</p> <p>In March 2013, approx. 91 workers and some contractors who work on crews who operate the C-frame jumbo were provided with education regarding MSD risk factors and adjustments they can make to decrease risk associated with awkward and static postures in their cabs. Those operators interviewed recall this training and have been making adjustments as they work to assist in mitigating awkward postures. Some complaints were raised about the current arm rests in the C-frames jumbos as the adjustability was not intuitive and the arm rests simply got in the way of some larger statured operators. Some even questioned if the arm rests were actually broken but were not sure. An audit of these arm rests with a consultation with the manufacturer may prove the arm rests useful versus the workforce simply removing them as they are confusing and in the way.</p> <p>Following the completion of more ergonomic assessments, MSD prevention education that is job/task specific will be able to be presented to trainees and existing workers which will further enhance MSD Prevention.</p>	5
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>

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Part Two– Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><b>Subsection 1.9.1</b></p> <p><i>(1) With respect to ergonomics has the manager taken all reasonable and practicable measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers,</i></p> <p><i>(2) Has the manager taken a proactive approach to musculoskeletal disorder prevention? Are safety tours addressing workstation design being conducted, area job demand analyses being done, and is research into hazards and controls being conducted?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p> <p>Several office ergonomics assessments “Ergonomic Spot Audit Checklist” had been completed by a consultant. It is unknown if the recommendations contained within were put into place and effective.</p> <p>A Physical Demands Analysis had also been completed for the Mill Control Room but it did not contain any recommendations or evaluation of risk associated with any physical demands. A finger-tip adjustable work surface was installed and will be effective in reducing symptoms associated with static postures at this work task, providing control room operators adjust their posture regularly.</p> <p>No other evidence of ergonomics assessments underground or within surface operations was provided. Proactive inspection tours with respect to MSD related hazards may have revealed:</p> <p>1.C-frame jumbo: noted cramped space for operator’s with some visibility difficulties. Drill operation console actually articulates (handle at left side) which changes the angle of the controls to increase comfort and adjustability for workers but was stuck. Recommend this be fixed and demonstrated to drill operators to help reduce static and awkward postures related to this task.</p> <p>2. Underground crusher cab – small area needs better suited furniture (more narrow profile chairs, cabinets) for this small space. Also foot-rung on main operator’s chair a hazard for tripping.</p>	<p><u>Score</u></p>

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## Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

### Initial Audit - Manager's Reply:

#1- SAP work order issued for both C frame Drilling Rigs (SAP# 308 –10020984 310 –10020985 )

Ergonomic assessment completed on Gyro cab and design recommendations have been approved and the workstation is now installed. The development crusher is now only used for 1-2 hours/shift. Foot rung on operator's chair will be removed (Development Captain). Currently sourcing appropriate foot rest and chair.

A presentation regarding posture as a risk factor and how to adjust the C frame drill has been delivered to 4 crews. Physical demands analyses are currently being performed on all jobs on site. Risk factors will be identified and proactive assessments will be completed.

### Audit Follow Up – Inspector Comments:

Ergonomics Assessments were reviewed re: the Sandvik Bolter, Gyratory Crusher Cab, Warehouse, and of an office setting in Tech

Adjusted  
Score

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Part Two– Occupational Health

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<p>Services:</p> <ul style="list-style-type: none"> <li>Following the work order, an ergonomic assessment was conducted on the C-frame and in March 2013, approx. 91 workers and some contractors who work on crews who operate the C-frame jumbo were provided with education regarding MSD risk factors and adjustments they can make to decrease risk associated with awkward and static postures in their cabs.</li> <li>An ergonomic assessment was reviewed on the Gyro Cab. Recommendations are in place. There are some opportunities for improvement in the installation of task lighting (as current lighting leads to glare), a repositioning of the right hand monitors currently blocking a direct sight-line to the left side dump position (could be repositioned above monitors at centre of desk), and a repositioning of the CPU from under the desk to a protected cabinet/area to avoid damage from kicking.</li> </ul> <p>OHSC members participating in safety tours and meetings are identifying some ergonomic hazards of handling (reference 8572, 10838) work area design (ref 5128) seating (ref 8562) and rest breaks (ref 5131). To gain further experience hazard identification and assessment, it is recommended that additional persons with training participate in ergonomic assessments.</p> <p>Excellent work in this area. The assessments were well done and provide recommendations based on a hierarchy of controls outlining the most effective means of reducing risk to workers. It is recommended that additional persons also participate on future assessments to provide experience for OHSC members to assist on investigations.</p>	<p>5</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

### **Subsection 3.3.5/1.9.1**

*With respect to ergonomics has the manager:*

*(2) where practicable, instituted controls at the source to ensure that workers are not exposed to a level of any physical, chemical, or radiation hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations.*

### **Materials Handling**

*Where a materials handling task endangers the safety of the persons doing the work, does the manager ensure that:*

- 1. the physical parameters of the handling task are redesigned or*
- 2. mechanical lifting aids or personal protective equipment is provided, or*
- 3. the work area where the work is carried out is redesigned to eliminate unsafe condition conditions relating to floor surfaces, lighting, or obstruction to materials handling, or*
- 4. a combination of (1), (2), or (3) is implemented.*

Initial Audit - Inspector Comments:

Score

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<p>Flocculent-mill: due to the design of where the flocculent is stored, handled and poured into a hopper in the mill, workers are exposed to lifting tasks in excess of recommended weight limits due to how the 25 kg bag is handled to complete this task. To reduce physical demands associated with handling this 25 kg bag, workers would benefit from an elevation in the floor surface which could be accomplished by installing grating across the containment ledge to raise the standing surface in front of the hopper for ease of lifting bag to dump into the hopper and a ledge to place the bag on to cut it then dump in the hopper. A reduction in the carrying distance of the flocculent would also decrease risk associated with this handling task.</p> <p>Incident reports were reviewed where handling injuries occurred. Investigators need to consider engineering controls to more effectively reduce the need for items to be handled vs. simply recommending workers should “take their time”.</p> <p>In the new Assay lab and in the warehouse, lifting aids and carts were available for workers to use when needed. In the warehouse, large items were being stored on pallets for safer lifting by a forklift instead of by hand.</p>	
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Improving the ergonomics of the flocculent area has been identified as a project and will be managed by the Project Group. More effective controls during incident investigations have been covered in the JOHSC and Supervisor MSD Prevention training sessions.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Flocculent handling has been redesigned to reduce manual handling. Although it is recognized that this task is performed</p>	<p><u>Adjusted Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

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<p>infrequently, handling of the 25kg bags still occurs and involves lifting from a bent over position from a tote. There may still be some room for improvement to further decrease handling and any associated risk. It is recommended that the task as it is designed is assessed with an objective means (ergonomic checklist) to determine if any risk remains with the modifications.</p> <p>There has not been any MA or LTI related to MSD since the initial audit. Therefore a FA was reviewed where a worker reported low back pain March 10. A cart for moving heavy items was recommended as an effective engineered method of reducing risk.</p> <p>OHSC members participating in safety tours and meetings identified some ergonomic hazards of handling (reference 8572, 10838) work. To gain further experience hazard identification and assessment, it is recommended that additional persons with training participate in ergonomic assessments.</p>	<p>4.5</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

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## Subsection 2.9.1/1.9.1

*Where the equipment, work procedure, or working condition in a work area has caused injurious inflammation of muscles, tendons, or bursae of the upper limbs of the persons doing the work, and it is demonstrated to be from repetitive or forceful use, the Chief Inspector shall, where practicable, require implementation of one or more of the following preventive measures:*

1. *Modification of work procedures or equipment to reduce physical demands on affected body areas*
2. *A rescheduling of work to permit safe adjustment to unaccustomed task requirements*

*Or where practicable, institute controls at the source to ensure that workers are not exposed to a level of any physical, hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations.*

### Initial Audit - Inspector Comments:

Several incident reports were reviewed where workers were involved in incidents where an overexertion injury occurred. Recommendations were often limited to behavioural controls and administrative controls such as adding a worker to the task. These controls are not as effective as using engineering methods of control or redesign to reduce risk. Also, as recommendations were not always signed off as complete, it is unknown if this was consistently completed.

Overall, the low quality of investigation reports with respect to MSD Prevention is directly related to the lack of training of those involved in MSD-related investigations.

### Score

### Initial Audit - Manager's Reply:

JOHSC have been trained in MSD prevention which will improve corrective actions related to MSD. RTW coordinator reviews all MSD related injury reports and works with supervisor to make appropriate recommendations. To date 12/27 supervisors have been trained in MSD Prevention. Second session to occur June 7/13.

### Audit Follow Up – Inspector Comments:

Thank you for extending this training to the supervisors. This training will enhance their investigative skills and

### Adjusted Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>following recommendations to reduce risk to workers. Injury/incident report template appears to improve the tracking and sign off:</p> <ul style="list-style-type: none"> <li>Incident dated April 12th involving a broken arm as a result of falling off of a ladder was reviewed. Investigation concluded the fall a result of selecting the wrong hand tool for the job. Could this job have been done more safely if it had been designed to maintain 3point contact on the ladder? Perhaps a working platform or better design to access the work to be done would have prevented the fall? This was not discussed in the investigation report.</li> <li>An ankle injury May 13 resulted in a recommendation of fixing a flooded walk area with fill to smooth out the walking surface; an effective engineered control.</li> </ul> <p>There has not been any MA or LTI directly related to chronic MSD since the initial audit.</p>	4
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>2. Hazards</b></p> <p><b><i>Subsection 2.1.4 Oxygen Content of Air</i></b> <i>Do persons work or remain in any section of the Mine where they may be exposed to air with less than 19.5% oxygen without an alternate air supply?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p>	<p><u>Score</u></p>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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A number of unidentified (unmarked) confined spaces were observed in the mill. The Ministry has been informed that a review is underway to identify all confined spaces and have them adequately identified.		
<u>Initial Audit - Manager's Reply:</u> All confined spaces in the mill have been identified and labelled		
<u>Audit Follow Up – Inspector Comments:</u> A consultant was brought in to evaluate confined spaces, identify potential hazards within confined spaces, create entry and rescue plans and label confined spaces. The majority of the spaces observed are now in compliance with the code. There were a number of unlabeled confined spaces at the waste water treatment circuit.  At the Assay Lab there is a tank of liquid argon inside a small room accessible from the rear of the building. Should the cylinder or lines coming from the cylinder develop a leak oxygen may be displaced resulting in an IDLH atmosphere.		<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.		
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.		<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.		

Scoring: **Maximum points available per subsection = 5**

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## Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

### Part Two– Occupational Health

July 16 & 17, 2013

#### **Subsection 2.5.1/2.5.2/2.5.3/2.5.4/2.5.5/2.5.6 Abrasive Blasting**

##### No Silica or Lead:

*Is abrasive blasting material containing 1% or more free silica or lead being used?*

*Is all abrasive blasting and similar operations,:*

- when carried out within a building, conducted in an isolated enclosure to prevent injury to persons?*
- when carried out outside a building, conducted in a place and manner to prevent injury to persons?*

*Do the enclosures have sufficient exhaust ventilation to ensure that a continuous inward flow of air is maintained at all openings in the enclosure during the blasting operation?*

##### Protective Equipment:

*During abrasive blasting operations are air-supplied hoods or respirators suitable for the work supplied and work, together with gloves, leggings, and clothing designed to protect the employees from dust, and projected abrasive or other material?*

*Does air supplied to the hood or respirator meet the requirements of CSA Standard CAN3Z180, 1-M85 “Compressed Breathing Air and System,” as updated from time to time, and is the volume of air supplied sufficient for respiration and to prevent the entry of contaminants into the hood or respirator, and not less than 105 L per minute at the mask?*

##### Nozzles and Valves:

- 1. Are blast cleaning nozzles equipped with an operating valve which must be held open manually and the normal operation of this valve not defeated?*
  - Is there support provided on which the nozzle can be secured when not in use?*
- 2. In addition to the operating valve required by subsection (1), is there another operating control readily accessible to the operator to enable the flow of abrasives to be stopped immediately?*

##### Workers to Be Removed:

*Are persons not required to assist in abrasive blasting or a similar operation which release harmful substances to the atmosphere, removed from contaminated areas?*

*Where such removal is not practical, are the exposed persons advised of the hazard and supplied with suitable personal protective equipment which they shall wear?*

Scoring. Maximum points available per subsection – 5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Inspector Comments:</u> The Ministry was informed there is no abrasive blasting being conducted on site.	<u>Score</u>
	n/a
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u>
	n/a
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

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## Subsection 2.3.1/2.3.2 Asbestos

*The manager shall ensure that*

- (1) *as effective, less hazardous, asbestos-free substitutes become available and practical for such items as brake lining, insulation, and fire retardant materials, they shall be used,*
- (2) *where there is no substitute available for an asbestos-containing material, a procedure acceptable to the chief inspector is developed to protect the health of persons using, maintaining, or exposed to such material,*
- (3) *notwithstanding subsection (2), items containing crocidolite asbestos are not to be used at a mine,*
- (4) *spraying of asbestos, or material containing more than 1% of asbestos, is prohibited, and*
- (5) *protective clothing and equipment made of material containing asbestos is used in such a manner as to prevent the release of asbestos fibres.*

*Where any work involves the use, handling, or disposal of asbestos or materials containing asbestos, the manager shall ensure that the procedures outlined in the manual "Safework Practices for Handling*

*Asbestos Revision 10 1996" published by WorkSafe BC are followed, and that the inspector and the OHSC are notified of the procedures.*

### Initial Audit - Inspector Comments:

An asbestos survey was conducted under previous supervision. The results of the asbestos survey could not be located at the time of the audit. Employees were aware that some building walls were asbestos containing. Signs need to be mounted on the asbestos containing walls to indicate they should not be disturbed.

### Score

### Initial Audit - Manager's Reply:

Survey has been located and reviewed, bulletin has been sent site wide for review communicating areas that could possibly contain asbestos and all renovation work has to be approved by the Safety department.

### Audit Follow Up – Inspector Comments:

A safety alert has been sent out to site to inform employees that the Administration building, the maintenance shop, and the

### Adjusted

### Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

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<p>warehouse contain asbestos. At the time of the audit, employees who were asked about asbestos containing areas could either not recall the bulletin at all or could not remember which areas were potentially affected. This may be a result of the frequency with which safety alerts are sent out and due to the possibility that they may be forgotten after a period of time. New employees or contractors would not have seen the safety alert.</p> <p>Though, as presented in Manager's Reply, the Safety Department may be engaged for renovations, consideration should be given to the risk of asbestos material being disturbed during routine work, such as routine electrical work (as per Golder report, electrical system insulating materials are assumed to be asbestos containing).</p>	3
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 2.3.5 Hazardous Dust</b> <i>Is dust being removed by suitable means (wet sweeping or shovelling, vacuuming or being suppressed) where it could become a hazard by restricting vision, or could cause a fire or explosion or be potentially hazardous if inhaled or ingested?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p>	<p><u>Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<p>Dry sweeping was observed in the shop and indications of dry sweeping were observed in the mill (broom and dust pile without indication of dust collecting agent or use of water). Previous dust monitoring results suggest that inhaled dust may be potentially hazardous due to elevated levels of silica quartz.</p> <p>The site has taken positive steps to mitigate potential dust issues. Dust suppressant has been applied to roadways and DustFoam is being added to ore.</p>	
<p><u>Initial Audit - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> Control measures have been put in place to control dust at the Pebble Crusher. In general, most roads underground are being sprayed with greater frequency. Inspectors accessing the pit portal access road encountered extended areas of dust as the road had not recently been maintained. Major dust accumulations were observed by the mechanical inspectors at the reclaim feeders under the coarse ore pile. If this is a usual occurrence is there a means of engineering this hazard from occurring? Dustbane sweeping compound has been used in the past for dry sweeping but is being phased out as it contains crystalline silica. The product was observed onsite.</p>	<p><u>Adjusted Score</u> 3.5</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

Click here to enter text.

### **Subsection 2.3.9 (1)(2)/2.3.10/2.3.11 Radiation**

*Is equipment which emits harmful levels of infrared or ultraviolet radiation shielded to protect employees from exposure to such radiation?*

*Is PPE supplied to and worn by persons who could become exposed to harmful radiation levels?*

*Are employees exposed to non-ionizing radiation which exceeds the recommendations contained in the publication "Safety Code 6, Recommended Safety Procedures for the Installation and Use of Radio Frequency and Microwave Devices in the Frequency Range of 10 MHz to 300 GHz", published by Health and Welfare, Canada?*

1. *Are workers being exposed to ionizing radiation levels greater than:
 
  - a. 4.0 Working Level Months (20 millisieverts) of radon decay products per year averaged over 5 years, and 10.0 Working Level Months (50 millisieverts) in a single year?
  - b. 20 millisieverts (2 Rem) of gamma radiation per year averaged over 5 years, and 50 millisieverts (5 Rem) in a single year?
  - c. A combination of radon decay products and gamma radiation totalling 20 millisieverts averaged over 5 years or 50 millisieverts in a single year?*
2. *Are workers provided and wearing a gamma radiation dosimeter if measurements indicate exposure to gamma radiation greater than 5.0 microsieverts per hour (0.5 millirem per hour) at 0.5 meters from the source?*
3. *Are all radioactive materials used, handled, stored, transported, and disposed of in accordance with the Canadian Nuclear Safety Commission Regulations?*

### Initial Audit - Inspector Comments:

This section appears to be within compliance.

### Score

5

### Initial Audit - Manager's Reply:

Current standards will be maintained

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

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<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.3.12 ISOCYANATES

*Where paints, protective coatings, adhesives, or insulating materials containing isocyanate compounds or other compounds that have similar sensitizing effects are being applied, persons shall be protected from the airborne contaminants by*

*(1) where practicable, performing the work in an isolated enclosure having sufficient exhaust ventilation to ensure that contaminated air is not released from the enclosure into areas where unprotected persons can enter, and*

*(2) where methylene bisphenyl isocyanate is used, ensuring that a supplied-air respirator (SAR) approved by NIOSH or MSHA is worn by all exposed persons, in accordance with the following concentrations:*

- *up to 2 mg/m<sup>3</sup>: SAR or SCBA,*
- *up to 5 mg/m<sup>3</sup>: SAR operated continuous flow, or SCBA,*
- *up to 10 mg/m<sup>3</sup>: positive pressure, full facepiece SAR,*
- *up to 100 mg/m<sup>3</sup>: positive pressure, full facepiece SCBA, and*
- *Emergency or planned entry into unknown concentrations or immediately dangerous to life or health: positive pressure, full-facepiece SCBA, or positive pressure full-facepiece SAR with an auxiliary positive pressure SCBA.*

*(3) A respirator type shall be selected in accordance with assigned protection factors as outlined in Table 2 of CSA Standard Z94.4-93*

### Initial Audit - Inspector Comments:

The Ministry was informed there are no isocyanates on site. However, products (e.g. WHMIS controlled products) can be brought onto site without a central check for materials containing isocyanate compounds or other compounds that have similar sensitizing effects. It remains unclear whether there are such products on site. It was recently confirmed (after the onsite audit) that New Afton conducted a trial for a new type of resin rebar with an isocyanate containing material. It is unclear what safe work procedures and controls were used. A substitute for this product should be considered and if this isocyanate containing product will be used appropriate safe work procedures and controls must be developed.

### Score

3

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Manager's Reply:</u>	
Chemical approval process was developed and all chemicals need approval before coming on to site. A risk assessment was completed on the MICON product and control measures put in place for use.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
4,4' –Methylenediphenyl diisocyanate (Micon) is being used on site. The TLV for this product is 0.005 ppm. If workplace exposures may exceed this concentration, an organic vapor cartridge with a particulate pre-filter should be used. If the concentration of 4,4' –Methylenediphenyl diisocyanate may exceed 0.05 ppm, a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus) should be used. This product should only be used in with adequate ventilation. The odor and irritancy of this material are inadequate to warn of excessive exposure.	
Goggles/face shield and chemically resistant gloves should also be considered for use with this product.	
A Job Hazard Assessment has been completed. The JHA does not include stipulations for respiratory protection. Protective mechanisms are important to evaluate in the context of potential isocyanate exposure.	
At the time of the audit the Ministry was informed that products which are direct ordered do not have a check and balance to ensure that controlled products are approved before being put into use.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.7.1 Lasers</b> <i>Are laser emitting devices being classified and used in accordance with the procedures outlined in ANSIZ136.1 – 1993 – “American National Standard for the Safe Use of Lasers”?</i>	
<u>Initial Audit - Inspector Comments:</u> The Ministry was informed that lasers are not being used on site. Pit monitoring equipment may involve the use of lasers. Upon request, the site did not produce an SOP for the use of lasers. Given the lack of information provided this item was not reviewed.	<u>Score</u> n/a
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Not Evaluated	<u>Adjusted Score</u> n/a
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<b>Subsection Noise 2.6.1 NOISE</b>	
<i>Mufflers Required:</i>	
<i>If practicable is machinery or equipment which, when operating, expose the operator or persons in the vicinity to noise levels in excess of those prescribed in Table 2-2, Part 2, for unprotected ears, fitted with a properly maintained muffler or other noise reducing device?</i>	
<u>Initial Audit - Inspector Comments:</u> Noise levels in the mill were loud. It is unknown whether any assessment has taken place to identify areas that could be controlled. Of the vehicles that were observed, all were outfitted with mufflers.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Noise monitoring was conducted in the mill and will continue	
<u>Audit Follow Up – Inspector Comments:</u> No change from previous audit. As part of the revised Workplace Monitoring Program sound surveys will be conducted to identify areas where engineering controls can be put into place to reduce noise levels. Of the vehicles that were observed, all were outfitted with mufflers	<u>Adjusted Score</u>
	3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.8.1/2.8.2 Illumination

### Lighting Standards:

*Do all working places have suitable and adequate lighting in accordance with the ANSI/IES Standard RP-7-1991: “American National Standard Practice for Industrial Lighting”, as updated from time to time, unless otherwise authorized by the Code?*

### Surface Illumination:

*Is there a separate and independent emergency source of illumination at all places where a hazard could be caused by a failure of the normal lighting system?*

### Is the emergency lighting:

1. *Where it is a section of a permanent installation, turn on automatically when the normal lighting fails?*
2. *Providing adequate illumination to allow employees to initiate emergency shutdown procedures and leave their work areas safely?*
3. *Tested as frequently as necessary to ensure that it will function when required?*

### Initial Audit - Inspector Comments:

Poor lighting was observed in the mill in certain areas. A number of light fixtures between the SAG mill and the floatation circuits had filled with water and burnt out.

It would appear there is no practical way to assess whether emergency lighting in the emergency exit culvert and at intake conveyer is in working order (cutting power to that circuit would mean cutting power to the conveyer also).

### Score

### Initial Audit - Manager's Reply:

Click here to enter text.

### Audit Follow Up – Inspector Comments:

New LED lights in areas of the Con Shed and mill appear to provide good illumination (not quantitatively measured).

### Adjusted

### Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

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<p>Overhead lights in the Gyro Crusher cab cause glare on the windows affecting a direct view of dumping haul vehicles. As a result, operators are not using lights in this cab which has resulted in a dimly lit room and could lead to errors or increased time needed for inputting data at the computers. Task lighting that can be repositioned as needed would provided necessary lighting and reduce glare.</p> <p>An emergency light in the Mill requires service. There was no evidence to suggest that emergency lighting was being checked regularly to ensure it remains operational. Annual emergency lighting checks are planned over the next few months by a contracted technician. There was no emergency lighting along the conveyer between pebble crusher and the mill.</p>	4
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 2.10.1 (1)(2)(3) HEAT AND COLD STRESS:</b> <i>Is there a program to control for heat or cold stress?</i> <i>Is it a problem?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p>	<p><u>Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>A program for Heat Stress is in place. It includes education and a hierarchy of controls to mitigate heat exposure. High temperatures had been reported to have been observed in the underground workings. It was unconfirmed whether testing had been done to monitor conditions. A program for Cold Stress was not demonstrated in the materials provided.</p>		
<p><u>Initial Audit - Manager's Reply:</u> Heat Stress Kit for measuring heat in work areas is stored in the Foot wall refuge station. Supervisors are instructed to use this if they or any workers have any concerns in any particular work area. A program to manage cold stress is under development.</p>		
<p><u>Audit Follow Up – Inspector Comments:</u> The workforce received education regarding heat stress in July (A crew: July 2, 4, 10; B crew: July 2, 12, 15; C crew: July 3, 4, 5, 9, 15; and D crew: July 3, 15) A heat stress policy is in place but had some conflicting information regarding trigger points for monitoring with the instructional materials provided to the workforce. Corrections were made at the time of the follow-up audit.  A draft of a cold stress policy was provided. The safety department plans to finalize the draft later this year before the onset of cold weather. Cold stress training records were not reviewed.</p>		<p><u>Adjusted Score</u> 4</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>		
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>		<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>		

Scoring: **Maximum points available per subsection = 5**

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**5.** All components of the element are present, in place, being monitored and working. **4.** Most components of the element are present, minor improvements needed or additional training is required. **3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft format. **1.** The element is not present; however, the mine has made attempts to develop it or it is outdated. **0.** The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Section 2.4 Harmful Chemical Exposure

### Subsection 2.4.1 (1)(2)(3) EMERGENCY WASH FACILITIES

*Are eye wash equipment, emergency water baths or showers or other suitable means immediately available to effectively cleanse the affected body areas where persons may be exposed to corrosive or other chemicals harmful to the eyes or skin?*

1. *Emergency shower facility shall provide a tempered supply of potable water for a minimum of 15 minutes?*
2. *In cases where it is not practical to install a permanent facility portable eye wash stations and/or portable emergency wash facilities may be installed as applicable*
3. *Are provisions taken to ensure that water supplies and eye wash isotonic fluids are protected from freezing and are adequately maintained?*

#### Initial Audit - Inspector Comments:

A plumbed emergency shower wash was installed in the assay lab.

At the time of the audit, emergency wash facilities were not being tested regularly in the mill. Tags to record regular checks were blank. When testing the eyewash stations, water lines were initially plugged, causing white foamy water to spray a few feet in the air until the lines had cleared. Water supplied to emergency wash stations in the mill was not tempered. There was no eye wash station near the DustFoam addition point/storage where ore enters the mill. DustFoam is particularly toxic to the eyes.

Some eyewash stations underground were in poor condition (very dusty). At one eyewash station in the underground shop, the eyewash solution had been removed from its holder, placed nearby, and replaced by an empty energy drink can. There was no eyewash station in proximity to the DustFoam addition point in transfer chamber 4/5.

#### Score

#### Initial Audit - Manager's Reply:

Eyewash stations in the mill are being tested regularly. One has been installed at the DustFoam addition tote in the reclaim chamber. One will be installed at U4/U5 DustFoam tote.

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Plumbed eyewash stations in the mill are linked to an alarm in the control room. Water is plumbed from the potable water supply. Inconsistent states of readiness were found regarding various eye wash stations on the property (equipped as well as those with missing expiration dates, missing tags, missing tag information, missing eye cups)</p> <p>An emergency shower was not available in the underground shop. Deficiencies were noted with the proximity of an eyewash station in the slick line area.</p> <p>As sumps may contain controlled products which may pose a hazard to eyesight, it was agreed upon that eyewash stations should be installed at each sump. The one sump which had an eyewash station in place at the time of the inspection had an empty eyewash bottle in the station.</p>	<p><u>Adjusted Score</u></p> <p>3</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p>Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p>Click here to enter text.</p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.4.2 (1) (2) (3) Harmful Chemical Exposure

- (1) Are shower or wash facilities and separate areas for street and work clothing provided where the nature of the work causes a person's clothing or skin to be contaminated with substances which could cause injury or endanger the health of the person or contaminate other areas on or off the minesite?
- (2) Are means for cleaning contaminated clothing or is suitable protective clothing provided where contaminated clothing is not to be removed from the minesite?
- (3) Do persons exposed to contaminants:
  - Cleanse affected skin areas as soon as practicable?
  - Not consume or handle food or tobacco products until hands and face are free of contamination?
  - Ensure contaminated clothing is removed and disposed of?
  - Not leave the mine at end of shift until all affected skin areas have been cleansed of contamination?

Initial Audit - Inspector Comments:

Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

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<p>In the underground shop refuge station/break room, soap and a means to dry hands was not available. There were other areas where people take breaks underground that had no means available for washing hands.</p> <p>Clean and dirty areas are provided in the Mine Drys both at the Mine Operations area as well as at the Truck Shop. Contaminated clothing is washed on site by contractors and measures are in place to neutralize the shotcrete which accumulates on coveralls worn underground.</p> <p>Shower facilities are provided to all personnel at the Mine Drys and employees are encouraged to use them after returning to surface from underground.</p> <p>There is evidence that personnel are using tobacco underground but it is unclear whether these workers, as a general rule, are cleansing their hands and face before use. Contaminated clothing is gathered in the Mine Dry in designated bins and washed by contract employees.</p>	
<p><u>Initial Audit - Manager's Reply:</u> Washing facilities within the permanent refuge station, as well as in the trailerized toilets located throughout the mine.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> Cold water is available in the underground shop lunchroom although it did not appear to be being used as a water jug with hand</p>	<p><u>Adjusted Score</u></p>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>pump was placed in the sink instead. This may be because the water is connected to the hot water tap and not the cold. Nothing runs from the cold side when turned on so persons may have thought it was disconnected or preferred the pumped water as it was not as cold. Reasons unknown. A means of drying hands was not available.</p> <p>Trailerized toilets underground with wash facilities were equipped and operable.</p> <p>At the time of the audit it appeared that PPE used for PAX mixing was being re-used and stored in lockers in the PAX mixing area. PPE that is to be re-used should be decontaminated before storage.</p>		4
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>		
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>		Adjusted Score
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>		
<p><b>Section 2.11 Lunchrooms and Sanitary Conveniences</b></p>		

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.11.1/2.11.8 Water

*Has the Manager provided a source of cool, potable drinking water complying with the Safe Drinking Water Guidelines of the Ministry of Health in locations that:*

- *Are reasonably accessible to employees?*
- *Are kept clean and in a sanitary condition?*
- *Are designed to permit the water to be dispensed and drunk in a sanitary manner?*

*Temperature of washing water:*

*Does water used for personal washing exceed 60 degrees Celsius at any outlet, or is it mixed directly with steam?*

### Initial Audit - Inspector Comments:

Potable water is available in most areas on surface. In areas, such as the Safety Trailer, where the water is not potable, bottled water is provided. Posted signage indicating that the water is not for consumption is inconsistent throughout the property, for example: signage was missing in the women's dry in the shop, shop "cafeteria", underground shop break-room.

Samples are being taken of the potable water system with some frequency however the Mine Operations trailers, which are the end of the potable water line, are not being sampled. There are two individuals with a water treatment ticket. They are both also mill operators and often too busy to monitor the potable water system themselves, thus requiring assistance.

The non-potable water supply, which is used for hygiene purposes (including washing in lunch rooms), is not monitored for water quality.

Employees are encouraged to get water before heading underground and an ice machine is provided on surface to keep water cooler longer. Once underground there are a few key locations where workers can refill their water such as the permanent refuge station.

### Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u> Quarterly monitoring program implemented for hygienic water. Potable system is monitored for coliforms monthly (when operational), as per IHA (Drinking Water Regulations). Cl and turbidity monitoring frequency needs improvement, this will be addressed by Water Treatment Plant monitoring and operations SOP will be completed by May 15. Non-potable signage has been reviewed and posted as need be.	
<u>Audit Follow Up – Inspector Comments:</u> An increasing number of employees are being trained to oversee the supply and distribution of water. Each crew now has at least one certified operator, or at least one employee that has completed the training and is currently accruing the necessary hours to be a certified operator.  Due to issues with the chlorine addition point at the water treatment plant, the potable water line is currently signed as non-potable. Water continues to be treated. The mine plans to implement a new set up for treating water which should reduce the number of leaks/failures with the current system.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two– Occupational Health

July 16 & 17, 2013

### Subsection 2.11.3/2.11.4 Lunchrooms

*Where 7 or more persons regularly congregate to eat food, other than where the mining activity of an open pit mine is preformed, is a lunchroom provided which:*

- 1) *Is heated, lighted, and ventilated?*
- 2) *Has or be located near facilities for persons to wash with cold and hot running water and dry their hands?*
- 3) *Does not have an entrance through a toilet facility?*
- 4) *Contains sufficient fire retardant receptacles with lids, which are used by employees to dispose of all waste food, paper, and other related material, and the containers emptied regularly?*
- 5) *Has suitable seating facilities equipped with backrests and tables with impervious top surfaces which is kept in clean and sanitary condition?*
- 6) *Is constructed of materials which can be, and is, maintained in a clean condition?*
- 7) *Has the following minimum dimensions:*
  - a. *No. of Persons*      *sq. m / Person*
  - b. *25 or less*      *1.2 (min. size. 6 sq. m.*
  - c. *26 to 74*      *1*
  - d. *75 to 149*      *0.66*
  - e. *150 to 499*      *0.56*
  - f. *500 or more*      *0.46*
- 8) *Be located in an area away from process chemicals and contaminants?*

*Where more than 3 persons and fewer than 7 persons regularly congregate to eat food, other than where the mining activity at an open pit mine is preformed, is an eating area provided which complies with 2.11.3 (1), (4), (5), (6), (7), and (8), and provided with facilities for persons to clean their hands?*

Initial Audit - Inspector Comments:

Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<div><div><div>1) Lunchrooms all appear to be heated, lighted and ventilated adequately.</div><div>2) In the underground shop refuge station/break room, soap and a means to dry hands was not available. There were other areas where people take breaks underground that had no means available for washing hands, such as in refuge stations.</div><div>3) The entrances to lunchrooms do not pass through a restroom facility.</div><div>4) Waste containers appear to be adequate for the locations and seemed to be emptied regularly.</div><div>5) Tables and chairs were in good shape, generally clean and were in adequate supply. Seats with backrests were available in all designated break areas.</div><div>6) As above</div><div>7) The lunchrooms appeared adequate in size.</div></div><div>There were chemicals stored in the permanent refuge station which doubles as a lunchroom underground however these chemicals were segregated away from the area where personnel would eat and therefore was found to be acceptable.</div></div>	
<div><div><div>Initial Audit - Manager's Reply:</div><div>Means to wash hands is needed for the footwall shop refuge station.</div></div></div>	
<div><div><div>Audit Follow Up – Inspector Comments:</div><div>Cold water is available in the underground shop lunchroom although it did not appear to be being used as a water jug with hand pump was placed in the sink instead. This may be because the water is connected to the hot water tap and not the cold. It was unknown if it was potable. Nothing runs from the cold side when turned on so persons may have thought it was disconnected or preferred the pumped water as it was not as cold. Reasons unknown. Soap was provided but a means of drying hands was not available.</div></div></div>	<div><div><div>Adjusted Score</div><div>3</div></div></div>
<div><div><div>Audit Follow Up - Manager's Reply:</div><div>Click here to enter text.</div></div></div>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 2.11.5/2.11.7 Mine Dry</b></p> <p>1. <i>The Manager shall provide separate facilities for male and female employees to wash and shower, and to change and dry their clothing</i></p> <ul style="list-style-type: none"> <li>• <i>At a surface mine where persons are subject to dusty, dirty, or wet conditions</i></li> <li>• <i>At an underground mine and this facility shall include separate storage facilities for street clothes and working clothes</i></li> </ul> <p>2. <i>The facilities shall have separate approaches with signs clearly indication for which gender they have been provided.</i></p> <p><i>Location of Mine Dry:</i> <i>Is the mine dry adequately heated, lighted and ventilated, kept clean and sanitary, and have one shower for every 7 persons leaving work at the same time?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p> <p>The dries located in the shop were clean, organized and adequate. Separate facilities for male and female employees are available and are of sufficient quantity to meet the requirements of this subsection.</p> <p>There was a lack of signage visible at the entrances to the Mine Ops Mine Dries to indicate which doors led into the male Dry and which led into the female.</p>	<p><u>Score</u></p> <p>4</p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Signs to be posted</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Not evaluated.</p>	<p><u>Adjusted Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.		
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.		<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.		

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.11.9/2.11.10/2.11.12 Toilet Facilities

*Are there separate toilet facilities for male and female employees:*

- *having separate entrances*
- *with signs clearly indicating for which gender they have been provided?*

*On the surface of a mine, are washroom facilities conveniently located and equipped with:*

- *One toilet and one urinal for every 25 male employees or fraction thereof, and one toilet for every 9 female employees or fraction thereof, except where the maximum number of employees on any shift is fewer than 6 when one toilet is required?*
- *One wash basin, or equivalent facility, provided with hot and cold running water for every 15 employees or fraction thereof?*
- *A means for drying hands hygienically?*
- *Adequate heat, light, and ventilation?*

*Toilets are:*

- *Of the water flushing type or other sanitary design, located in an individual compartment with a door that locks, and with walls and floor of a finish or material that can be easily cleaned?*
- *Fitted with an open-front seat and provided with a reasonable supply of toilet paper?*
- *Provided with a clothes hook and lighting where electricity is available?*
- *Kept clean and sanitary, and any waste products shall be disposed of regularly?*

Initial Audit - Inspector Comments:

Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>There were no signs indicating an entrance to the men’s dry on surface from the parking lot.</p> <p>Inspected washrooms on surface and underground were clean, stocked, operable and equipped with hooks.</p> <p>In almost all areas separate toilet facilities were provided for male and female employees however in the Safety Trailer there is only one toilet facility which must be shared by both genders.</p> <p>In those areas that did have separate toilet facilities there were separate entrances leading into both.</p> <p>The Mine Operation’s Mine Dry did not have signage at each door to indicate which door led into the male side and which door led into the female side.</p> <p>There are an adequate number of toilets and urinals for employees and an adequate number of wash basins.</p> <p>There are hygienic options, either paper towel and/or automatic hand driers in each restroom.</p> <p>Heat, light and ventilation are adequate for all facilities.</p> <p>The toilets were generally as prescribed in this subsection however some, such as in the Safety Trailer, were not fitted with an open front seat.</p> <p>Some clothes hooks, such as in one of the toilets in the Mine Operations Building, appear to have once had a clothes hook but it is now missing.</p>	<p>4</p>
<p><u>Initial Audit - Manager’s Reply:</u> Signs will be posted to Indicate Mens or ladies</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> Not evaluated.</p>	<p><u>Adjusted Score</u></p>
<p><u>Audit Follow Up - Manager’s Reply:</u> Click here to enter text.</p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Section 2.12 Medical Surveillance Programs</b></p> <p><b>Subsection 2.12.1 Medical Surveillance Programs 2.12.1(1)(a,b,c)</b>  <i>Are medical surveillance programs in place where necessary? E.g. blood lead for fire assay workers, high silica exposures?</i></p> <p>1. <i>The Manager shall notify the Chief Inspector when he believes there is a need for a medical surveillance program, for persons:</i></p> <ul style="list-style-type: none"> <li><i>In a dust exposure occupation</i></li> <li><i>Exposed to excessive noise</i></li> <li><i>Exposed to any chemical, physical, or radiation agent specified by the Chief Inspector</i></li> </ul> <p>2. <i>A medical surveillance program, when required by the Chief Inspector, shall be modeled after the “Guidelines for Standard Practice for Medical Monitoring Programs” issued by the Chief Inspector and shall be of a form satisfactory to him.</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p>	<p><u>Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>The Medical Surveillance Program still appears to be in its infancy. There are plans at the Corporate Level to advance this program in the coming year but at this point much work is still to be done. The corporate level has communicated that the intention is to implement mandatory medical screening, an action that contravenes the code.</p> <p>There were no records available to suggest evidence of Lung Function Testing for any employees. Audiometric testing is in place and is being conducted by on-site contractors (Security/First Aid). Baseline blood lead testing has been completed for employees who will be working in the Assay Lab.</p>	
<p><u>Initial Audit - Manager's Reply:</u> Medical surveillance program in development stage</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> A written medical surveillance program has been developed that satisfies code requirements. It may be appropriate to review occupational exposure information for other hazards that can lead to adverse health consequences (e.g. heavy metal exposure from welding, or other) to assess them for inclusion in the medical surveillance program.</p>	<p><u>Adjusted Score</u> 4</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.12.3 (1)(2) Advising Workers

1. The Manager shall advise persons working in a dust, excessive noise, chemical, physical, or radiation exposure occupation, of the nature of the health risks and that a medical surveillance program is available, and the person, at his option, may choose to participate in the program. A person participating in the medical surveillance program may attend the doctor of his choice to undergo the examinations and tests required 2.12.1 (2).

<p><u>Initial Audit - Inspector Comments:</u> In speaking with a number of individuals at the mine most were aware of the audiometric testing but were not aware of any other medical surveillance programs that might be available.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u> Medical surveillance program in development stage</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> Unchanged from last audit. A presentation is being developed and in future will be added to the new employee orientation.</p>	<p><u>Adjusted Score</u> 2</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 2.12.4.(1) (a, b,c,d,e) 2.12.4 (2)

*Does the medical surveillance program, required by section 2.12.1 ensure that each person examined or clinically tested is:*

- *Aware of the nature of the health risks and effects for which he is being examined*
- *Advised on his medical fitness to work*
- *Advised of any work restrictions resulting from his medical condition*
- *Instructed in health precautions required*

*Provided with a copy of the results of the medical examination*

### Initial Audit - Inspector Comments:

For the extent of audiometric testing only, interviewed workers reported that upon completion of their audiometric testing the results of the test was shared with them, they were advised of deficiencies and the personnel conducting the testing actively promoted the use of hearing protection in areas of concern.

As personnel were unaware of any other medical surveillance they could not make comment on these factors outside of audiometric testing.

Score

### Initial Audit - Manager's Reply:

Other programs are in the development stage

### Audit Follow Up – Inspector Comments:

The newly published Medical Surveillance Program addresses these components. Once employees have been screened it is reasonable that these components will be addressed. The Ministry looks forward to seeing this program come to fruition.

Adjusted  
Score

3

### Audit Follow Up - Manager's Reply:

Click here to enter text.

### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

Click here to enter text.

Adjusted  
Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.12.5 (1) (2) Maintenance of Records</b> <i>Personal medical records shall be maintained on a confidential basis by the physician or nurse, and shall not be made available to the Manager or any other person, except as required by statute, without the informed written consent of the individual?</i>	
<u>Initial Audit - Inspector Comments:</u> There was no evidence to suggest any contradictions to this subsection.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Personal Medical records will continue to be handled with confidentiality	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<b>Subsection 2.12.6 Chemical Analysis</b>	
<i>Whenever a chemical analysis is required for biological monitoring is it carried out at a laboratory acceptable to the Chief Inspector?</i>	
<u>Initial Audit - Inspector Comments:</u> There was no evidence to suggest any contradictions to this subsection.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 2.12.7 Programs at Owner's Expense</b>	
<i>All medical examinations and tests performed on a person during a medical surveillance program shall be done at the owner's or agent's expense and the expense shall not be passed on to that person.</i>	
<u>Initial Audit - Inspector Comments:</u> It appears the company has been paying for medical surveillance tests, as per draft policy.	<u>Score</u> 5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>Initial Audit - Manager's Reply:</u> Process will continue	
<u>Audit Follow Up – Inspector Comments:</u> Not evaluated.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## **Subsection 2.12.2/2.12.4 (2)/2.12.5 (2) Hearing Conservation Program**

*A hearing conservation program is developed and followed that includes:*

- *Noise measurement*
- *Education and training*
- *Engineered noise control*
- *Hearing protection*
- *Posting of noise hazard areas*
- *Hearing tests*
- *Annual program review*
- *Audiometric Testing*

*Audiometric testing shall be carried out by a certified audiometric technician.*

*Audiometric information shall be made available to the Chief Inspector.*

### Initial Audit - Inspector Comments:

These components were addressed in a draft Hearing Conservation Program document. All components were present with the exception of a commitment to review the program annually.

### Score

### Initial Audit - Manager's Reply:

Hearing Conservation program has been developed and will be reviewed annually.

### Audit Follow Up – Inspector Comments:

The Hearing Conservation Program has been recently revised and published. The current program includes all components required. Audiometric testing continues on an ongoing basis. To date, the primary avenue for education of the workforce has been through audiometric testing. As such, employees that have not undergone audiometric testing may not have received training. Area noise surveys have not yet been conducted (noted above under section 2.6.1).

### Adjusted Score

4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>  
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 2.13 WHMIS</b>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## **Subsection 2.13.1-2/2.13.19-20/2.3.4/2.3.6/2.3.8 CHEMICAL STORAGE & WASTE**

*Is the WHMIS program fully implemented including the storage and handling of hazardous products including those substances which are not controlled products but could cause adverse health effects?*

### Proper containers:

*Are dangerous or potentially hazardous materials stored in containers designed, constructed and maintained to ensure proper containment of their contents?*

### Hazardous Waste:

*Is hazardous waste material that could be detrimental to a person's health or could cause a fire or explosion:*

- *Stored in impervious containers?*
- *Labelled?*
- *Covered and located in well-ventilated areas?*
- *Collected, handled, sorted and disposed of by persons trained and wearing any necessary PPE?*

### Flammable Waste Storage:

*Are waste materials containing solvents, grease, paints or other flammable substances stored in appropriate covered containers while awaiting disposal?*

### Storage of Hazardous Materials:

*Are dangerous or potentially hazardous materials stored in designated storage areas:*

- *Acceptable to Inspector?*
- *Well ventilated?*

*Incompatible materials adequately separated?*

Initial Audit - Inspector Comments:

Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

Flammable storage cabinets were in use in the surface shop. They were also to be put in place in the new assay lab. All hazardous waste material appears to be stored in containers which are designed to hold the contents. There were some containers, for example in the Underground Shop, where what appeared to be waste hazardous materials was not adequately labelled. Flammable waste storage was observed to be in appropriate covered containers.		
<u>Initial Audit - Manager's Reply:</u> Continual auditing of labeling and storage will be conducted through workplace inspections		
<u>Audit Follow Up – Inspector Comments:</u> A flammable cabinet was needed in the Instrumentation shop. Some materials were improperly stored (in front of electrical panels) but corrected immediately. Some inadequate labelling of decanted and tote containers was noted throughout the property. As WHMIS refresher training is currently underway, the expectation will be that this will improve and should be audited by the mine without delay.  The trailer in which bulk PAX is stored outside the mill is showing signs of corrosion and there is some concern that the trailer may develop a leak which would increase the chances of moisture coming in contact with PAX (a water-reactive species which may give off Carbon Disulphide creating both a health concern and a potentially explosive atmosphere). Ventilation in the PAX storage trailer is currently insufficient; the mine is working to address this.		<u>Adjusted Score</u> 3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.		
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.		<u>Adjusted Score</u>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 2.13.5-10 CHEMICAL LABELLING</b>  <i>Is the WHMIS program fully implemented including suppliers and workplace labelling?</i>  <i>All hazardous products are properly identified and labelled.</i></p>	
<p><u>Initial Audit - Inspector Comments:</u>  The majority of the site had appropriate labels located on chemicals and hazardous materials. There were some hazardous materials, such as in the Lube Oil Room of the Truck Shop and the Batch Plant which did not have placarding which would be easily identifiable.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u>  WHMIS training is provided to workers at time of hire on. Labelling of products is ongoing, Hazardous substance and WHMIS PPT was provided to all employees onsite</p>	
<p><u>Audit Follow Up – Inspector Comments:</u>  Some inadequate labelling of decanted and tote containers was noted throughout the property. At the time of the audit, some controlled products were identified by touch/smell. As WHMIS refresher training is currently underway, the expectation will be that this will improve and should be audited by the mine without delay. As refresher training was already out of date at the time of the initial audit, the effectiveness of the WHMIS program may have deteriorated since then.</p>	<p><u>Adjusted Score</u></p> <p>3</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b><i>Subsection 1.6.9(d)/2.3.6 SAFE HANDLING/ WORK PROCEDURE</i></b>  <i>Are there safe handling procedures for working with hazardous and potentially hazardous materials?</i>  <i>Are workers trained to safely handle the material and wear any necessary protective clothing or equipment to safeguard their own and any other person's health and safety?</i>  <i>An emergency spill plan has been developed to protect workers and the environment.</i>  <i>Are spills or releases of hazardous waste materials cleaned up as soon as possible by trained persons and are they wearing any necessary PPE?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u> Procedures are being used to handle hazardous and potentially hazardous materials safely. PPE is contained within the procedures and is being utilized as was evidence when speaking with Mill employees about the safe handling of reagents. An emergency spill plan has been developed and the site is in the process of stocking up their spill response trailer. Spills which have occurred on site are reported to the Environment Department, cleaned up and then the Environment Department follows up to ensure that the spill has been adequately cleaned.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u> Spill response trailer is stocked and a mock spill drill was completed.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u> Workers that are unable to identify controlled products in their work area may not handle them safely.</p>	<p><u>Adjusted Score</u></p>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<p>A bucket of PAX was found on a catwalk in the Mill. Buckets are used to add PAX manually when automatic addition points do not supply sufficient PAX to the mill process.</p> <p>At the water treatment plant, it may be beneficial to store the Vitamin C (currently stored at warehouse) to improve proximity in the event of a chlorine spill.</p> <p>Additional barricading could be considered to reduce the potential for inadvertent exposure to lime for employees in the surrounding area of the mill when flushing lines.</p> <p>A number of absorbent pads used to collect a hydrocarbon product were identified on the basement floor of the mill, resulting in flammable/combustible material being left in the workplace. Secondary containment could be considered.</p>	<p>3</p>
<p><u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.</p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.</p>	
<p><b>Subsection 2.13.3-4 WORKER EDUCATION AND TRAINING</b> <i>Is the WHMIS program fully implemented including: Worker indoctrination and refresher training?</i></p>	
<p><u>Initial Audit - Inspector Comments:</u></p>	<p><u>Score</u></p>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

Training is given to new employees upon hire but there is currently no schedule for refresher courses. Many employees have worked on site for more than one year, yet records showed only three have been given a refresher course, as required annually.	
<u>Initial Audit - Manager's Reply:</u> WHMIS refresher to be delivered Annually, WHMIS presentation was provided to all employees and supervisors for review in PPT format and resides on SharePoint.	
<u>Audit Follow Up – Inspector Comments:</u> WHMIS currently offered at orientation. Refresher training began July 11, 2013 (42 people trained) and is scheduled to be completed by end of August (hopes of 90% will have received training). Each Thursday a training session will occur to cover off all crews. As refresher training was already out of date at the time of the initial audit, the effectiveness of the WHMIS program may have deteriorated since then. As WHMIS refresher training is currently underway, the effectiveness should improve.	<u>Adjusted Score</u>
	3.5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

## Subsection 1.6.9 (d)/2.13.11-18 SUPPLIER MATERIAL SAFETY DATA SHEETS

*Are MSDS's in place, updated and available to all workers?*

- All hazardous products have current Material Safety Data Sheets
- An up-to-date inventory exists of all hazardous products

*Workers who work with or in proximity have ready access to Material Safety Data Sheets.*

### Initial Audit - Inspector Comments:

MSDS sheets were located in a few prominent locations such as within the shop. Upon inspection approximately 1 out of every 10 was out of date. Note that most that were out of date were only by a year or two.

MSDS sheets were also available on the operation's network. It is unknown if these are automatically updated. MSDS appeared only available on supervisor's computers. Employees could not easily access MSDS.

Score

### Initial Audit - Manager's Reply:

Well net data base is used on the SharePoint network which is available to all employees directly or through their supervisors. Hard copies are also updated in several locations. Outdated MSDS's are being addressed.

### Audit Follow Up – Inspector Comments:

Hard copy MSDS were provided in the underground shop lunchroom. Some MSDS sheets laminated and provided at totes but this was not consistent.

The MSDS book in the Mill Control Room was evaluated by the Ministry and some of the sheets were out of date. At one location one of the binders containing a range of MSDS (by letter) could not be located at the time of inspection.

Adjusted  
Score

3

### Audit Follow Up - Manager's Reply:

Click here to enter text.

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

July 16 & 17, 2013

<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.		Adjusted Score
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.		
<b>Part 2 – Total out of 190</b>		<b>141.5</b>
<b>Part 2 – Percentage out of 100%</b>		<b>75%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Section 3.1 Impairment and Conduct</b>	
<b>Subsection 3.1.1 - Impaired Persons:</b>	
<i>Have all employees been instructed; that no persons shall enter, remain or be knowingly permitted to enter or remain in the mine if his/her ability is so impaired as to endanger his/her health or safety or that of another person.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This topic is adequately addressed in the Certification Fitness for Duty form that is given and discussed during orientation. There were no records showing the all employees have signed off on this certificate.	4
<u>Initial Audit - Manager's Reply:</u>	
Fitness for duty records are maintained by HR department	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.1.2 - Drugs and Liquor</b>	
<i>Are employees instructed that they will not possess liquor, or illegal drugs in or about the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This is adequately addressed in the Certification Fitness for Duty form that is given and discussed during orientation	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.1.3 - Improper Conduct</b> <i>Have employees been instructed to not engage in any improper conduct that might create or constitute a hazard to himself or any other person? Includes horseplay, scuffling, fighting, playing, practical jokes, or other.</i>	
<u>Initial Audit - Inspector Comments:</u> There was no evidence found showing where this topic is reviewed with employees.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> This is in the new hire orientation under general rules.	
<u>Audit Follow Up – Inspector Comments:</u> This requirement was noted as being now in the orientation package	<u>Adjusted Score</u> 5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.1.4 - Tampering with Safety Devices and Equipment</b>	
<i>Have employees been instructed that they shall not, without cause, render ineffective any device, equipment, or material provided for the protection of the health and safety of persons employed in, on or about a mine, or the safety of the public?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was no evidence found showing where this topic is reviewed with employees.	
<u>Initial Audit - Manager's Reply:</u>	
Is in the orientation and is reviewed with all employees at time of hire	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This requirement was noted as being now in the orientation package	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 3.2 General Safety Rules</b>	
<b>Subsection 3.2.1 - Age</b> <i>Are there any persons under the age of 18 years employed at the mine?</i>	
<u>Initial Audit - Inspector Comments:</u> There was no person under the age of 18 years of age, found on site at the time of this audit.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.2.2 – Tallying</b> 1. <i>Is there a system in place to account for all persons on the mining property?</i> a. <i>Workers</i> b. <i>Staff</i> c. <i>Contractors</i> 2. <i>How is the system introduced to new persons coming onto the mine site?</i>	

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<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Access to the site is controlled at a secure gate where electronic cards are used to track persons going on and off site. It is the responsibility of the gate persons to account for those that have not signed out at end of day and report to the respective area should someone be unaccounted for.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.2.3 – Working Alone</b>	
<ol style="list-style-type: none"> <li>1. Does a means exist for checking the well being of workers working alone and may not be able to secure assistance in the event of an injury or other misfortune?</li> <li>2. Do the intervals between checks exceed 2.5 hours?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was no procedure developed at the time of this audit to address this topic.	

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<u>Initial Audit - Manager's Reply:</u>	
There is currently an SOP being developed for Mine ops in regard to working alone and is in a draft state for sign off.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Working Alone SOP MIN-SWI-001 has been developed and now needs to be rolled out to all employees that could be impacted by this SOP	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.2.4 – Transportation of Persons</b>	
<ol style="list-style-type: none"> <li>Are there persons being transported in the box of a pickup truck or riding in a standing position?</li> <li>Are there persons boarding or leaving any vehicle while that vehicle is in motion?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No observations were made of persons being transported in the box of pickup trucks or in a standing position. There are records that show this having been discussed with employees.	4
<u>Initial Audit - Manager's Reply:</u>	
Continue to inform crews, riding in the box of pick-up trucks is not permitted.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.3 Working Conditions</b>	
<b>Subsection 3.3.2 – Hazardous Work:</b>	
<ol style="list-style-type: none"> <li>Are there any locations in the mine where persons are working overhead?</li> <li>How is employee safety being protected by not allowing them to enter into any location at a mine where persons are working overhead?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No such procedure was presented at the time of this audit.	0
<u>Initial Audit - Manager's Reply:</u>	
In the process of revising all applicable SOP's to include working overhead and review with all crews.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
MIN-SOP-002 was presented to this auditor as proof of this element but it is on the topic of open holes and does not address the requirement of this section. No change in score	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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Part Three– Personnel Safety and Emergency Preparedness

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<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><b>Subsection 3.3.3 Hazardous Work</b></p> <p><i>When persons are required to work or be near water, where drowning could be a risk:</i></p> <ol style="list-style-type: none"> <li><i>Has the Manager provided, at conspicuous locations, life-buoys equipped with heaving lines of adequate length which conform to Ministry of Transport (Canada) standards?</i></li> <li><i>If the person is required to work alone at these sites or be transported across water is that person provided with and wearing a personal floatation device conforming to Canadian Government Specifications Board Standard CAN/CGSB-65.7-M88?</i></li> </ol>	
<p><u>Initial Audit - Inspector Comments:</u></p> <p>There was no procedure in place at the time of this audit to address this topic. No life-buoys or flotation devices were observed in areas where drowning could be a risk.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Life preservers are installed and fall arrest equipment are installed at both sumps underground. Procedure for working around water in is the development stage.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>There is now a procedure SAF-POL-009 developed for working around water. This procedure needs to be rolled out to all those that could be effected by this procedure. Life preserves were observed at the sumps.</p>	<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up – Manager Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow up – Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

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Section 3.4 Hazardous Atmosphere – Confined Spaces	
<b>Subsection 3.4.1 Work in Confined Spaces</b>	
<i>Are written procedures developed and implemented for work in confined spaces where irrespirable, toxic or flammable atmospheres might be encountered?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was a draft procedure presented at the time of this audit but it was still under revision.	
<u>Initial Audit - Manager's Reply:</u>	
There is a procedure in place and has been published	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Confined Space Procedure SAF-SOP-009 has been developed and rolled out to the workers	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.4.2 Safe work Procedures</b> <i>The procedures required under section 3.4.1 shall include:</i> <ol style="list-style-type: none"> <li><i>1. The use of lifelines and safety belts wherever possible;</i></li> <li><i>2. When lifelines and safety belts cannot be used, sufficient resources with respiratory equipment capable of performing a rescue be stationed outside the confined space;</i></li> <li><i>3. Maintenance of an effective means of communication between persons inside and outside the confined space;</i></li> <li><i>4. Specified time intervals for making periodic visual contact with persons inside the confined space;</i></li> <li><i>5. Specific procedures to be followed whenever welding or burning operations are to be carried out in the confined space;</i></li> <li><i>6. Appropriate breathing apparatus and persons trained in its use, and readily available at every confined space in which person are working; Compressed air used for breathing complying with the requirements of CSA Standard CAN-3-Z180.1M85 Series</i></li> <li><i>7. Disconnection, blanking or blinding off pipes carrying substances that could be hazardous to the person entering the confined space;</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
These topics are outlined in the draft confined space procedure.	
<u>Initial Audit - Manager's Reply:</u>	
Procedure has been published	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Confined Space Procedure SAF-SOP-009 has been developed and rolled out to the workers	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.4.3 Tests of Confined Space</b> <i>Are persons without self-contained breathing apparatus instructed not to enter a confined space in which a harmful atmosphere might exist or develop until:</i> <ol style="list-style-type: none"> <li><i>1. Tests have been made to determine the nature and quantity of harmful vapours, gases, fumes, mists, dusts, and the oxygen content of the atmosphere inside the confined space and these test results recorded in a logbook kept for that purpose?</i></li> <li><i>2. The written work procedures under section 3.4.1 have been read and understood by the person and the required emergency and rescue procedures are in place?</i></li> <li><i>3. The confined space is being ventilated continuously by a natural or forced ventilation system?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
These items are covered in the Pre-Entry Check procedure SAF-FRM-006	4
<u>Initial Audit - Manager's Reply:</u>	
Annual reviews will be conducted on the procedures for accuracy, ongoing training will be provided.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.4.4 Test of Intervals</b> <i>Are tests of the atmosphere inside the confined space made at intervals during the work process to ensure that the quality of the air does not deteriorate and the test results shall be recorded as required by section 3.4.3 (1)?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Confined space procedure requires testing at 20 minute intervals.	4
<u>Initial Audit - Manager's Reply:</u>	
Annual reviews will be conducted on the procedures for accuracy	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.4.5 Confined Space Ventilation:</b> <i>Where tests made under 3.4.3 and 3.4.4 or any other test or examination indicates a harmful atmosphere or the presence of a harmful substance, is the confined space ventilated or cleaned, or both, and re-tested or re-examined to ensure that no person without self-contained breathing apparatus is allowed to enter the confined space unless:</i> <ol style="list-style-type: none"> <li><i>The atmosphere or substance in the confined space is no longer considered harmful according to the acceptable standards prescribed in part 2 of the Code</i></li> <li><i>The oxygen content of the atmosphere inside the confined space is not less than 18%</i></li> </ol>	

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Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This requirement is outlined in the confined space procedure.	4
<u>Initial Audit - Manager's Reply:</u>	
Annual reviews will be conducted on the procedures for accuracy	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.4.6 Wearing of Protective Equipment</b> <i>Where tests made under 3.4.3 and 3.4.4 indicate the presence of harmful or explosive substances and it is not practical to provide a safe, respirable atmosphere</i> <ol style="list-style-type: none"> <li>1. Do persons entering the confined space wear self-contained breathing apparatus and personal protective equipment?</li> <li>2. Is the concentration of flammable substances maintained below 20% of the lower explosive limit as determined by repeated testing?</li> <li>3. Are all possible sources of ignition eliminated or controlled where flammable substances exist?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This requirement is outlined in the confined space procedure.	4

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<u>Initial Audit - Manager's Reply:</u>	
Atmospheric gas tests are taken and necessary precautions are taken	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.6 Industrial First Aid</b>	
<b>Subsection 3.6.1 First Aid Supplies:</b>	
<i>Does the Manager provide and maintain first aid supplies and services as required by the WorkSafe BC?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The first aid room was clean and well organized. First aid records are kept in a locked cabinet. Instruments are sterilized with bleach. Inventory of first aid supplies is done at least monthly by first aid staff and replenished as required.	5
<u>Initial Audit - Manager's Reply:</u>	
Current standards will be maintained	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.6.3 First Aid Supplies</b> <i>How is a means of communication provided by which the services of a physician can be obtained expeditiously?</i>	
<u>Initial Audit - Inspector Comments:</u> A nurse or doctor, at the hospital emergency room, can be reached by phone. The hospital is less than 20 minute drive away. BC ambulance will come to the mine site or the mine ETV can transport a patient directly to the hospital.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current standards will be maintained	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Section 3.7 Mine Rescue</b>	
<b>Subsection 3.7.1 Underground</b>	
<i>Mine Emergency Response Plan:</i>	
<i>Is there a mine rescue emergency response plan?</i>	
<ul style="list-style-type: none"> <li>• <i>Developed</i></li> <li>• <i>Filed with the Chief Inspector</i></li> <li>• <i>Kept up to date</i></li> <li>• <i>Followed in the event of an emergency</i></li> <li>• <i>Contain all elements required in the Mine Emergency Response Plan Guidelines for the Mining Industry</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
An initial plan was developed February 11/10. The latest revision is dated April 10/12 and filed with the Chief and contains the required elements.	5
<u>Initial Audit - Manager's Reply:</u>	
Continual review of the emergency response plan will be maintained	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 3.7.2 Underground</b> Are trained mine rescue teams established, maintained and equipped at underground mines where the number of employees underground at one time is less than: <ol style="list-style-type: none"> <li>1. 50, but greater than 10, 1 team?</li> <li>2. Is greater than 50, 2 teams?</li> <li>3. On every shift where there are less than 20 working underground at any one time there are four persons trained in mine rescue?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u> There are 44 employees trained in emergency response and mine rescue.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Plans are to cap the Fire mine rescue brigade at 50 members based on the current size of the operation	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.7.4 Surface at Underground Mine</b> <i>At all underground mines where a surface fire can compromise people, plant, or equipment has the Manager ensured that sufficient trained personnel and equipment are available to provide fire suppression capability for the site?</i>	
<u>Initial Audit - Inspector Comments:</u> There are two fire engines and 44 employees trained in fire fighting. Team members are trained in structure-fire fighting at the fire department training facility in Kamloops. An underground fire truck and ambulance is budgeted to be purchased within the next year.	<u>Score</u> 5

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<u>Initial Audit - Manager's Reply:</u>	
Emergency response team size will maintained to ensure adequate coverage to the site	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.7 Mine Rescue Team</b> <i>Are the qualified members of a mine rescue team:</i> <ol style="list-style-type: none"> <li><i>1. In possession of a valid mine rescue certificate and a valid St. John "Standard" first aid certificate, or equivalent?</i></li> <li><i>2. Free from a beard, moustache, or sideburns that could interfere with the face piece seal of any breathing apparatus?</i></li> <li><i>3. Considered competent to act as a mine rescue team member by the person appointed as a trainer under section 3.7.9?</i></li> <li><i>4. Medically fit for the nature of the work required?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All team members have valid mine rescue and first aid certificates. They are clean shaven as required. They have annual medicals by "Nurse Next Door" and confirmed to be medically fit to be part of the mine rescue team.	5
<u>Initial Audit - Manager's Reply:</u>	
No action required, full points awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.8 Mine Rescue Records</b> <i>Is there a record of all mine rescue training maintained at the mine site, and</i> <ol style="list-style-type: none"> <li><i>1. Is the logbook maintained by the qualified person appointed by the Manager, to conduct the training?</i></li> <li><i>2. Contains the particulars of the training, including the names of those participating and the trainer?</i></li> <li><i>3. Notes the condition of all equipment used during the training?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Records of all training are kept, who attended and what training was given. There are 4 Platoons, 4 Captains and 4 Lieutenants.	5
<u>Initial Audit - Manager's Reply:</u>	
No action required, full points awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.9 Mine Rescue Records</b>	
<i>Has the Manager:</i>	
<ol style="list-style-type: none"> <li>1. <i>Appointed a qualified person as a trainer for mine rescue team members?</i></li> <li>2. <i>Ensured that all mine rescue team members practice 8 hours during each 3 months the mine operates?</i></li> <li>3. <i>Ensured that all mine rescue personnel are not underground at any one time except for rescue work or training?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Mike Owens is the trainer. Training is done every month except July and August. All team members are not underground at the same time.	5
<u>Initial Audit - Manager's Reply:</u>	
No action required, full points awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.10 Type of Breathing Apparatus</b>	
<i>Where self-contained breathing apparatus is required is it of a type approved by a recognized certification agency, and suitable for the intended work?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There are 12 BG4s and 6 more will be acquired. There are also PSS 7000 units on surface in the fire trucks and Oxy-K units cached underground.	5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.7.11 Mine Plan for Rescue Purposes</b> <i>Are the mine plans required under Part 6 of the Code readily available for the use of mine rescue teams?</i>	
<u>Initial Audit - Inspector Comments:</u> Mine plans are available and updated monthly by Tech. Services.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.7.12 Mine Plan for Rescue Purposes</b> <i>Has the Manager appointed a qualified person:</i> <ol style="list-style-type: none"> <li><i>1. To be responsible for the care and maintenance of all rescue apparatus?</i></li> <li><i>2. For the entries into a logbook to be kept at the mine recording the condition of all equipment used for mine rescue or fire fighting?</i></li> <li><i>3. For the care of the rescue equipment storage room, and equipment caches?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>There are 6 trained technicians for the BG4s and current log sheets for each machine.</p> <p>There is no log book for ropes and the ropes are not tagged for identification.</p> <p>The equipment store room is a sea-can container, which is quite congested. There appears to be much new equipment and tools but a bigger storage space would be an advantage for organizing the gear. There are plans to build a new facility.</p>	
<u>Initial Audit - Manager's Reply:</u>	
New Facility is completed, rope rescue trailer which will come with training and rope logging system slated to arrive at the end of June	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Rescue ropes have individual logs. There is a storage place for all rescue gear in the new fire hall and a servicing/charging facility for BAs. A rescue trailer is on order that will be outfitted with new rescue gear.	5

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.8.2 Survival Rescue Procedures</b> <ol style="list-style-type: none"> <li><i>Has the Manager of an underground mine established a training program in survival mine rescue, including the use of approved self-rescue apparatus, and the use of firefighting equipment in place at his mine?</i></li> <li><i>Are all persons, employed at the mine or not, instructed and trained in these procedures before entering the underground mine?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u> During new employee orientation, training on W65 and fire extinguisher use is given. All visitors receive basic training as well.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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<b>Subsection 3.8.3 Instructor Emergency Procedures</b>	
<i>Has the Manager of the mine appointed a qualified person to instruct and establish a training program for all employees in basic emergency response, and fire fighting?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
During orientation, all employees receive training in the Code 1 procedure, refuge station instruction, fire extinguisher and W65 training.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Section 3.9 Fire Fighting</b>	
<b>Subsection 3.9.1 Fire Fighting Equipment</b>	
<ol style="list-style-type: none"> <li><i>Is firefighting equipment provided and maintained at all locations at the mine where fire may endanger life?</i></li> <li><i>Unless specified otherwise in this Code, the British Columbia Fire Code 1998 and subsequent supplements and revisions shall apply in determining the level of firefighting equipment and maintenance as prescribed in subsection (1).</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There fire extinguishers on most vehicles and in most areas on surface and underground. There are automatic deluge systems in the fuel bay and in the shops and conveyor transfer points. There are fire hydrants on surface in many locations, supplied by fresh water storage tanks. There are two fire trucks on surface.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Section 3.10 Underground Fire Fighting</b>	
<b>Subsection 3.10.1 Underground Fire Fighting</b>	
<ol style="list-style-type: none"> <li>1. <i>Is firefighting equipment provided and maintained at all underground crusher stations, electrical installations, pump stations, shaft stations, tipples, conveyors, service garages, fuelling stations, and where a fire hazard may exist?</i></li> <li>2. <i>Are a suitable number of fire extinguishers of a specified capacity provided and maintained at each stationary diesel motor, transformer substation and any splitter panel?</i></li> <li>3. <i>Is the location of the firefighting equipment required by sections 3.10 (1) and (2) such that, in the event of a fire, the direction of the mine ventilation air flow will not prevent or hamper the effective use of the equipment?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Extinguishers are found in all locations where a fire hazard may exist. However, not all fire extinguishers have tags indicating when they were last inspected (e.g.: the deluge system and hand-held extinguishers in the underground fuel station).	
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There was no fire extinguisher at 60 sump electrical panel. In the UG fuel bay, a wall-mounted extinguisher was blocked behind an oil drum. There was also an oil drum blocking access to the electrical switch panel in the fuel bay. The deluge system in the fuel bay is now tagged, showing regular maintenance of the system.	4
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 3.10.3 Underground Fire Fighting:</b>	
<i>Are inspections and if necessary, testing and maintenance of all firefighting equipment carried out by a qualified person at least once a month?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Not all fire extinguishers seen underground had date cards on them indicating when they were last checked. The fuel bay had an overhead auto discharge, nitrogen activated, dry chemical system. However, there was no tag indicating when it was last checked. It was not determined who is responsible for checking this equipment.	
<u>Initial Audit - Manager's Reply:</u>	
Investigate required training to inspect fire suppression system in the fuel bay. Designated personnel on Production Cave crew check all fire extinguishers underground. An audit to identify all underground extinguishers and checklists is planned.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The fuel bay deluge system is now tagged, indicating regular checking of the system. Oil drums are blocking an extinguisher and an electrical panel in the fuel bay.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.10.4 Fire Fighting Plans:</b>	
<ol style="list-style-type: none"> <li>1. <i>Is the position of all fire fighting pipe lines, hydrant valves, fire stations and fire cabinets shown on a plan drawn to scale of not less than 1:2,500 with a metric scale bar and a marked north point?</i></li> <li>2. <i>Is the plan updated at intervals not exceeding three months?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
A surface plan was seen with the location of fire hydrants marked.	5

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<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 3.12 Gas Detectors</b>	
<b>Subsection 3.12.1 Approved Detector</b> <i>Is every device used for the detection of flammable or noxious gas at a surface or underground mine of a type approved for such use by a recognized testing agency?</i>	
<u>Initial Audit - Inspector Comments:</u> 6 Altair testers were observed in the mine rescue room (LEL, O2, CO, CO2, H2S and NO2). The docking stations bump test the units each day. Acklands has a contract to service these units regularly.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.





# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.12.2 Servicing Detectors</b>	
<i>Has the Manager appointed a qualified person to be responsible for maintaining the appliances used for detection of flammable or noxious gases?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Acklands has a contract to service the detectors. Marcel Syens from MSA, Vancouver has come on one occasion to service some of the units.	
<u>Initial Audit - Manager's Reply:</u>	
Not sure as to why full points were not awarded	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Acklands service the detectors annually. Individual users of detectors are responsible for bump testing their own monitors. A contract is being developed with Industrial Scientific for remote monitoring of the status of detectors. If a detector is faulty, this company will send a replacement unit.	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.12.3 Use of Appliance</b> <i>Has the Manager appointed a qualified person to carry and use an appliance for the detection of flammable or noxious gas?</i> <i>Does the qualified person:</i> <ol style="list-style-type: none"> <li>1. Check the appliance for damage and ensure it is in proper working order before use</li> <li>2. Not use the appliance if found damaged or dysfunctional</li> <li>3. Take all reasonable precautions to prevent the appliance from being damaged</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The shift bosses and mine rescue members have taken on-line, gas detector training (MSA University). This self-study course is followed up with an interview with the trainer to confirm the employee understands how to use the unit.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Section 3.13 Evacuation</b>	
<b>Subsection 3.13.1 Procedures and Instructions</b>	
<i>Has the Manager of a mine:</i>	
<ol style="list-style-type: none"> <li><i>1. Prepared procedures for the safe evacuation of personnel from the mine, or part of the mine, if necessitated by an emergency?</i></li> <li><i>2. Posted copies of the procedure in conspicuous places at the surface and underground?</i></li> <li><i>3. Ensured that each employee receives instruction in the procedures prepared under subsection (1) and that he can recognize the emergency warning system and is familiar with the emergency escape routes from the mine?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The evacuation procedure is found in the “Code One” booklet and is posted. Instructions on the procedure are given during new employee orientation.	5
<u>Initial Audit - Manager’s Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager’s Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</u>	
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Subsection 3.13.2 Emergency Warning System</b> <i>Has the Manager developed and maintained a system acceptable to an Inspector for warning all employees, whether underground or in buildings on surface, of an emergency requiring prompt evacuation of their work places?</i>	
<u>Initial Audit - Inspector Comments:</u> A stench gas system is used to warn employees underground. The stench warning is activated remotely or manually if the automatic system is down. On surface, a phone system and radio backup is used for warning employees.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 3.13.3 Test of System</b> <i>Is a test of the warming system required under section 3.13.2 that does not involve evacuation of key process personnel carried out at least once every 12 months on a production shift, and does the Manager ensure that key process personnel unable to evacuate are knowledgeable with the warning system, and the evacuation procedure?</i>	
<u>Initial Audit - Inspector Comments:</u> A surprise test of the stench warning system was done on October 12, 2011. After the test, a review was done to determine which employees smelled the stench, (if not then why?) and how long it took employees to evacuate.	<u>Score</u> 5

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Part Three– Personnel Safety and Emergency Preparedness

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<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.13.4 Report of Test</b>	
<i>Is a report of all emergency warning system tests, including their effectiveness, produced in a timely manner by the Manager, reviewed by the OHSC and kept on file at the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
OHSC members were involved in the test of the system but there is no record of the test being discussed at an OHSC meeting.	
<u>Initial Audit - Manager's Reply:</u>	
Test conducted Dec. 24, test was discussed at JOHSC meeting	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There was not a specific reference in the JOHSC minutes that the test was discussed but it was stated that the discussion took place. Another test is scheduled for November/13.	4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Part 3 – Total out of 195</b>	<b>184</b>
<b>Part 3 – Percentage out of 100%</b>	<b>94 %</b>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

Section 5.1.1 / 5.2.1 / 3.2.1 Application of Electrical Rules	
<b>Subsection 5.1.1 / 5.2.1 / 3.2.1 Codes and Standards</b> <ul style="list-style-type: none"> <li><i>The Manager shall develop a plan, approved by a registered electrical engineer, for the use of electrical energy at any mine, and the plan shall be forwarded to the Chief Inspector prior to introduction of electricity to the mine. A plan shall also be required for any increase in capacity of an existing installation by more than 500KVA.</i></li> <li><i>The plan referred to shall show the area's at the mine where the energy is to be transmitted and used, including schematic drawings.</i></li> <li><i>Is there a copy of CSA M421-00 "Electricity in Mines" on the mining property?</i></li> </ul>	
<b>Initial Audit - Inspector Comments</b> <p>This mine has an electrical system that has been developed by utilizing some existing infrastructure, updating and installation of new equipment. Although not all drawings were reviewed during this audit there are sufficient and up to date electrical plans available. Most if not all the plans have been developed by professional engineers. Copies of M421-11 are available, however some workers interviewed were not aware of this CSA standard and how it applies to mining.</p>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> <p>As we are still in construction of some areas of the mine and upgrades or changes to the existing infrastructure are ongoing, electrical drawings are being revised as required and posted or made available on SharePoint.  Each electrical worker on site will receive a copy of CSA Standard M421-11 by the end of January 2013. They will then be required to study the standard and write an exam based on some of the more pertinent rules for this mine.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>Online drawings in the UG subs were redlined drawings. The drawings need to be updated and the revised drawing posted in the substations. In discussions with workers, electrical workers were given copies of M421 and later tested on the content. The distribution of M421 and the follow up quizzes is very encouraging.</p>	<b>Adjusted Score</b> <p>4</p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
Section 5.2.1 Notices and Information	
<b>Subsection 5.2.1 &amp; 3.2.2 of M421-00 Notices and Information</b> <i>All Mines:</i> <ul style="list-style-type: none"> <li>• Only authorized persons shall work on or be in charge of electrical equipment or systems.</li> <li>• Only authorized persons undertake installation of and repairs, extensions, or changes to electrical equipment or systems.</li> <li>• Have practices and procedures been developed, implemented and updated as needed to ensure employees are properly trained in electrical safe practices?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>This operation has a well defined electrical department. Interviews with the maintenance superintendent, electrical general foreman and supervisors along with electrical workers were conducted. It is clear that only authorized and qualified workers are in charge of the electrical system and only these people undertake installation and repairs to the equipment and systems. There is no formal electrical safety program in place at the time of the audit. The plan as I understand is in draft and will contain practices and procedures when complete.</p> <p>Click here to enter text.</p>	
<u>Initial Audit - Manager's Reply:</u>	
<p>The electrical safety program is in the development stage, ESPS will be on site Feb 4th 2013 to carry on with the development and roll out of training and program facilitation.</p>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<p>Contact with Terry Becker (ESPS) has been made and ESPS is helping to develop an electrical safety program. To date the Safety program is still in the draft process. This auditor did see parts of the draft and was told that the draft is nearly ready for release for worker input.</p>	3

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

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<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Section 5.4.1 Isolating Switchgear</b>	
<b>Subsection 5.4.1 (1) (2) &amp; 3.2.6 of M421-00 Isolating Underground Workings</b> <i>Is the electrical switchgear installed?</i> <ul style="list-style-type: none"> <li>• Each circuit shall have a provision for locking and tagging of the disconnection means</li> <li>• Operate by a qualified person</li> <li>• Easily accessible for repairs or operation</li> <li>• Fixed in a vertical position</li> <li>• Recessed from haulage ways and protected from physical damage</li> <li>• Located where water cannot accumulate</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> During the audit electrical switch gear installation was inspected all over the mine including surface and underground. The vast majority of the switchgear is new or reconditioned and is installed as required by the code. The only deficiency noted was the ventilation fan installations in the mill had disconnects mounted horizontally, high above any access point to workers without the use of a ladder. <a href="#">Click here to enter text.</a>	<u>Score</u>

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Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
The ventilation fan disconnect switches are mounted close to the fans for lockout purposes when working on the fans. They are readily accessible from the crane work platform which would be used to access the fans. There has been a work notification input into our CMMS to investigate and possibly relocate the disconnect switches to a more feasible location. This is scheduled for completion by Feb 15, 2013.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This ventilation disconnects were not reviewed during the follow up audit.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>Section 5.5.1 / 5.5.3 Trailing Cable Use and Repair</b>	
<b>Subsection 5.5.1, 5.5.2 &amp; 4.6.3 of M421-00 Protective Equipment and Defective Cables</b>	
<ul style="list-style-type: none"> <li>• <i>Whenever persons are handling energized trailing cables suitable protective equipment is being utilized</i></li> <li>• <i>Damaged cables are inspected by qualified persons before they are returned to service</i></li> <li>• <i>All permanent repairs to damaged trailing cables shall be made by qualified persons who shall examine and test the cables before they are allowed to go back into service</i></li> <li>• <i>Trailing cables shall be routed to avoid damage and be kept visible by being mounted on suitable markers at regular intervals throughout the cable route. Cable couplers shall be suitably supported off the ground</i></li> <li>• <i>Suitable strain relief shall be provided at the connection of the cables to machines</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>The trailing cables used at this mine are primarily for mobile equipment underground. All the cables inspected appear to be repaired properly. Cables underground are primarily routed high on the back to prevent damage. Cables on the surface primarily are marked and mounted on cable stands. Strain relief protection at this mine in the underground workings should be reviewed. Additional strain relief could be utilized at some of the jumbo and Drill switchgear attachments as well as the mobile equipment.</p> <p><a href="#">Click here to enter text.</a></p>	
<u>Initial Audit - Manager's Reply:</u>	
<p>All of our underground equipment comes equipped with strain relief from the manufacturer. Addition strain reliefs are installed on the cable couplers when they are installed in their new locations. A work Notification has been input into our CMMS system to audit this practice.</p>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<p>Cables were not reviewed during the follow up audit.</p>	4
<u>Audit Follow Up - Manager's Reply:</u>	
<p><a href="#">Click here to enter text.</a></p>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<p><a href="#">Click here to enter text.</a></p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Section 5.6.1 Submersible Pumps</b>	
<b>Subsection 5.6.1 Ground Fault Protection</b> <ul style="list-style-type: none"> <li><i>All submersible pumps supplied by portable training cable shall be provided with ground fault protection to limit ground fault current to a maximum of 25 amps and automatically isolate the supply in the event of a fault</i></li> <li><i>Submersible pumps operating at voltages in excess of 300 volts shall, (after Jan. 1, 2001) be supplied by shielded portable power cable and have ground fault protection and ground check monitoring</i></li> </ul>	
<b>Initial Audit - Inspector Comments:</b> The inspector did not review a great number of submersible pumps during this audit but those that were looked at did not reveal any deficiencies. <a href="#">Click here to enter text.</a>	<b>Score</b> 
<b>Initial Audit - Manager's Reply:</b> All 600 volt substations feeding submersible pumps are equipped with resistance grounding limiting ground fault current to 15 amps max, and Startco SE-325 or SE-330 NGR Monitor relays to automatically isolate the supply in the event of a fault. All submersible pumps that are installed at New Afton on surface or underground are installed with type SHD-GC shielded trailing cable and Startco SE-105 ground fault/ground check relays. These systems are function tested upon installation and at least once annually thereafter. Test reports are kept and are available upon request.	
<b>Audit Follow Up – Inspector Comments:</b> Submersible pumps were not reviewed during the follow up audit.	<b>Adjusted Score</b> 4
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b> 

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Section 5.7.1 / 5.7.2 Supply Systems for Mobile Electrical Equipment</b>	
<b>Subsection 5.7.1 / 5.7.2 &amp; 3.5.5, 3.5.6 of M421-00 System Testing and Record of Testing</b> <ul style="list-style-type: none"><li><i>Supply systems for mobile electrical equipment shall be tested before being put into service and at least once a year thereafter in order to prove the effectiveness of the ground fault tripping and the ground conductor monitoring circuits</i></li><li><i>A record of the tests shall be kept at the mine and shall be available for examination</i></li><li><i>The supply shall be grounded through a neutral grounding device that limits the ground-fault voltage to 100 volts or less and de-energizes in less than 1's if ground fault current exceeds 20% of the prospective ground fault current</i></li><li><i>The ground conductor monitoring shall de-energize the supply in less than 0.5's if the ground check conductor opens, the ground return conductor opens, or the ground check conductor shorts to ground</i></li></ul>	
<b>Initial Audit - Inspector Comments</b> <p>Documentation has been developed and maintained showing the regular testing of the supply systems for mobile equipment. All the installations inspected during this audit were fed from a supply that was grounded through a neutral grounding resistor. It could not be easily determined whether the NGR would limit the current as required or whether the monitoring of the supply would de-energize in the prescribed time, but the installed looked at appear to have the proper setting on the protective relays.</p> <p><a href="#">Click here to enter text.</a></p>	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> <p>All 600 volt substations feeding mobile electrical equipment are equipped with resistance grounding limiting ground fault current to 15 amps max, and Startco SE-325 or SE-330 NGR Monitor relays to automatically isolate the supply in the event of a fault. All mobile electrical equipment at New Afton is supplied with type SHD-GC shielded trailing cable and Startco SE-105 ground fault/ground check relays. These relays are set to de-energize the supply in the event of a fault of 0.5 amps for 0.1 second. These systems are function tested upon installation and at least once annually thereafter. Test reports are kept and are available upon request. There has been a PM program implemented with our CMMS to document and track all of the ground fault relay settings. This is to be audited on a regular basis to ensure that the settings are current and have not been adjusted. Documentation will be maintained with the CMMS.</p>	
<b>Audit Follow Up – Inspector Comments:</b> <p>System testing was not reviewed during the follow up audit.</p>	<b>Adjusted Score</b> 4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
Section M421-00 Testing and Calibration of Protective Devices	
<b>Subsection 3.5.4 of M421-00 Testing and calibration of Protective Devices</b> <ul style="list-style-type: none"> <li>Except for fuses, each protective device for an installation operating at a voltage in excess of 750 volts shall be tested to confirm that the device prevents the equipment from being operated in excess of its rating</li> <li>These tests shall be performed before initial use and after every three years of use, and the result shall be recorded in a record book</li> </ul>	
<u>Initial Audit - Inspector Comments</u> All the protective relays looked at during this audit appear to be tested in accordance with 3.5.4. Click here to enter text.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Testing and calibration was not reviewed during the follow up audit.	<u>Adjusted Score</u>
	5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

Scoring: **Maximum points available per subsection = 5**

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Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
<b>Section M421-00 Movable Equipment</b>			
<b>Subsection 4.6.1, 4.6.2 of M421-00</b> <ul style="list-style-type: none"> <li>• <u>Movable Switch Houses</u> <ul style="list-style-type: none"> <li>a. <i>Disconnecting means shall be manually operated three phase ganged visi-blade type. It shall be suitably rated, installed at the point of power entry and key interlocked with the circuit breaker or interrupter</i></li> <li>b. <i>The circuit breaker shall be complete with devices necessary to provide overcurrent and ground fault protection</i></li> <li>c. <i>Control devices requiring adjustment or reset shall not be located inside the high voltage section of the switch house enclosure</i></li> </ul> </li> <li>• <u>Movable Substations</u> <ul style="list-style-type: none"> <li>a. <i>The substation supporting structure must be suitable for moving over rough terrain, or shall be fitted with adequate lifting attachments to allow lifting onto other transport</i></li> <li>b. <i>Power transformers shall be of the totally enclosed type or shall be enclosed within a substantial chain link fence. Warning signs must be posted at the entrance to the transformer enclosure with the words "DANGER: HIGH VOLTAGE"</i></li> <li>c. <i>Protection of interconnecting cables to 2 or more movable structures must be protected by a circuit breaker and the cables must not exceed 5m in length</i></li> <li>d. <i>The neutral grounding device shall be mounted as close as practical to the transformer neutral.</i></li> </ul> </li> </ul>			
<b>Initial Audit - Inspector Comments:</b> <p>Substations were reviewed extensively during this audit and it is to be noted that stationary substations will be include in this section. Portable substations underground looked at during this audit did not reveal any deficiencies. The permanent substations at various locations on the surface will require more signage "<i>DANGER: HIGH VOLTAGE</i>" <i>posted on the fence.</i></p> <p><a href="#">Click here to enter text.</a></p>	<table border="1"> <tr> <th style="text-align: center;">Score</th> </tr> <tr> <td style="height: 50px;"></td> </tr> </table>	Score	
Score			

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

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<u>Initial Audit - Manager's Reply:</u>	
More signs will be installed. A work notification has been input into our CMMS to audit the number of additional signs required and will be installed when they arrive on site.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Signage at the substations was not reviewed during the follow up audit.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.6.2.2 &amp; 4.6.2.3 of M421-00 Station Ground Electrodes and Resistances:</b> <ul style="list-style-type: none"> <li>Each Movable Substation shall be grounded to a station ground electrode that meets the requirements of Rules 36-302 (1), (2), and (3) of CSA Standard C22.1</li> <li>The station ground electrode shall be designed and installed to prevent the transfer of potentials in excess of 100 volts from the station ground electrode to any connected mobile electrical equipment. The resistance of the station ground electrode shall be measured and the ground-fault protection tested after installation or relocation of the substation</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The electrical system feeding the underground movable substations includes a separate grounding conductor carried to the surface. There is additional grounding installed at the substation locations underground.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Manager's Reply:</u>	
A program will be put in place to measure the resistance of the grounding conductor to ensure that it is still connected to the main ground grid for the mine site.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There is a ground wire carried through the mine from surface and regular testing is ongoing.	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection M421-00 Electrical Equipment Rooms</b>	
<b>Subsection 4.2 M421-00 Electrical Equipment Rooms</b> <ul style="list-style-type: none"> <li><i>Electrical equipment rooms must ensure the best practical protection against fire propagation, water and dust ingress and corrosive atmospheres</i></li> <li><i>They shall be sufficiently ventilated to maintain equipment at safe temperatures</i></li> <li><i>Lighting levels must be sufficient to enable all equipment to be easily distinguished and all instruments and labels to be easily read</i></li> <li><i>An emergency lighting system shall be provided</i></li> <li><i>A fire extinguishing device shall be provided at each electrical equipment room or vault</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
A significant number of electrical equipment rooms were looked at during this audit both on the surface and the underground. As most of the equipment rooms are new very few deficiencies were noted on the surface. The primary concern with the underground equipment rooms was the excessive heat developing at the main transformer distribution locations. Temperatures were noted at 4 locations with ambient being in the range of 95-115 degrees Fahrenheit. This over temperature condition must be addressed immediately.	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
<p>As a temporary immediate measure, portable fans have been installed in the U/G ERU's to mitigate the heat. Twice daily ERU temperature readings show that this has dropped the room temperature by at least a few degrees F in all ERUs. A permanent solution involves the redesign of the air filtration system of the ERU'S. This is to include the direct extraction of the heat from the VFD'S installed in the ERU'S. Construction of the new system is set to begin in early February and will be completed by late March or early April 2013. ERU transformer nameplates state insulation class of 220 degrees C and a temperature rise of 80 degrees C. Actual transformer temperatures have been observed in the 70-80 degree range, maximum temperature recorded was 85 degrees C. An alarm will be generated if transformer temperature reaches 100 degrees C, and transformer feeder breakers will open if the temperature reaches 120 degrees C.</p>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<p>Records were provided to this auditor that shows significant improvement with regards to lowering ERU temperatures. The reconfiguring of the cooling ducts has made a big difference in operating temperatures. However 2 ERUs have not had the ventilation reconfigured with one ERU having a temperature of approximately 100 degrees.</p>	3
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

## Subsection M421-00 Quick Connect Cable Couplers

### Subsection 3.4.4 M421-00

#### 3.4.4.1

*A quick-connect coupler used to join portable power cables or a cable and a flange-mount receptacle, operating at a voltage in excess of 300 V, shall have*

- (a) a mechanical fastening arrangement, to join the coupler, with a tensile strength greater than that of the portable power cable;*
- (b) strain-relief devices suitable for the intended portable power cable;*
- (c) a means to prevent the ingress of moisture;*
- (d) a means to mechanically lock the coupler, where the circuit voltage exceeds 750 V;*
- (e) a pin arrangement such that*
  - (i) the ground conductor makes before and breaks after the phase conductors; and*
  - (ii) the ground-check circuit makes after and breaks before the phase conductors; and*
- (f) ground-fault protection and ground-conductor monitoring at the source of supply.*

#### 3.4.4.2

*Notwithstanding Clause 3.4.4.1, if a disconnect switch is mechanically or electrically interlocked with a receptacle for a portable-power-cable plug, and if quick-connect couplers are not used downstream, ground-fault protection and ground-conductor monitoring shall not be required.*

#### Initial Audit - Inspector Comments:

This operation primarily uses UEE type couplers. These couplers are either mechanically or electrically interlocked. During this audit no deficiencies were noted with respect to the use of couplers.

[Click here to enter text.](#)

Score

#### Initial Audit - Manager's Reply:

The UEE cable couplers used at New Afton meet all the requirements of this section, and have performed very well for us here.

#### Audit Follow Up – Inspector Comments:

Couplers were not reviewed on the follow up audit.

Adjusted  
Score

5

#### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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October 16 & 17, 2012

<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><b>Section M421-00 5.4.1 General</b></p> <p><b>Subsection:</b></p> <p><i>Switchboards and switchgear shall</i></p> <ul style="list-style-type: none"> <li>a) <i>be protected against physical damage;</i></li> <li>b) <i>be guarded in such a manner that access by unauthorized persons can be prevented, if there are exposed live parts;</i></li> <li>c) <i>be separated from an explosives storage area by at least 15 m when measured along mine workings;</i></li> <li>d) <i>have clearances around them to permit safe access for inspection, maintenance, and repairs;</i></li> <li>e) <i>be installed on a fire-resistant foundation; and</i></li> <li>f) <i>be in such a location as to minimize the spread of fire.</i></li> </ul>	
<p><u>Initial Audit - Inspector Comments:</u></p> <p>Switchboards and other electrical equipment inspected during this audit were in compliance with this subsection. Parking of mobile equipment in front of portable substations underground should be discouraged as several no post barriers were noted as being “bumped into” during the inspection.</p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>Concrete blocks are used to guard the entrance of the U/G substation. These blocks are use in various locations in the mine; they may show signs of wear from where they were last used. It is part of our regular communications that these blocks are not to be used as bumper blocks, parking directly in front of the substation is not encouraged, and this subject comes up frequently in regular safety talks.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>This item was not reviewed during the follow up audit.</p>	<p><u>Adjusted Score</u></p> <p>4</p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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## Section M421-00 Conveyor Systems

### 4.4.3 Conveyor systems

#### 4.4.3.1

An electrically driven conveyor shall have the following:

(a) pull-cords (see [Clause 4.4.3.2](#)) for stopping the conveyor at accessible locations along the conveyor.

The pull-cords shall be within easy reach of persons at such locations;

(b) when the conveyor is started automatically by remote control, or when a portion or portions of the conveyor are not visible from the operator's position, a start-up warning device; and

(c) head, tail, drive, deflection, and tension pulleys guarded at any pinch point that is or can become accessible.

#### 4.4.3.2

A pull-cord required by [Clause 4.4.3.1](#) shall

(a) operate a manual-reset-type switch that stops the conveyor;

(b) be designed and arranged so that it operates the associated switching device and generates the emergency stop signal when

(i) the pull-cord is pulled in any direction;

(ii) a perpendicular pulling force of less than 200 N is applied to the pull-cord; and

(iii) a perpendicular deflection of the pull-cord of less than 400 mm occurs;

(c) be able to withstand, without breaking, a tension force ten times greater than is necessary to generate the emergency stop signal; and

(d) incorporate a visual indicator to show which device has been operated where more than one switching device is necessary.

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<p><u>Initial Audit - Inspector Comments:</u></p> <p>Conveyor systems were reviewed and inspected during this audit both on the surface and underground portions of this mine. All new installations are compliant with this section of the code with respect to installation of safety devices. The only area of concern was the varying degrees of tightness of the pull cords. Please note the requirements of this section in 4.4.3.2 (b) (ii) and (iii). Seasonal adjustment may be required to meet the criteria defined in this section.</p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>As part of our regular preventative maintenance program, the pull cords are inspected regularly for correct operation and functionality. Pull cord slack is adjusted if needed at the time of the inspection.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Pull cords were not reviewed during the follow up audit.</p>	<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>Section M421-00 Grounding</b>	
<b>Subsection 5.6</b>	
<b>5.6.1 Grounding Circuit</b>	
<i>The grounding circuit from underground to surface shall consist of at least one copper conductor interconnected and bonded with metallic parts of the electrical system, unless equally effective means are provided.</i>	
<b>5.6.2 Inspection</b>	
<i>The grounding network shall be inspected periodically for continuity and assessed for adequate capacity.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The separate grounding circuit from surface to underground was inspected at numerous locations and no deficiencies were noted. As discussed with electrical supervision a conscious effort is required to review and make visual inspections to this system on a continual basis to ensure its integrity and meet the requirement of 5.6.2.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
A preventive maintenance task will be implemented in our CMMS to inspect and measure the ground conductor throughout the mine. Program will be in place by the end of Q1 2013.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This auditor was informed that a PM had been generated and meter(s) were either ordered or available.	
	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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### **Subsection 3.5**

#### **3.5.5 Ground-Fault Protection**

*Where ground-fault protection is used, the supply shall be*

- a) grounded through a neutral-grounding device that limits ground-fault voltage to 100 V or less; and*
- b) de-energized in less than 1 s if ground-fault current exceeds 20% of the prospective ground-fault current (see Appendix A).*

#### **3.5.6 Ground-Conductor Monitoring**

*Where ground-conductor monitoring is used, the supply shall be de-energized by a fail-safe circuit in less than 0.5 s, and a de-energized supply shall not become energized if*

- a) the ground-check conductor opens;*
- b) the ground-return conductor opens; or*
- c) the ground-check conductor shorts to ground.*

*A ground-conductor monitoring system shall have an open-circuit voltage of less than 100 V and shall continuously indicate ground-circuit continuity.*

### **3.6 Grounding**

#### **3.6.1 Circuit-Opening Devices in Grounding Conductors**

*A circuit-opening device shall be permitted in the neutral-to-ground connection on any star-connected generator whenever two or more generators are required to be operated in parallel. Procedures for opening and closing these devices shall be instituted to ensure operator safety.*

#### **3.6.2 Neutral-Grounding Devices**

*A neutral-grounding device shall be*

- a) continuously rated, except when ground-fault tripping is provided;*
- b) monitored so as to de-energize the supply in less than 60 s if the neutral-grounding device opens; and*
- c) connected as close as practical to the supply neutral.*

#### **3.6.3 Ground-Fault Indication**

##### **3.6.3.1**

*A device required by Rule 10-106 (2) of CSA Standard C22.1 shall be provided with*

- a) short-circuit protection; and*
- b) disconnecting means such as a general-use switch.*

*A ground fault shall be investigated and removed without delay.*

##### **3.6.3.2.**

*Where an audible or visible alarm is used to indicate a ground fault, such alarm shall continue signalling to indicate the fault until the fault is cleared.*

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<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is extensive use of ground fault protection and monitoring taking place at this operation both underground and on surface. All the equipment has been recently installed and all installations inspected met the requirements of this section.	
<u>Initial Audit - Manager's Reply:</u>	
Every 600 volt branch circuit fed from an underground portable substation has its own individual ground fault relay protecting the circuit, and most branch circuits fed from surface substations have as well.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Ground fault protection was not reviewed during the follow up audit.	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>Section M421-00 Travelling Cranes</b>	
<b>Subsection 3.4</b>	
<b>3.4.6.1</b>	
<i>Electric overhead travelling cranes shall meet the requirements of CSA Standard B167.</i>	
<b>3.4.6.2</b>	
<i>Each crane shall be equipped with</i>	
<ul style="list-style-type: none"> <li><i>a) an upper-limit switch that prevents the crane block from reaching its upper limit of travel; and</i></li> <li><i>b) a lower-limit switch if operation of the crane requires the hook to leave sight of the operator at its lower limit of travel.</i></li> </ul>	
<b>3.4.6.3</b>	
<i>A circuit breaker or load-break switch for interrupting the power supply to the crane shall be provided in the cab.</i>	
<b>3.4.6.4</b>	
<i>Each service crane shall be provided with a form of dead-man control.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The surface cranes that this inspector reviewed were in compliance with this section with respect to electrical requirements.	
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
A program is in place for regular inspection and testing of all overhead cranes on site.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Cranes were not reviewed during the follow up audit.	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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**Scoring: Maximum points available per subsection = 5**

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**5.** All components of the element are present, in place, being monitored and working. **4.** Most components of the element are present, minor improvements needed or additional training is required. **3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft format. **1.** The element is not present; however, the mine has made attempts to develop it or it is outdated. **0.** The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### Subsection 3.3

#### 3.3.6.1

*Electrical supply lines shall be installed in accordance with CSA Standard CAN/CSA-C22.3 No. 1 or the applicable standard of the jurisdiction.*

#### 3.3.6.2

*Overhead supply line clearances referred to in CSA Standard CAN/CSA-C22.3 No. 1 require additional clearances as noted in Clauses 4.3.1.1 and 4.3.1.2 of that Standard (see Clause B2 of this Standard).*

#### 3.3.6.3

*Notwithstanding the requirements of Table 2 and Clause 4.3.1.1 of CSA Standard CAN/CSA-C22.3 No. 1, minimum vertical clearances in Table 3 of this Standard shall be increased where haulage vehicles are frequently used (see Clause B1 of this Standard). Minimum vertical clearances shall be increased by*

- a) the amount by which the combined vehicle and load height exceeds 4.15 m;*
- b) the amount of snow pack; and*
- c) the amount by which banked shoulders, crests, or road maintenance increases road elevation.*

#### 3.3.6.4

*Vertical clearances specified in Clause 3.3.6.3 do not provide for the travelling of cranes, shovels, drills, and other oversized equipment having unusual dimensions. Clauses 3.3.6.5 and 3.3.6.6 relate to the movement of this special equipment underneath or alongside energized supply lines but are not intended as a procedure for working in the vicinity of energized supply lines.*

#### 3.3.6.5

*When special equipment is moved, and where the equipment will encroach on the minimum clearances listed in Table 4, the supply lines shall be isolated and grounded. When the movement is under the supervision of qualified personnel, the clearances in Table 3 shall be permitted.*

#### 3.3.6.6

*Personnel involved in the movement of special equipment in the vicinity of energized overhead supply lines shall minimize the electric-shock hazard in the event of accidental contact by*

- a) operating the equipment from a position on the equipment that is not in direct contact with earth;*
- b) having all grounds persons/safety watchers maintain a safe stand-off distance from the equipment;*
- c) using only prearranged visual signals or radio communications. Hard-wired communication systems shall not be used between the equipment and persons on the ground; and*
- d) ensuring only persons required for the move are directly involved.*

Initial Audit - Inspector Comments:

Score

Scoring: Maximum points available per subsection = 5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<p>The electrical distribution overhead lines at this operation have primarily been installed by a qualified contractor. The assumption is and cannot be disputed by visual observation is that the overhead supply lines have been installed to meet the requirements of the code. The notwithstanding clauses defined in 3.3.6.3 through to 3.3.6.6 cannot be emphasized enough as there have been far too many occurrences of equipment coming into contact with high voltage lines at various other mining operations in the province in the last few years.</p>		
<p><u>Initial Audit - Manager's Reply:</u></p> <p>The overhead distribution system has been installed by a qualified contractor that specializes in overhead power distribution system construction and maintenance. The overhead power distribution system that crosses any road way has the height of the lowest conductor clearly marked on signage installed on either side of the line as it crosses the road way. The posted heights have recently been audited and new, larger signs are going to be installed at each location. Sign size has been increased to 24"x 24".</p>		
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Overhead lines were not reviewed during the follow up audit. This auditor was told that during the recent shut down much of the powerline was inspected and maintenance on components was completed.</p>		<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>		<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

## Section M421-00 Work on Live Equipment

### Subsection 3.2

#### 3.2.5.1

*With the exception of utility work and work on electric furnaces and plating tanks, repairs or alterations shall not be carried out on live equipment.*

#### 3.2.5.2

*Notwithstanding Clause 3.2.5.1, if adjustments, tests, or calibrations are performed while equipment is live, all necessary precautions shall be taken to ensure that the work can be done safely.*

#### 3.2.8 Notices to Workers

*Where a hazard exists from inadvertent access to or interference with electrical apparatus, durable notice signs of sufficient size shall be effectively posted that*

- a) prohibit unauthorized personnel from handling or interfering with electrical apparatus;*
- b) warn of danger and indicate the highest voltage in use;*
- c) provide instructions for communication with the supervisor of the electrical equipment;*
- d) advise of the procedure to be followed in case of electrical fire; and*
- e) contain directions for the procedure to be followed to rescue persons in contact with live electrical conductors, and for the resuscitation of persons from the effects of electrical shock.*

*The requirements of Items (c), (d), and (e) are not obligatory where adequate mine emergency procedures are in place.*

### Z462 Workplace Electrical Safety

#### 4.1.2 Purpose

*The practices and procedures specified in this Standard are intended to provide for the safeguarding of workers relative to electrical hazards in the workplace.*

#### Initial Audit - Inspector Comments:

In discussion with management and workers during this audit it is apparent that the practice of working on live electrical equipment is discouraged. That being said there is not any formal training or a formal Workplace Electrical Safety program developed and implemented at this mine. There is a plan in place to provide training and a draft program is being developed.

#### Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<b>Initial Audit - Manager's Reply:</b>	
A large percentage of the electrical safety program is centered on electrical safety with policies and procedure developed. The procedures will support the policies. The program will also consist of online training and testing, as well as class room instructional training. Next meeting is scheduled for Feb 4th 2013.	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
Progress towards an electrical program is slow in developing and is not well communicated to electrical workers at site. It is recognized that these programs are difficult to design and implement. Basic procedures could be in place and expanded upon as the program is built.	3
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Section M421-00 Wiring Methods - Underground</b>	
<b>Subsection 5.2</b>	
<b>5.2.1 Conductors</b>	
<i>Conductors, cables, or portable power cables supplying power to fixed equipment at voltages-to-ground in excess of 150 V shall be protected by armour, conduit, or other similar mechanical means or by suitable location.</i>	
<b>5.2.2.2</b>	
Portable power cables shall meet the requirements for FT5 rating as specified in CSA Standard C22.2 No. 0.3.	
<b>5.2.2.3</b>	
<i>Mine power cables without armour jackets, installed after January 1, 2001, shall meet the requirements for FT5 rating as specified in CSA Standard C22.2 No. 0.3.</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
It is difficult if not impossible to determine if every piece of cable is in compliance but there was ample evidence that most of the cabling used underground at this mine is in compliance.	
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Manager's Reply:</u> All cable that has been purchased for the construction of this mine has been purchased from a reputable electrical wholesaler; the spec that was issued to the wholesale company included all the standards that must be met to supply the cable.	
<u>Audit Follow Up – Inspector Comments:</u> Cabling was not reviewed during the follow up audit.	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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**Section M421-00 Installation of Transformers and Capacitors**

**Subsection 5.3:**

**5.3.1 Surface Transformers — Flash Point Less than 275 degree C**

*A transformer containing a liquid having a flash point less than 275 degree C, and installed on the surface in the vicinity of the escapeway or entrance to an underground mine*

- a) shall be located at least 15 m from a headframe, shaft house, portal house, adit, or combustible building attached to such a structure;*
- b) shall be mounted on a non-combustible pad designed so as to contain the liquid from the largest transformer and prevent spill from seeping into and entering the mine, shaft house, portal house, adit, headframe, or other building; and*
- c) may be located beside a fireproof building that is attached to the headframe, shaft house, adit, or portal house if there are no openings in the part of the building adjacent to the transformer through which smoke or heat can enter the building.*

**5.3.2 Underground Transformers — General**

*A transformer installed in an underground mine shall*

- a) be protected against physical damage;*
- b) be guarded in such a manner that access by unauthorized persons can be prevented, if there are energized exposed parts;*
- c) be separated from an explosives storage area as follows:*
  - i. when the transformer is over 5 kV•A, by a distance of at least 15 m of undisturbed rock or a distance of at least 60 m of open space; or*
  - ii. when the transformer is 5 kV•A or less, by a distance of at least 15 m of open space;*
- d) be rated for the ambient temperature;*
- e) have clearances around it to permit safe access for inspection, maintenance, and repairs;*
- f) be mounted on a fireproof foundation and in such a location as to minimize the spread of fire;*
- g) not be used where flooding is likely to occur; and*
- h) be provided with an enclosure that meets the requirements of Rule 2-400 of CSA Standard C22.1.*

Initial Audit - Inspector Comments:

Score

**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

October 16 & 17, 2012

<p>All the transformers inspected at this mine both on the surface and underground were compliant with this section. Of note this inspector is not able to confirm that the underground transformers are rated for the high ambient temperatures that are being experienced at some locations.</p> <p><a href="#">Click here to enter text.</a></p>		
<p><u>Initial Audit - Manager's Reply:</u></p> <p>The underground substations are all equipped with temperature monitoring relays that are designed to trip the main switch open if the core temp gets higher than 150 degrees C. ERU transformer nameplates state insulation class of 220 degrees C and a temperature rise of 80 degrees C. Actual transformer temperatures have been observed in the 70-80 degree range, maximum temperature recorded was 85 degrees C. An alarm will be generated if transformer temperature reaches 100 degrees C, and transformer feeder breakers will open if the temperature reaches 120 degrees C.</p> <p>The redesign of the air management system in the underground substations will address the higher than normal ambient temperatures. Construction will begin in February 2013, starting with ERU2 and moving to the next ERU that has the next highest ambient temperature.</p>		
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Transformers were not reviewed during the follow up audit.</p>		<p><u>Adjusted Score</u></p> <p>4</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>		<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>		

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### Section M421-00 Installation of Storage Batteries

#### Subsection:

##### 5.5.1 Location

*Stationary-type storage batteries whose aggregate capacity is 5 kW at the 8 h discharge rate shall be located in storage-battery rooms or in areas with equivalent enclosures.*

##### 5.5.2 Installation

*Storage-battery and battery-charging areas shall comply with the following:*

- a) they shall be located so as to prevent damage by mobile equipment;*
- b) they shall be ventilated by an adequate amount of fresh air to ensure the diffusion of hazardous gases that are produced;*
- c) battery-charging stations shall be equipped with adequate fire-fighting apparatus suitable for fighting Class C fires;*
- d) no open flame is permitted, except as defined in Item (g);*
- e) smoking shall be prohibited;*
- f) electrical apparatus shall be enclosed in an approved enclosure or otherwise located to ensure that no possibility for ignition exists; and*
- g) battery repairs may be undertaken after all due precautions to ensure the dissipation of flammable gases have been taken. Battery charging shall be discontinued for the duration of the time taken to effect the repair.*

##### 5.5.3 Disposal

*The electrolyte of storage batteries shall be removed and neutralized before the batteries are scrapped or stored for salvage.*

#### Initial Audit - Inspector Comments:

The unit substation batteries were not reviewed properly during this audit. An internal audit of these installations should be undertaken to ensure proper ventilation is provided. No other deficiencies were noted by this inspector.

Score

#### Initial Audit - Manager's Reply:

A preventative maintenance task will be developed by the end of Q1 to address this inspection.

#### Audit Follow Up – Inspector Comments:

Battery installs were not reviewed during the follow up audit. Batteries in the subs were being checked on a routine but these inspections reports were not reviewed by this auditor.

Adjusted  
Score

4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section M421-00 Trackless Mobile Electrical Equipment</b>	
<b>Subsection 5.10.2</b>	
<b>5.10.2.1</b>	
<i>Clause 5.10.2 applies to the source of power, isolation, ground-fault protection, ground-wire monitoring, portable power cable, multiphase bus system, slip rings, and take-up reel.</i>	
<b>5.10.2.2</b>	
<i>A transformer supplying power to mobile electrical equipment shall</i>	
<ul style="list-style-type: none"> <li>a) <i>have a minimum kV•A rating of 25% of the maximum kV•A rating of the mobile electrical equipment; and</i></li> <li>b) <i>be supplied by load-break isolating devices for the primary supply to the transformer and by a secondary circuit supplying power to the mobile electrical equipment.</i></li> </ul>	
<b>5.10.2.3</b>	
<i>Portable power cables used to supply ac power to mobile electrical equipment shall</i>	
<ul style="list-style-type: none"> <li>a) <i>meet the requirements of CSA Standard CAN/CSA-C22.2 No. 96;</i></li> <li>b) <i>meet the requirements of Table 12A of CSA Standard C22.1 for the rated load current of the mobile electrical equipment. Voltage drop shall not exceed the design criteria for the system;</i></li> <li>c) <i>have cable-entry connectors and conductor terminations that will not be adversely affected by normal operation of the mobile electrical equipment;</i></li> <li>d) <i>have cable-entry connectors that prevent the entry of water, dust, and other environmental conditions to junction boxes and switch boxes;</i></li> <li>e) <i>be suspended or made secure when installed outside the radius of operation of the mobile equipment;</i></li> <li>f) <i>when spliced, have electrical and mechanical characteristics equivalent to that of the cable; and</i></li> <li>g) <i>when spliced, be subjected to an insulation voltage test equal to the rating of the cable.</i></li> </ul>	

**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Five – Electrical Power Systems

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<p><u>Initial Audit - Inspector Comments:</u></p> <p>Only two pieces of mobile equipment were inspected during this audit due to time constraints. Neither of these two installations revealed any deficiencies.</p>	<p><u>Score</u></p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p>All transformers, trailing cables and other parts of the distribution system supplying power to mobile electrical equipment at this mine meet the requirements of this section.</p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p>Mobile equipment was not reviewed during the follow up audit. Moveable equipment will be reviewed on following inspections. Discussion with the Safety department representative with regards to training for the contract diamond drillers as to how the drillers were handling energised cables.</p>	<p><u>Adjusted Score</u></p> <p>5</p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### 5.10.2.5 continued

Electrical equipment installed on the vehicle shall meet the following requirements:

- a) all enclosures shall meet the Type-4 requirements of CSA Standard CAN/CSA-C22.2 No. 94;
- b) each motor or group of motors shall have separate disconnecting means, overload protection, and ground-fault protection. Acceptable specialized drives shall be exempt;
- c) all motors shall be of the totally enclosed type;
- d) all high-voltage and low-voltage ac wiring and terminations shall be clearly identified, separated by suitable barriers from automotive circuits and terminals, and have a flame-test rating of FT2 as specified in CSA Standard C22.2 No. 0.3; and
- e) high-voltage or low-voltage ac supply shall not be used to power or drive any automotive electrical device such as lights, battery-charging circuits, gauges, horns, warning devices, solenoids, or radio control equipment.

### 5.10.2.5

Electrical equipment installed on the vehicle shall meet the following requirements:

- a) all enclosures shall meet the Type-4 requirements of CSA Standard CAN/CSA-C22.2 No. 94;
- b) each motor or group of motors shall have separate disconnecting means, overload protection, and ground-fault protection. Acceptable specialized drives shall be exempt;
- c) all motors shall be of the totally enclosed type;
- d) all high-voltage and low-voltage ac wiring and terminations shall be clearly identified, separated by suitable barriers from automotive circuits and terminals, and have a flame-test rating of FT2 as specified in CSA Standard C22.2 No. 0.3; and
- e) high-voltage or low-voltage ac supply shall not be used to power or drive any automotive electrical device such as lights, battery-charging circuits, gauges, horns, warning devices, solenoids, or radio control equipment.

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Only two pieces of mobile equipment were inspected during this audit due to time constraints. Neither of these two installations revealed any deficiencies.	
<u>Initial Audit - Manager's Reply:</u>	
The electrical systems installed by the manufacturer on mobile electrical equipment at this mine meet the requirements of this section.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
This item was not reviewed during the follow up audit. Will be reviewed on regular inspection tours.	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Part 5 – Total out of 115</b>	<b>97</b>
<b>Part 5 – Percentage out of 100%</b>	<b>84%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

Afton Follow up audit July 16-17, 2013

### SUMMARY

Afton is now on its' own with many of the contractors finished their projects. It is very clear that NewGold is looking to make Afton a model mine. Development with respect to the electrical safety program is well planned with; computer based training, providing arc flash gear and development of a safety program. This auditor's concern is that the electrical workers onsite are not involved in its evolution. If workers find the procedures to be cumbersome or difficult to complete their tasks, participation may not be at a high level. Workers did not seem to know how the training they were receiving fit into the overall training and electrical safety programs. Development and implementation is progressing slowly.

Temperatures in the ERUs have dropped significantly (as per provided charts). There are still two ERUs that have not had the ventilation reconfigured with one having temperatures of 100 degrees. As warm weather is now here these projects need to be completed to keep electrical equipment operating at a safe temperatures.

NewGold has set a high standard for itself with regards to electrical safety. Electrical workers are being trained on how to protect themselves with regards to electrical exposure. The mine primarily uses arc resistant electrical equipment and is providing PPE. The concern is the lack of an electrical safety program to educate workers on PPE as to when and where to use it.

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>6.1 Work System Appraisal</b>	
<b>Subsection 6.1.1 Who is responsible for Ventilation</b>	
<i>Has the manager appointed a qualified person to be responsible for all aspects of ventilation in the mine?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Ahsan Chaudry Mining Engineer EIT.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Section 6.3 Manager - Underground</b>	
<b>Subsection 6.3.1(2) Escape Plan</b>	
<i>Is there an escape route plan for each level or working area showing the main routes of egress from the active workings, sites of all underground refuge stations, and ventilation as required in section 6.3.2(5)?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes dated Sept 2012	<u>Score</u> 5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.1(1) Escape Plan</b> <i>Are they posted in a conspicuous place accessible to all persons working underground?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Access/Egress schematics are posted in all refuge stations underground and updated monthly	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Subsection 6.3.2(1) General</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li><i>An accurate and up-to-date copy of the plan of the underground workings?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Yes, Oct 1, 2012 presentation Oct,16, 2012 to Audit team	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(2) Escape</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li><i>A copy of the current emergency and rescue plan required by 6.3.1(2)</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Yes, Reviewed	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.2(3)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li>A separate underground plan of every level showing all workings, including shafts, tunnels, diamond drill holes, dams, bulkheads, electrical substations, explosives storage, shop areas, permanent seals and stoppings,</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Yes, Very detailed, drill holes on drive layout. Complete on many layers.	<u>Score</u>
	4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Subsection 6.3.2(4)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li><i>Vertical mine sections at suitable intervals and azimuths, showing all shafts, tunnels, drifts, sloped roadways, rooms, stopes, diamond drill holes and the location of the top of the bedrock, surface of, and type of, the overburden and the bottom and surface of any known body of water or watercourse or material likely to flow,</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Daily with cave information from TDR and seismic data.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(5)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li><i>A ventilation plan showing the normal direction and volume of the main air currents and the location of permanent fans, ventilation doors, fire doors, stoppings and connections with adjacent mines, and</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u> Yes ,information is on the drawings	<u>Score</u> 4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.3. Manager - Underground</b>	
<b>Subsection 6.3.3 Shiftboss Plans</b>	
<i>Does the shiftboss have current development plans for the assigned area of responsibility indicating the size, dip and length of all development headings?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, on daily sheets provided by engineering.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.3(1) Shiftboss Plans</b> <i>Do they indicate adjacent or disused workings?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Show old caved area, new development and new cave area.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.3(2) Shiftboss Plans</b> <i>Are drill holes that are within 8m of a heading indicated on the map?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Map inspected	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.3(3) Shiftboss Plans</b> <i>Are the drill holes that extend into mine workings clearly marked?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, 10 M radius marked in maps	<u>Score</u>
	4
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.3.3(4) Shiftboss Plans</b> <i>Are the collars of these drill holes whether on surface or underground located and plugged as required?</i>	
<u>Initial Audit - Inspector Comments:</u> Protocol is to plug but many historic surface holes not grouted.	<u>Score</u>

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<u>Initial Audit - Manager's Reply:</u>	
No blasting occurs while personnel underground. Any exception covered by specific JHA.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The surface needs to be guarded when there is potential for a DDH to surface, to intersect the blast	3
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.5 Effective Ground Support</b>	
<i>Has the manager ensured that an effective ground support system has been properly installed and maintained?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, been audited by Michael Cullen P. Eng MEMNG consultant.	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Subsection 6.3.5 Qualified Person Qualified Person</b>	
<i>Is there a ground control plan developed by a qualified person?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Andy Davies, Al Chan, Cory	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.5 Quality Control</b>	
<i>Is there a quality control program in place to ensure that the ground control program or ground support systems are installed and maintained according to the directions of a qualified person?</i>	
<u>Initial Audit - Inspector Comments:</u> Check surveys on Convergence in cave area, plus surface measurements.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.4 Mine Shift Boss – General Rules</b>	
<b>Subsection 6.4.1(1)(2)</b> <i>Does a certified shiftboss inspect all active headings at least twice per shift?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes but record keeping needs improvement, could not track what heading had been inspected.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> We now log our gas tests. We have created a new 5 point card with a spot for two onshift signatures with gas readings also	
<u>Audit Follow Up – Inspector Comments:</u> Gas tests are in the 5 point card plus in the shifter's log	<u>Adjusted Score</u> 5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Subsection 6.4.1(1)(2) Shiftboss</b>	
<ul style="list-style-type: none"> <li>Do the shift bosses have current tickets?</li> <li>Are the first aid and transportation endorsements current?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Reviewed	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.4.2 &amp; 3 Log Book</b>	
<i>Is there a shift log recording the activities in each heading that is signed by the examining shiftboss and countersigned by the corresponding shiftboss?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes	
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
There needs to be a tamper proof record for the shifters log, ,bound book with numbered pages	4

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Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.8 Mine Plans</b>	
<b>Subsection 6.8.1(1) Duty to Keep Plans - Surface</b> <i>Are updated accurate mine plans prepared in accordance with the Code and good engineering practice as follows:</i> <i>A surface plan showing the</i> <ul style="list-style-type: none"> <li>• <i>claims, licences or leases on which mining is being carried out, and</i></li> <li>• <i>all lakes, watercourses,</i></li> <li>• <i>naturally unstable ground, such as peat bogs or sloughs,</i></li> <li>• <i>main roads,</i></li> <li>• <i>railways,</i></li> <li>• <i>power transmission lines,</i></li> <li>• <i>buildings,</i></li> <li>• <i>shaft openings, adits,</i></li> <li>• <i>surface workings,</i></li> <li>• <i>diamond drill holes collared on the surface,</i></li> <li>• <i>dumps,</i></li> <li>• <i>dams, tailings ponds and their overflow channels,</i></li> <li>• <i>topographic contours, and</i></li> <li>• <i>any abandoned, adjacent or historical workings.</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, in place Jane McCaw has this document	4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.8.3 Failure to Post Plans:</b> <i>Is the traffic control plan prepared and available, showing:</i> <ul style="list-style-type: none"> <li>• Maximum allowable speeds for the vehicles in use</li> <li>• Rules for passing, "STOP" and "Yield Rules"</li> <li>• Priority rules for various vehicles</li> <li>• Rules for the night operation</li> <li>• Maximum operating grades, emergency run-off protection, shoulder barriers</li> <li>• Other information to ensure the safe operation of all types of vehicles in the minesite including but not limited to, single lane traffic areas, X-over areas</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes in place for pit access.	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.10. Dumps</b>	
<b>Subsection 6.10.1(4) Dumping at Open Holes</b>	
<i>Has the manager required a qualified person to ensure:</i>	
<i>(4) where material is to be dumped from a vehicle into a bin, raise, or other opening, provide and maintain a barrier of sufficient size and strength and anchored sufficiently to prevent the vehicle from inadvertently entering the bin, raise, or opening,</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, a design is in place and designed to take the heaviest vehicle underground. Designed by Core Engineering .	<u>Score</u>
	5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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<b>Subsection 6.10.1(5) Dumping Prohibited</b>	
<i>Has the manager required a qualified person to ensure:</i> <i>(5)where dumping is prohibited or hazardous, prevent dumping by placing across the entrance a barrier sufficient to prevent access and a sign that reads "No entry for dumping purposes,"</i>	
<u>Initial Audit - Inspector Comments:</u> No barrier or sign was noted	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Signage has been made and have been installed.	
<u>Audit Follow Up – Inspector Comments:</u> Signs noted while on U/G tour	<u>Adjusted Score</u>
5	
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.12 Mine Openings</b>	
<b>Subsection 6.12.1 Two Exits</b> <i>Prior to production has the mine provided a second exit?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, The access decline and the conveyor decline	<u>Score</u>
5	

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.12.2 Distance between Exits</b> <i>An auxiliary exit shall not at any point be less than 30 m from the main entrance to underground workings of the mine and shall be separated by solid strata. Is this so?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Access decline is the secondary access	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.12.4 Ease of Travel</b>	
<i>Does the auxiliary exit afford easy passage and is it provided with good and substantial ladders from the deepest working to the surface, or with hoisting apparatus, which shall constantly be available for use?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
All ramps at present time,	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.12.5 New Mine</b>	
<i>Where an underground mine is being developed, have the shafts and raise openings to the surface been provided with a substantial collar secured to the bedrock, comprised of concrete or other material that will perform in the same manner as concrete and is not expected to deteriorate?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes, Concrete collars on all Vent Raises	5

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Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.13 Refuge Stations</b>	
<b>Subsection 6.13.1 Location</b>	
<i>Where a workplace in an underground mine is more than 300 m from a mine portal or from a shaft station which is used to access that workplace, has the manager provided and maintained, in a suitable location for that workplace, a refuge station in accordance with section 6.13.3?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, all well equipped	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.13.3 Construction and Equipping</b> <i>Is the underground refuge station</i> <ol style="list-style-type: none"> <li>1) <i>clearly identified, constructed of non-combustible material, and of sufficient size to accommodate all</i></li> <li>2) <i>persons working in the vicinity,</i></li> <li>3) <i>equipped with a supply of air, a supply of water, a means of communicating with the surface, a means of sealing to prevent entry of gas, and first aid equipment,</i></li> <li>4) <i>equipped with a plan of the mine clearly showing all emergency exits, and</i></li> <li>5) <i>located</i> <ol style="list-style-type: none"> <li>a. <i>100 metres from explosives magazines,</i></li> <li>b. <i>100 metres from flammable materials storage, and</i></li> </ol> </li> <li>6) <i>(c) constructed or located in such a manner to prevent inadvertent entrance or damage by vehicles, or</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes locations are meeting requirements and meet and exceed requirements. Mine designed a independent means of supplying air, water and communications to the main refuge station. This is a first in BC	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>6.16 Underground Mobile Equipment</b> <b>Subsection 6.16.1 Clearances</b> <ul style="list-style-type: none"> <li>Where any mobile equipment is operating, has a minimum clearance of 2 m in excess of the maximum width of the vehicle been maintained? The vehicle shall be fitted with an approved roll-over-protective structure ROPS or falling object protection structure (FOPS).</li> <li>Has a minimum clearance of 300 mm above the ROPS or FOPS been maintained?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> In some areas of the exploration decline, the clearance is not here but safety bays were developed during construction.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>6.17 Safety Stations</b>	
<b>Subsection 6.17.1 Safety Stations</b> <i>Where the Inspector has allowed a reduction in the clearances in 6.15.2 and 6.16.1, do the safety stations meet the following criteria?</i> <ol style="list-style-type: none"> <li>1) <i>be plainly marked,</i></li> <li>2) <i>be clean and free of obstructions,</i></li> <li>3) <i>be cut as close to perpendicular as is practical to the haulage way, and</i></li> <li>4) <i>if made after 1990, be at least</i> <ol style="list-style-type: none"> <li>a. <i>1 m in depth, in addition to the clearance between the vehicle and the wall,</i></li> <li>b. <i>the height of the roadway or 2 m whichever is least, and</i></li> <li>c. <i>1.5 m in width?</i></li> </ol> </li> </ol>	
<b>Initial Audit - Inspector Comments:</b> Yes throughout the access decline and the conveyor decline, some housekeeping is required as garbage is accumulating is some.	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> Have been cleaned.	
<b>Audit Follow Up – Inspector Comments:</b> House Keeping is a on going issue and needs improvement.	<b>Adjusted Score</b> 3
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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<b>6.19 Equipment Operation - General</b>	
<b>Subsection 6.19.1 Operators Responsibility</b>	
<i>Are the operators:</i>	
<ol style="list-style-type: none"> <li>1. <i>using their seatbelts</i></li> <li>2. <i>driving with their lights on</i></li> <li>3. <i>where required, is the vehicle flashing light on at all times or does it have a flag equipped whip antenna light?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes good compliance	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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<b>Subsection 6.19.2 Log Book to be Maintained</b> <i>Has the manager provided and maintained an effective logbook system for each unit of mobile equipment over 7000 kg gross vehicle weight where</i> <i>(a) the vehicle operator notes the operating condition prior to operating of the vehicle</i> <i>(b) note any unsafe conditions, and</i> <i>(c) a qualified person making repairs, notes any repairs made and if the vehicle is safe to operate?</i>	
<u>Initial Audit - Inspector Comments:</u> Operator compliance 90% Mechanic compliance 50 % Mechanical dept need more training on Log books	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> The Log book procedure as per the Code is not being followed. New Afton, The mine needs to comply with the Code.	<u>Adjusted Score</u> 3
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.19.3 Examination of Equipment</b> <i>Does the operator do a pre-op check?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes , several noted	<u>Score</u> 4

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<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.19.4 Signing Logbook</b> <i>Does every notation made in the logbook, maintenance record, and every other record relating to the condition of the equipment show the time and date of the entry and the name of the person who made the entry?</i>	
<u>Initial Audit - Inspector Comments:</u> Needs improvement	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u>	
<u>Audit Follow Up – Inspector Comments:</u> Does not comply with the Code, Repairs not being noted in Log book	<u>Adjusted Score</u> 2.5
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>

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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>6.24 General Mine Rules</b>	
<b>Subsection 6.24.2 Water Sprays</b> <i>Wherever practicable, are water sprays or other dust suppression means and devices being used at every dusty place where work is carried out and where it is impractical to do so, is personal protective equipment supplied and worn by all persons working in that location?</i>	
<b>Initial Audit - Inspector Comments:</b> Yes, system need review and ongoing maintenance	<b>Score</b>
<b>Initial Audit - Manager's Reply:</b> Timed water spray systems continue to be advanced throughout the mine. Every N.G worker U/G has been fit tested and supplied ( check with Melissa) with a respirator. Every draw point has water spray systems set up and inspected by monthly and results forwarded to dispatch to pass along information to allow repairs to be fast tracked. Ongoing coaching with crews regarding dust control. Air/ water atomisers now implemented for use in all large bell blasts, good positive feedback from crews on this initiative.	
<b>Audit Follow Up – Inspector Comments:</b> Conveyor decline in good condition,Access decline dusty. Conveyor decline blocked by broken down vehicle, traffic detoured to access decline, very busy and very dusty, needs to be plan in place when when this type of event happens.	<b>Adjusted Score</b> 3.5
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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<b>Subsection 6.24.3 Drilling Dry</b>	
<i>Are powered rock drills being used in a mine without a water jet or other device capable of suppressing dust?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
None observed	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.25 General - Underground Rules</b>	
<b>Subsection 6.25.1(1) Scaling</b>	
<i>Before any work is begun in an underground mine do the workers check their workplaces for hazardous or dangerous conditions and make it safe before continuing?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, in policy SOP 006, in work place inspection	4

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<b>Initial Audit - Manager's Reply:</b>	
Workers utilize the five point Safety system on a daily basis and checklist for workplace inspections is completed/checked off and signed by worker and supervisor	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
Click here to enter text.	
<b>Audit Follow Up - Manager's Reply:</b>	
Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
Click here to enter text.	
<b>Subsection 6.25.2 Travel Ways</b>	
<i>Are all work places, travel ways and other areas that may be frequented by mine personnel regularly inspected and maintained by check scaling as conditions warrant and re-supported as may be prudent and that adequate tools and supplies are provided?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes	3
<b>Initial Audit - Manager's Reply:</b>	
Quarterly rotating ramp inspections.	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
Geo Tech have a very good program in place and the system for transfer information to the crews is comprehensive	4
<b>Audit Follow Up - Manager's Reply:</b>	
Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
Click here to enter text.	

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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.3 Overhead Holes</b>	
<i>Where persons are working in any location which is below and open to a haulage or travel way on the level above, is the workplace securely covered or otherwise closed off from the haulage or travel way?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.3 Cover Holes</b>	
<i>Are the tops of every millhole, manway, sump, drain hole or other opening covered or otherwise adequately protected to prevent inadvertent access?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Sump next to Fueling bay needs bumper block	

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<u>Initial Audit - Manager's Reply:</u>	
Block will be installed	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.3 Working a Manway</b>	
<i>Where manways are being repaired or in active use, are they closed off and are warning signs posted at all entrances?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Manway between conveyor transfer CTC 3 -4 needs warning signage	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Signed and gated	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

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<b>Subsection 6.25.4 Work Near Abandoned Areas</b> <i>If required does the manager have an approved work procedure for work that is to be carried out within 30 m of abandoned or old workings, or any accumulation of water or unconsolidated material, or any other substance that may flow?</i>	
<u>Initial Audit - Inspector Comments:</u> In progress with the cave and the break through to the pit.	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Subsidence plan in place that includes barricades and exclusion zones.	
<u>Audit Follow Up – Inspector Comments:</u> Yes in place	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.5 Check Breakthroughs</b> <i>No connection between mine workings shall be made through to until a thorough examination of the workings toward which the active heading is advancing has been made and has shown that the work can proceed in a safe manner. Where required, is there a procedure is in place?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, procedure in place	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.6 Jumbo Drills</b>	
<i>Are the drills stopped prior to persons proceeding beyond the front of the drill controls of an underground jumbo drill?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, procedure in place	4
<u>Initial Audit - Manager's Reply:</u>	
SOP in place, reviewed with crews regularly.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	

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October 16 & 17, 2012

<b>6.26 Rock Passes</b>	
<b>Subsection 6.26.1 No Water</b>	
<i>Has the Chief Inspector approved an operating procedure to introduce water into an ore or waste pass, a loading pocket, coal silo, hopper, storage bin or a completed large diameter borehole for any purpose?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No procedure as this is not done	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.26.1 No Water</b>	
<i>Is the operating procedure being followed?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.26.2 Procedure to Remove Water</b> <i>Has the manager provided a plan for the safe removal of water or saturated Material from any ore or waste pass that contains water or saturated material that will flow?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, procedure in place for mucking bored raises	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> SOP in place, JHA done where necessary.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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<b>Subsection 6.27.4 Guardrail</b>	
<i>Where a stairway ends in direct proximity to dangerous traffic or other hazards, have detour guardrails been installed?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, on conveyor transfer points	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.30 Flammable Waste and Scrap - Underground</b>	
<b>Subsection 6.30.1 Scrap Removal</b>	
<i>Is the waste, including waste timber, being removed from the underground mine on a regular basis and is not being piled up nor permitted to decay in the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No, there is waste material collecting underground, housekeeping needs to be improved	2

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Manager's Reply:</u>	
Check DMG bins on Mine Captain's tours, discuss with shifters the importance of removing garbage. We have developed a housekeeping SOP and assigned areas of responsibility, have also posted these designated areas throughout the mine both on surface and underground. A program where waste is being removed on a daily basis from the mine has been implemented. Very little timber is being used in the mine.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.30.2 Flammable Scrap</b>	
In an underground mine, or in or about a headframe or shaft-house, is the flammable refuse being	
1) deposited in covered, fire-resistant containers, and	
2) removed at least weekly from the mine, headframe, or shaft-house?	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No covered fire resistant containers were noted	
<u>Initial Audit - Manager's Reply:</u>	
Steel containers being used. Auditing to ensure covers are in place and investigating flammable covers.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The container lids have a hole which would not contain a fire	3

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<u>Audit Follow Up - Manager's Reply:</u>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.31 Sulphide Dust</b>	
<b>Subsection 6.31.1 Sulphide Dust</b>	
<i>In any underground mine where the sulphur content of the ore is high and a sulphide dust explosion has occurred, has the manager implemented an approved scheme for minimizing the danger from a sulphide dust explosion that includes</i>	
<ol style="list-style-type: none"> <li>1) <i>provision for ensuring that all persons are removed to a place of safety prior to blasting, taking into consideration the mine layout and the ventilation circuits, and if necessary, removed to the surface of the mine,</i></li> <li>2) <i>provision for ensuring that all accessible headings, raises, and other workplaces within 30 m of a blasting site are washed down to remove dust prior to blasting, and</i></li> <li>3) <i>any other measures that could reduce the risk of a dust explosion or lessen the consequences if one should occur.</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Very little sulphides in the mine, ore very discriminated.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.33 Ventilation Standard</b>	
<b>Subsection 6.33.1 Ventilation Standard</b>	
<i>Is the return air from all working places, whenever practicable, routed directly to the return airway?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Partially now and when VR 7 is complete air quality will improve.	
<u>Initial Audit - Manager's Reply:</u>	
As noted.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Ventilation much improved	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>6.35 Underground Mine Heating</b>	
<b>Subsection 6.35.1 Mine Air Heaters</b>	
<i>Has an Inspector given written permission for the mine to install the furnaces or devices for heating mine air?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, G MacDonald has given permission.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>6.36 Auxiliary Ventilation</b>	
<b>Subsection 6.36.1 Auxiliary Ventilation</b>	
<i>Has the manager ensured that all workings that are removed from the main ventilation circuit have an adequate supply of ventilating air?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes aux ventilation in place and used where required and identified drive layouts, level plots all indicate ventilation flows	4

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<u>Initial Audit - Manager's Reply:</u>	
SOP submitted in November 2012 regarding aux ventilation, currently going through the review and sign off process	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.36.2 Manager's Rules</b> <i>Where auxiliary ventilation systems are necessary, has the manager of the underground mine prepared rules and procedures for the installation and use of auxiliary ventilation systems and, in the case of a coal mine, for the degassing of headings. Is a copy of this procedure posted at a conspicuous location at the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Rules and procedures were not noted to be posted.	
<u>Initial Audit - Manager's Reply:</u>	
MIN-SOP-043 Aux Ventilation Underground: has been updated, located on document server. Vent management plan exists and is audited to those standards by vent techs.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Reviewed MIN SOP 043	5

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<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.36.4 Exhaust from a Compressor</b> <i>Is compressed air being used for ventilation other than clearing blast fumes and smoke since the exhaust from any compressed air machine shall not be considered as ventilation</i>	
<u>Initial Audit - Inspector Comments:</u> No	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>6.37 Ventilation Monitoring</b>	
<b>Subsection 3.37.1 Air Measurements</b>	
<i>Has the manager of the underground mine ensured that the measurements of the quantity of air flowing are taken at the main fan, in all airways, and at all major ventilation splits at intervals not exceeding three months?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Air measurements are taken weekly	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.37.2 Diesel Equipment Ventilation</b>	
<i>In a mine or part of a mine in which diesel equipment is operating underground</i>	
<i>(1) are measurements of the quantity of air flowing being taken at intervals not exceeding once a week,</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Shifters take gas reading daily and record in shift log. Reported twice day on 5 point safety cards. It is also on Daily shifters pass down. Shift cross over record.	4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.37.2 Diesel Equipment Ventilation</b>	
<i>(1) are tests being made at least once a shift, in the general body of the air, on the exhaust side of the operating diesel equipment, for nitrogen dioxide or oxides of nitrogen and other gases specified by an inspector,</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Shifters take gas reading daily and record in shift log. Reported twice day on 5 point safety cards. It is also on Daily shifters pass down. Shift crossover record.	4
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.37.3 Recording</b>	
<i>Are the measurements required to be taken under sections 6.37.2(1) and 6.37.2(2) being recorded in a book kept for that purpose?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Records are kept in the shift log. All on the electronic back up available for review.	4
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>6.38 Doors and Regulators</b>	
<b>Subsection 6.38.1 Door Closing</b>	
<i>Do the doors used for regulating or controlling ventilation close automatically and are they provided with a suitable device for opening or closing them?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes in place on doors that are in operation and will be installed on future doors	4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.40 Unventilated Workings</b>	
<b>Subsection 6.40.1 Prevention of Access</b>	
<i>Where any part of the underground mine that is not being ventilated has the manager ensured that these parts</i>	
<ol style="list-style-type: none"> <li>1) are effectively barricaded to prevent inadvertent entry</li> <li>2) are posted with signs warning that entry is prohibited,</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Barricades were noted	
<u>Initial Audit - Manager's Reply:</u>	
Installed signage in NXC, AAC3, UAC3	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Signage was in place where required	4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 6.40.1 Ventilation</b> <i>Where any part of the underground mine that is not being ventilated has the manager ensured that these parts:</i> <ol style="list-style-type: none"> <li>1) <i>have been examined by a qualified person for the following prior to anyone entering or being permitted to enter these parts</i> <ol style="list-style-type: none"> <li>a) <i>oxygen deficiency,</i></li> <li>b) <i>the presence of toxic or noxious gases, fumes, mists, vapours, or dust, and</i></li> <li>c) <i>any other dangerous condition.</i></li> </ol> </li> </ol>	
<u>Initial Audit - Inspector Comments:</u> Yes by shift boss	<u>Score</u>
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Records are much improved	<u>Adjusted Score</u> 4
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Part 6 – Total out of 320</b>	<b>276</b>
<b>Part 6 – Percentage out of 100%</b>	<b>86%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<b>Section 8.1 Magazines</b>	
<b>Subsection 8.1.1 (1) Permit Required</b>	
<i>Has the Manager applied for and received an Explosives Storage and Use Permit from the Inspector before a magazine was put into service, or modified, or before carrying out any maintenance work including the installation of lighting or heating?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The permit for the surface explosives magazine is: #BC-1081; mine #0300614, expires May 25, 2016. Detonators are not stored on surface.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.1 (2) Permit Required</b>	
<i>Has the Manager ensured that the magazine meets the current regulations and standards of the Explosives Act (Canada)?</i>	
<i>Note: The new standards were established by NRCAN and upgrades must be completed by May 31, 2006?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine is a standard steel construction magazine. Mine security check the magazine twice per day for tampering and photograph the magazine each inspection.	5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.4 Flammable Material</b>	
<i>Is there flammable material stored in a magazine, or nearer to a magazine than the distance required in NRC Explosives Branch "Blasting Explosives and Detonators Storage, Possession, Transportation, Destruction and Sale (8 meters)?"</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The outside of the magazine was free of flammable material. Inside the magazine there was some scrap lumber and a few cases of loading hose which should be removed.	
<u>Initial Audit - Manager's Reply:</u>	
Flammable material has been removed. A program of regular inspections has been set up.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Flammable material is removed from the magazine. Magazine is in good order.	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.5 Magazine Signs</b>	
<i>Are the proper signs required in the Code in place?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Proper warning signs were mounted on the fence surrounding the magazine compound.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.6 (1) Magazine Rules</b>	
<i>Is there an authorized person in charge of the magazine, who inspects it on a weekly basis?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Authorized persons check the magazine at least twice per week. Security inspect the magazine compound and around the magazine twice per day.	5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.6 (2) Magazine Rules</b>	
<i>Is the magazine kept locked as required in the Code?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine is kept locked, as required. The mag. keys are kept in a lock box or locked desk in the office.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<b>Subsection 8.1.6 (3) Magazine Rules</b>	
<i>Is there an up-to-date inventory kept in a logbook with every entry signed by the authorized person in charge?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine inventory is current and signed by an authorized person.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.6 (4) Magazine Rules</b>	
<i>Is the magazine clean, dry and free from grit?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine is clean and dry.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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Page 5 of 14

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.6 (7) Magazine Rules</b>	
<i>Is there any exposed iron or steel?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is no exposed iron or steel.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.6 (8) Magazine Rules</b>	
<i>Is the stock rotated, with the oldest stock being utilized first?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Stock is rotated regularly. There was a minimum of product in the surface magazine at the time of inspection.	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 8.1.7 Posting Rules</b> <i>Are the rules for magazine operation and maintenance posted inside every magazine?</i>	
<u>Initial Audit - Inspector Comments:</u> The magazine rules are posted inside. In surface and underground magazines.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<b>Subsection 8.1.8 Storage of Detonators</b>	
<i>Are the rules regarding detonators being met?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Detonators are stored underground, in a sea-can container. The inside of the steel doors of the underground detonator storage are not covered with wood.	
<u>Initial Audit - Manager's Reply:</u>	
Wood liner installed.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Wood liner is installed in present detonator storage. The new magazine area is almost ready to go. It is well lit, shelves for detonators, concrete floors and an overhead crane to handle bulk ANFO bags.	5
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.9 No Smoking</b>	
<i>Any sign of smoking while handling explosives?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There were no signs of smoking near explosives.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Subsection 8.1.10 (1) Underground Explosive Storage</b> <i>In an underground mine, other than a coal mine, does any magazine established for the storage of more than a 24 hour supply of explosives, have the written approval of the Inspector?</i>	
<u>Initial Audit - Inspector Comments:</u> The inspector has given his approval of the underground magazine.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<b>Subsection 8.1.10 (2) Underground Explosive Storage</b> <i>Are explosive storage boxes, holding not more than a 24 hour supply, clearly marked “Explosives?”</i> <i>Is there a current record of every magazine and explosive storage area?</i>	
<b>Initial Audit - Inspector Comments:</b> The contractor’s boxes are marked “explosives”. There is presently only one underground storage area.	<b>Score</b> 5
<b>Initial Audit - Manager’s Reply:</b> Current process will continue.	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager’s Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.10 (3) (a-d) Underground Explosive Storage</b> <i>In an underground mine are magazine, explosive container, or explosive storage areas:</i> <ol style="list-style-type: none"> <li><i>Located at least 60 meters from a shaft, hoist room, main access ramp, refuge station, transformer vault or a fuel storage or fuel transfer area?</i></li> <li><i>Located so that there is no possibility of a vehicle colliding with a storage container?</i></li> <li><i>Located so that in case of fire in the mine the explosives are not likely to become overheated?</i></li> <li><i>Conspicuously marked by “Explosives” sign or signs?</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b> The contractor’s explosives boxes are not protected from accidental vehicle impact. The explosives storage is located an appropriate distance from mine infrastructure. It was reported that explosives are sometimes left on the loading truck between shifts. Unused explosives should be returned to the magazine or day box.	<b>Score</b>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Discuss with contractor TMCC and implement solutions. Temporary day mag has been moved. Discuss at line up meetings with crews	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
The contractor's explosives boxes are removed. No unused explosives were observed on the loading truck.	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 8.2 Blasting Certificates</b>	
<b>Subsection 8.2.1 through 8.2.7 Blasting Certificates</b>	
<i>Are all persons, conducting blasts, certified as per sections 8.2.1 – 8.2.7 of the HSRC?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Blasting certificates are current.	5
<u>Initial Audit - Manager's Reply:</u>	
Current process will continue.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 8.3 Use, Care and Handling of Explosives</b>	
<b>Subsection 8.3.2 (1) (2) (3) (4) Identification of Explosives</b> <i>Do all explosives have plainly marked or printed on the exterior of every original package:</i> <ol style="list-style-type: none"> <li><i>The name and place of business of the manufacturer and the date of its manufacture?</i></li> <li><i>The type and strength of the explosive, and the dimensions of the cartridge?</i></li> <li><i>The UN Classification number and the dangerous goods classification?</i></li> <li><i>When full cases of detonators, detonating cords, and boosters are received, the inner cartons are immediately marked with the magazine license number?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Explosives cases are properly marked. Cases are not opened on surface.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
Click here to enter text.	
<b>Section 8.7 Drilling Near Explosives</b>	
<b>Subsection 8.7.1 (1) Misfires</b>	
<i>Is the use of equipment restricted within this 8 meter distance except as provide in section 8.7.1, or under a procedure approved by the Inspector 8.8.1. (1) (2)?</i>	
Initial Audit - Inspector Comments:	Score
There is a procedure, approved by an inspector, for pre-loading production blastholes, which allows equipment to work within 8 m of a loaded hole. Misholes are washed or blown out to neutralize them.	5
Initial Audit - Manager's Reply:	
Click here to enter text.	
Audit Follow Up – Inspector Comments:	Adjusted Score
Click here to enter text.	
Audit Follow Up - Manager's Reply:	
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Inspector Comments:	Adjusted Score
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
Click here to enter text.	
<b>Section 8.8. Misfires</b>	
<b>Subsection 8.8.1 (1) Surface Misfires</b>	
<i>Are misfired hole on the surface shall be clearly marked off for a distance of 8 meters around the collar of the hole and equipment restricted?</i>	
Initial Audit - Inspector Comments:	Score
N/A	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Eight – Explosives

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Part 8 – Total out of 95</b>	<b>95</b>
<b>Part 8 – Percentage out of 100%</b>	<b>100%</b>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

Section 10.1 Mine Plan and Reclamation Program Information	
<b>Subsection 10.1.2 Producing Mines</b> <i>Does the mine have a permit authorizing the work from the Chief Inspector?</i> <i>Does it include information on the following:</i> <ul style="list-style-type: none"> <li>• <i>Surface or underground development or production for coal and mineral mines, or major modification of existing producing coal and mineral mines of the buildings available on site</i></li> <li>• <i>Underground exploration requiring excavation, large pilot projects, bulk samples, trial cargos, test shipments</i></li> <li>• <i>Has work proceeded without the Chief Inspector granting a permit or authorization?</i></li> </ul>	
Initial Audit - Inspector Comments:	Score
Yes permits are in place M229 and TSF M229A	5
Initial Audit - Manager's Reply:	
Click here to enter text.	
Audit Follow Up – Inspector Comments:	Adjusted Score
Click here to enter text.	
Audit Follow Up - Manager's Reply:	
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Inspector Comments:	Adjusted Score
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
Click here to enter text.	
<b>Subsection 10.1.4 Mine Plans</b> <i>Does the mine have a plan that has the relevant information as requested by the Code?</i> <ul style="list-style-type: none"> <li>• <i>Baseline information</i></li> </ul>	
Initial Audit - Inspector Comments:	Score
All information is in the permit application document and the application	5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (f)?</i> <ul style="list-style-type: none"> <li><i>Designs and details for dumps, open pits, impoundments, underground workings including areas that may be affected by subsidence, stockpiles, processing facilities, water management structures, water storage and /or water treatment facilities, haulage roads, road construction and significant transportation or utilities infrastructure, compatible with environmental protection, reclamation and mine closure?</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
As builds are available for structures and reclamation report is due at year end.	4
<u>Initial Audit - Manager's Reply:</u>	
The Closure Report (both technical and costs) have been provided to Ministry (December 2012).	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 Mine Plans</b> Does the mine plan have the requirements of Part 10.1.4 (3) (g)? <ul style="list-style-type: none"> <li>• Designs for material handling and waste disposal procedures</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Waste disposal is handled by a contractor and dealt with off site. GFL waste oil, BFI waste for recycling. Storage of chemicals needs improvement, RheoTEC tank sitting in the yard with product still it exposed to the potential of being hit by a vehicle in winter conditions, also a tank of DELVO Stabilizer in the same condition. Waste oil storage area needs to be covered so it doesn't fill with water and float the hydrocarbons into the environment. Diesel fuel surface fueling station has diesel spilled on the ground and needs to have all contaminated soil removed and a system installed so it doesn't reoccur.	
<u>Initial Audit - Manager's Reply:</u>	
RheoTEC & Delvo tanks now removed and disposed of or stored appropriately. Waste oil pad has roof planned, (May if in budget). Diesel tanks will be decommissioned soon with the completion of surface fuel bay (end of February). Contaminated soil to be placed in Bioremediation cell.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Waste oil pad is moved to the old Teck shops and now under cover, Bioremediation cell designed and to be completed by mid Sept 2013.	4
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 (3h) Mine Plans</b>	
<i>Does the mine plan have the requirements of Part 10.1.4 (3) (h)?</i>	
<ul style="list-style-type: none"> <li>Salvaging and stockpiling of surface soils and overburden materials</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The mine has stockpiled 170,000 m3 of topsoil and 300,000 m3 of till	4
<u>Initial Audit - Manager's Reply:</u>	
We have a fresh estimate of salvageable soils that was obtained during the Closure Plan work. This will be reconciled against current stockpile, but for now we have more soil than was initially estimated in the application document. Correct number is 320,000m3 till.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection: 10.1.4 (3i) Mine Plans</b>	
<i>Does the mine plan have the requirements of Part 10.1.4 (3) (i)?</i>	
<ul style="list-style-type: none"> <li>Source, use and water balance for any water required in the operation</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Fresh water comes from Kamloops Lake permit 139m3/min average is 124 m3 / min Water balance is not complete due to 3 different water balances and discussions on the water volume trapped in the tailings	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Draft Water Balance received from BGC, under review. Final closing memo due by April 15/13	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 (3j) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (j)?</i> <ul style="list-style-type: none"> <li>Overall site water balance</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Still work in progress	
<u>Initial Audit - Manager's Reply:</u>	
Draft Water Balance received from BGC, under review. Final closing memo due by April 15/13	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 (4b) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (4) (b)?</i> <i>Plan for environmental Protection that includes:</i> <ul style="list-style-type: none"> <li><i>Erosion control and sediment retention</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, but some erosion channels need to be improved before water leaves the property	
<u>Initial Audit - Manager's Reply:</u>	
Erosion Control and Management Plan completed under title "Vegetation and Soil Management Plan". Will be submitted with Annual Reclamation Report.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Slope below batch plant is planned for this summer to be reclaimed, not in progress yet	3
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 (6) Mine Plans</b> <i>Does the mine plan have operational reclamation plans for the next five years that shows the progressive development of structures?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Work in progress due from consultant December 2012.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Submitted to ministry in December 2012	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection: 10.1.5 Design Standards</b> <i>Are the impoundments, water management facilities and dams designed in accordance with the criteria provided in the Canadian Dam Association, Dam Safety Guidelines?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, audit by Geologic, Monte Christie still not complete	
<u>Initial Audit - Manager's Reply:</u>	
Audit performed, preliminary report available. Final report will be submitted by March 31, 2013	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Completed	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.6 Design Standards</b>	
<i>Are the dumps designed in accordance with the Interim Guidelines of the British Columbia Mine Waste Rock Pile Research Committee?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Present dump is in pit and will be effected by the cave	4
<u>Initial Audit - Manager's Reply:</u>	
Not sure how we could not get a 5. We have a Stockpile Management Plan that has been approved by Ministry and is compliant. At the moment we have no waste rock dump other than those inherited from Teck.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.7 Design Standards</b>	
<i>Are the dumps designed so as to allow for re-contouring such that final reclamation is consistent with the approved end land use?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Not required as they are in pit	4

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
The Batch plant slope is the only one I think this would relate to. We have a reclamation plan for that slope which will be carried out in Spring, 2013.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 10.1.8 Design Standards</b>	
<i>Are the Tailings impoundments, water management facilities, dams and waste dumps designed by a professional engineer?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes Scott Elfen PE and stamped by Harry H. Kim P.eng	4
<u>Initial Audit - Manager's Reply:</u>	
Further to comment in audit, BGC are now the engineer of record.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Subsection 10.1.9 Design Standards</b>	
<i>Are there plans for the prediction, and if necessary, the prevention, mitigation and management of metal leaching and acid rock drainage which shall be prepared in accordance with the Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Using MLARD program as laid out in permit and full data base on NG computer system.	4
<u>Initial Audit - Manager's Reply:</u>	
We fully comply with this. It should be a 5.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.11</b>	
<i>Has the Owner, Agent or Manager notified the Chief Inspector in writing of any intention to depart from the mine plan and reclamation program authorized under sections 10.1.1 or 10.2.1 of the Code to any substantial degree?</i>	
<i>Has the Manager received the written authorization of the Chief Inspector prior to implementing the proposed changes?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No Changes at this time	4
<u>Initial Audit - Manager's Reply:</u>	
New Closure Plan submitted. Any deviation will be provided to ministry for approval with Annual Reclamation Report.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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**5.** All components of the element are present, in place, being monitored and working. **4.** Most components of the element are present, minor improvements needed or additional training is required. **3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft format. **1.** The element is not present; however, the mine has made attempts to develop it or it is outdated. **0.** The element is not present at the mine.





# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 10.5 Operations</b>	
<b>Subsection 10.5.1 Operations</b>	
<i>Did the operation of tailings or water management facility commence prior to an "as-built" report prepared by a professional engineer certifying that the facility was designed and constructed according to section 10.1.5 of this Code being submitted to the Chief Inspector and a permit to operate the facility was received?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes ,Reviewed by George Warnock P. Eng. MEMNG and signed off	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Subsection 10.5.2 Operations</b> <i>Does the mine have an Operation, Maintenance and Surveillance (OMS) manual?</i> <i>Was this manual prepared and provided to an Inspector and to all employees involved in the operation of major dam or major impoundment, prior to commissioning?</i> <ul style="list-style-type: none"> <li><i>Is the manual revised regularly during operations, decommissioning and closure of the structure?</i></li> </ul>	
Initial Audit - Inspector Comments:	Score
Yes, In place	5
Initial Audit - Manager's Reply:	
Complete	
Audit Follow Up – Inspector Comments:	Adjusted Score
Click here to enter text.	Choose an item.
Audit Follow Up - Manager's Reply:	
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Inspector Comments:	Adjusted Score
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
Click here to enter text.	
<b>Subsection 10.5.3 Operations</b> <i>Has the Manager submitted an annual dam safety inspection report prepared by a professional engineer on the operation, maintenance and surveillance of the tailings and water management facilities and associated dams to the Chief Inspector?</i>	
Initial Audit - Inspector Comments:	Score
Not Due until March 31, 2013	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Done and a preliminary report is available on request. Report will be submitted march 31 with Annual reclamation report	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Complete	5
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Part 10 – Total out of 90</b>	<b>85</b>
<b>Part 10 – Percentage out of 100%</b>	<b>94%</b>

Scoring: **Maximum points available per subsection = 5**

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## NEW AFTON MINE

# **FOLLOW UP HEALTH AND SAFETY AUDIT**

**JULY 16 & 17, 2013**

### **Part One**

### **(OVERVIEW)**

### **Report**

PREPARED BY

MINISTRY OF ENERGY AND MINES  
MINES AND MINERAL RESOURCES



Ministry of Energy and Mines  
Mines and Mineral Resources

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## PREFACE

This report is a compilation of the findings from the Follow-up Health and Safety Audit conducted at New Afton Mine, July 16, 17, 2013. This report represents the second step in the audit process and concentrated on the deficiencies noted from the initial audit. The third step, if required, will be another full audit, which will investigate compliance with all applicable parts of the Code.

This Part One overview report discusses the methods used in the Audit and summarizes the auditors' findings.

The detailed findings of the audit parts are found in the Part Two detailed report. These detailed findings will be used to conduct a full audit (if required) in 6 months from receipt of this report.

A progress report from the Mine Manager addressing the deficiencies from this Initial Audit is required *two months* from receipt this report. The Mine Manager is required to put his responses in the "Follow Up Audit - Managers Reply" section found in the Follow-up Health and Safety Audit, Part Two: Detailed Report for New Afton Mine.



## AUDITORS

Shown below is the list of inspectors who participated in the Health and Safety Follow Up Audit and the part(s) of the Health, Safety and Reclamation Code (HSRC) that were audited.

**Phil Pascuzzi – Senior Inspector of Mines Health and Safety (Audit Lead)**

- HSRC Part 1: Health and Safety Program, Records / General Rules
- HSRC Part 3: Personnel Safety

**Cheryl Pocklington – Inspector of Mines, Ergonomics**

**Carina Doyle – Inspector of Mines, Occupational Health**

- HSRC Part 2: Occupational Health

**Greg McLean –Senior Inspector of Mines, Mechanical**

**Sandy Gillies – Inspector of Mines, Mechanical**

- HSRC Part 4: Building, Machinery and Equipment

**Emmanuel Padley – Senior Inspector of Mines, Electrical**

- HSRC Part 5: Electrical Power System

**Rolly Thorpe – Deputy Chief Inspector of Mines, Victoria**

- HSRC Part 3: Emergency Preparedness
- HSRC Part 8: Explosives

**Steve Rothman – Senior Inspector of Mines, Health and Safety**

- HSRC Part 6 – Mine Design and Procedures
- HSRC Part 10: Reclamation and Closure



## INTRODUCTION

Mine Health and Safety Audits are designed to assist management in developing or updating their policies and procedures, to continue to improve their health and safety programs, while also ensuring compliance with the Health, Safety and Reclamation Code for Mines in British Columbia.

## METHODS

The auditors rated their respective areas by a combination of the following criteria:

- Inspections
- Review of procedures and records

## SCORING

The scoring is based on whether or not the section/sub-section was present, was sufficient to meet the requirements of the Health, Safety and Reclamation Code, and was being followed by the affected employees.

Each section/sub-section was scored using the following criteria:

- |   |   |
|---|---|
| 5 | All components of the section/sub-section are present, in place, being monitored and working.                               |
| 4 | Most components of the section/sub-section are present, minor improvements are needed, additional training is required.     |
| 3 | The basics of the section/sub-section are in place, but require updating, revisions, documentation, training or procedures. |
| 2 | Parts of the section/sub-section is available, the procedure may be verbal or in draft format.                              |
| 1 | The section/sub-section is not present; however, the mine has made attempts to develop it or it is outdated.                |
| 0 | The section/sub-section is not present at the mine and no consideration has been made to for development.                   |





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The scores for each section/sub-section were tallied and summarized as a percentage based on the following:

***SCORING RESULTS: For New Afton***

<b>ACTIVITY AUDITED</b>		<b>INITIAL PERCENTAGE</b>	<b>FOLLOW UP PERCENTAGE</b>
Part 1	Health and Safety Program	<b>68%</b>	<b>90%</b>
Part 2	Occupational Health	<b>61%</b>	<b>75%</b>
Part 3	Personnel Safety / Emergency Procedures	<b>80%</b>	<b>94%</b>
Part 4	Mechanical	<b>84%</b>	<b>91%</b>
Part 5	Electrical	<b>82%</b>	<b>84%</b>
Part 6	Mine Design	<b>78%</b>	<b>86%</b>
Part 8	Explosives	<b>87%</b>	<b>100%</b>
Part 10	Reclamation	<b>72%</b>	<b>94%</b>



## **AUDITOR'S SUMMARY:**

### ***Part One – Health and Safety Program & General Rules***

The most significant change made since the initial audit is the additional resources that have been added to the Safety Department. With these added resources, there have been measurable developments in all levels in New Afton's Safety Management Plan. Along with this development comes the implementation and monitoring of these Standards and Procedures.

The New Afton Safety Policy has been revised and reviewed by all employees, now Management and Workers have to continue to demonstrate their belief in this Policy through their behaviour toward Health and Safety.

The Joint Occupational Health and Safety Committee have changed their focus to one of more program development and monitoring than just physical inspections. The JOHSC better understand their role within the Safety Management system and the Health and Safety Reclamation Code (HSRC).

There is much improved Management support for the JOHSC and their onsite visibility has increased significantly.

### ***Part Two – Occupational Health***

Since the initial Ministry audit, Musculoskeletal Disorder (MSD) Prevention has been greatly enhanced by a comprehensive training plan and in-house capabilities to perform ergonomic assessments to aid in the prevention of injuries or incidents.

The inspector is pleased to see a plan to provide both new hires and the existing workforce with MSD prevention education. Also, in addition to the OHSC having received the required education as per the HSR Code, the mine has gone above expectation to deliver this training to supervisors. As supervisors are key persons involved in investigations and in the prevention of incidents during regularly working activities, MSD prevention at New Afton



will be greatly enhanced.

### **Ergonomic Assessments**

Currently, Lisa Martinovic is performing the ergonomic assessments. It is strongly recommended additional trained persons from the OHSC assist Ms. Martinovic on ergonomic assessments to help develop their skills and New Gold's in-house capacity for participation in related incident investigations.

### **Smoking Policy**

On review of this policy, there was no mention of smoking conduct in working areas underground such as in the shop. Interviewed workers were also not clear as to the expectations regarding smoking underground. It is recommended this policy be revisited to provide some clarity to the workforce regarding expectations on this issue.

### **Underground Shop Lunchroom**

It was unclear whether this area was an official refuge station. Many supplies to support it as a refuge station were in place, a make-shift sign was on the door but there was ambiguity amongst the workforce whether it could be successfully used as refuge due to some poorly accessible cut outs requiring sealing on the outside wall, in the event of an emergency. This area and plan to use this space should be audited, a plan put in place for its use and clarity provided to the workforce. If it is not going to be used as a refuge station, the sign should be removed and the workforce informed.

Thank you to the staff and workforce for their support and collaboration throughout this audit process. They are a pleasure to work with.

### ***Part Three – Personnel Safety and Emergency Preparedness***

Under Personnel Safety, most of the safety work procedures required by the HSRC have now been developed and are being implemented. The working overhead procedure required by 3.3.2 of the HSRC was not yet developed at the time of this audit.

The New Hire Orientation package has been revised to cover the HSRC General Rule requirements. This package has been reviewed by the JOSD and Employees.



Under Emergency Preparedness, the mine rescue ropes are logged and stored in the new fire hall. The fire hall is well set up for training, storage and servicing of emergency response equipment.

The deluge fire extinguishing system in the underground fuel bay is now tagged, indicating regular checks. An oil drum was blocking an electrical panel in the fuel bay.

Gas detector users are responsible for bump testing their own detector. The mine is considering developing a contract with Industrial Scientific to supply, monitor and service gas detectors.

#### ***Part Four – Building, Machinery and Equipment***

During the follow up audit it was found that progress had been made in a number of areas including drawings for buildings but underground services was slower in progression and with cause.

NDT test documentation was also available for examination.

The score has climbed in a number of areas which showed a willingness to improve however some remained stagnant.

We will look forward to seeing improvement continuing throughout the Mine Site along with the positive attitude toward Safety.

#### ***Part Five – Electrical***

Afton is now on its' own with many of the contractors finished their projects. It is very clear that New Gold is looking to make Afton a model mine. Development with respect to the electrical safety program is well planned with; computer based training, providing arc flash gear and development of a safety program. This auditor's concern is that the electrical workers onsite are not involved in its evolution. If workers find the procedures to be cumbersome or difficult to complete their tasks, participation may not be at a high level. Workers did not seem to know how the training they were receiving fit into the overall training and electrical safety programs. Development and implementation is progressing slowly.

Temperatures in the ERUs have dropped significantly (as per provided charts). There are still two ERUs that have not had the ventilation reconfigured with one having temperatures of 100 degrees. As



warm weather is now here these projects need to be completed to keep electrical equipment operating at safe temperatures.

New Gold has set a high standard for itself with regards to electrical safety. Electrical workers are being trained on how to protect themselves with regards to electrical exposure. The mine primarily uses arc resistant electrical equipment and is providing PPE. The concern is the lack of an electrical safety program to educate workers on PPE as to when and where to use it.

### ***Part six – Mine Design and Procedures***

The follow up audit of Part 6 was much improved; most of the lower scores in the initial audit have improved.

Overall the mine has made great strides in making the Mine Operations a high priority, it shows throughout the mine.

#### **Two areas need improvement;**

The equipment logbooks need improvement to comply with the Code.

Housekeeping underground has improved but garbage was still noted underground, diligence by all personal underground to be aware of this subject will help improve the marks.

Job well done, but need to aim for 100% compliance with the Health, Safety & Reclamation Code.

### ***Part Eight - Explosives***

Flammables have been removed from the surface magazine.

The underground detonator storage container is now wood lined. The new magazine facility underground is almost ready to go. It is well lit; has a crane to handle bulk ANFO bags; wood shelves for detonator storage and access controlled by a locked gate.

The contractor's day boxes have been removed. No unused explosives were observed on the loading truck.



### ***Part Ten – Reclamation***

The follow up audit of Part 10 was much improved; most of the lower scores in the initial audit have improved.

Overall the mine has made great strides in making the Reclamation and Environment program a high priority, it shows throughout the site.

Two projects still need close attention, Storage of old oils and fuel, and control of water on the site to prevent erosion. The re-vegetation below the batch plant will greatly improve the initial optics of the mine.

Job well done, but need to aim for 100% compliance with the Health, Safety & Reclamation Code.

### ***CONCLUSION:***

The auditors were well received at New Afton and everyone was open and cooperative with the audit team

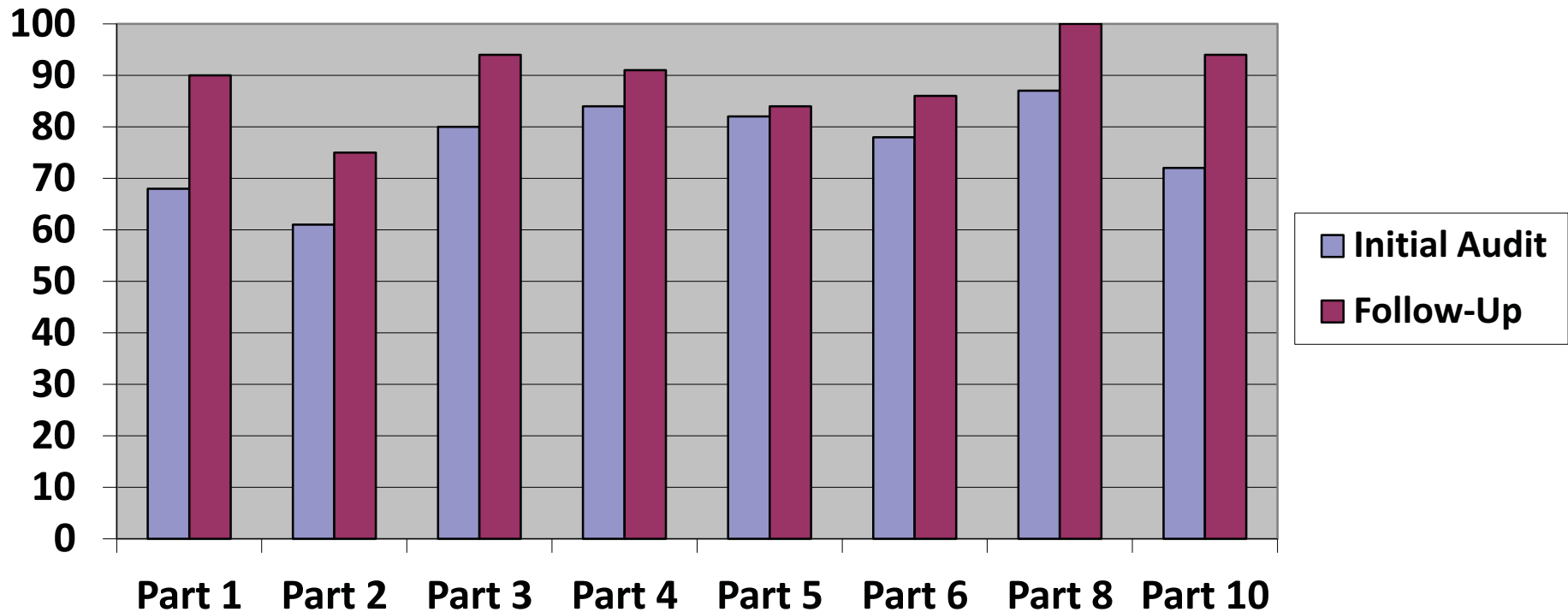
Since the Initial Audit in October 2012 there has been a tremendous amount of effort gone in to increasing compliance with the HSRC. As reflected in the scoring all elements have shown an increase, some more than others, which shows there is still more work to be done. All auditors involved in the Follow Up audit do recognize the amount of work and effort that has been put into this audit and the Management and Workers are to be commended for that.

The Ministry sincerely appreciates the efforts that have been made thus far in compliance with the Health, Safety Reclamation code and look forward to reviewing the improvements New Afton will be making to their Health and Safety Management System in near future.

We wish you well in the continued development of your Health and Safety program. We have the expertise and capability of assisting you in this development and offer that to you at your request.

# Appendix 1- Chart of Results

## New Afton Follow Up Audit July 16 & 17, 2013





NEW AFTON MINE

**FOLLOW UP HEALTH AND SAFETY AUDIT**

**JULY 16 & 17, 2013**

**Part One**

**(OVERVIEW)**

**Report**

PREPARED BY

MINISTRY OF ENERGY AND MINES  
MINES AND MINERAL RESOURCES





Ministry of Energy and Mines  
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### ***Part Two – Occupational Health***

Since the initial Ministry audit, Musculoskeletal Disorder (MSD) Prevention has been greatly enhanced by a comprehensive training plan and in-house capabilities to perform ergonomic assessments to aid in the prevention of injuries or incidents.

The inspector is pleased to see a plan to provide both new hires and the existing workforce with MSD prevention education. Also, in addition to the OHSC having received the required education as per the HSR Code, the mine has gone above expectation to deliver this training to supervisors. As supervisors are key persons involved in investigations and in the



prevention of incidents during regularly working activities, MSD prevention at New Afton will be greatly enhanced.

### **Ergonomic Assessments**

Currently, Lisa Martinovic is performing the ergonomic assessments. It is strongly recommended additional trained persons from the OHSC assist Ms. Martinovic on ergonomic assessments to help develop their skills and New Gold's in-house capacity for participation in related incident investigations.

### **Smoking Policy**

On review of this policy, there was no mention of smoking conduct in working areas underground such as in the shop. Interviewed workers were also not clear as to the expectations regarding smoking underground. It is recommended this policy be revisited to provide some clarity to the workforce regarding expectations on this issue.

### **Underground Shop Lunchroom**

It was unclear whether this area was an official refuge station. Many supplies to support it as a refuge station were in place, a make-shift sign was on the door but there was ambiguity amongst the workforce whether it could be successfully used as refuge due to some poorly accessible cut outs requiring sealing on the outside wall, in the event of an emergency. This area and plan to use this space should be audited, a plan put in place for its use and clarity provided to the workforce. If it is not going to be used as a refuge station, the sign should be removed and the workforce informed.

Thank you to the staff and workforce for their support and collaboration throughout this audit process. They are a pleasure to work with.

### ***Part Three – Personnel Safety and Emergency Preparedness***

Under Personnel Safety, most of the safety work procedures required by the HSRC have now been developed and are being implemented. The working overhead procedure required by 3.3.2 of the HSRC was not yet developed at the time of this audit.

The New Hire Orientation package has been revised to cover the HSRC General Rule requirements. This package has been reviewed by the JOSC and Employees.



Under Emergency Preparedness, the mine rescue ropes are logged and stored in the new fire hall. The fire hall is well set up for training, storage and servicing of emergency response equipment.

The deluge fire extinguishing system in the underground fuel bay is now tagged, indicating regular checks. An oil drum was blocking an electrical panel in the fuel bay.

Gas detector users are responsible for bump testing their own detector. The mine is considering developing a contract with Industrial Scientific to supply, monitor and service gas detectors.

#### ***Part Four – Building, Machinery and Equipment***

During the follow up audit it was found that progress had been made in a number of areas including drawings for buildings but underground services was slower in progression and with cause.

NDT test documentation was also available for examination.

The score has climbed in a number of areas which showed a willingness to improve however some remained stagnant.

We will look forward to seeing improvement continuing throughout the Mine Site along with the positive attitude toward Safety.

#### ***Part Five – Electrical***

Afton is now on its' own with many of the contractors finished their projects. It is very clear that New Gold is looking to make Afton a model mine. Development with respect to the electrical safety program is well planned with; computer based training, providing arc flash gear and development of a safety program. This auditor's concern is that the electrical workers onsite are not involved in its evolution. If workers find the procedures to be cumbersome or difficult to complete their tasks, participation may not be at a high level. Workers did not seem to know how the training they were receiving fit into the overall training and electrical safety programs. Development and implementation is progressing slowly.

Temperatures in the ERUs have dropped significantly (as per provided charts). There are still two ERUs that have not had the ventilation reconfigured with one having temperatures of 100 degrees. As





warm weather is now here these projects need to be completed to keep electrical equipment operating at safe temperatures.

New Gold has set a high standard for itself with regards to electrical safety. Electrical workers are being trained on how to protect themselves with regards to electrical exposure. The mine primarily uses arc resistant electrical equipment and is providing PPE. The concern is the lack of an electrical safety program to educate workers on PPE as to when and where to use it.

### ***Part six – Mine Design and Procedures***

The follow up audit of Part 6 was much improved; most of the lower scores in the initial audit have improved.

Overall the mine has made great strides in making the Mine Operations a high priority, it shows throughout the mine.

#### **Two areas need improvement;**

The equipment logbooks need improvement to comply with the Code.

Housekeeping underground has improved but garbage was still noted underground, diligence by all personal underground to be aware of this subject will help improve the marks.

Job well done, but need to aim for 100% compliance with the Health, Safety & Reclamation Code.

### ***Part Eight - Explosives***

Flammables have been removed from the surface magazine.

The underground detonator storage container is now wood lined. The new magazine facility underground is almost ready to go. It is well lit; has a crane to handle bulk ANFO bags; wood shelves for detonator storage and access controlled by a locked gate.

The contractor's day boxes have been removed. No unused explosives were observed on the loading truck.



### ***Part Ten – Reclamation***

The follow up audit of Part 10 was much improved; most of the lower scores in the initial audit have improved.

Overall the mine has made great strides in making the Reclamation and Environment program a high priority, it shows throughout the site.

Two projects still need close attention, Storage of old oils and fuel, and control of water on the site to prevent erosion. The re-vegetation below the batch plant will greatly improve the initial optics of the mine.

Job well done, but need to aim for 100% compliance with the Health, Safety & Reclamation Code.

### ***CONCLUSION:***

The auditors were well received at New Afton and everyone was open and cooperative with the audit team

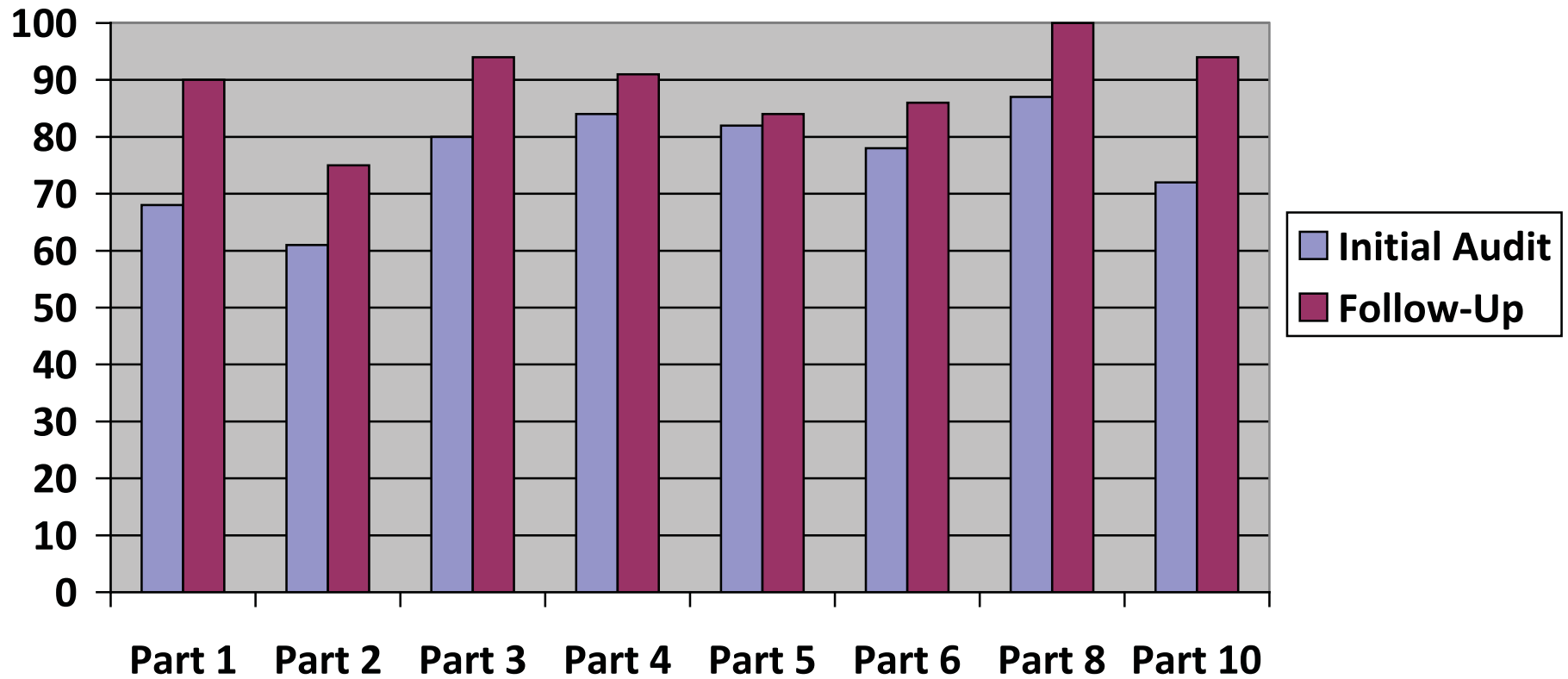
Since the Initial Audit in October 2012 there has been a tremendous amount of effort gone in to increasing compliance with the HSRC. As reflected in the scoring all elements have shown an increase, some more than others, which shows there is still more work to be done. All auditors involved in the Follow Up audit do recognize the amount of work and effort that has been put into this audit and the Management and Workers are to be commended for that.

The Ministry sincerely appreciates the efforts that have been made thus far in compliance with the Health, Safety Reclamation code and look forward to reviewing the improvements New Afton will be making to their Health and Safety Management System in near future.

We wish you well in the continued development of your Health and Safety program. We have the expertise and capability of assisting you in this development and offer that to you at your request.

# Appendix 1- Chart of Results

## New Afton Follow Up Audit July 16 & 17, 2013





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# **INITIAL HEALTH AND SAFETY AUDIT**

**New Afton Mine**

**October 16 & 17, 2012**

**Part Two**

**(DETAILED)**

**Report**

PREPARED BY

MINISTRY OF ENERGY, MINES AND NATURAL GAS

MINES AND MINERAL RESOURCE DIVISION



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>Section 1.3.1 Authority to Enter a Mine:</b>	
<b>Subsection: 1.3.2 Posting</b>	
<i>Is there "only authorized persons" notice posted on all road entrances to the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There are signs posted and the main access to the site is controlled by 24/7 security.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 1.6.9 Occupational Health and Safety Managerial Responsibility:</b>	
<b>Subsection 1.6.9(1) Health and Safety Program:</b>	
<i>Has the Manager developed a Mine Health and Safety program and has it been reviewed recently by the OHSC?</i>	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
The mine does have an Occupational Health and Safety Manual in draft form. There are also elements of the program in the safety management system, but neither of these have been reviewed by the JOHSC	3
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Has the Manager developed a Mine Health and Safety Policy? Is it in Writing?</i>	
<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
There were two safety polices posted. One was a Corporate policy and one was a site policy. Both read the same but one was not signed. There needs to be one policy for the site and that is the one that should be posted.	4
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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Page 3 of 269

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Does the safety policy set forth Company safety Program Objectives?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The site policy speaks of the Management teams commitment but only in general terms.	3
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Does the safety policy Identify the authority/accountability or responsibility of workers and management?</i>	

Scoring: **Maximum points available per subsection = 5**

Page 4 of 269

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
The policy speaks of Responsibilities and Accountabilities being transfer to employees but does not define or outline what they are.	3
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<u>Adjusted Score</u>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Is the safety policy posted in conspicuous locations?</i>	
<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
One or both of the safety polices were posted throughout the site.	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Is it reviewed/reissued on an annual basis?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The most recent posted policy was dated October 15, 2012 but the General Manager's signature was not on it. It was admitted that although the policy had been re-dated it had not been reviewed for quality or content.	3
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Are workers familiar with the safety policy?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Employees interviewed stated they were aware of a policy but were not sure what it said.	2
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<i>Is it communicated to new employees?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The safety policy is not covered in the new hire orientation.	0

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## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
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<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
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<b>Subsection 1.6.9 (1a) Health and Safety Program :</b>	
<b><i>Is it discussed during regular staff/team/workgroup meetings?</i></b>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
The records presented did not show the policy had been reviewed at any meetings.	0
<b><u>Initial Audit - Manager's Reply:</u></b>	
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<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(b) Health and Safety Program :</b>	
<i>Have general safety rules been developed?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Some general rules are reviewed in the new hire orientation and some are in the OHS manual, (which is in draft form and not reviewed).	4
<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(b) Health and Safety Program :</b>	
<i>Are workers familiar with general safety rules?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The majority of the workers interviewed indicated they were aware of the general rules but felt they needed to be reviewed more often.	4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(c) Health and Safety Program :</b>	
<i>Have Safe Work Procedures been developed on a departmental basis?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Safe Operating Procedures are being developed on an ongoing basis using a Job Hazard Analysis process for each Department. Some departments are further along in this process than others.	4
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9 (1)(c) Health and Safety Program :</b>	
<i>Have the safe work procedures been reviewed with all relevant workers?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is an employee training matrix in place that tracks which SOP's are reviewed by which employee. It was also noted that some of the SOP's are also being reviewed at crew meetings. This process needs to be expanded to capture all training.	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(e) Health and Safety Program :</b>	
<i>Is there a provision for regular monthly crew safety meetings?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There are formal monthly meetings being held with minutes being kept.	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(f) Health and Safety Program :</b>	
<i>Are there procedures developed for accident and serious incident investigations?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There are procedures developed in the OHS manual, which needs to be published. There has been formal accident investigation training done, but the process needs to be published and reviewed.	3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(g) Health and Safety Program :</b>	
<i>Are there procedures for monthly safety tour inspections?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There is a procedure outlined in SOP procedure SAF-FRM-088	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (2) Health and Safety Program :</b>	
<i>Does the OHSC regularly review the mine Health and Safety program for completeness and effectiveness and submit its findings to the manager?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
In review of the minutes from the OHSC it appears that some of the safety program elements are being discussed but the committee needs to expand their focus to more parts of the program.	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.1 Occupational Health and Safety Managerial Responsibility:</b>	
<b>Subsection 1.6.1 Health and Safety Committee:</b>	
<i>Is there a health and safety committee established in accordance with section 1.6.1?</i>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<b>Score</b>
There is a committee that is comprised of New Gold employees and Contractors, which creates a rather lager committee. This appears to have an impact on the committee's ability to work on the bigger picture elements of the safety program.		3
<b>Initial Audit - Manager's Reply:</b>		
<a href="#">Click here to enter text.</a>		
<b>Audit Follow Up – Inspector Comments:</b>		<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>		
<b>Audit Follow Up - Manager's Reply:</b>		
<a href="#">Click here to enter text.</a>		
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>		<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>		
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>		
<a href="#">Click here to enter text.</a>		
<b>Section 1.6.3 Inspections:</b>		
<b>Subsection 1.6.3(1) Health and Safety Committee:</b>		
<i>Does the committee conduct regular monthly inspections?</i>		
<ul style="list-style-type: none"> <li><i>All hazard areas are identified and inspected regularly</i></li> <li><i>Substandard conditions are documented in writing</i></li> </ul>		
<b>Initial Audit - Inspector Comments:</b>		<b>Score</b>
The records show that regular monthly inspections are being done, with minutes kept. It was noted that at the time of this audit the hazard rating that was being used previously for items found during the inspection has been dropped from the present process. The reason for this needs to be reviewed.		3

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

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<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.3(2) Health and Safety Committee:</b> <i>Does the Committee meet after their inspection?</i> <i>Are minutes of this meeting prepared including a description of conditions found during the inspection?</i> <i>Are Action and follow-up plans are developed specifying what will be done, by whom, when?</i> <i>Are the minutes posted in a conspicuous place and filed with the Manager?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Review of the records show that minutes of the Inspections are being kept with action items identified. These action items are put in the site's Corrective Action tracking system for implementation and monitoring.	4
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

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<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.4 Inspections:</b>	
<b>Subsection: 1.6.4(3) Health and Safety Committee:</b>	
<i>Are the OHSC Minutes posted in a conspicuous place and filed with the Manager?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Minutes from the OHSC were observed posted throughout the site.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.5 Accident Investigations:</b>	
<b>Subsection: 1.6.5 Health and Safety Committee:</b>	
<i>Do the OHSC co-chairpersons or their designate participate in investigations of medical aids and dangerous occurrences as required in 1.7.1 of the HSRC?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
In review of the records, they showed that the OHSC co-chair persons or designates are involved sometimes but not on a consistent basis. There were many AI reports that did not have a safety representative signature on them.	3
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.7 Cooperation with the OHSC:</b>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>Subsection: 1.6.7 (1,2,3) Health and Safety Committee:</b> <i>Do all persons working at the mine cooperate with the OHSC by;</i> <ul style="list-style-type: none"> <li>• Providing facility to carry out its inspections and investigations</li> <li>• Allowing access to all records and reports</li> <li>• Correcting hazards as noted by the agreed date by the OHSC?</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> There appears to be good cooperation with the OHSC. It is worth noting that at the time of this audit there appeared to be a good working relationship between the Surface and Underground OHSC representatives.	<b>Score</b> 5
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection: 1.6.7 Health and Safety Committee:</b> <i>Is there a system in place to ensure follow-up and implementation of committee recommendations?</i>	
<b>Initial Audit - Inspector Comments:</b> The action items identified from the OHSC are put into the site Corrective action process for tracking. The OHSC should be reviewing the status of these items at each monthly meeting to ensure action has been implemented.	<b>Score</b> 4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

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Click here to enter text.	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
Click here to enter text.	
<b>Subsection: 1.6.7 Health and Safety Committee</b> <i>Is the Committee involved in the development of:</i> <ul style="list-style-type: none"> <li>• <i>Safety program elements</i></li> <li>• <i>Program measurements</i></li> <li>• <i>Safe work procedures</i></li> <li>• <i>Training for workers</i></li> </ul>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
<p>Records show the OHSC has started to look at these aspects but due to the size and structure of the committee, the review is a complicated process.</p> <p>Records also show the committee spends most of its time looking at the physical conditions of the mine and less time on the behaviours, processes and procedures that show the effectiveness of the program</p>	3

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

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<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.6.8 Committee Training:</b>	
<b>Subsection: 1.6.8 OHSC training:</b>	
<i>Has the OHSC received any training?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
This topic was a point of some frustration for the OHSC. It was stated that a training plan had been developed for the committee for the year but for some reason was not followed through with. The records also showed that not all OHSC representatives had accident investigation training. This topic of training for the OHSC needs to be reviewed and a commitment made to get the training done.	2
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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## Part One – Application of Code and General Rules

October 16 & 17, 2012

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<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Section 1.11.1 Occupational Health and Safety Managerial Responsibility:</b>	
<b>Subsection: 1.11.1(2) Training in the Workplace:</b> <i>Is there a comprehensive orientation and safety training program for new workers, including hazard awareness and reporting, general safety rules, safe work procedures, safety and health policy, safety Committee emergency procedures, etc?</i> <i>Does this training include all Managers/Supervisors?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
There is a new hire orientation process in place at the mine. Some of the Personnel safety rules that are identified in the Health and Safety Reclamation code are not reviewed in this orientation. There were no records provided that showed that Managers or Supervisors had received any new hire orientation.	3
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection: 1.11.1 Training in the Workplace</b>	
<i>Are workers given task specific safety training on how to do each task safely including being informed of hazards associated with the task?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Specific task hazard analysis is done through the use of the Job Hazard analysis process, which helps in the development of SOPs for each task. In review of the records they do not clearly show that all relevant workers get this task hazard training.	3
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part One – Application of Code and General Rules

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection: 1.11.2. Training in the Workplace:</b>	
<i>Is there a recording system developed for recording all training received by workers and supervisors?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There was, at the time of this audit, an Excel spreadsheet that was being used to track employee training which was a very labour intensive system to use. There is a new system being introduced, the INX-Health Data/Incident Entry Management system which appears will make this tracking process a lot more manageable.	3
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Part 1 – Total out of 150</b>	<b>102</b>
<b>Part 1 – Percentage out of 100%</b>	<b>68%</b>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

### Section 2.1 Workplace Health Hazard Management Program:

#### Subsection: 2.1.3(1) Workplace Monitoring Program

*Has a written program to ensure a hazard free environment been established in accordance with the "Workplace Monitoring Procedures Manual"?  
Is there a written program and is it reviewed on a regular basis?*

##### Initial Audit - Inspector Comments:

On three occasions a consulting company has conducted workplace monitoring for the mine: May 2009, Oct. 2011 and May 2012. In 2009, exposures to noise, silica, and respirable combustible dust were assessed and lighting, radon gas, and gamma radiation surveys were conducted. In 2011, exposures to noise, silica, and respirable combustible dust were re-assessed and heat stress monitoring was conducted. In 2012, noise, silica, and respirable combustible dust were again assessed and concentrations of fourteen airborne metals, including mercury, were assessed underground, a second gamma radiation survey was conducted and the heat stress monitoring program was re-evaluated. This work has been complemented by ongoing monitoring conducted by the mine for noise, silica, respirable combustible dust, and three metals (nickel, magnesium and chromium).

Score

4

##### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

##### Audit Follow Up – Inspector Comments:

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Adjusted Score

##### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

##### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
<b>Subsection: 2.1.3(1) Anticipation/Recognition of Hazards</b> <ul style="list-style-type: none"> <li><i>Are work areas being assessed to anticipate/recognize occupational health hazards?</i></li> <li><i>Does the program identify the potential health hazards?</i></li> <li><i>Does the program identify the locations of these hazards?</i></li> <li><i>Does the program identify the workers exposed? Including grouping workers of similar exposures together (SEG)?</i></li> </ul>			
<b>Initial Audit - Inspector Comments:</b>  <p>Hazards have been identified and SEGs have been developed. In 2009, the consultant hired to conduct workplace monitoring categorized approximately 65 employees into similar exposure groups, and in 2011, the consultant categorized approximately 230 employees into similar exposure groups. The mine currently employees approximately 800 people, including contractors. SEGs should be reviewed and adjusted on a regular basis.</p> <p>Methodology for identification of hazards and their respective locations is unclear. It remains unclear if all hazards have been identified (organic vapours? cement dust? Are surface labourers exposed to noise? etc). For the majority of SEG's (all except SEG 1), the workers exposed have been identified.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="padding: 2px 5px;"><u>Score</u></th> </tr> <tr> <td style="padding: 10px 5px; font-size: 1.2em;">3</td> </tr> </table>	<u>Score</u>	3
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<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
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**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
<b>Subsection 2.1.3 (1)(2)/2.1.1/2.1.2 Evaluation of Hazards</b> <ul style="list-style-type: none"> <li>Does the program specify the frequency of monitoring?</li> <li>Does the program specify the evaluation methods used to determine the exposure levels of workers?</li> <li>Are worker's trained in conducting the program? Is monitoring being conducted?</li> <li>Are records of the monitoring program being kept?</li> <li>Are employees exposed to airborne concentrations of chemical agents or noise in excess of the levels specified in the Code or 1994-95 TLVs?</li> <li>Are TWA concentrations calculated based on Ceq formula when shifts are longer than 8 (eight) hours</li> </ul>			
<b>Initial Audit - Inspector Comments:</b> <p>A considerable amount of personal samples have been collected. Program sampling frequencies appear to be chosen based on qualitative information/professional judgment. Sampling frequency for newly identified SEG has not yet been established. Recommended sampling frequencies are not consistently being met. For example, three personal samples have been taken for welding fumes, too few to ascertain compliance.</p> <p>Samples taken by the consultant in 2012 were area samples, rather than personal sampling for airborne contaminants.</p>	<table border="1"> <tr> <th>Score</th> </tr> <tr> <td>3</td> </tr> </table>	Score	3
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<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
Click here to enter text.	
<b>Subsection 2.1.3/2.2.1/1.9.1 Control of Hazards</b> <ul style="list-style-type: none"> <li>Does the program specify the controls in place for the hazard?</li> <li>Are controls being developed/implemented to reduce worker exposures?</li> <li>Has the manager taken all reasonable and practicable measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers?</li> <li>Where practicable, has the manager instituted controls at the source to ensure that workers are not exposed to a level of any physical, chemical, or radiation hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations, and has the manager required that persons wear effective personal protective equipment in any situation where control at the source, as required by section 1.9.1(2), is impractical.</li> </ul>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There is limited evidence to show that quantitative data from collected samples is being used to make recommendations for the implementation of controls. Data should be analyzed appropriately to ensure that workers' exposure profiles fall within acceptable limits. For example, current monitoring results from SEG 8 and SEG 1 for silica quartz demonstrate that employee's exposure profiles lie above the safe working limit.	2

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>2.2.1 Workplace to be hazard free</b>	
<b>Subsection: 2.2.1</b> <i>Is there an effective housekeeping program developed and implemented to ensure:</i> <ul style="list-style-type: none"><li>• <i>That all workplaces and travel ways are maintained in a safe condition?</i></li><li>• <i>Materials and equipment are stored in a manner so as not to endanger persons?</i></li><li>• <i>Appropriate action is taken whenever necessary to maintain</i></li></ul>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

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<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<ul style="list-style-type: none"> <li>• Areas in the mill had water unable to drain such as at the filter press and at a smelly, catchment area without a drain by the south door.</li> <li>• In the mill, the sag in the conveyer belt leading to the pebble crusher caused coarse ore to fall from conveyer and scatter all over the floor, making a considerable mess. Similarly, the magnetic roller separator used to pick steel out of the ore was not aligned properly. Coarse steel-containing rocks are being picked up and dropped over walkways and under conveyer belt. A build up of dust and rock under the head end of S3 conveyer in the mill was also observed.</li> <li>• Underground, there were a number of areas leading up to where operators worked or accessed (operator access to Crusher cab, lower work ladder and catwalk at bottom of crusher, access area to a diamond drill platform) that had loose rock and other debris that could lead to tripping hazards. Given that trends of ankle injuries were seen in the records review, this should be an area of housekeeping focus.</li> <li>• A pump in one underground area was off, resulting in a significant build up of water in the travel way. Upon observing the water build up the mine captain took initiative to have the area cleaned.</li> <li>• Employees report having observed rodents in the permanent underground refuge station. Mouse traps have been set in the area, however it is not known if the rodent problem has been resolved.</li> </ul> <p>Upon review of incident reports, recommendations for control measures were often made but were not always adequate or signed off as completed. When not completed, it is unknown whether hazards are controlled.</p>	3
<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two– Occupational Health

October 16 & 17, 2012

### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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### Section 1.11 Training

#### Subsection: 1.11.2/1.8.1/1.8.2 Respirators

- Does the manager supply properly fitted PPE? I.e. is respirator fit testing being conducted? Are records being kept?
- Does the manager ensure that the equipment is adequate for its purpose?
- Are workers wearing the PPE?
- Are workers instructed in the use and maintenance of the equipment, the reasons for it, and its location and limitations?
- Is a record of the training maintained?

#### Initial Audit - Inspector Comments:

Fit testing is being conducted and employees are being instructed in the use and maintenance of the equipment. Employees report that respiratory protection can be obtained from the warehouse without a fit test being conducted. At the time of inspection, the respirator protection program provided to the Ministry appears to be draft form, as it lacks a document control number, lacks a title, and had not been assigned with a revision number.

An appropriate respirator was observed being used during a grinding task in the shop.

#### Score

4

#### Initial Audit - Manager's Reply:

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>1.6.9/1.1.2 Musculoskeletal Disorder Prevention</b>	
<b>Subsection: 1.6.9 (1)(h) Musculoskeletal Disorder Prevention Program</b>	
<i>Has the Manager developed a written MSD prevention program for the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
A Wellness Program including some content on MSD Prevention in the form of a presentation was reviewed. It recognized some risk factors related to MSD but often focused on behavioural changes to reduce the exposure to risks associated with MSD. It did not reference how to evaluate the severity of risk factors or control through the application of a hierarchy of controls. Symptoms and early reporting are not discussed. This training does not meet the requirements for training for the OHSC.	1
<u>Initial Audit - Manager's Reply:</u>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 1.6.9 (1)(h)/1.1.2 /1.11.1(2) MSD Prevention Program</b> <ul style="list-style-type: none"> <li>Has the Manager developed a Mine Health and Safety Program which includes the following sections:</li> <li>(h) a written preventative training program, acceptable to the chief inspector, to educate OHSC members in the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries</li> <li>Are ½ the worker representative and ½ the management representatives trained?</li> </ul>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
The Wellness program presentation which contained some MSD Prevention content was reviewed. Training records for this training were not provided. Lisa Martinovic, Andrew Bryant, Kevin Mihalisz and Jackson Chamberlain have attended training on this topic offered by this Ministry. At least half of the OHSC requires training so that OHSC knowledgeable on this content can effectively be involved in investigations or site inspections and assessments where tasks risk associated with MSD may need to be identified, evaluated and controlled.	1
<b><u>Initial Audit - Manager's Reply:</u></b>	
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<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.11.1 MSD Prevention Program</b> <i>Have workers been trained in the recognition, evaluation and prevention of adverse health effects resulting in Musculoskeletal Disorders (MSD) and in reporting related symptoms and injuries as it relates to their work?</i> <i>Has the manager ensured that, with respect to musculoskeletal disorder prevention,</i> (1) <i>workers are adequately trained to do their job or are working under the guidance of someone who has competency both in the job and in giving instruction, and</i> (2) <i>ensure that all employees receive thorough orientation and basic instruction in safe work practices</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>The Wellness presentation includes some information on risk factors associated with MSD and some instruction on body mechanics. Early reporting and signs and symptoms are not emphasized. Training records were not provided.</p> <p>Some additional training records regarding 1 hr sessions: "Ergonomic Risk Presentation" and "Office Ergonomics Training" were provided. Training was conducted by a consultant ergonomist April 26/27, 2011. A summary of the training content was not provided.</p> <p>Some workers interviewed demonstrated some working knowledge of possible injury risk related to overexertion activities associated with their work. This was more apparent in the more experienced workforce so is not clear whether this has been learned through experience, previous workplaces or information presented at this mine.</p>	2

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 1.9.1</b> <i>(1) With respect to ergonomics has the manager taken all reasonable and practicable measures to ensure that the workplace is free of potentially hazardous agents and conditions which could adversely affect the health, safety, or well-being of the workers,</i> <i>(2) Has the manager taken a proactive approach to musculoskeletal disorder prevention? Are safety tours addressing workstation design being conducted, area job demand analyses being done, and is research into hazards and controls being conducted?</i>	

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<p><b>Initial Audit - Inspector Comments:</b></p> <p>Several office ergonomics assessments “Ergonomic Spot Audit Checklist” had been completed by a consultant. It is unknown if the recommendations contained within were put into place and effective.</p> <p>A Physical Demands Analysis had also been completed for the Mill Control Room but it did not contain any recommendations or evaluation of risk associated with any physical demands. A finger-tip adjustable work surface was installed and will be effective in reducing symptoms associated with static postures at this work task, providing control room operators adjust their posture regularly.</p> <p>No other evidence of ergonomics assessments underground or within surface operations was provided. Proactive inspection tours with respect to MSD related hazards may have revealed:</p> <ol style="list-style-type: none"> <li>1.C-frame jumbo: noted cramped space for operator’s with some visibility difficulties. Drill operation console actually articulates (handle at left side) which changes the angle of the controls to increase comfort and adjustability for workers but was stuck. Recommend this be fixed and demonstrated to drill operators to help reduce static and awkward postures related to this task.</li> <li>2. Underground crusher cab – small area needs better suited furniture (more narrow profile chairs, cabinets) for this small space. Also foot-rung on main operator’s chair a hazard for tripping.</li> </ol>	<p><u>Score</u></p> <p>2</p>
<p><b>Initial Audit - Manager’s Reply:</b></p> <p><a href="#">Click here to enter text.</a></p>	
<p><b>Audit Follow Up – Inspector Comments:</b></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
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## 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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### Subsection 3.3.5/1.9.1

*With respect to ergonomics has the manager:*

*(2) where practicable, instituted controls at the source to ensure that workers are not exposed to a level of any physical, chemical, or radiation hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations.*

### **Materials Handling**

*Where a materials handling task endangers the safety of the persons doing the work, does the manager ensure that:*

- 1. the physical parameters of the handling task are redesigned or*
- 2. mechanical lifting aids or personal protective equipment is provided, or*
- 3. the work area where the work is carried out is redesigned to eliminate unsafe condition conditions relating to floor surfaces, lighting, or obstruction to materials handling, or*
- 4. a combination of (1), (2), or (3) is implemented.*

### **Initial Audit - Inspector Comments:**

Flocculent-mill: due to the design of where the flocculent is stored, handled and poured into a hopper in the mill, workers are exposed to lifting tasks in excess of recommended weight limits due to how the 25 kg bag is handled to complete this task.

To reduce physical demands associated with handling this 25 kg bag, workers would benefit from an elevation in the floor surface which could be accomplished by installing grating across the containment ledge to raise the standing surface in front of the hopper for ease of lifting bag to dump into the hopper and a ledge to place the bag on to cut it then dump in the hopper. A reduction in the carrying distance of the flocculent would also decrease risk associated with this handling task.

Incident reports were reviewed where handling injuries occurred. Investigators need to consider engineering controls to more effectively reduce the need for items to be handled vs. simply recommending workers should "take their time".

In the new Assay lab and in the warehouse, lifting aids and carts were available for workers to use when needed. In the warehouse, large items were being stored on pallets for safer lifting by a forklift instead of by hand.

Score

1

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<b>Subsection 2.9.1/1.9.1</b> <i>Where the equipment, work procedure, or working condition in a work area has caused injurious inflammation of muscles, tendons, or bursae of the upper limbs of the persons doing the work, and it is demonstrated to be from repetitive or forceful use, the Chief Inspector shall, where practicable, require implementation of one or more of the following preventive measures:</i> <ol style="list-style-type: none"><li>1. <i>Modification of work procedures or equipment to reduce physical demands on affected body areas</i></li><li>2. <i>A rescheduling of work to permit safe adjustment to unaccustomed task requirements</i></li></ol> <i>Or where practicable, institute controls at the source to ensure that workers are not exposed to a level of any physical, hazard in excess of the limits prescribed in the code or by an inspector, with the exception of unusual short term or emergency situations.</i>	

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October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<u>Score</u>
<p>Several incident reports were reviewed where workers were involved in incidents where an overexertion injury occurred. Recommendations were often limited to behavioural controls and administrative controls such as adding a worker to the task. These controls are not as effective as using engineering methods of control or redesign to reduce risk. Also, as recommendations were not always signed off as complete, it is unknown if this was consistently completed.</p> <p>Overall, the low quality of investigation reports with respect to MSD Prevention is directly related to the lack of training of those involved in MSD-related investigations.</p>		1
<b>Initial Audit - Manager's Reply:</b>		
<a href="#">Click here to enter text.</a>		
<b>Audit Follow Up – Inspector Comments:</b>		<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>		
<b>Audit Follow Up - Manager's Reply:</b>		
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>		<u>Adjusted Score</u>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>		
<a href="#">Click here to enter text.</a>		
<b>2. Hazards</b>		
<b>Subsection 2.1.4 Oxygen Content of Air</b>		
<i>Do persons work or remain in any section of the Mine where they may be exposed to air with less than 19.5% oxygen without an alternate air supply?</i>		

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<u>Score</u>
A number of unidentified (unmarked) confined spaces were observed in the mill. The Ministry has been informed that a review is underway to identify all confined spaces and have them adequately identified.		2
<b>Initial Audit - Manager's Reply:</b>		
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Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1 .The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



**Subsection 2.5.1/2.5.2/2.5.3/2.5.4/2.5.5/2.5.6 Abrasive Blasting**

No Silica or Lead:

*Is abrasive blasting material containing 1% or more free silica or lead being used?*

*Is all abrasive blasting and similar operations,:*

- when carried out within a building, conducted in an isolated enclosure to prevent injury to persons?*
- when carried out outside a building, conducted in a place and manner to prevent injury to persons?*

*Do the enclosures have sufficient exhaust ventilation to ensure that a continuous inward flow of air is maintained at all openings in the enclosure during the blasting operation?*

Protective Equipment:

*During abrasive blasting operations are air-supplied hoods or respirators suitable for the work supplied and work, together with gloves, leggings, and clothing designed to protect the employees from dust, and projected abrasive or other material?*

*Does air supplied to the hood or respirator meet the requirements of CSA Standard CAN3Z180, 1-M85 “Compressed Breathing Air and System,” as updated from time to time, and is the volume of air supplied sufficient for respiration and to prevent the entry of contaminants into the hood or respirator, and not less than 105 L per minute at the mask?*

Nozzles and Valves:

- 1. Are blast cleaning nozzles equipped with an operating valve which must be held open manually and the normal operation of this valve not defeated?*
  - Is there support provided on which the nozzle can be secured when not in use?*
- 2. In addition to the operating valve required by subsection (1), is there another operating control readily accessible to the operator to enable the flow of abrasives to be stopped immediately?*

Workers to Be Removed:

*Are persons not required to assist in abrasive blasting or a similar operation which release harmful substances to the atmosphere, removed from contaminated areas?*

*Where such removal is not practical, are the exposed persons advised of the hazard and supplied with suitable personal protective equipment which they shall wear?*

**Scoring: Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The Ministry was informed there is no abrasive blasting being conducted on site.	n/a
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 2.3.1/2.3.2 Asbestos</b> <i>The manager shall ensure that</i> <ul style="list-style-type: none"><li>(1) <i>as effective, less hazardous, asbestos-free substitutes become available and practical for such items as brake lining, insulation, and fire retardant materials, they shall be used,</i></li><li>(2) <i>where there is no substitute available for an asbestos-containing material, a procedure acceptable to the chief inspector is developed to protect the health of persons using, maintaining, or exposed to such material,</i></li><li>(3) <i>notwithstanding subsection (2), items containing crocidolite asbestos are not to be used at a mine,</i></li><li>(4) <i>spraying of asbestos, or material containing more than 1% of asbestos, is prohibited, and</i></li><li>(5) <i>protective clothing and equipment made of material containing asbestos is used in such a manner as to prevent the release of asbestos fibres.</i></li></ul> <p><i>Where any work involves the use, handling, or disposal of asbestos or materials containing asbestos, the manager shall ensure that the procedures outlined in the manual "Safework Practices for Handling Asbestos Revision 10 1996" published by WorkSafe BC are followed, and that the inspector and the OHSC are notified of the procedures.</i></p>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
An asbestos survey was conducted under previous supervision. The results of the asbestos survey could not be located at the time of the audit. Employees were aware that some building walls were asbestos containing. Signs need to be mounted on the asbestos containing walls to indicate they should not be disturbed.	2
<b>Initial Audit - Manager's Reply:</b>	
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<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<b><u>Audit Follow Up - Manager's Reply:</u></b>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
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<b>Subsection 2.3.5 Hazardous Dust</b> <i>Is dust being removed by suitable means (wet sweeping or shovelling, vacuuming or being suppressed) where it could become a hazard by restricting vision, or could cause a fire or explosion or be potentially hazardous if inhaled or ingested?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
<p>Dry sweeping was observed in the shop and indications of dry sweeping were observed in the mill (broom and dust pile without indication of dust collecting agent or use of water). Previous dust monitoring results suggest that inhaled dust may be potentially hazardous due to elevated levels of silica quartz.</p> <p>The site has taken positive steps to mitigate potential dust issues. Dust suppressant has been applied to roadways and DustFoam is being added to ore.</p>	3
<b><u>Initial Audit - Manager's Reply:</u></b>	
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<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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<p><b>Subsection 2.3.9 (1)(2)/2.3.10/2.3.11 Radiation</b></p> <p><i>Is equipment which emits harmful levels of infrared or ultraviolet radiation shielded to protect employees from exposure to such radiation?</i></p> <p><i>Is PPE supplied to and worn by persons who could become exposed to harmful radiation levels?</i></p> <p><i>Are employees exposed to non-ionizing radiation which exceeds the recommendations contained in the publication "Safety Code 6, Recommended Safety Procedures for the Installation and Use of Radio Frequency and Microwave Devices in the Frequency Range of 10 MHz to 300 GHz", published by Health and Welfare, Canada?</i></p> <ol style="list-style-type: none"> <li><i>Are workers being exposed to ionizing radiation levels greater than:</i> <ol style="list-style-type: none"> <li><i>4.0 Working Level Months (20 millisieverts) of radon decay products per year averaged over 5 years, and 10.0 Working Level Months (50 millisieverts) in a single year?</i></li> <li><i>20 millisieverts (2 Rem) of gamma radiation per year averaged over 5 years, and 50 millisieverts (5 Rem) in a single year?</i></li> <li><i>A combination of radon decay products and gamma radiation totalling 20 millisieverts averaged over 5 years or 50 millisieverts in a single year?</i></li> </ol> </li> <li><i>Are workers provided and wearing a gamma radiation dosimeter if measurements indicate exposure to gamma radiation greater than 5.0 microsieverts per hour (0.5 millirem per hour) at 0.5 meters from the source?</i></li> <li><i>Are all radioactive materials used, handled, stored, transported, and disposed of in accordance with the Canadian Nuclear Safety Commission Regulations?</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
This section appears to be within compliance.	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 2.3.12 ISOCYANATES</b> <i>Where paints, protective coatings, adhesives, or insulating materials containing isocyanate compounds or other compounds that have similar sensitizing effects are being applied, persons shall be protected from the airborne contaminants by</i> <i>(1) where practicable, performing the work in an isolated enclosure having sufficient exhaust ventilation to ensure that contaminated air is not released from the enclosure into areas where unprotected persons can enter, and</i> <i>(2) where methylene bisphenyl isocyanate is used, ensuring that a supplied-air respirator (SAR) approved by NIOSH or MSHA is worn by all exposed persons, in accordance with the following concentrations:</i> <ul style="list-style-type: none"> <li>• up to 2 mg/m<sup>3</sup>: SAR or SCBA,</li> <li>• up to 5 mg/m<sup>3</sup>: SAR operated continuous flow, or SCBA,</li> <li>• up to 10 mg/m<sup>3</sup>: positive pressure, full facepiece SAR,</li> <li>• up to 100 mg/m<sup>3</sup>: positive pressure, full facepiece SCBA, and</li> <li>• Emergency or planned entry into unknown concentrations or immediately dangerous to life or health: positive pressure, full-facepiece SCBA, or positive pressure full-facepiece SAR with an auxiliary positive pressure SCBA.</li> </ul> <i>(3) A respirator type shall be selected in accordance with assigned protection factors as outlined in Table 2 of CSA Standard Z94.4-93</i>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>		<u>Score</u>
<p>The Ministry was informed there are no isocyanates on site. However, products (e.g. WHMIS controlled products) can be brought onto site without a central check for materials containing isocyanate compounds or other compounds that have similar sensitizing effects. It remains unclear whether there are such products on site. It was recently confirmed (after the onsite audit) that New Afton conducted a trial for a new type of resin rebar with an isocyanate containing material. It is unclear what safe work procedures and controls were used. A substitute for this product should be considered and if this isocyanate containing product will be used appropriate safe work procedures and controls must be developed.</p>		3
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<b>Subsection 2.7.1 Lasers</b> <i>Are laser emitting devices being classified and used in accordance with the procedures outlined in ANSI Z136.1 – 1993 – “American National Standard for the Safe Use of Lasers”?</i>		

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<u>Score</u>
The Ministry was informed that lasers are not being used on site. Pit monitoring equipment may involve the use of lasers. Upon request, the site did not produce an SOP for the use of lasers. Given the lack of information provided this item was not reviewed.		n/a
<b>Initial Audit - Manager's Reply:</b>		
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<a href="#">Click here to enter text.</a>		
<b>Subsection Noise 2.6.1 NOISE</b> <b>Mufflers Required:</b> <i>If practicable is machinery or equipment which, when operating, expose the operator or persons in the vicinity to noise levels in excess of those prescribed in Table 2-2, Part 2, for unprotected ears, fitted with a properly maintained muffler or other noise reducing device?</i>		
<b>Initial Audit - Inspector Comments:</b>		<u>Score</u>
Noise levels in the mill were loud. It is unknown whether any assessment has taken place to identify areas that could be controlled. Of the vehicles that were observed, all were outfitted with mufflers.		3

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
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<b>Subsection 2.8.1/2.8.2 Illumination</b> <u>Lighting Standards:</u> <i>Do all working places have suitable and adequate lighting in accordance with the ANSI/IES Standard RP-7-1991: "American National Standard Practice for Industrial Lighting", as updated from time to time, unless otherwise authorized by the Code?</i> <u>Surface Illumination:</u> <i>Is there a separate and independent emergency source of illumination at all places where a hazard could be caused by a failure of the normal lighting system?</i> <u>Is the emergency lighting:</u> <ol style="list-style-type: none"> <li>1. Where it is a section of a permanent installation, turn on automatically when the normal lighting fails?</li> <li>2. Providing adequate illumination to allow employees to initiate emergency shutdown procedures and leave their work areas safely?</li> <li>3. Tested as frequently as necessary to ensure that it will function when required?</li> </ol>	

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Part Two- Occupational Health

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<u>Score</u>
<p>Poor lighting was observed in the mill in certain areas. A number of light fixtures between the SAG mill and the floatation circuits had filled with water and burnt out.</p> <p>It would appear there is no practical way to assess whether emergency lighting in the emergency exit culvert and at intake conveyer is in working order (cutting power to that circuit would mean cutting power to the conveyer also).</p>		4
<b>Initial Audit - Manager's Reply:</b>		
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<b>Subsection 2.10.1 (1)(2)(3) HEAT AND COLD STRESS:</b> <i>Is there a program to control for heat or cold stress?</i> <i>Is it a problem?</i>		

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<b>Score</b>
A program for Heat Stress is in place. It includes education and a hierarchy of controls to mitigate heat exposure. High temperatures had been reported to have been observed in the underground workings. It was unconfirmed whether testing had been done to monitor conditions. A program for Cold Stress was not demonstrated in the materials provided.		3
<b>Initial Audit - Manager's Reply:</b>		
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<b>Audit Follow Up – Inspector Comments:</b>		<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>		
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<b>Section 2.4 Harmful Chemical Exposure</b>		
<b>Subsection 2.4.1 (1)(2)(3) EMERGENCY WASH FACILITIES</b>		
<i>Are eye wash equipment, emergency water baths or showers or other suitable means immediately available to effectively cleanse the affected body areas where persons may be exposed to corrosive or other chemicals harmful to the eyes or skin?</i>		
<ol style="list-style-type: none"> <li><i>Emergency shower facility shall provide a tempered supply of potable water for a minimum of 15 minutes?</i></li> <li><i>In cases where it is not practical to install a permanent facility portable eye wash stations and/or portable emergency wash facilities may be installed as applicable</i></li> <li><i>Are provisions taken to ensure that water supplies and eye wash isotonic fluids are protected from freezing and are adequately maintained?</i></li> </ol>		

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>		<u>Score</u>
<p>A plumbed emergency shower wash was installed in the assay lab.</p> <p>At the time of the audit, emergency wash facilities were not being tested regularly in the mill. Tags to record regular checks were blank. When testing the eyewash stations, water lines were initially plugged, causing white foamy water to spray a few feet in the air until the lines had cleared. Water supplied to emergency wash stations in the mill was not tempered. There was no eye wash station near the DustFoam addition point/storage where ore enters the mill. DustFoam is particularly toxic to the eyes.</p> <p>Some eyewash stations underground were in poor condition (very dusty). At one eyewash station in the underground shop, the eyewash solution had been removed from its holder, placed nearby, and replaced by an empty energy drink can. There was no eyewash station in proximity to the DustFoam addition point in transfer chamber 4/5.</p>		3
<u>Initial Audit - Manager's Reply:</u>		
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Scoring: **Maximum points available per subsection = 5**

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**Subsection 2.4.2 (1) (2) (3) Harmful Chemical Exposure**

- (1) Are shower or wash facilities and separate areas for street and work clothing provided where the nature of the work causes a person's clothing or skin to be contaminated with substances which could cause injury or endanger the health of the person or contaminate other areas on or off the minesite?
- (2) Are means for cleaning contaminated clothing or is suitable protective clothing provided where contaminated clothing is not to be removed from the minesite?
- (3) Do persons exposed to contaminants:
  - Cleanse affected skin areas as soon as practicable?
  - Not consume or handle food or tobacco products until hands and face are free of contamination?
  - Ensure contaminated clothing is removed and disposed of?
  - Not leave the mine at end of shift until all affected skin areas have been cleansed of contamination?

Initial Audit - Inspector Comments:

In the underground shop refuge station/break room, soap and a means to dry hands was not available. There were other areas where people take breaks underground that had no means available for washing hands.

Clean and dirty areas are provided in the Mine Dries both at the Mine Operations area as well as at the Truck Shop. Contaminated clothing is washed on site by contractors and measures are in place to neutralize the shotcrete which accumulates on coveralls worn underground. Shower facilities are provided to all personnel at the Mine Dries and employees are encouraged to use them after returning to surface from underground.

There is evidence that personnel are using tobacco underground but it is unclear whether these workers, as a general rule, are cleansing their hands and face before use. Contaminated clothing is gathered in the Mine Dry in designated bins and washed by contract employees.

Score

3

**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 2.11 Lunchrooms and Sanitary Conveniences</b>	
<b>Subsection 2.11.1/2.11.8 Water</b>	
<i>Has the Manager provided a source of cool, potable drinking water complying with the Safe Drinking Water Guidelines of the Ministry of Health in locations that:</i>	
<ul style="list-style-type: none"> <li>• <i>Are reasonably accessible to employees?</i></li> <li>• <i>Are kept clean and in a sanitary condition?</i></li> <li>• <i>Are designed to permit the water to be dispensed and drunk in a sanitary manner?</i></li> </ul>	
<i>Temperature of washing water:</i>	
<i>Does water used for personal washing exceed 60 degrees Celsius at any outlet, or is it mixed directly with steam?</i>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<b>Score</b>
<p>Potable water is available in most areas on surface. In areas, such as the Safety Trailer, where the water is not potable, bottled water is provided. Posted signage indicating that the water is not for consumption is inconsistent throughout the property, for example: signage was missing in the women's dry in the shop, shop "cafeteria", underground shop break-room.</p> <p>Samples are being taken of the potable water system with some frequency however the Mine Operations trailers, which are the end of the potable water line, are not being sampled. There are two individuals with a water treatment ticket. They are both also mill operators and often too busy to monitor the potable water system themselves, thus requiring assistance.</p> <p>The non-potable water supply, which is used for hygiene purposes (including washing in lunch rooms), is not monitored for water quality.</p> <p>Employees are encouraged to get water before heading underground and an ice machine is provided on surface to keep water cooler longer. Once underground there are a few key locations where workers can refill their water such as the permanent refuge station.</p>		4
<b>Initial Audit - Manager's Reply:</b>		
<a href="#">Click here to enter text.</a>		
<b>Audit Follow Up – Inspector Comments:</b>		<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>		
<b>Audit Follow Up - Manager's Reply:</b>		
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>		<b>Adjusted Score</b>
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**Subsection 2.11.3/2.11.4 Lunchrooms**

*Where 7 or more persons regularly congregate to eat food, other than where the mining activity of an open pit mine is preformed, is a lunchroom provided which:*

- 1) Is heated, lighted, and ventilated?*
- 2) Has or be located near facilities for persons to wash with cold and hot running water and dry their hands?*
- 3) Does not have an entrance through a toilet facility?*
- 4) Contains sufficient fire retardant receptacles with lids, which are used by employees to dispose of all waste food, paper, and other related material, and the containers emptied regularly?*
- 5) Has suitable seating facilities equipped with backrests and tables with impervious top surfaces which is kept in clean and sanitary condition?*
- 6) Is constructed of materials which can be, and is, maintained in a clean condition?*
- 7) Has the following minimum dimensions:*
  - a. No. of Persons      sq. m / Person*
  - b. 25 or less          1.2 (min. size. 6 sq. m.*
  - c. 26 to 74            1*
  - d. 75 to 149          0.66*
  - e. 150 to 499        0.56*
  - f. 500 or more       0.46*
- 8) Be located in an area away from process chemicals and contaminants?*

*Where more than 3 persons and fewer than 7 persons regularly congregate to eat food, other than where the mining activity at an open pit mine is preformed, is an eating area provided which complies with 2.11.3 (1), (4), (5), (6), (7), and (8), and provided with facilities for persons to clean their hands?*

**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<p><u>Initial Audit - Inspector Comments:</u></p> <ol style="list-style-type: none"> <li>1) Lunchrooms all appear to be heated, lighted and ventilated adequately.</li> <li>2) In the underground shop refuge station/break room, soap and a means to dry hands was not available. There were other areas where people take breaks underground that had no means available for washing hands, such as in refuge stations.</li> <li>3) The entrances to lunchrooms do not pass through a restroom facility.</li> <li>4) Waste containers appear to be adequate for the locations and seemed to be emptied regularly.</li> <li>5) Tables and chairs were in good shape, generally clean and were in adequate supply. Seats with backrests were available in all designated break areas.</li> <li>6) As above</li> <li>7) The lunchrooms appeared adequate in size.</li> </ol> <p>There were chemicals stored in the permanent refuge station which doubles as a lunchroom underground however these chemicals were segregated away from the area where personnel would eat and therefore was found to be acceptable.</p>	<p><u>Score</u></p> <p>3</p>
<p><u>Initial Audit - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>Audit Follow Up – Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>
<p><u>Audit Follow Up - Manager's Reply:</u></p> <p><a href="#">Click here to enter text.</a></p>	
<p><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></p> <p><a href="#">Click here to enter text.</a></p>	<p><u>Adjusted Score</u></p>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
<b>Subsection 2.11.5/2.11.7 Mine Dry</b> <ol style="list-style-type: none"> <li>1. <i>The Manager shall provide separate facilities for male and female employees to wash and shower, and to change and dry their clothing</i> <ul style="list-style-type: none"> <li>• <i>At a surface mine where persons are subject to dusty, dirty, or wet conditions</i></li> <li>• <i>At an underground mine and this facility shall include separate storage facilities for street clothes and working clothes</i></li> </ul> </li> <li>2. <i>The facilities shall have separate approaches with signs clearly indication for which gender they have been provided.</i></li> </ol> <p><b>Location of Mine Dry:</b>  <i>Is the mine dry adequately heated, lighted and ventilated, kept clean and sanitary, and have one shower for every 7 persons leaving work at the same time?</i></p>			
<b>Initial Audit - Inspector Comments:</b>  The dries located in the shop were clean, organized and adequate. Separate facilities for male and female employees are available and are of sufficient quantity to meet the requirements of this subsection. There was a lack of signage visible at the entrances to the Mine Ops Mine Dries to indicate which doors led into the male Dry and which led into the female.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="padding: 2px 5px;">Score</th> </tr> <tr> <td style="padding: 2px 5px; text-align: center;">4</td> </tr> </table>	Score	4
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4			
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="padding: 2px 5px;">Adjusted Score</th> </tr> <tr> <td style="padding: 2px 5px;"> </td> </tr> </table>	Adjusted Score	
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<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
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**2<sup>nd</sup> Audit Follow Up - Manager's Reply:**

[Click here to enter text.](#)

**Subsection 2.11.9/2.11.10/2.11.12 Toilet Facilities**

*Are there separate toilet facilities for male and female employees:*

- *having separate entrances*
- *with signs clearly indicating for which gender they have been provided?*

*On the surface of a mine, are washroom facilities conveniently located and equipped with:*

- *One toilet and one urinal for every 25 male employees or fraction thereof, and one toilet for every 9 female employees or fraction thereof, except where the maximum number of employees on any shift is fewer than 6 when one toilet is required?*
- *One wash basin, or equivalent facility, provided with hot and cold running water for every 15 employees or fraction thereof?*
- *A means for drying hands hygienically?*
- *Adequate heat, light, and ventilation?*

*Toilets are:*

- *Of the water flushing type or other sanitary design, located in an individual compartment with a door that locks, and with walls and floor of a finish or material that can be easily cleaned?*
- *Fitted with an open-front seat and provided with a reasonable supply of toilet paper?*
- *Provided with a clothes hook and lighting where electricity is available?*
- *Kept clean and sanitary, and any waste products shall be disposed of regularly?*

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two- Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>There were no signs indicating an entrance to the men's dry on surface from the parking lot.</p> <p>Inspected washrooms on surface and underground were clean, stocked, operable and equipped with hooks.</p> <p>In almost all areas separate toilet facilities were provided for male and female employees however in the Safety Trailer there is only one toilet facility which must be shared by both genders.</p> <p>In those areas that did have separate toilet facilities there were separate entrances leading into both.</p> <p>The Mine Operation's Mine Dry did not have signage at each door to indicate which door led into the male side and which door led into the female side.</p> <p>There are an adequate number of toilets and urinals for employees and an adequate number of wash basins.</p> <p>There are hygienic options, either paper towel and/or automatic hand driers in each restroom.</p> <p>Heat, light and ventilation are adequate for all facilities.</p> <p>The toilets were generally as prescribed in this subsection however some, such as in the Safety Trailer, were not fitted with an open front seat.</p> <p>Some clothes hooks, such as in one of the toilets in the Mine Operations Building, appear to have once had a clothes hook but it is now missing.</p>	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

October 16 & 17, 2012

## 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

### Section 2.12 Medical Surveillance Programs

#### Subsection 2.12.1 Medical Surveillance Programs 2.12.1(1)(a,b,c)

*Are medical surveillance programs in place where necessary? E.g. blood lead for fire assay workers, high silica exposures?*

1. *The Manager shall notify the Chief Inspector when he believes there is a need for a medical surveillance program, for persons:*
  - *In a dust exposure occupation*
  - *Exposed to excessive noise*
  - *Exposed to any chemical, physical, or radiation agent specified by the Chief Inspector*
2. *A medical surveillance program, when required by the Chief Inspector, shall be modeled after the "Guidelines for Standard Practice for Medical Monitoring Programs" issued by the Chief Inspector and shall be of a form satisfactory to him.*

#### Initial Audit - Inspector Comments:

The Medical Surveillance Program still appears to be in its infancy. There are plans at the Corporate Level to advance this program in the coming year but at this point much work is still to be done. The corporate level has communicated that the intention is to implement mandatory medical screening, an action that contravenes the code.

There were no records available to suggest evidence of Lung Function Testing for any employees. Audiometric testing is in place and is being conducted by on-site contractors (Security/First Aid). Baseline blood lead testing has been completed for employees who will be working in the Assay Lab.

#### Score

2

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

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#### Adjusted Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 2.12.3 (1)(2) Advising Workers</b> <i>1. The Manager shall advise persons working in a dust, excessive noise, chemical, physical, or radiation exposure occupation, of the nature of the health risks and that a medical surveillance program is available, and the person, at his option, may choose to participate in the program. A person participating in the medical surveillance program may attend the doctor of his choice to undergo the examinations and tests required 2.12.1 (2).</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
In speaking with a number of individuals at the mine most were aware of the audiometric testing but were not aware of any other medical surveillance programs that might be available.	2
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 2.12.4.(1) (a, b,c,d,e) 2.12.4 (2)</b> <i>Does the medical surveillance program, required by section 2.12.1 ensure that each person examined or clinically tested is:</i> <ul style="list-style-type: none"><li>• <i>Aware of the nature of the health risks and effects for which he is being examined</i></li><li>• <i>Advised on his medical fitness to work</i></li><li>• <i>Advised of any work restrictions resulting from his medical condition</i></li><li>• <i>Instructed in health precautions required</i></li></ul> <i>Provided with a copy of the results of the medical examination</i>	
<b>Initial Audit - Inspector Comments:</b> For the extent of audiometric testing only, interviewed workers reported that upon completion of their audiometric testing the results of the test was shared with them, they were advised of deficiencies and the personnel conducting the testing actively promoted the use of hearing protection in areas of concern. As personnel were unaware of any other medical surveillance they could not make comment on these factors outside of audiometric testing.	<b>Score</b> 3
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
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Part Two- Occupational Health

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 2.12.5 (1) (2) Maintenance of Records</b>	
<i>Personal medical records shall be maintained on a confidential basis by the physician or nurse, and shall not be made available to the Manager or any other person, except as required by statute, without the informed written consent of the individual?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There was no evidence to suggest any contradictions to this subsection.	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 2.12.6 Chemical Analysis</b>	
<i>Whenever a chemical analysis is required for biological monitoring is it carried out at a laboratory acceptable to the Chief Inspector?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There was no evidence to suggest any contradictions to this subsection.	5

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Part Two- Occupational Health

October 16 & 17, 2012

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 2.12.7 Programs at Owner's Expense</b> <i>All medical examinations and tests performed on a person during a medical surveillance program shall be done at the owner's or agent's expense and the expense shall not be passed on to that person.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
It appears the company has been paying for medical surveillance tests, as per draft policy.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 2.12.2/2.12.4 (2)/2.12.5 (2) Hearing Conservation Program</b> <i>A hearing conservation program is developed and followed that includes:</i> <ul style="list-style-type: none"> <li>Noise measurement</li> <li>Education and training</li> <li>Engineered noise control</li> <li>Hearing protection</li> <li>Posting of noise hazard areas</li> <li>Hearing tests</li> <li>Annual program review</li> <li>Audiometric Testing</li> </ul> <i>Audiometric testing shall be carried out by a certified audiometric technician.</i> <i>Audiometric information shall be made available to the Chief Inspector.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
These components were addressed in a draft Hearing Conservation Program document. All components were present with the exception of a commitment to review the program annually.	2

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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## Section 2.13 WHMIS

### Subsection 2.13.1-2/2.13.19-20/2.3.4/2.3.6/2.3.8 CHEMICAL STORAGE & WASTE

*Is the WHMIS program fully implemented including the storage and handling of hazardous products including those substances which are not controlled products but could cause adverse health effects?*

#### Proper containers:

*Are dangerous or potentially hazardous materials stored in containers designed, constructed and maintained to ensure proper containment of their contents?*

#### Hazardous Waste:

*Is hazardous waste material that could be detrimental to a person's health or could cause a fire or explosion:*

- *Stored in impervious containers?*
- *Labelled?*
- *Covered and located in well-ventilated areas?*
- *Collected, handled, sorted and disposed of by persons trained and wearing any necessary PPE?*

#### Flammable Waste Storage:

*Are waste materials containing solvents, grease, paints or other flammable substances stored in appropriate covered containers while awaiting disposal?*

#### Storage of Hazardous Materials:

*Are dangerous or potentially hazardous materials stored in designated storage areas:*

- *Acceptable to Inspector?*
- *Well ventilated?*

*Incompatible materials adequately separated?*

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>		<u>Score</u>
<p>Flammable storage cabinets were in use in the surface shop. They were also to be put in place in the new assay lab. All hazardous waste material appears to be stored in containers which are designed to hold the contents. There were some containers, for example in the Underground Shop, where what appeared to be waste hazardous materials was not adequately labelled. Flammable waste storage was observed to be in appropriate covered containers.</p>		4
<u>Initial Audit - Manager's Reply:</u>		
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<u>Audit Follow Up - Manager's Reply:</u>		
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>		
Click here to enter text.		
<b>Subsection 2.13.5-10 CHEMICAL LABELLING</b> <i>Is the WHMIS program fully implemented including suppliers and workplace labelling?</i> <i>All hazardous products are properly identified and labelled.</i>		
<u>Initial Audit - Inspector Comments:</u>		<u>Score</u>
<p>The majority of the site had appropriate labels located on chemicals and hazardous materials. There were some hazardous materials, such as in the Lube Oil Room of the Truck Shop and the Batch Plant which did not have placarding which would be easily identifiable.</p>		4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 1.6.9(d)/2.3.6 SAFE HANDLING/ WORK PROCEDURE</b> <i>Are there safe handling procedures for working with hazardous and potentially hazardous materials?</i> <i>Are workers trained to safely handle the material and wear any necessary protective clothing or equipment to safeguard their own and any other person's health and safety?</i> <i>An emergency spill plan has been developed to protect workers and the environment.</i> <i>Are spills or releases of hazardous waste materials cleaned up as soon as possible by trained persons and are they wearing any necessary PPE?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Procedures are being used to handle hazardous and potentially hazardous materials safely. PPE is contained within the procedures and is being utilized as was evidence when speaking with Mill employees about the safe handling of reagents. An emergency spill plan has been developed and the site is in the process of stocking up their spill response trailer. Spills which have occurred on site are reported to the Environment Department, cleaned up and then the Environment Department follows up to ensure that the spill has been adequately cleaned.	4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two– Occupational Health

October 16 & 17, 2012

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 2.13.3-4 WORKER EDUCATION AND TRAINING</b>	
<i>Is the WHMIS program fully implemented including: Worker indoctrination and refresher training?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Training is given to new employees upon hire but there is currently no schedule for refresher courses. Many employees have worked on site for more than one year, yet records showed only three have been given a refresher course, as required annually.	3
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Two- Occupational Health

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 1.6.9 (d)/2.13.11-18 SUPPLIER MATERIAL SAFETY DATA SHEETS</b> <i>Are MSDS's in place, updated and available to all workers?</i> <ul style="list-style-type: none"> <li>• All hazardous products have current Material Safety Data Sheets</li> <li>• An up-to-date inventory exists of all hazardous products</li> </ul> <i>Workers who work with or in proximity have ready access to Material Safety Data Sheets.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>MSDS sheets were located in a few prominent locations such as within the shop. Upon inspection approximately 1 out of every 10 was out of date. Note that most that were out of date were only by a year or two.</p> <p>MSDS sheets were also available on the operation's network. It is unknown if these are automatically updated. MSDS appeared only available on supervisor's computers. Employees could not easily access MSDS.</p>	3
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Two– Occupational Health

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<b>Part 2 – Total out of 190</b>	<b>115</b>
<b>Part 2 – Percentage out of 100%</b>	<b>61%</b>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Section 3.1 Impairment and Conduct</b>	
<b>Subsection 3.1.1 - Impaired Persons:</b>	
<i>Have all employees been instructed; that no persons shall enter, remain or be knowingly permitted to enter or remain in the mine if his/her ability is so impaired as to endanger his/her health or safety or that of another person.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This topic is adequately addressed in the Certification Fitness for Duty form that is given and discussed during orientation. There were no records showing the all employees have signed off on this certificate.	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.1.2 - Drugs and Liquor</b>	
<i>Are employees instructed that they will not possess liquor, or illegal drugs in or about the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
This is adequately addressed in the Certification Fitness for Duty form that is given and discussed during orientation	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

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<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.1.3 - Improper Conduct</b> <i>Have employees been instructed to not engage in any improper conduct that might create or constitute a hazard to himself or any other person?  Includes horseplay, scuffling, fighting, playing, practical jokes, or other.</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There was no evidence found showing where this topic is reviewed with employees.	0
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.1.4 - Tampering with Safety Devices and Equipment</b>	
<i>Have employees been instructed that they shall not, without cause, render ineffective any device, equipment, or material provided for the protection of the health and safety of persons employed in, on or about a mine, or the safety of the public?</i>	
<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
There was no evidence found showing where this topic is reviewed with employees.	0
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<u>Adjusted Score</u>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Section 3.2 General Safety Rules</b>	
<b>Subsection 3.2.1 - Age</b>	
<i>Are there any persons under the age of 18 years employed at the mine?</i>	
<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
There was no person under the age of 18 years of age, found on site at the time of this audit.	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.2.2 – Tallying</b> <ol style="list-style-type: none"> <li>1. <i>Is there a system in place to account for all persons on the mining property?</i> <ol style="list-style-type: none"> <li>a. <i>Workers</i></li> <li>b. <i>Staff</i></li> <li>c. <i>Contractors</i></li> </ol> </li> <li>2. <i>How is the system introduced to new persons coming onto the mine site?</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Access to the site is controlled at a secure gate where electronic cards are used to track persons going on and off site. It is the responsibility of the gate persons to account for those that have not signed out at end of day and report to the respective area should someone be unaccounted for.	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three- Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.2.3 – Working Alone</b> <ol style="list-style-type: none"> <li>1. <i>Does a means exist for checking the well being of workers working alone and may not be able to secure assistance in the event of an injury or other misfortune?</i></li> <li>2. <i>Do the intervals between checks exceed 2.5 hours?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There was no procedure developed at the time of this audit to address this topic.	0
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 3.2.4 – Transportation of Persons</b>	
<ol style="list-style-type: none"> <li><i>Are there persons being transported in the box of a pickup truck or riding in a standing position?</i></li> <li><i>Are there persons boarding or leaving any vehicle while that vehicle is in motion?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No observations were made of persons being transported in the box of pickup trucks or in a standing position. There are records that show this having been discussed with employees.	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 3.3 Working Conditions</b>	
<b>Subsection 3.3.2 – Hazardous Work:</b>	
<ol style="list-style-type: none"> <li><i>Are there any locations in the mine where persons are working overhead?</i></li> <li><i>How is employee safety being protected by not allowing them to enter into any location at a mine where persons are working overhead?</i></li> </ol>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three- Personnel Safety and Emergency Preparedness

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<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
No such procedure was presented at the time of this audit.	0
<b>Initial Audit - Manager's Reply:</b>	
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<b>Audit Follow Up – Inspector Comments:</b>	<u>Adjusted Score</u>
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<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<u>Adjusted Score</u>
Click here to enter text.	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
Click here to enter text.	
<b>Subsection 3.3.3 Hazardous Work</b> <i>When persons are required to work or be near water, where drowning could be a risk:</i> <ol style="list-style-type: none"> <li>Has the Manager provided, at conspicuous locations, life-buoys equipped with heaving lines of adequate length which conform to Ministry of Transport (Canada) standards?</li> <li>If the person is required to work alone at these sites or be transported across water is that person provided with and wearing a personal floatation device conforming to Canadian Government Specifications Board Standard CAN/CGSB-65.7-M88?</li> </ol>	

Scoring: **Maximum points available per subsection = 5**

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<u>Initial Audit - Inspector Comments:</u>		<u>Score</u>
There was no procedure in place at the time of this audit to address this topic. No life-buoys or flotation devices were observed in areas where drowning could be a risk.		0
<u>Initial Audit - Manager's Reply:</u>		
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<u>Audit Follow Up – Inspector Comments:</u>		<u>Adjusted Score</u>
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<u>Audit Follow Up – Manager Reply:</u>		
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>		<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow up – Manager's Reply:</u>		<u>Score</u>
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<b>Section 3.4 Hazardous Atmosphere – Confined Spaces</b>		
<b>Subsection 3.4.1 Work in Confined Spaces</b>		
<i>Are written procedures developed and implemented for work in confined spaces where irrespirable, toxic or flammable atmospheres might be encountered?</i>		
<u>Initial Audit - Inspector Comments:</u>		<u>Score</u>
There was a draft procedure presented at the time of this audit but it was still under revision.		3

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<b>Initial Audit - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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Click here to enter text.	
<b>Subsection 3.4.2 Safe work Procedures</b> <i>The procedures required under section 3.4.1 shall include:</i> <ol style="list-style-type: none"> <li><i>1. The use of lifelines and safety belts wherever possible;</i></li> <li><i>2. When lifelines and safety belts cannot be used, sufficient resources with respiratory equipment capable of performing a rescue be stationed outside the confined space;</i></li> <li><i>3. Maintenance of an effective means of communication between persons inside and outside the confined space;</i></li> <li><i>4. Specified time intervals for making periodic visual contact with persons inside the confined space;</i></li> <li><i>5. Specific procedures to be followed whenever welding or burning operations are to be carried out in the confined space;</i></li> <li><i>6. Appropriate breathing apparatus and persons trained in its use, and readily available at every confined space in which person are working; Compressed air used for breathing complying with the requirements of CSA Standard CAN-3-Z180.1M85 Series</i></li> <li><i>7. Disconnection, blanking or blinding off pipes carrying substances that could be hazardous to the person entering the confined space;</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
These topics are outlined in the draft confined space procedure.	3

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<b>Subsection 3.4.3 Tests of Confined Space</b> <i>Are persons without self-contained breathing apparatus instructed not to enter a confined space in which a harmful atmosphere might exist or develop until:</i> <ol style="list-style-type: none"> <li><i>1. Tests have been made to determine the nature and quantity of harmful vapours, gases, fumes, mists, dusts, and the oxygen content of the atmosphere inside the confined space and these test results recorded in a logbook kept for that purpose?</i></li> <li><i>2. The written work procedures under section 3.4.1 have been read and understood by the person and the required emergency and rescue procedures are in place?</i></li> <li><i>3. The confined space is being ventilated continuously by a natural or forced ventilation system?</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
These items are covered in the Pre-Entry Check procedure SAF-FRM-006	4

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<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
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<b>Subsection 3.4.4 Test of Intervals</b> <i>Are tests of the atmosphere inside the confined space made at intervals during the work process to ensure that the quality of the air does not deteriorate and the test results shall be recorded as required by section 3.4.3 (1)?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Confined space procedure requires testing at 20 minute intervals.	4
<b><u>Initial Audit - Manager's Reply:</u></b>	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 3.4.5 Confined Space Ventilation:</b> <i>Where tests made under 3.4.3 and 3.4.4 or any other test or examination indicates a harmful atmosphere or the presence of a harmful substance, is the confined space ventilated or cleaned, or both, and re-tested or re-examined to ensure that no person without self-contained breathing apparatus is allowed to enter the confined space unless:</i> <ol style="list-style-type: none"><li><i>1. The atmosphere or substance in the confined space is no longer considered harmful according to the acceptable standards prescribed in part 2 of the Code</i></li><li><i>2. The oxygen content of the atmosphere inside the confined space is not less than 18%</i></li></ol>	
<u>Initial Audit - Inspector Comments:</u> This requirement is outlined in the confined space procedure.	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
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### Subsection 3.4.6 Wearing of Protective Equipment

Where tests made under 3.4.3 and 3.4.4 indicate the presence of harmful or explosive substances and it is not practical to provide a safe, respirable atmosphere

1. Do persons entering the confined space wear self-contained breathing apparatus and personal protective equipment?
2. Is the concentration of flammable substances maintained below 20% of the lower explosive limit as determined by repeated testing?
3. Are all possible sources of ignition eliminated or controlled where flammable substances exist?

#### Initial Audit - Inspector Comments:

This requirement is outlined in the confined space procedure.

Score

4

#### Initial Audit - Manager's Reply:

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Section 3.6 Industrial First Aid	
<b>Subsection 3.6.1 First Aid Supplies:</b> <i>Does the Manager provide and maintain first aid supplies and services as required by the WorkSafe BC?</i>	
<u>Initial Audit - Inspector Comments:</u> The first aid room was clean and well organized. First aid records are kept in a locked cabinet. Instruments are sterilized with bleach. Inventory of first aid supplies is done at least monthly by first aid staff and replenished as required.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 3.6.3 First Aid Supplies</b> <i>How is a means of communication provided by which the services of a physician can be obtained expeditiously?</i>	
<u>Initial Audit - Inspector Comments:</u> A nurse or doctor, at the hospital emergency room, can be reached by phone. The hospital is less than 20 minute drive away. BC ambulance will come to the mine site or the mine ETV can transport a patient directly to the hospital.	<u>Score</u> 5

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.7 Mine Rescue</b>	
<b>Subsection 3.7.1 Underground</b>	
<i>Mine Emergency Response Plan:</i>	
<i>Is there a mine rescue emergency response plan?</i>	
<ul style="list-style-type: none"> <li>• <i>Developed</i></li> <li>• <i>Filed with the Chief Inspector</i></li> <li>• <i>Kept up to date</i></li> <li>• <i>Followed in the event of an emergency</i></li> <li>• <i>Contain all elements required in the Mine Emergency Response Plan Guidelines for the Mining Industry</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
An initial plan was developed February 11/10. The latest revision is dated April 10/12 and filed with the Chief and contains the required elements.	5

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<b>Subsection 3.7.2 Underground</b> Are trained mine rescue teams established, maintained and equipped at underground mines where the number of employees underground at one time is less than: <ol style="list-style-type: none"> <li>1. 50, but greater than 10, 1 team?</li> <li>2. Is greater than 50, 2 teams?</li> <li>3. On every shift where there are less than 20 working underground at any one time there are four persons trained in mine rescue?</li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There are 44 employees trained in emergency response and mine rescue.	5
<b>Initial Audit - Manager's Reply:</b>	
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<b>Subsection 3.7.4 Surface at Underground Mine</b>	
<i>At all underground mines where a surface fire can compromise people, plant, or equipment has the Manager ensured that sufficient trained personnel and equipment are available to provide fire suppression capability for the site?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There are two fire engines and 44 employees trained in fire fighting. Team members are trained in structure-fire fighting at the fire department training facility in Kamloops. An underground fire truck and ambulance is budgeted to be purchased within the next year.	5
<u>Initial Audit - Manager's Reply:</u>	
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<b>Subsection 3.7.7 Mine Rescue Team</b>	
<i>Are the qualified members of a mine rescue team:</i>	
<ol style="list-style-type: none"> <li><i>1. In possession of a valid mine rescue certificate and a valid St. John “Standard” first aid certificate, or equivalent?</i></li> <li><i>2. Free from a beard, moustache, or sideburns that could interfere with the face piece seal of any breathing apparatus?</i></li> <li><i>3. Considered competent to act as a mine rescue team member by the person appointed as a trainer under section 3.7.9?</i></li> <li><i>4. Medically fit for the nature of the work required?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All team members have valid mine rescue and first aid certificates. They are clean shaven as required. They have annual medicals by “Nurse Next Door” and confirmed to be medically fit to be part of the mine rescue team.	5
<u>Initial Audit - Manager’s Reply:</u>	
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<b>Subsection 3.7.8 Mine Rescue Records</b> <i>Is there a record of all mine rescue training maintained at the mine site, and</i> <ol style="list-style-type: none"> <li><i>1. Is the logbook maintained by the qualified person appointed by the Manager, to conduct the training?</i></li> <li><i>2. Contains the particulars of the training, including the names of those participating and the trainer?</i></li> <li><i>3. Notes the condition of all equipment used during the training?</i></li> </ol>	
Initial Audit - Inspector Comments:	Score
Records of all training are kept, who attended and what training was given. There are 4 Platoons, 4 Captains and 4 Lieutenants.	5
Initial Audit - Manager's Reply:	
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Audit Follow Up – Inspector Comments:	Adjusted Score
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<b>Subsection 3.7.9 Mine Rescue Records</b> <i>Has the Manager:</i> <ol style="list-style-type: none"> <li><i>1. Appointed a qualified person as a trainer for mine rescue team members?</i></li> <li><i>2. Ensured that all mine rescue team members practice 8 hours during each 3 months the mine operates?</i></li> <li><i>3. Ensured that all mine rescue personnel are not underground at any one time except for rescue work or training?</i></li> </ol>	
Initial Audit - Inspector Comments:	Score
Mike Owens is the trainer. Training is done every month except July and August. All team members are not underground at the same time.	5

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<b>Subsection 3.7.10 Type of Breathing Apparatus</b>	
<i>Where self-contained breathing apparatus is required is it of a type approved by a recognized certification agency, and suitable for the intended work?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There are 12 BG4s and 6 more will be acquired. There are also PSS 7000 units on surface in the fire trucks and Oxy-K units cached underground.	5
<u>Initial Audit - Manager's Reply:</u>	
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<b>Subsection 3.7.11 Mine Plan for Rescue Purposes</b>	
<i>Are the mine plans required under Part 6 of the Code readily available for the use of mine rescue teams?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Mine plans are available and updated monthly by Tech. Services.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

### Subsection 3.7.12 Mine Plan for Rescue Purposes

*Has the Manager appointed a qualified person:*

- 1. To be responsible for the care and maintenance of all rescue apparatus?*
- 2. For the entries into a logbook to be kept at the mine recording the condition of all equipment used for mine rescue or fire fighting?*
- 3. For the care of the rescue equipment storage room, and equipment caches?*

#### Initial Audit - Inspector Comments:

There are 6 trained technicians for the BG4s and current log sheets for each machine.

There is no log book for ropes and the ropes are not tagged for identification.

The equipment store room is a sea-can container, which is quite congested. There appears to be much new equipment and tools but a bigger storage space would be an advantage for organizing the gear. There are plans to build a new facility.

Score

3

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

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Adjusted Score

#### Audit Follow Up - Manager's Reply:

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#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

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#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

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<b>Subsection 3.8.2 Survival Rescue Procedures</b>	
<ol style="list-style-type: none"> <li>Has the Manager of an underground mine established a training program in survival mine rescue, including the use of approved self-rescue apparatus, and the use of firefighting equipment in place at his mine?</li> <li>Are all persons, employed at the mine or not, instructed and trained in these procedures before entering the underground mine?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
During new employee orientation, training on W65 and fire extinguisher use is given. All visitors receive basic training as well.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 3.8.3 Instructor Emergency Procedures</b>	
Has the Manager of the mine appointed a qualified person to instruct and establish a training program for all employees in basic emergency response, and fire fighting?	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
During orientation, all employees receive training in the Code 1 procedure, refuge station instruction, fire extinguisher and W65 training.	5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

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<b>Initial Audit - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
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<b>Section 3.9 Fire Fighting</b>	
<b>Subsection 3.9.1 Fire Fighting Equipment</b>	
<ol style="list-style-type: none"> <li>1. <i>Is firefighting equipment provided and maintained at all locations at the mine where fire may endanger life?</i></li> <li>2. <i>Unless specified otherwise in this Code, the British Columbia Fire Code 1998 and subsequent supplements and revisions shall apply in determining the level of firefighting equipment and maintenance as prescribed in subsection (1).</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
There fire extinguishers on most vehicles and in most areas on surface and underground. There are automatic deluge systems in the fuel bay and in the shops and conveyor transfer points. There are fire hydrants on surface in many locations, supplied by fresh water storage tanks. There are two fire trucks on surface.	5
<b>Initial Audit - Manager's Reply:</b>	
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<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
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<b>Section 3.10 Underground Fire Fighting</b>	
<b>Subsection 3.10.1 Underground Fire Fighting</b>	
<ol style="list-style-type: none"> <li>1. <i>Is firefighting equipment provided and maintained at all underground crusher stations, electrical installations, pump stations, shaft stations, tipples, conveyors, service garages, fuelling stations, and where a fire hazard may exist?</i></li> <li>2. <i>Are a suitable number of fire extinguishers of a specified capacity provided and maintained at each stationary diesel motor, transformer substation and any splitter panel?</i></li> <li>3. <i>Is the location of the firefighting equipment required by sections 3.10 (1) and (2) such that, in the event of a fire, the direction of the mine ventilation air flow will not prevent or hamper the effective use of the equipment?</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Extinguishers are found in all locations where a fire hazard may exist. However, not all fire extinguishers have tags indicating when they were last inspected (e.g.: the deluge system and hand-held extinguishers in the underground fuel station).	4
<b>Initial Audit - Manager's Reply:</b>	
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<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 3.10.3 Underground Fire Fighting:</b>	
<i>Are inspections and if necessary, testing and maintenance of all firefighting equipment carried out by a qualified person at least once a month?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Not all fire extinguishers seen underground had date cards on them indicating when they were last checked. The fuel bay had an overhead auto discharge, nitrogen activated, dry chemical system. However, there was no tag indicating when it was last checked. It was not determined who is responsible for checking this equipment.	2
<u>Initial Audit - Manager's Reply:</u>	
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Subsection 3.10.4 Fire Fighting Plans:</b>	
1. <i>Is the position of all fire fighting pipe lines, hydrant valves, fire stations and fire cabinets shown on a plan drawn to scale of not less than 1:2,500 with a metric scale bar and a marked north point?</i> 2. <i>Is the plan updated at intervals not exceeding three months?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
A surface plan was seen with the location of fire hydrants marked.	5
<u>Initial Audit - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Section 3.12 Gas Detectors</b>	
<b>Subsection 3.12.1 Approved Detector</b>	
<i>Is every device used for the detection of flammable or noxious gas at a surface or underground mine of a type approved for such use by a recognized testing agency?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
6 Altair testers were observed in the mine rescue room (LEL, O2, CO, CO2, H2S and NO2). The docking stations bump test the units each day. Acklands has a contract to service these units regularly.	5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 3.12.2 Servicing Detectors</b>	
<i>Has the Manager appointed a qualified person to be responsible for maintaining the appliances used for detection of flammable or noxious gases?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Acklands has a contract to service the detectors. Marcel Syens from MSA, Vancouver has come on one occasion to service some of the units.	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 3.12.3 Use of Appliance</b> <i>Has the Manager appointed a qualified person to carry and use an appliance for the detection of flammable or noxious gas?</i> <i>Does the qualified person:</i> <ol style="list-style-type: none"> <li><i>1. Check the appliance for damage and ensure it is in proper working order before use</i></li> <li><i>2. Not use the appliance if found damaged or dysfunctional</i></li> <li><i>3. Take all reasonable precautions to prevent the appliance from being damaged</i></li> </ol>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
The shift bosses and mine rescue members have taken on-line, gas detector training (MSA University). This self-study course is followed up with an interview with the trainer to confirm the employee understands how to use the unit.	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>Audit Follow Up - Manager's Reply:</b>	
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

### Section 3.13 Evacuation

#### Subsection 3.13.1 Procedures and Instructions

Has the Manager of a mine:

1. Prepared procedures for the safe evacuation of personnel from the mine, or part of the mine, if necessitated by an emergency?
2. Posted copies of the procedure in conspicuous places at the surface and underground?
3. Ensured that each employee receives instruction in the procedures prepared under subsection (1) and that he can recognize the emergency warning system and is familiar with the emergency escape routes from the mine?

#### Initial Audit - Inspector Comments:

The evacuation procedure is found in the “Code One” booklet and is posted. Instructions on the procedure are given during new employee orientation.

Score

5

#### Initial Audit - Manager's Reply:

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#### Audit Follow Up – Inspector Comments:

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Adjusted Score

#### Audit Follow Up - Manager's Reply:

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#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

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#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<b>Subsection 3.13.2 Emergency Warning System</b> <i>Has the Manager developed and maintained a system acceptable to an Inspector for warning all employees, whether underground or in buildings on surface, of an emergency requiring prompt evacuation of their work places?</i>	
<b>Initial Audit - Inspector Comments:</b> A stench gas system is used to warn employees underground. The stench warning is activated remotely or manually if the automatic system is down. On surface, a phone system and radio backup is used for warning employees.	<b>Score</b> 5
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 3.13.3 Test of System</b> <i>Is a test of the warning system required under section 3.13.2 that does not involve evacuation of key process personnel carried out at least once every 12 months on a production shift, and does the Manager ensure that key process personnel unable to evacuate are knowledgeable with the warning system, and the evacuation procedure?</i>	
<b>Initial Audit - Inspector Comments:</b> A surprise test of the stench warning system was done on October 12, 2011. After the test, a review was done to determine which employees smelled the stench, (if not then why?) and how long it took employees to evacuate.	<b>Score</b> 5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 3.13.4 Report of Test</b> <i>Is a report of all emergency warning system tests, including their effectiveness, produced in a timely manner by the Manager, reviewed by the OHSC and kept on file at the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
OHSC members were involved in the test of the system but there is no record of the test being discussed at an OHSC meeting.	3
<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Three– Personnel Safety and Emergency Preparedness

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Part 3 – Total out of 195</b>	<b>156</b>
<b>Part 3 – Percentage out of 100%</b>	<b>80%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

### Section 4.1 Buildings - General

#### Subsection 4.1.1 Design and Construction

*Are the buildings constructed in accordance with the British Columbia Building Code?*

- *Drawing of the buildings available on site*
- *Services that are buried such as water, sewer and electrical are available in plan form*
- *The plans have been updated*
- *Work supervised by a professional engineer*

#### Initial Audit - Inspector Comments:

The buried services and building drawings for the new infrastructure meets the requirements of the code, however the buried services and building drawings for the old Afton infrastructure is out-dated and incomplete.

[Click here to enter text.](#)

Score

3

#### Initial Audit - Manager's Reply:

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#### Audit Follow Up – Inspector Comments:

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Adjusted Score

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<b>Subsection 4.1.4 Access to Work Areas</b>	
<i>Are emergency exits clearly marked and designed to provide quick and unimpeded exit?</i>	
<u>Initial Audit - Inspector Comments:</u> All emergency exits provided an unimpeded exit. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.1.5 Equipment Entranceways to Buildings</b>	
<i>Are all the vertical doors installed with a sensing device along the lower edge where applicable?</i>	
<u>Initial Audit - Inspector Comments:</u> An overhead power operated vertical door in the mill has a non-functional “bump stop” device on the lower edge of the door. The doors checked in the shop were equipped with “momentary switches” and were compliant. <a href="#">Click here to enter text.</a>	<u>Score</u> 3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.1.6 Storage of Materials</b>	
<i>Are all materials stored or stacked in an appropriate manner?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Ventilated storage cabinets in the shop were being used to store non-dangerous materials, while aerosol spray cans were being stored on work benches and tool boxes.	3
<a href="#">Click here to enter text.</a>	
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.1.7 – 4.1.9 Handrails and Guardrails</b> <i>Are standard guardrails installed where applicable?</i> <ul style="list-style-type: none"> <li>• <i>Designed and constructed properly</i></li> <li>• <i>Openings, pits in floors, roof walkways or accessible work areas properly secured</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All hand railings checked met the requirements of the code.	5
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<b>Section 4.2 Buildings – Surface</b>	
<b>Subsection 4.2.1 Repair Shops</b>	
<i>Is the repair shop located in such a way for adequate drainage away from the shop?</i>	
<ul style="list-style-type: none"><li>• Adequate parking</li><li>• Signage adequate where applicable</li></ul>	
<u>Initial Audit - Inspector Comments:</u> The repair shops on the surface and underground were in compliance with this part. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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### Section 4.3 Fuel Pipelines Underground Mines

#### Subsection 4.3.8 Fire Protection and Control:

Every fuel storage tank shall:

1. Have a means of accurately determining the amount of fuel it contains
2. Be identified as to its contents and that it is a fire hazard area
3. Be surrounded by a dike or curb capable of containing 110% of its storage capacity

#### Initial Audit - Inspector Comments:

The fuel tank supplying fuel to the auxiliary generator at the mill does not have signs identifying the contents of the tank; this tank does not have a fire extinguisher located at the tank.

[Click here to enter text.](#)

Score

4

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

#### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<b>Section 4.4 Fixed Equipment</b>	
<b>Subsection 4.4.1 Fall Arresting Devices</b>	
<i>Are there appropriate fall arrest where applicable?</i>	
<u>Initial Audit - Inspector Comments:</u> Activities requiring fall arrest were good; all workers observed were using appropriate fall arrest when needed. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.1 Fall Arresting Devices</b>	
<i>Does all the fall arrest comply with the relevant design and performance requirements of CSA?</i>	
<u>Initial Audit - Inspector Comments:</u> All fall arresting devices were of the required type and were in good condition. <a href="#">Click here to enter text.</a>	<u>Score</u> 5

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<b><u>Initial Audit - Manager's Reply:</u></b>	
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<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
Click here to enter text.	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
Click here to enter text.	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
Click here to enter text.	
<b>Subsection 4.4.2 / 4.4.3 Moving Parts of Machinery</b>	
<i>Unless situated so as to prevent a person from coming into accidental contact are all moving parts adequately guarded?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
There was a barrier gate in the jaw crusher left open and therefore left a drive for the screen deck exposed to worker contact. Other guarding appeared to meet the requirements of the code.	4
Click here to enter text.	
<b><u>Initial Audit - Manager's Reply:</u></b>	
Click here to enter text.	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.3 Grinders</b> <i>Are there suitable safety devices available when grinders are being used?</i> <ul style="list-style-type: none"> <li>• <i>Rest Properly Adjusted</i></li> <li>• <i>Eye and face protection</i></li> <li>• <i>Inspected and maintained regularly</i></li> <li>• <i>Proper exhaust system (other than hand-held)</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
One hand grinder without a guard and two bench grinders that needed to have the rest adjusted were found; these grinders were taken out of service.	3
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.7 Welding and Burning Equipment</b> <i>Is there safety procedure developed by the mine for the safe transportation or use of torches or welding equipment?</i> <ul style="list-style-type: none"> <li>• Use of fastened safe caps</li> <li>• Stored in upright and secured position</li> <li>• Stored in well ventilated area</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Compressed gas cylinder storage and use was good in general. However, there were some improperly stored cylinders in the jaw crusher area.	4
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.9 Lifting Devices</b> <i>All lifting devices shall be designed, constructed and installed in accordance with recognized standards and good engineering practices:</i> <ul style="list-style-type: none"> <li>• <i>Maximum load marked on structure</i></li> <li>• <i>Are the safety devices checked and tested regularly</i></li> <li>• <i>Maintenance and inspection recorded</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Several lifting devices were found in the mill, shop, and underground that will not displaying their rated loads.	3
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 4.4.10 Install Fire Protection</b> <i>Is there suitable type and size of fire extinguisher provided at all fire hazard areas?</i> <ul style="list-style-type: none"><li>• Fire suppression system (sprinklers, foam, etc.)</li><li>• On underground fixed equipment containing more than 10L flammable fluids</li><li>• On surface in buildings and structures adjacent to opening and underground mine</li></ul>	
<b>Initial Audit - Inspector Comments:</b> The fuel tank for the auxiliary generator at the mill does not have a fire extinguisher. <a href="#">Click here to enter text.</a>	<b>Score</b> 4
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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<b>Subsection 4.4.11 Boilers and Engines Near Underground Workings:</b> <i>Is there any part of a steam boiler or stationary internal combustion engine installed within 30m of any part of the collar of a shaft or openings to underground workings</i>	
<u>Initial Audit - Inspector Comments:</u> No such steam boilers or stationary engines were observed near any portals. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.12 Engine Exhausts:</b> <i>Is the exhaust of an internal combustion engine temporarily or permanently installed within or outside a building prevented from re-entering the building?</i>	
<u>Initial Audit - Inspector Comments:</u> No engines found had exhausts that could enter a building. <a href="#">Click here to enter text.</a>	<u>Score</u> 5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.13 Fans for Supplying Underground Ventilation:</b> <i>Are all fans supplying ventilating air to underground workings and structures:</i> <ul style="list-style-type: none"><li>• <i>Containing fans constructed of non-combustible material?</i></li><li>• <i>Provide a means for reversing the direction of air flow?</i></li><li>• <i>Procedure for reversing only by the mine's authorization?</i></li></ul>	
<u>Initial Audit - Inspector Comments:</u> The fans checked appeared to meet the requirements of this section of the code. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.16 Conveyor Belts</b> <i>Are all conveyors provided with a walkway or other acceptable access for maintenance and inspection?</i> <ul style="list-style-type: none"> <li>• Pull cords to stop conveyors in an emergency</li> <li>• Conveyors; are they re-set manually</li> <li>• Start up warning device</li> <li>• Delay of 10 seconds</li> <li>• Head, tail drives, tension pulleys guarded</li> <li>• Conveyors longer than 15m (inside building or enclosed) belt slip detection</li> <li>• Policy and procedure for clean-up around conveyors</li> </ul>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Guarding, pull-cording, start-up horns and procedures appear to meet the requirements of the code.	5
<a href="#">Click here to enter text.</a>	
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
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<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.17 &amp; 4.4.18 Steam and Compressor Plant Operation:</b> <i>Has the Manager developed a procedure for the operation of compressor plants?</i> <ul style="list-style-type: none"> <li>• Does it conform to the safety regulation</li> <li>• Temperature shutdown devices (exceeds 30kw)</li> <li>• Carbon monoxide monitoring (supply air U/G)</li> <li>• Is the monitor tested monthly and recorded</li> </ul>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
All devices checked appeared to meet the requirements of the code.	5
<a href="#">Click here to enter text.</a>	
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.20 Portable Ladders</b> <i>Are all portable ladders meeting the CSA Standard CAN Z11 M81?</i>	
<b>Initial Audit - Inspector Comments:</b> Portable ladder compliance was good; all portable ladders checked were good. <a href="#">Click here to enter text.</a>	<b>Score</b> 5
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.4.21 Construction of Portable Ladders</b> <i>Are all the portable wooden ladders that are constructed at the mine meeting the requirements of HSR Code?</i> <ol style="list-style-type: none"><li>1. Side rails 38x39mm</li><li>2. Cleats (rungs) 21x89mm</li><li>3. If nail is a filler block use between cleats</li><li>4. Width between cleats 500mm</li><li>5. Material used of #2 grade</li></ol>	
<u>Initial Audit - Inspector Comments:</u> Portable ladder construction appeared to meet the requirements of the code. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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4.6 Mobile Equipment – Underground Mine	
<b>Subsection 4.6.1 Diesel Equipment Underground:</b> <i>Does the Manager have written procedures for the operation of diesel-powered equipment underground?</i> <ul style="list-style-type: none"> <li>Fuel used meet the CAN/CGSB Standard (is a copy of the fuel specification at the mine).</li> <li>Is equipment left running when not personally being attendant?</li> <li>Has a cool down period been established by the OHSC when vehicles are parked.</li> <li>Is the master switches turned off when the operator leaves the vehicle?</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> Most of the requirements of this section were good. However, several pieces of underground mobile equipment were observed being shut down with no cool down period. <a href="#">Click here to enter text.</a>	<b>Score</b> 4
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<b>4.7 Trackless Diesel Powered Equipment</b>	
<b>Subsection 4.7.1 Trackless Diesel Powered Equipment:</b>	
<i>Do the self-propelled underground vehicles comply with the requirements of CAN/CSA M424.3-90?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All pieces of underground equipment checked, met the requirements of this section.	5
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>CSA M424.1 – 88 Trackless Diesel Powered Equipment</b>	
<i>Does the company have copies of the underground diesel certification numbers on file?</i>	
<b>CSA M424.2-90</b>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All equipment checked met the requirements of this section.	5
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>CSA M424.1 – 88 Trackless Diesel Powered Equipment</b> <i>Are the maintenance records up to date on the underground diesel equipment?</i> <b>CSA M424.2-90</b>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
All equipment records checked met the requirements of this section.	5
<a href="#">Click here to enter text.</a>	
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
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<b>4.8 Flammable Materials</b>	
<b>Subsection 4.8.1 &amp; 4.8.3 General Requirements:</b>	
<i>Are there any flammable materials stored within 30m of a mine portal, shaft or other mine openings?</i>	
<ul style="list-style-type: none"> <li>• <i>Flammables flashpoint of less the 52 degrees Celsius (need copy of fuel spec.)</i></li> <li>• <i>Method of transportation</i></li> <li>• <i>Storage underground (containers etc;)</i></li> <li>• <i>Amount of supply underground (per day oil and grease)</i></li> <li>• <i>Flammable materials shall be storage in an area approved by the mine Manager</i></li> </ul>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Some compressed gas cylinders were found at the Alimak shafts were stored closer than 30m to the shaft.	4
<a href="#">Click here to enter text.</a>	
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	

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## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>4.9 Mobile Equipment</b>	
<b>Subsection 4.9.1 Back-up Alarm</b>	
<i>Is all the equipment in excess of 7,000kg gross vehicle weight equipped with a back alarm?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All equipment checked had functional/suitable back-up alarms.	5
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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## Part Four– Buildings, Machinery and Equipment

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<b>Subsection 4.9.2 Transmission Interlock</b>	
<i>Does all equipment with fluid drive transmission have an interlocking system to prevent the unit from being started and put in motion?</i>	
<u>Initial Audit - Inspector Comments:</u> All equipment checked had functional transmission interlock devices. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.3 Fire Extinguisher</b>	
<i>Is all the equipment carrying at least one fire extinguisher of adequate size and proper type?</i>	
<u>Initial Audit - Inspector Comments:</u> Several pick-up trucks were found that did not have a suitable fire extinguisher. <a href="#">Click here to enter text.</a>	<u>Score</u> 3

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<b><u>Initial Audit - Manager's Reply:</u></b>	
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<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.4 Vehicle Requirements</b> <i>All rubber tired mobile equipment over 7000 kg gross vehicle weight shall have a minimum of two wheel chocks which shall be used whenever necessary.</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
A scissor lift truck was found underground that did not have the required wheel chocks on the machine. Overall compliance with wheel chocks was good.	4
<a href="#">Click here to enter text.</a>	
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.4 Vehicle Requirements</b> <i>Does the equipment have the appropriate safety devices:</i> <ul style="list-style-type: none"> <li>• <i>Firmly secured seat (as well as passenger)</i></li> <li>• <i>Seat belts</i></li> <li>• <i>Clearance lights &amp; Reflectors</i></li> <li>• <i>Windshield</i></li> <li>• <i>Mirrors</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
One scoop underground was found that had a side window missing.	4
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.5 Vehicle Requirements</b> <i>Does a vehicle, other than a vehicle used directly for production in an operation open pit:          Shall have in addition to the equipment required for highway driving, be equipped with:</i> <ul style="list-style-type: none"> <li>• a whip antenna that is fitted with a flag and lamp high enough to be visible to the drivers of all production vehicles or</li> <li>• a flashing light mounted above the cab of the vehicle?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All personal carriers checked met the requirements of this section.	5
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.6 Fire Suppression for Underground Mines</b> <i>All mobile equipment capable of containing more than 25L of flammable fluids and used in underground mines shall be fitted with a manually activated multi-nozzle fire suppression system. Is the activation of the system possible from each side of the machine and at the operators cab? Does the activation of the system shut the engine down?</i>	
<b>Initial Audit - Inspector Comments:</b> All machines checked had a suitable fire suppression system. <a href="#">Click here to enter text.</a>	<b>Score</b> 5
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
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## Part Four– Buildings, Machinery and Equipment

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<b>Subsection 4.9.7</b>	
<i>Are vehicles that are regularly or primarily used as personnel carriers suitable for the intended purpose?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The seat belts on some personal carriers were non-functional and need to be repaired.	4
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.9</b>	
<i>Does the name plate visible to the operator showing manufacturer, serial number, and maximum rated load. Load grade decal?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All machines checked met the requirements of this section.	5
<a href="#">Click here to enter text.</a>	

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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.11 / 4.9.12 Rollover Protective Modifications</b> <i>Does all the equipment have ROPS that is required in accordance with the HSR Code?</i> <ul style="list-style-type: none"> <li>• ROPS permanently marked</li> <li>• Seat belts</li> <li>• Properly labelled</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
All ROPS/FOPS checked met the requirements of this section.	5
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1 .The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.14 tires and Rims</b> <i>Does the Manager have a tire and rim procedure developed?</i>	
<u>Initial Audit - Inspector Comments:</u> This operation is using the Fountain Tire procedure. This procedure meets the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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October 16 & 17, 2012

<b>Subsection 4.9.15</b> <i>Are trucks with dump boxes being equipped with a permanently attached device for securing or locking the box in a raised position, or carrying suitable equipment on board for this purpose?</i>	
<u>Initial Audit - Inspector Comments:</u> All vehicles checked had the required devices on the vehicle. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> Choose an item.
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.17 Parking Brake</b> <i>Are all vehicles equipped with a proper activating park brake?</i>	
<u>Initial Audit - Inspector Comments:</u> All vehicles checked had a suitable functional parking brake. <a href="#">Click here to enter text.</a>	<u>Score</u> 5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 4.9.19</b>	
<i>Trucks having a manufacturer's rated gross vehicle weight in excess of 45,000 kg shall be subjected to downgrade braking tests such that at least once a year 50% of the fleet is tested, and every truck in the fleet is tested at intervals not exceeding 3 years. Is this testing up to date?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is no documentation available for the annual brake testing on the haulage trucks in use on the surface projects.	0
Click here to enter text.	
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.9.20 Auxiliary Steering</b> <i>Do all vehicles, which require auxiliary steering, meet the provision of the HRS Code? Stored energy devices depressurize when engine is shut down.</i>	
<u>Initial Audit - Inspector Comments:</u> All vehicles checked met the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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#### 4.11 Lock-Out Procedures

##### Subsection 4.11.1 Lock-Out Procedures

*Has the mine developed a lockout procedure, which includes all the provisions as decided in this part of the Code?*

- Tagging procedures
- Power disconnects
- Provision for draining stored energy
- Appropriate lock-outs (mobile equipment, etc.)
- Use of a watchman

##### Initial Audit - Inspector Comments:

There are two lock-out procedures in use at this mine, a new one in the mill and the old one on the used for the rest of the mine. In the shop area, it was observed that a worker was using a departmental lock as a personal protection lock; persons other than the worker had keys to this lock.

[Click here to enter text.](#)

Score

3

##### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

##### Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

##### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

##### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>4.12 Lifting Devices – General</b>	
<b>Subsection 4.12 Manually-Operated Hoists and Winches</b>	
<i>Is there a suitable inspection and maintenance program in place?</i>	
<ul style="list-style-type: none"><li>• NDT inspection</li><li>• Safety checks</li><li>• Logbooks where applicable</li></ul>	
<b>Initial Audit - Inspector Comments:</b>  The annual inspection and NDT records were requested for these devices, but no documents were provided. Mine officials assured me that these tests had taken place.	<b>Score</b>  2
<b>Initial Audit - Manager's Reply:</b>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>

Scoring: **Maximum points available per subsection = 5**

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#### 4.13 Raise climbers

##### Subsection 4.13 raise climbers

*Are the following in place for raise climbers*

- *NDT inspection*
- *Safety checks by mechanics and operators*
- *Logbooks up to date*
- *Identification plate*
- *Brakes*
- *Emergency switch*
- *Communication device*
- *Fire extinguisher*
- *Emergency escape procedures in place*

##### Initial Audit - Inspector Comments:

The annual inspection and NDT records were not complete for the entire rail assembly; all other requirements for this section appear to have been met.

##### Score

4

##### Initial Audit - Manager's Reply:

##### Audit Follow Up – Inspector Comments:

##### Adjusted Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>4.14 Temporary Work Platforms</b>	
<b>Subsection 4.14.1</b>	
<i>Is there scaffolding or temporary work platforms being used, are they being constructed and maintained in accordance with WCB Occupational Health and Safety Regulation 13?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Scaffolding observed in use was properly set up and secure.	5
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>4.18 Miscellaneous Hoisting Equipment</b>	
<b>Subsection 4.18.6</b>	
<i>Log book; defects noted, maintenance and repairs noted, supervisor has examined, dated and signed at least weekly by to verify that log book is being used. Is log book in place and current?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Worker daily entries were not consistent and the supervisor weekly sign-off was not done every week, this was observed in the shop area.	3
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.18.7</b> <i>Are the name, model, and serial number assigned by the manufacturer clearly visible and legible on every crane, hoist, and derrick?</i>	
<u>Initial Audit - Inspector Comments:</u> All of these devices checked met the requirements of the code. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<b>Subsection 4.18.8</b> <ul style="list-style-type: none"><li>• A permanent, clearly visible, and legible sign shall be affixed to each crane, derrick, and hoist showing the safe working load.</li><li>• The safe working load shall be marked on the load block and superstructure of hoisting equipment.</li><li>• Is this signage in place and visible?</li></ul>	
<u>Initial Audit - Inspector Comments:</u> All lifting devices checked met the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.18.10 Controls</b> <i>Are all the controls of the cranes, derrick, or hoist clearly marked to show its functions?</i>	
<u>Initial Audit - Inspector Comments:</u> All crane controllers checked met the requirements of this section. <a href="#">Click here to enter text.</a>	<u>Score</u> 5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 4.18.10 Controls</b> <i>Are there signs on the crane structure, visible to an operator, clearly indicating the direction of the hook, bridge, and trolley motions, compatible with those marked on the controls?</i>	
<u>Initial Audit - Inspector Comments:</u> Many cranes in all areas of the mine do not have this control depiction. <a href="#">Click here to enter text.</a>	<u>Score</u> 2
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>4.20 Rigging</b>	
<b>Subsection 4.20 Use of Riggings and Fittings</b>	
<i>Are all the rigging and fittings used and assembled properly?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Several lifting jigs and bins were found that did not display their rated load, some of these devices may not have been certified by an engineer (looked homemade).	2
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Four– Buildings, Machinery and Equipment

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>4.21 Slings</b>	
<b>Subsection 4.21 Requirements</b>	
<i>Are all the slings marked with the safe working load, have the manufacturer's identification, not damaged and in good working condition?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Several fiber webbing slings were found that had sufficient damage to them that they should be taken out of service. These slings were removed from service at the time they were found.	3
<a href="#">Click here to enter text.</a>	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Part 4 – Total out of 260</b>	<b>218</b>
<b>Part 4 – Percentage out of 100%</b>	<b>84%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### Section 5.1.1 / 5.2.1 / 3.2.1 Application of Electrical Rules

#### Subsection 5.1.1 / 5.2.1 / 3.2.1 Codes and Standards

- The Manager shall develop a plan, approved by a registered electrical engineer, for the use of electrical energy at any mine, and the plan shall be forwarded to the Chief Inspector prior to introduction of electricity to the mine. A plan shall also be required for any increase in capacity of an existing installation by more than 500KVA.*
- The plan referred to shall show the area's at the mine where the energy is to be transmitted and used, including schematic drawings.*
- Is there a copy of CSA M421-00 "Electricity in Mines" on the mining property?*

#### Initial Audit - Inspector Comments

This mine has an electrical system that has been developed by utilizing some existing infrastructure, updating and installation of new equipment. Although not all drawings were reviewed during this audit there are sufficient and up to date electrical plans available. Most if not all the plans have been developed by professional engineers. Copies of M421-11 are available, however some workers interviewed were not aware of this CSA standard and how it applies to mining.

#### Score

4

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

#### Adjusted Score

#### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

#### Adjusted Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>			
<b>Section 5.2.1 Notices and Information</b> <b>Subsection 5.2.1 &amp; 3.2.2 of M421-00 Notices and Information</b> <i>All Mines:</i> <ul style="list-style-type: none"> <li>• Only authorized persons shall work on or be in charge of electrical equipment or systems.</li> <li>• Only authorized persons undertake installation of and repairs, extensions, or changes to electrical equipment or systems.</li> <li>• Have practices and procedures been developed, implemented and updated as needed to ensure employees are properly trained in electrical safe practices?</li> </ul>			
<b>Initial Audit - Inspector Comments:</b> <p>This operation has a well defined electrical department. Interviews with the maintenance superintendent, electrical general foreman and supervisors along with electrical workers were conducted. It is clear that only authorized and qualified workers are in charge of the electrical system and only these people undertake installation and repairs to the equipment and systems. There is no formal electrical safety program in place at the time of the audit. The plan as I understand is in draft and will contain practices and procedures when complete.</p> <a href="#">Click here to enter text.</a>	<table border="1"> <tr> <th>Score</th> </tr> <tr> <td>3</td> </tr> </table>	Score	3
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

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<b>Section 5.4.1 Isolating Switchgear</b>	
<b>Subsection 5.4.1 (1) (2) &amp; 3.2.6 of M421-00 Isolating Underground Workings</b>	
<i>Is the electrical switchgear installed?</i>	
<ul style="list-style-type: none"> <li>• <i>Each circuit shall have a provision for locking and tagging of the disconnection means</i></li> <li>• <i>Operate by a qualified person</i></li> <li>• <i>Easily accessible for repairs or operation</i></li> <li>• <i>Fixed in a vertical position</i></li> <li>• <i>Recessed from haulage ways and protected from physical damage</i></li> <li>• <i>Located where water cannot accumulate</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
During the audit electrical switch gear installation was inspected all over the mine including surface and underground. The vast majority of the switchgear is new or reconditioned and is installed as required by the code. The only deficiency noted was the ventilation fan installations in the mill had disconnects mounted horizontally, high above any access point to workers without the use of a ladder.	4
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

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<b>Section 5.5.1 / 5.5.3 Trailing Cable Use and Repair</b>	
<b>Subsection 5.5.1, 5.5.2 &amp; 4.6.3 of M421-00 Protective Equipment and Defective Cables</b>	
<ul style="list-style-type: none"> <li>Whenever persons are handling energized trailing cables suitable protective equipment is being utilized</li> <li>Damaged cables are inspected by qualified persons before they are returned to service</li> <li>All permanent repairs to damaged trailing cables shall be made by qualified persons who shall examine and test the cables before they are allowed to go back into service</li> <li>Trailing cables shall be routed to avoid damage and be kept visible by being mounted on suitable markers at regular intervals throughout the cable route. Cable couplers shall be suitably supported off the ground</li> <li>Suitable strain relief shall be provided at the connection of the cables to machines</li> </ul>	
<b>Initial Audit - Inspector Comments:</b>  The trailing cables used at this mine are primarily for mobile equipment underground. All the cables inspected appear to be repaired properly. Cables underground are primarily routed high on the back to prevent damage. Cables on the surface primarily are marked and mounted on cable stands. Strain relief protection at this mine in the underground workings should be reviewed. Additional strain relief could be utilized at some of the jumbo and Drill switchgear attachments as well as the mobile equipment.  <a href="#">Click here to enter text.</a>	<b>Score</b>  4
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## Part Five – Electrical Power Systems

October 16 & 17, 2012

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<b>Section 5.6.1 Submersible Pumps</b>	
<b>Subsection 5.6.1 Ground Fault Protection</b>	
<ul style="list-style-type: none"> <li><i>All submersible pumps supplied by portable training cable shall be provided with ground fault protection to limit ground fault current to a maximum of 25 amps and automatically isolate the supply in the event of a fault</i></li> <li><i>Submersible pumps operating at voltages in excess of 300 volts shall, (after Jan. 1, 2001) be supplied by shielded portable power cable and have ground fault protection and ground check monitoring</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The inspector did not review a great number of submersible pumps during this audit but those that were looked at did not reveal any deficiencies.	4
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

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<b>Section 5.7.1 / 5.7.2 Supply Systems for Mobile Electrical Equipment</b>	
<b>Subsection 5.7.1 / 5.7.2 &amp; 3.5.5, 3.5.6 of M421-00 System Testing and Record of Testing</b>	
<ul style="list-style-type: none"> <li>Supply systems for mobile electrical equipment shall be tested before being put into service and at least once a year thereafter in order to prove the effectiveness of the ground fault tripping and the ground conductor monitoring circuits</li> <li>A record of the tests shall be kept at the mine and shall be available for examination</li> <li>The supply shall be grounded through a neutral grounding device that limits the ground-fault voltage to 100 volts or less and de-energizes in less than 1's if ground fault current exceeds 20% of the prospective ground fault current</li> <li>The ground conductor monitoring shall de-energize the supply in less than 0.5's if the ground check conductor opens, the ground return conductor opens, or the ground check conductor shorts to ground</li> </ul>	
<u>Initial Audit - Inspector Comments</u>	<u>Score</u>
Documentation has been developed and maintained showing the regular testing of the supply systems for mobile equipment. All the installations inspected during this audit were fed from a supply that was grounded through a neutral grounding resistor. It could not be easily determined whether the NGR would limit the current as required or whether the monitoring of the supply would de-energize in the prescribed time, but the installed looked at appear to have the proper setting on the protective relays.	4
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## Part Five – Electrical Power Systems

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Section M421-00 Testing and Calibration of Protective Devices	
<b>Subsection 3.5.4 of M421-00 Testing and calibration of Protective Devices</b> <ul style="list-style-type: none"> <li>Except for fuses, each protective device for an installation operating at a voltage in excess of 750 volts shall be tested to confirm that the device prevents the equipment from being operated in excess of its rating</li> <li>These tests shall be performed before initial use and after every three years of use, and the result shall be recorded in a record book</li> </ul>	
<u>Initial Audit - Inspector Comments</u>	<u>Score</u>
All the protective relays looked at during this audit appear to be tested in accordance with 3.5.4.	5
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## Section M421-00 Movable Equipment

### Subsection 4.6.1, 4.6.2 of M421-00

- Movable Switch Houses
  - a. Disconnecting means shall be manually operated three phase ganged visi-blade type. It shall be suitably rated, installed at the point of power entry and key interlocked with the circuit breaker or interrupter
  - b. The circuit breaker shall be complete with devices necessary to provide overcurrent and ground fault protection
  - c. Control devices requiring adjustment or reset shall not be located inside the high voltage section of the switch house enclosure
- Movable Substations
  - a. The substation supporting structure must be suitable for moving over rough terrain, or shall be fitted with adequate lifting attachments to allow lifting onto other transport
  - b. Power transformers shall be of the totally enclosed type or shall be enclosed within a substantial chain link fence. Warning signs must be posted at the entrance to the transformer enclosure with the words “DANGER: HIGH VOLTAGE”
  - c. Protection of interconnecting cables to 2 or more movable structures must be protected by a circuit breaker and the cables must not exceed 5m in length
  - d. The neutral grounding device shall be mounted as close as practical to the transformer neutral.

#### Initial Audit - Inspector Comments:

Substations were reviewed extensively during this audit and it is to be noted that stationary substations will be include in this section. Portable substations underground looked at during this audit did not reveal any deficiencies. The permanent substations at various locations on the surface will require more signage “DANGER: HIGH VOLTAGE” posted on the fence.

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#### Initial Audit - Manager's Reply:

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## Part Five – Electrical Power Systems

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<b>Subsection 4.6.2.2 &amp; 4.6.2.3 of M421-00 Station Ground Electrodes and Resistances:</b> <ul style="list-style-type: none"> <li>Each Movable Substation shall be grounded to a station ground electrode that meets the requirements of Rules 36-302 (1), (2), and (3) of CSA Standard C22.1</li> <li>The station ground electrode shall be designed and installed to prevent the transfer of potentials in excess of 100 volts from the station ground electrode to any connected mobile electrical equipment. The resistance of the station ground electrode shall be measured and the ground-fault protection tested after installation or relocation of the substation</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The electrical system feeding the underground movable substations includes a separate grounding conductor carried to the surface. There is additional grounding installed at the substation locations underground.	4
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<b>Subsection M421-00 Electrical Equipment Rooms</b>	
<b>Subsection 4.2 M421-00 Electrical Equipment Rooms</b> <ul style="list-style-type: none"> <li>• <i>Electrical equipment rooms must ensure the best practical protection against fire propagation, water and dust ingress and corrosive atmospheres</i></li> <li>• <i>They shall be sufficiently ventilated to maintain equipment at safe temperatures</i></li> <li>• <i>Lighting levels must be sufficient to enable all equipment to be easily distinguished and all instruments and labels to be easily read</i></li> <li>• <i>An emergency lighting system shall be provided</i></li> <li>• <i>A fire extinguishing device shall be provided at each electrical equipment room or vault</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>A significant number of electrical equipment rooms were looked at during this audit both on the surface and the underground. As most of the equipment rooms are new very few deficiencies were noted on the surface. The primary concern with the underground equipment rooms was the excessive heat developing at the main transformer distribution locations. Temperatures were noted at 4 locations with ambient being in the range of 95-115 degrees Fahrenheit. This over temperature condition must be addressed immediately.</p> <p>Click here to enter text.</p>	3

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**Subsection M421-00 Quick Connect Cable Couplers**

**Subsection 3.4.4 M421-00**

**3.4.4.1**

*A quick-connect coupler used to join portable power cables or a cable and a flange-mount receptacle, operating at a voltage in excess of 300 V, shall have*

- (a) a mechanical fastening arrangement, to join the coupler, with a tensile strength greater than that of the portable power cable;*
- (b) strain-relief devices suitable for the intended portable power cable;*
- (c) a means to prevent the ingress of moisture;*
- (d) a means to mechanically lock the coupler, where the circuit voltage exceeds 750 V;*
- (e) a pin arrangement such that*
  - (i) the ground conductor makes before and breaks after the phase conductors; and*
  - (ii) the ground-check circuit makes after and breaks before the phase conductors; and*
- (f) ground-fault protection and ground-conductor monitoring at the source of supply.*

**3.4.4.2**

*Notwithstanding Clause 3.4.4.1, if a disconnect switch is mechanically or electrically interlocked with a receptacle for a portable-power-cable plug, and if quick-connect couplers are not used downstream, ground-fault protection and ground-conductor monitoring shall not be required.*

Initial Audit - Inspector Comments:

This operation primarily uses UEE type couplers. These couplers are either mechanically or electrically interlocked. During this audit no deficiencies were noted with respect to the use of couplers.

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Initial Audit - Manager's Reply:

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Audit Follow Up – Inspector Comments:

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<b>Section M421-00 5.4.1 General</b>	
<b>Subsection:</b> <i>Switchboards and switchgear shall</i> <ul style="list-style-type: none"> <li>a) <i>be protected against physical damage;</i></li> <li>b) <i>be guarded in such a manner that access by unauthorized persons can be prevented, if there are exposed live parts;</i></li> <li>c) <i>be separated from an explosives storage area by at least 15 m when measured along mine workings;</i></li> <li>d) <i>have clearances around them to permit safe access for inspection, maintenance, and repairs;</i></li> <li>e) <i>be installed on a fire-resistant foundation; and</i></li> <li>f) <i>be in such a location as to minimize the spread of fire.</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Switchboards and other electrical equipment inspected during this audit were in compliance with this subsection. Parking of mobile equipment in front of portable substations underground should be discouraged as several no post barriers were noted as being "bumped into" during the inspection.	4
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## Section M421-00 Conveyor Systems

### 4.4.3 Conveyor systems

#### 4.4.3.1

An electrically driven conveyor shall have the following:

- (a) pull-cords (see [Clause 4.4.3.2](#)) for stopping the conveyor at accessible locations along the conveyor. The pull-cords shall be within easy reach of persons at such locations;
- (b) when the conveyor is started automatically by remote control, or when a portion or portions of the conveyor are not visible from the operator's position, a start-up warning device; and
- (c) head, tail, drive, deflection, and tension pulleys guarded at any pinch point that is or can become accessible.

#### 4.4.3.2

A pull-cord required by [Clause 4.4.3.1](#) shall

- (a) operate a manual-reset-type switch that stops the conveyor;
- (b) be designed and arranged so that it operates the associated switching device and generates the emergency stop signal when
  - (i) the pull-cord is pulled in any direction;
  - (ii) a perpendicular pulling force of less than 200 N is applied to the pull-cord; and
  - (iii) a perpendicular deflection of the pull-cord of less than 400 mm occurs;
- (c) be able to withstand, without breaking, a tension force ten times greater than is necessary to generate the emergency stop signal; and
- (d) incorporate a visual indicator to show which device has been operated where more than one switching device is necessary.

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u> Conveyor systems were reviewed and inspected during this audit both on the surface and underground portions of this mine. All new installations are compliant with this section of the code with respect to installation of safety devices. The only area of concern was the varying degrees of tightness of the pull cords. Please note the requirements of this section in 4.4.3.2 (b) (ii) and (iii). Seasonal adjustment may be required to meet the criteria defined in this section. <a href="#">Click here to enter text.</a>	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>Section M421-00 Grounding</b>	
<b>Subsection 5.6</b>	
<b>5.6.1 Grounding Circuit</b>	
<i>The grounding circuit from underground to surface shall consist of at least one copper conductor interconnected and bonded with metallic parts of the electrical system, unless equally effective means are provided.</i>	
<b>5.6.2 Inspection</b>	
<i>The grounding network shall be inspected periodically for continuity and assessed for adequate capacity.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The separate grounding circuit from surface to underground was inspected at numerous locations and no deficiencies were noted. As discussed with electrical supervision a conscious effort is required to review and make visual inspections to this system on a continual basis to ensure its integrity and meet the requirement of 5.6.2.	4
Click here to enter text.	
<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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Scoring: **Maximum points available per subsection = 5**

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### **Subsection 3.5**

#### **3.5.5 Ground-Fault Protection**

*Where ground-fault protection is used, the supply shall be*

- a) grounded through a neutral-grounding device that limits ground-fault voltage to 100 V or less; and*
- b) de-energized in less than 1 s if ground-fault current exceeds 20% of the prospective ground-fault current (see Appendix A).*

#### **3.5.6 Ground-Conductor Monitoring**

*Where ground-conductor monitoring is used, the supply shall be de-energized by a fail-safe circuit in less than 0.5 s, and a de-energized supply shall not become energized if*

- a) the ground-check conductor opens;*
- b) the ground-return conductor opens; or*
- c) the ground-check conductor shorts to ground.*

*A ground-conductor monitoring system shall have an open-circuit voltage of less than 100 V and shall continuously indicate ground-circuit continuity.*

### **3.6 Grounding**

#### **3.6.1 Circuit-Opening Devices in Grounding Conductors**

*A circuit-opening device shall be permitted in the neutral-to-ground connection on any star-connected generator whenever two or more generators are required to be operated in parallel. Procedures for opening and closing these devices shall be instituted to ensure operator safety.*

#### **3.6.2 Neutral-Grounding Devices**

*A neutral-grounding device shall be*

- a) continuously rated, except when ground-fault tripping is provided;*
- b) monitored so as to de-energize the supply in less than 60 s if the neutral-grounding device opens; and*
- c) connected as close as practical to the supply neutral.*

#### **3.6.3 Ground-Fault Indication**

##### **3.6.3.1**

*A device required by Rule 10-106 (2) of CSA Standard C22.1 shall be provided with*

- a) short-circuit protection; and*
- b) disconnecting means such as a general-use switch.*

*A ground fault shall be investigated and removed without delay.*

##### **3.6.3.2.**

*Where an audible or visible alarm is used to indicate a ground fault, such alarm shall continue signalling to indicate the fault until the fault is cleared.*

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is extensive use of ground fault protection and monitoring taking place at this operation both underground and on surface. All the equipment has been recently installed and all installations inspected met the requirements of this section.	5
<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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Scoring: **Maximum points available per subsection = 5**

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## Section M421-00 Travelling Cranes

### Subsection 3.4

#### 3.4.6.1

*Electric overhead travelling cranes shall meet the requirements of CSA Standard B167.*

#### 3.4.6.2

*Each crane shall be equipped with*

- a) an upper-limit switch that prevents the crane block from reaching its upper limit of travel; and*
- b) a lower-limit switch if operation of the crane requires the hook to leave sight of the operator at its lower limit of travel.*

#### 3.4.6.3

*A circuit breaker or load-break switch for interrupting the power supply to the crane shall be provided in the cab.*

#### 3.4.6.4

*Each service crane shall be provided with a form of dead-man control.*

#### Initial Audit - Inspector Comments:

The surface cranes that this inspector reviewed were in compliance with this section with respect to electrical requirements.

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Score

5

#### Initial Audit - Manager's Reply:

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#### Audit Follow Up – Inspector Comments:

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#### Audit Follow Up - Manager's Reply:

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#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

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**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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**Scoring: Maximum points available per subsection = 5**

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**5.** All components of the element are present, in place, being monitored and working. **4.** Most components of the element are present, minor improvements needed or additional training is required. **3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft format. **1.** The element is not present; however, the mine has made attempts to develop it or it is outdated. **0.** The element is not present at the mine.





### **Subsection 3.3**

#### **3.3.6.1**

*Electrical supply lines shall be installed in accordance with CSA Standard CAN/CSA-C22.3 No. 1 or the applicable standard of the jurisdiction.*

#### **3.3.6.2**

*Overhead supply line clearances referred to in CSA Standard CAN/CSA-C22.3 No. 1 require additional clearances as noted in Clauses 4.3.1.1 and 4.3.1.2 of that Standard (see Clause B2 of this Standard).*

#### **3.3.6.3**

*Notwithstanding the requirements of Table 2 and Clause 4.3.1.1 of CSA Standard CAN/CSA-C22.3 No. 1, minimum vertical clearances in Table 3 of this Standard shall be increased where haulage vehicles are frequently used (see Clause B1 of this Standard). Minimum vertical clearances shall be increased by*

- a) the amount by which the combined vehicle and load height exceeds 4.15 m;*
- b) the amount of snow pack; and*
- c) the amount by which banked shoulders, crests, or road maintenance increases road elevation.*

#### **3.3.6.4**

*Vertical clearances specified in Clause 3.3.6.3 do not provide for the travelling of cranes, shovels, drills, and other oversized equipment having unusual dimensions. Clauses 3.3.6.5 and 3.3.6.6 relate to the movement of this special equipment underneath or alongside energized supply lines but are not intended as a procedure for working in the vicinity of energized supply lines.*

#### **3.3.6.5**

*When special equipment is moved, and where the equipment will encroach on the minimum clearances listed in Table 4, the supply lines shall be isolated and grounded. When the movement is under the supervision of qualified personnel, the clearances in Table 3 shall be permitted.*

#### **3.3.6.6**

*Personnel involved in the movement of special equipment in the vicinity of energized overhead supply lines shall minimize the electric-shock hazard in the event of accidental contact by*

- a) operating the equipment from a position on the equipment that is not in direct contact with earth;*
- b) having all grounds persons/safety watchers maintain a safe stand-off distance from the equipment;*
- c) using only prearranged visual signals or radio communications. Hard-wired communication systems shall not be used between the equipment and persons on the ground; and*
- d) ensuring only persons required for the move are directly involved.*

**Scoring: Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<b>Initial Audit - Inspector Comments:</b>		<b><u>Score</u></b>
<p>The electrical distribution overhead lines at this operation have primarily been installed by a qualified contractor. The assumption is and cannot be disputed by visual observation is that the overhead supply lines have been installed to meet the requirements of the code. The notwithstanding clauses defined in 3.3.6.3 through to 3.3.6.6 cannot be emphasized enough as there have been far too many occurrences of equipment coming into contact with high voltage lines at various other mining operations in the province in the last few years.</p>		4
<b>Initial Audit - Manager's Reply:</b>		
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>		<b><u>Adjusted Score</u></b>
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Scoring: **Maximum points available per subsection = 5**

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## Section M421-00 Work on Live Equipment

### Subsection 3.2

#### 3.2.5.1

*With the exception of utility work and work on electric furnaces and plating tanks, repairs or alterations shall not be carried out on live equipment.*

#### 3.2.5.2

*Notwithstanding Clause 3.2.5.1, if adjustments, tests, or calibrations are performed while equipment is live, all necessary precautions shall be taken to ensure that the work can be done safely.*

#### 3.2.8 Notices to Workers

*Where a hazard exists from inadvertent access to or interference with electrical apparatus, durable notice signs of sufficient size shall be effectively posted that*

- a) prohibit unauthorized personnel from handling or interfering with electrical apparatus;*
- b) warn of danger and indicate the highest voltage in use;*
- c) provide instructions for communication with the supervisor of the electrical equipment;*
- d) advise of the procedure to be followed in case of electrical fire; and*
- e) contain directions for the procedure to be followed to rescue persons in contact with live electrical conductors, and for the resuscitation of persons from the effects of electrical shock.*

*The requirements of Items (c), (d), and (e) are not obligatory where adequate mine emergency procedures are in place.*

### Z462 Workplace Electrical Safety

#### 4.1.2 Purpose

*The practices and procedures specified in this Standard are intended to provide for the safeguarding of workers relative to electrical hazards in the workplace.*

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u>  In discussion with management and workers during this audit it is apparent that the practice of working on live electrical equipment is discouraged. That being said there is not any formal training or a formal Workplace Electrical Safety program developed and implemented at this mine. There is a plan in place to provide training and a draft program is being developed.	<u>Score</u>  2
<u>Initial Audit - Manager's Reply:</u>  Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>  Click here to enter text.	<u>Adjusted Score</u>  
<u>Audit Follow Up - Manager's Reply:</u>  Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>  Click here to enter text.	<u>Adjusted Score</u>  
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>  Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### Section M421-00 Wiring Methods - Underground

#### Subsection 5.2

##### 5.2.1 Conductors

*Conductors, cables, or portable power cables supplying power to fixed equipment at voltages-to-ground in excess of 150 V shall be protected by armour, conduit, or other similar mechanical means or by suitable location.*

##### 5.2.2.2

Portable power cables shall meet the requirements for FT5 rating as specified in CSA Standard C22.2 No. 0.3.

##### 5.2.2.3

*Mine power cables without armour jackets, installed after January 1, 2001, shall meet the requirements for FT5 rating as specified in CSA Standard C22.2 No. 0.3.*

#### Initial Audit - Inspector Comments:

It is difficult if not impossible to determine if every piece of cable is in compliance but there was ample evidence that most of the cabling used underground at this mine is in compliance.

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Score

4

#### Initial Audit - Manager's Reply:

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#### Audit Follow Up – Inspector Comments:

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#### Audit Follow Up - Manager's Reply:

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#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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**Scoring: Maximum points available per subsection = 5**

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**5.** All components of the element are present, in place, being monitored and working. **4.** Most components of the element are present, minor improvements needed or additional training is required. **3.** The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. **2.** Parts of the element is available, the procedure may be verbal or in draft format. **1.** The element is not present; however, the mine has made attempts to develop it or it is outdated. **0.** The element is not present at the mine.



## Section M421-00 Installation of Transformers and Capacitors

### Subsection 5.3:

#### 5.3.1 Surface Transformers — Flash Point Less than 275 degree C

*A transformer containing a liquid having a flash point less than 275 degree C, and installed on the surface in the vicinity of the escapeway or entrance to an underground mine*

- a) shall be located at least 15 m from a headframe, shaft house, portal house, adit, or combustible building attached to such a structure;*
- b) shall be mounted on a non-combustible pad designed so as to contain the liquid from the largest transformer and prevent spill from seeping into and entering the mine, shaft house, portal house, adit, headframe, or other building; and*
- c) may be located beside a fireproof building that is attached to the headframe, shaft house, adit, or portal house if there are no openings in the part of the building adjacent to the transformer through which smoke or heat can enter the building.*

#### 5.3.2 Underground Transformers — General

*A transformer installed in an underground mine shall*

- a) be protected against physical damage;*
- b) be guarded in such a manner that access by unauthorized persons can be prevented, if there are energized exposed parts;*
- c) be separated from an explosives storage area as follows:*
  - i. when the transformer is over 5 kV•A, by a distance of at least 15 m of undisturbed rock or a distance of at least 60 m of open space; or*
  - ii. when the transformer is 5 kV•A or less, by a distance of at least 15 m of open space;*
- d) be rated for the ambient temperature;*
- e) have clearances around it to permit safe access for inspection, maintenance, and repairs;*
- f) be mounted on a fireproof foundation and in such a location as to minimize the spread of fire;*
- g) not be used where flooding is likely to occur; and*
- h) be provided with an enclosure that meets the requirements of Rule 2-400 of CSA Standard C22.1.*

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Inspector Comments:</u> All the transformers inspected at this mine both on the surface and underground were compliant with this section. Of note this inspector is not able to confirm that the underground transformers are rated for the high ambient temperatures that are being experienced at some locations. <a href="#">Click here to enter text.</a>	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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Section M421-00 **Installation of Storage Batteries**

**Subsection:**

**5.5.1 Location**

*Stationary-type storage batteries whose aggregate capacity is 5 kW at the 8 h discharge rate shall be located in storage-battery rooms or in areas with equivalent enclosures.*

**5.5.2 Installation**

*Storage-battery and battery-charging areas shall comply with the following:*

- a) they shall be located so as to prevent damage by mobile equipment;*
- b) they shall be ventilated by an adequate amount of fresh air to ensure the diffusion of hazardous gases that are produced;*
- c) battery-charging stations shall be equipped with adequate fire-fighting apparatus suitable for fighting Class C fires;*
- d) no open flame is permitted, except as defined in Item (g);*
- e) smoking shall be prohibited;*
- f) electrical apparatus shall be enclosed in an approved enclosure or otherwise located to ensure that no possibility for ignition exists; and*
- g) battery repairs may be undertaken after all due precautions to ensure the dissipation of flammable gases have been taken. Battery charging shall be discontinued for the duration of the time taken to effect the repair.*

**5.5.3 Disposal**

*The electrolyte of storage batteries shall be removed and neutralized before the batteries are scrapped or stored for salvage.*

**Initial Audit - Inspector Comments:**

The unit substation batteries were not reviewed properly during this audit. An internal audit of these installations should be undertaken to ensure proper ventilation is provided. No other deficiencies were noted by this inspector.

Score

4

**Initial Audit - Manager's Reply:**

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**Audit Follow Up – Inspector Comments:**

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Adjusted Score

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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Section M421-00 **Trackless Mobile Electrical Equipment**

**Subsection 5.10.2**

**5.10.2.1**

*Clause 5.10.2 applies to the source of power, isolation, ground-fault protection, ground-wire monitoring, portable power cable, multiphase bus system, slip rings, and take-up reel.*

**5.10.2.2**

*A transformer supplying power to mobile electrical equipment shall*

- a) have a minimum kV•A rating of 25% of the maximum kV•A rating of the mobile electrical equipment; and*
- b) be supplied by load-break isolating devices for the primary supply to the transformer and by a secondary circuit supplying power to the mobile electrical equipment.*

**5.10.2.3**

*Portable power cables used to supply ac power to mobile electrical equipment shall*

- a) meet the requirements of CSA Standard CAN/CSA-C22.2 No. 96;*
- b) meet the requirements of Table 12A of CSA Standard C22.1 for the rated load current of the mobile electrical equipment. Voltage drop shall not exceed the design criteria for the system;*
- c) have cable-entry connectors and conductor terminations that will not be adversely affected by normal operation of the mobile electrical equipment;*
- d) have cable-entry connectors that prevent the entry of water, dust, and other environmental conditions to junction boxes and switch boxes;*
- e) be suspended or made secure when installed outside the radius of operation of the mobile equipment;*
- f) when spliced, have electrical and mechanical characteristics equivalent to that of the cable; and*
- g) when spliced, be subjected to an insulation voltage test equal to the rating of the cable.*

Initial Audit - Inspector Comments:

Only two pieces of mobile equipment were inspected during this audit due to time constraints. Neither of these two installations revealed any deficiencies.

Score

5

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u> Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> Click here to enter text.	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

### 5.10.2.5 continued

Electrical equipment installed on the vehicle shall meet the following requirements:

- a) all enclosures shall meet the Type-4 requirements of CSA Standard CAN/CSA-C22.2 No. 94;
- b) each motor or group of motors shall have separate disconnecting means, overload protection, and ground-fault protection. Acceptable specialized drives shall be exempt;
- c) all motors shall be of the totally enclosed type;
- d) all high-voltage and low-voltage ac wiring and terminations shall be clearly identified, separated by suitable barriers from automotive circuits and terminals, and have a flame-test rating of FT2 as specified in CSA Standard C22.2 No. 0.3; and
- e) high-voltage or low-voltage ac supply shall not be used to power or drive any automotive electrical device such as lights, battery-charging circuits, gauges, horns, warning devices, solenoids, or radio control equipment.

### 5.10.2.5

*Electrical equipment installed on the vehicle shall meet the following requirements:*

- a) all enclosures shall meet the Type-4 requirements of CSA Standard CAN/CSA-C22.2 No. 94;*
- b) each motor or group of motors shall have separate disconnecting means, overload protection, and ground-fault protection. Acceptable specialized drives shall be exempt;*
- c) all motors shall be of the totally enclosed type;*
- d) all high-voltage and low-voltage ac wiring and terminations shall be clearly identified, separated by suitable barriers from automotive circuits and terminals, and have a flame-test rating of FT2 as specified in CSA Standard C22.2 No. 0.3; and*
- e) high-voltage or low-voltage ac supply shall not be used to power or drive any automotive electrical device such as lights, battery-charging circuits, gauges, horns, warning devices, solenoids, or radio control equipment.*

### Initial Audit - Inspector Comments:

Only two pieces of mobile equipment were inspected during this audit due to time constraints. Neither of these two installations revealed any deficiencies.

### Score

5

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Five – Electrical Power Systems

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	Choose an item.
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Part 4 – Total out of 115</b>	<b>94</b>
<b>Part 4 – Percentage out of 100%</b>	<b>82%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

### 6.1 Work System Approval

#### Subsection 6.1.1 Who is responsible for Ventilation

*Has the manager appointed a qualified person to be responsible for all aspects of ventilation in the mine?*

Initial Audit - Inspector Comments:

Yes, Ahsan Chaudry Mining Engineer EIT.

Score

5

Initial Audit - Manager's Reply:

[Click here to enter text.](#)

Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Section 6.3 Manager - Underground</b>	
<b>Subsection 6.3.1(2) Escape Plan</b>	
<i>Is there an escape route plan for each level or working area showing the main routes of egress from the active workings, sites of all underground refuge stations, and ventilation as required in section 6.3.2(5)?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes dated Sept 2012	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.1(1) Escape Plan</b>	
<i>Are they posted in a conspicuous place accessible to all persons working underground?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes	<u>Score</u> 4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(1) General</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li><i>An accurate and up-to-date copy of the plan of the underground workings?</i></li> </ul>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Yes, Oct 1, 2012 presentation Oct,16, 2012 to Audit team	5
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(2) Escape</b>	
<i>Are the following available for inspection:</i>	
<ul style="list-style-type: none"> <li>A copy of the current emergency and rescue plan required by 6.3.1(2)</li> </ul>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes, Reviewed	4
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
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<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(3)</b>	
<i>Are the following available for inspection:</i>	
<ul style="list-style-type: none"> <li>A separate underground plan of every level showing all workings, including shafts, tunnels, diamond drill holes, dams, bulkheads, electrical substations, explosives storage, shop areas, permanent seals and stoppings,</li> </ul>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes, Very detailed, drill holes on drive layout. Complete on many layers.	4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
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<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.2(4)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li>Vertical mine sections at suitable intervals and azimuths, showing all shafts, tunnels, drifts, sloped roadways, rooms, stopes, diamond drill holes and the location of the top of the bedrock, surface of, and type of, the overburden and the bottom and surface of any known body of water or watercourse or material likely to flow,</li> </ul>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Daily with cave information from TDR and seismic data.	4
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.3.2(5)</b> <i>Are the following available for inspection:</i> <ul style="list-style-type: none"> <li>A ventilation plan showing the normal direction and volume of the main air currents and the location of permanent fans, ventilation doors, fire doors, stoppings and connections with adjacent mines, and</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes ,information is on the drawings	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

### 6.3. Manager - Underground

#### Subsection 6.3.3 Shiftboss Plans

*Does the shiftboss have current development plans for the assigned area of responsibility indicating the size, dip and length of all development headings?*

Initial Audit - Inspector Comments:

Yes, on daily sheets provided by engineering.

Score

4

Initial Audit - Manager's Reply:

[Click here to enter text.](#)

Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### Subsection 6.3.3(1) Shiftboss Plans

*Do they indicate adjacent or disused workings?*

Initial Audit - Inspector Comments:

Yes, Show old caved area, new development and new cave area.

Score

4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.3(2) Shiftboss Plans</b>	
<i>Are drill holes that are within 8m of a heading indicated on the map?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Map inspected	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.3(3) Shiftboss Plans</b>	
<i>Are the drill holes that extend into mine workings clearly marked?</i>	
<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
Yes, 10 M radius marked in maps	4
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.3(4) Shiftboss Plans</b>	
<i>Are the collars of these drill holes whether on surface or underground located and plugged as required?</i>	
<b>Initial Audit - Inspector Comments:</b>	<u>Score</u>
Protocol is to plug but many historic surface holes not grouted.	3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.5 Effective Ground Support</b>	
<i>Has the manager ensured that an effective ground support system has been properly installed and maintained?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Yes, been audited by Michael Cullen P. Eng MEMNG consultant.	4
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
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<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.5 Qualified Person Qualified Person</b>	
<i>Is there a ground control plan developed by a qualified person?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Andy Davies, Al Chan, Cory	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.3.5 Quality Control</b>	
<i>Is there a quality control program in place to ensure that the ground control program or ground support systems are installed and maintained according to the directions of a qualified person?.</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Check surveys on Convergence in cave area, plus surface measurements.	4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.4 Mine Shift Boss – General Rules</b>	
<b>Subsection 6.4.1(1)(2)</b>	
<i>Does a certified shiftboss inspect all active headings at least twice per shift?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes but record keeping needs improvement, could not track what heading had been inspected.	2
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.4.1(1)(2) Shiftboss</b> <ul style="list-style-type: none"> <li>• Do the shift bosses have current tickets?</li> <li>• Are the first aid and transportation endorsements current?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Reviewed	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

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<b>Subsection 6.4.2 &amp; 3 Log Book</b>	
<i>Is there a shift log recording the activities in each heading that is signed by the examining shiftboss and countersigned by the corresponding shiftboss?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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## 6.8 Mine Plans

### Subsection 6.8.1(1) Duty to Keep Plans - Surface

*Are updated accurate mine plans prepared in accordance with the Code and good engineering practice as follows:*

*A surface plan showing the*

- claims, licences or leases on which mining is being carried out, and*
- all lakes, watercourses,*
- naturally unstable ground, such as peat bogs or sloughs,*
- main roads,*
- railways,*
- power transmission lines,*
- buildings,*
- shaft openings, adits,*
- surface workings,*
- diamond drill holes collared on the surface,*
- dumps,*
- dams, tailings ponds and their overflow channels,*
- topographic contours, and*
- any abandoned, adjacent or historical workings.*

#### Initial Audit - Inspector Comments:

Yes, in place Jane McCaw has this document

#### Score

4

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

#### Adjusted Score

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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.8.3 Failure to Post Plans:</b> <i>Is the traffic control plan prepared and available, showing:</i> <ul style="list-style-type: none"> <li>• Maximum allowable speeds for the vehicles in use</li> <li>• Rules for passing, "STOP" and "Yield Rules"</li> <li>• Priority rules for various vehicles</li> <li>• Rules for the night operation</li> <li>• Maximum operating grades, emergency run-off protection, shoulder barriers</li> <li>• Other information to ensure the safe operation of all types of vehicles in the minesite including but not limited to, single lane traffic areas, X-over areas</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes in place for pit access.	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.10. Dumps</b>	
<b>Subsection 6.10.1(4) Dumping at Open Holes</b> <i>Has the manager required a qualified person to ensure:</i> <i>(4) where material is to be dumped from a vehicle into a bin, raise, or other opening, provide and maintain a barrier of sufficient size and strength and anchored sufficiently to prevent the vehicle from inadvertently entering the bin, raise, or opening,</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, a design is in place and designed to take the heaviest vehicle underground. Designed by Core Engineering .	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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<b>Subsection 6.10.1(5) Dumping Prohibited</b>	
<i>Has the manager required a qualified person to ensure:</i> <i>(5)where dumping is prohibited or hazardous, prevent dumping by placing across the entrance a barrier sufficient to prevent access and a sign that reads "No entry for dumping purposes,"</i>	
<u>Initial Audit - Inspector Comments:</u> No barrier or sign was noted	<u>Score</u> 2
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.12 Mine Openings</b>	
<b>Subsection 6.12.1 Two Exits</b>	
<i>Prior to production has the mine provided a second exit?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, The access decline and the conveyor decline	<u>Score</u> 5

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<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.12.2 Distance between Exits</b>	
<i>An auxiliary exit shall not at any point be less than 30 m from the main entrance to underground workings of the mine and shall be separated by solid strata. Is this so?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, Access decline is the secondary access	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.12.4 Ease of Travel</b> <i>Does the auxiliary exit afford easy passage and is it provided with good and substantial ladders from the deepest working to the surface, or with hoisting apparatus, which shall constantly be available for use?</i>	
<u>Initial Audit - Inspector Comments:</u> All ramps at present time,	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u> 
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.12.5 New Mine</b> <i>Where an underground mine is being developed, have the shafts and raise openings to the surface been provided with a substantial collar secured to the bedrock, comprised of concrete or other material that will perform in the same manner as concrete and is not expected to deteriorate?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, Concrete collars on all Vent Raises	<u>Score</u> 5

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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>6.13 Refuge Stations</b>	
<b>Subsection 6.13.1 Location</b>	
<i>Where a workplace in an underground mine is more than 300 m from a mine portal or from a shaft station which is used to access that workplace, has the manager provided and maintained, in a suitable location for that workplace, a refuge station in accordance with section 6.13.3?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, all well equipped	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.13.3 Construction and Equipping</b> <i>Is the underground refuge station</i> <ol style="list-style-type: none"> <li>1) <i>clearly identified, constructed of non-combustible material, and of sufficient size to accommodate all</i></li> <li>2) <i>persons working in the vicinity,</i></li> <li>3) <i>equipped with a supply of air, a supply of water, a means of communicating with the surface, a means of sealing to prevent entry of gas, and first aid equipment,</i></li> <li>4) <i>equipped with a plan of the mine clearly showing all emergency exits, and</i></li> <li>5) <i>located</i> <ol style="list-style-type: none"> <li>a. <i>100 metres from explosives magazines,</i></li> <li>b. <i>100 metres from flammable materials storage, and</i></li> </ol> </li> <li>6) <i>(c) constructed or located in such a manner to prevent inadvertent entrance or damage by vehicles, or</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes locations are meeting requirements and meet and exceed requirements. Mine designed a independent means of supplying air, water and communications to the main refuge station. This is a first in BC	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.16 Underground Mobile Equipment</b>	
<b>Subsection 6.16.1 Clearances</b>	
<ul style="list-style-type: none"> <li>Where any mobile equipment is operating, has a minimum clearance of 2 m in excess of the maximum width of the vehicle been maintained? The vehicle shall be fitted with an approved roll-over-protective structure ROPS or falling object protection structure (FOPS).</li> <li>Has a minimum clearance of 300 mm above the ROPS or FOPS been maintained?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
In some areas of the exploration decline, the clearance is not here but safety bays were developed during construction.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.17 Safety Stations</b>  <b>Subsection 6.17.1 Safety Stations</b> <i>Where the Inspector has allowed a reduction in the clearances in 6.15.2 and 6.16.1, do the safety stations meet the following criteria?</i> <ol style="list-style-type: none"> <li>1) <i>be plainly marked,</i></li> <li>2) <i>be clean and free of obstructions,</i></li> <li>3) <i>be cut as close to perpendicular as is practical to the haulage way, and</i></li> <li>4) <i>if made after 1990, be at least</i> <ol style="list-style-type: none"> <li>a. <i>1 m in depth, in addition to the clearance between the vehicle and the wall,</i></li> <li>b. <i>the height of the roadway or 2 m whichever is least, and</i></li> <li>c. <i>1.5 m in width?</i></li> </ol> </li> </ol>	
<u>Initial Audit - Inspector Comments:</u> Yes throughout the access decline and the conveyor decline, some housekeeping is required as garbage is accumulating is some.	<u>Score</u> 3
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.19 Equipment Operation - General</b>  <b>Subsection 6.19.1 Operators Responsibility</b> <i>Are the operators:</i> <ol style="list-style-type: none"> <li>1. <i>using their seatbelts</i></li> <li>2. <i>driving with their lights on</i></li> <li>3. <i>where required, is the vehicle flashing light on at all times or does it have a flag equipped whip antenna light?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u> Yes good compliance	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
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<b>Subsection 6.19.2 Log Book to be Maintained</b> <i>Has the manager provided and maintained an effective logbook system for each unit of mobile equipment over 7000 kg gross vehicle weight where</i> <i>(a) the vehicle operator notes the operating condition prior to operating of the vehicle</i> <i>(b) note any unsafe conditions, and</i> <i>(c) a qualified person making repairs, notes any repairs made and if the vehicle is safe to operate?</i>	
<u>Initial Audit - Inspector Comments:</u> Operator compliance 90% Mechanic compliance 50 % Mechanical dept need more training on Log books	<u>Score</u> 3
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.





# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Subsection 6.19.3 Examination of Equipment</b> <i>Does the operator do a pre-op check?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes , several noted	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.19.4 Signing Logbook</b> <i>Does every notation made in the logbook, maintenance record, and every other record relating to the condition of the equipment show the time and date of the entry and the name of the person who made the entry?</i>	
<u>Initial Audit - Inspector Comments:</u> Needs improvement	<u>Score</u> 2.5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.24 General Mine Rules</b>	
<b>Subsection 6.24.2 Water Sprays</b>	
<i>Wherever practicable, are water sprays or other dust suppression means and devices being used at every dusty place where work is carried out and where it is impractical to do so, is personal protective equipment supplied and worn by all persons working in that location?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes, system need review and ongoing maintenance	<u>Score</u> 2.5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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<b>Subsection 6.24.3 Drilling Dry</b>	
<i>Are powered rock drills being used in a mine without a water jet or other device capable of suppressing dust?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
None observed	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.25 General - Underground Rules</b>	
<b>Subsection 6.25.1(1) Scaling</b>	
<i>Before any work is begun in an underground mine do the workers check their workplaces for hazardous or dangerous conditions and make it safe before continuing?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, in policy SOP 006, in work place inspection	4

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<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.2 Travel Ways</b>	
<i>Are all work places, travel ways and other areas that may be frequented by mine personnel regularly inspected and maintained by check scaling as conditions warrant and re-supported as may be prudent and that adequate tools and supplies are provided?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes	3
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.3 Overhead Holes</b>	
<i>Where persons are working in any location which is below and open to a haulage or travel way on the level above, is the workplace securely covered or otherwise closed off from the haulage or travel way?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes	5
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.3 Cover Holes</b>	
<i>Are the tops of every millhole, manway, sump, drain hole or other opening covered or otherwise adequately protected to prevent inadvertent access?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Sump next to Fueling bay needs bumper block	3

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

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<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.3 Working a Manway</b>	
<i>Where manways are being repaired or in active use, are they closed off and are warning signs posted at all entrances?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Manway between conveyor transfer CTC 3 -4 needs warning signage	3
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.4 Work Near Abandoned Areas</b>	
<i>If required does the manager have an approved work procedure for work that is to be carried out within 30 m of abandoned or old workings, or any accumulation of water or unconsolidated material, or any other substance that may flow?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
In progress with the cave and the break through to the pit.	3
<b>Initial Audit - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b>	<b>Adjusted Score</b>
<a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.25.5 Check Breakthroughs</b>	
<i>No connection between mine workings shall be made through to until a thorough examination of the workings toward which the active heading is advancing has been made and has shown that the work can proceed in a safe manner. Where required, is there a procedure in place?</i>	
<b>Initial Audit - Inspector Comments:</b>	<b>Score</b>
Yes, procedure in place	5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

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<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 6.25.6 Jumbo Drills</b>	
<i>Are the drills stopped prior to persons proceeding beyond the front of the drill controls of an underground jumbo drill?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, procedure in place	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.26 Rock Passes</b>	
<b>Subsection 6.26.1 No Water</b> <i>Has the Chief Inspector approved an operating procedure to introduce water into an ore or waste pass, a loading pocket, coal silo, hopper, storage bin or a completed large diameter borehole for any purpose?</i>	
<u>Initial Audit - Inspector Comments:</u> No procedure as this is not done	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.26.1 No Water</b> <i>Is the operating procedure being followed?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes	<u>Score</u> 5

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<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.26.2 Procedure to Remove Water</b>	
<i>Has the manager provided a plan for the safe removal of water or saturated Material from any ore or waste pass that contains water or saturated material that will flow?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, procedure in place for mucking bored raises	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.27.4 Guardrail</b>	
<i>Where a stairway ends in direct proximity to dangerous traffic or other hazards, have detour guardrails been installed?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, on conveyor transfer points	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>6.30 Flammable Waste and Scrap - Underground</b>	
<b>Subsection 6.30.1 Scrap Removal</b>	
<i>Is the waste, including waste timber, being removed from the underground mine on a regular basis and is not being piled up nor permitted to decay in the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No, there is waste material collecting underground, housekeeping needs to be improved	2

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<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.30.2 Flammable Scrap</b> In an underground mine, or in or about a headframe or shaft-house, is the flammable refuse being <ol style="list-style-type: none"> <li>1) deposited in covered, fire-resistant containers, and</li> <li>2) removed at least weekly from the mine, headframe, or shaft-house?</li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No covered fire resistant containers were noted	2
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.31 Sulphide Dust</b>	
<b>Subsection 6.31.1 Sulphide Dust</b>	
<i>In any underground mine where the sulphur content of the ore is high and a sulphide dust explosion has occurred, has the manager implemented an approved scheme for minimizing the danger from a sulphide dust explosion that includes</i>	
<ol style="list-style-type: none"> <li>1) <i>provision for ensuring that all persons are removed to a place of safety prior to blasting, taking into consideration the mine layout and the ventilation circuits, and if necessary, removed to the surface of the mine,</i></li> <li>2) <i>provision for ensuring that all accessible headings, raises, and other workplaces within 30 m of a blasting site are washed down to remove dust prior to blasting, and</i></li> <li>3) <i>any other measures that could reduce the risk of a dust explosion or lessen the consequences if one should occur.</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Very little sulphides in the mine, ore very discriminated.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.33 Ventilation Standard</b>	
<b>Subsection 6.33.1 Ventilation Standard</b>	
<i>Is the return air from all working places, whenever practicable, routed directly to the return airway?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Partially now and when VR 7 is complete air quality will improve.	3
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>6.35 Underground Mine Heating</b>	
<b>Subsection 6.35.1 Mine Air Heaters</b>	
<i>Has an Inspector given written permission for the mine to install the furnaces or devices for heating mine air?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, G MacDonald has given permission.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>6.36 Auxiliary Ventilation</b>	
<b>Subsection 6.36.1 Auxiliary Ventilation</b>	
<i>Has the manager ensured that all workings that are removed from the main ventilation circuit have an adequate supply of ventilating air?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes aux ventilation in place and used where required and identified drive layouts, level plots all indicate ventilation flows	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 6.36.2 Manager's Rules</b>	
<i>Where auxiliary ventilation systems are necessary, has the manager of the underground mine prepared rules and procedures for the installation and use of auxiliary ventilation systems and, in the case of a coal mine, for the degassing of headings. Is a copy of this procedure posted at a conspicuous location at the mine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Rules and procedures were not noted to be posted.	1

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.36.4 Exhaust from a Compressor</b>	
<i>Is compressed air being used for ventilation other than clearing blast fumes and smoke since the exhaust from any compressed air machine shall not be considered as ventilation</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.37 Ventilation Monitoring</b>	
<b>Subsection 3.37.1 Air Measurements</b>	
<i>Has the manager of the underground mine ensured that the measurements of the quantity of air flowing are taken at the main fan, in all airways, and at all major ventilation splits at intervals not exceeding three months?</i>	
<u>Initial Audit - Inspector Comments:</u> Air measurements are taken weekly	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Subsection 3.37.2 Diesel Equipment Ventilation</b> <i>In a mine or part of a mine in which diesel equipment is operating underground</i> <i>(1) are measurements of the quantity of air flowing being taken at intervals not exceeding once a week,</i>	
<b>Initial Audit - Inspector Comments:</b> Shifters take gas reading daily and record in shift log. Reported twice day on 5 point safety cards. It is also on Daily shifters pass down. Shift cross over record.	<b>Score</b> 4
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 6.37.2 Diesel Equipment Ventilation</b> <i>(1) are tests being made at least once a shift, in the general body of the air, on the exhaust side of the operating diesel equipment, for nitrogen dioxide or oxides of nitrogen and other gases specified by an inspector,</i>	
<b>Initial Audit - Inspector Comments:</b> Shifters take gas reading daily and record in shift log. Reported twice day on 5 point safety cards. It is also on Daily shifters pass down. Shift crossover record.	<b>Score</b> 4

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 6.37.3 Recording</b>	
<i>Are the measurements required to be taken under sections 6.37.2(1) and 6.37.2(2) being recorded in a book kept for that purpose?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Records are kept in the shift log. All on the electronic back up available for review.	4
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>6.38 Doors and Regulators</b>	
<b>Subsection 6.38.1 Door Closing</b> <i>Do the doors used for regulating or controlling ventilation close automatically and are they provided with a suitable device for opening or closing them?</i>	
<u>Initial Audit - Inspector Comments:</u> Yes in place on doors that are in operation and will be installed on future doors	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

### 6.40 Unventilated Workings

#### Subsection 6.40.1 Prevention of Access

Where any part of the underground mine that is not being ventilated has the manager ensured that these parts

- 1) are effectively barricaded to prevent inadvertent entry
- 2) are posted with signs warning that entry is prohibited,

#### Initial Audit - Inspector Comments:

Yes, Barricades were noted

Score

3

#### Initial Audit - Manager's Reply:

[Click here to enter text.](#)

#### Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

#### Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

#### 2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

#### 2<sup>nd</sup> Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Six – Mine Design and Procedures

October 16 & 17, 2012

<b>Subsection 6.40.1 Ventilation</b>	
<i>Where any part of the underground mine that is not being ventilated has the manager ensured that these parts:</i>	
1) <i>have been examined by a qualified person for the following prior to anyone entering or being permitted to enter these parts</i> <ul style="list-style-type: none"> <li>a) <i>oxygen deficiency,</i></li> <li>b) <i>t he presence of toxic or noxious gases, fumes, mists, vapours, or dust, and</i></li> <li>c) <i>any other dangerous condition.</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes by shift boss	3
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Part 6 – Total out of 320</b>	<b>249</b>
<b>Part 6 – Percentage out of 100%</b>	<b>78%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<b>Section 8.1 Magazines</b>	
<b>Subsection 8.1.1 (1) Permit Required</b>	
<i>Has the Manager applied for and received an Explosives Storage and Use Permit from the Inspector before a magazine was put into service, or modified, or before carrying out any maintenance work including the installation of lighting or heating?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The permit for the surface explosives magazine is: #BC-1081; mine #0300614, expires May 25, 2016. Detonators are not stored on surface.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.1 (2) Permit Required</b>	
<i>Has the Manager ensured that the magazine meets the current regulations and standards of the Explosives Act (Canada)?</i>	
<i>Note: The new standards were established by NRCAN and upgrades must be completed by May 31, 2006?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine is a standard steel construction magazine. Mine security check the magazine twice per day for tampering and photograph the magazine each inspection.	5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.4 Flammable Material</b>	
<i>Is there flammable material stored in a magazine, or nearer to a magazine than the distance required in NRC Explosives Branch "Blasting Explosives and Detonators Storage, Possession, Transportation, Destruction and Sale (8 meters)?"</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The outside of the magazine was free of flammable material. Inside the magazine there was some scrap lumber and a few cases of loading hose which should be removed.	1
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.5 Magazine Signs</b>	
<i>Are the proper signs required in the Code in place?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Proper warning signs were mounted on the fence surrounding the magazine compound.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<b>Subsection 8.1.6 (1) Magazine Rules</b>	
<i>Is there an authorized person in charge of the magazine, who inspects it on a weekly basis?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Authorized persons check the magazine at least twice per week. Security inspect the magazine compound and around the magazine twice per day.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.6 (2) Magazine Rules</b>	
<i>Is the magazine kept locked as required in the Code?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine is kept locked, as required. The mag. keys are kept in a lock box or locked desk in the office.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.6 (3) Magazine Rules</b>	
<i>Is there an up-to-date inventory kept in a logbook with every entry signed by the authorized person in charge?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine inventory is current and signed by an authorized person.	5
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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5. All components of the element are present, in place, being monitored and working. 4. Most components of the element are present, minor improvements needed or additional training is required. 3. The basics of the element are in place, but require updating, revisions, documentation, training or formal procedure. 2. Parts of the element is available, the procedure may be verbal or in draft format. 1. The element is not present; however, the mine has made attempts to develop it or it is outdated. 0. The element is not present at the mine.



# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<b>Subsection 8.1.6 (4) Magazine Rules</b> <i>Is the magazine clean, dry and free from grit?</i>	
<u>Initial Audit - Inspector Comments:</u> The magazine is clean and dry.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.6 (7) Magazine Rules</b> <i>Is there any exposed iron or steel?</i>	
<u>Initial Audit - Inspector Comments:</u> There is no exposed iron or steel.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.6 (8) Magazine Rules</b> <i>Is the stock rotated, with the oldest stock being utilized first?</i>	
<u>Initial Audit - Inspector Comments:</u> Stock is rotated regularly. There was a minimum of product in the surface magazine at the time of inspection.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<b>Subsection 8.1.7 Posting Rules</b>	
<i>Are the rules for magazine operation and maintenance posted inside every magazine?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The magazine rules are posted inside. In surface and underground magazines.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.8 Storage of Detonators</b>	
<i>Are the rules regarding detonators being met?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Detonators are stored underground, in a sea-can container. The inside of the steel doors of the underground detonator storage are not covered with wood.	1
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.9 No Smoking</b> <i>Any sign of smoking while handling explosives?</i>	
<u>Initial Audit - Inspector Comments:</u> There were no signs of smoking near explosives.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<b>Subsection 8.1.10 (1) Underground Explosive Storage</b> <i>In an underground mine, other than a coal mine, does any magazine established for the storage of more than a 24 hour supply of explosives, have the written approval of the Inspector?</i>	
<u>Initial Audit - Inspector Comments:</u> The inspector has given his approval of the underground magazine.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 8.1.10 (2) Underground Explosive Storage</b> <i>Are explosive storage boxes, holding not more than a 24 hour supply, clearly marked "Explosives?" Is there a current record of every magazine and explosive storage area?</i>	
<u>Initial Audit - Inspector Comments:</u> The contractor's boxes are marked "explosives". There is presently only one underground storage area.	<u>Score</u> 5

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 8.1.10 (3) (a-d) Underground Explosive Storage</b> <i>In an underground mine are magazine, explosive container, or explosive storage areas:</i> <ol style="list-style-type: none"> <li><i>Located at least 60 meters from a shaft, hoist room, main access ramp, refuge station, transformer vault or a fuel storage or fuel transfer area?</i></li> <li><i>Located so that there is no possibility of a vehicle colliding with a storage container?</i></li> <li><i>Located so that in case of fire in the mine the explosives are not likely to become overheated?</i></li> <li><i>Conspicuously marked by "Explosives" sign or signs?</i></li> </ol>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
<p>The contractor's explosives boxes are not protected from accidental vehicle impact. The explosives storage is located an appropriate distance from mine infrastructure.</p> <p>It was reported that explosives are sometimes left on the loading truck between shifts. Unused explosives should be returned to the magazine or day box.</p>	1

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Section 8.2 Blasting Certificates</b>	
<b>Subsection 8.2.1 through 8.2.7 Blasting Certificates</b>	
<i>Are all persons, conducting blasts, certified as per sections 8.2.1 – 8.2.7 of the HSRC?</i>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Blasting certificates are current.	5
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Section 8.3 Use, Care and Handling of Explosives</b>	
<b>Subsection 8.3.2 (1) (2) (3) (4) Identification of Explosives</b> <i>Do all explosives have plainly marked or printed on the exterior of every original package:</i> <ol style="list-style-type: none"><li><i>1. The name and place of business of the manufacturer and the date of its manufacture?</i></li><li><i>2. The type and strength of the explosive, and the dimensions of the cartridge?</i></li><li><i>3. The UN Classification number and the dangerous goods classification?</i></li><li><i>4. When full cases of detonators, detonating cords, and boosters are received, the inner cartons are immediately marked with the magazine license number?</i></li></ol>	
<u>Initial Audit - Inspector Comments:</u> Explosives cases are properly marked. Cases are not opened on surface.	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 8.7 Drilling Near Explosives</b>	
<b>Subsection 8.7.1 (1) Misfires</b>	
<i>Is the use of equipment restricted within this 8 meter distance except as provide in section 8.7.1, or under a procedure approved by the Inspector</i>	
<b>8.8.1. (1) (2)?</b>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
There is a procedure, approved by an inspector, for pre-loading production blastholes, which allows equipment to work within 8 m of a loaded hole. Misholes are washed or blown out to neutralize them.	5
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Eight – Explosives

October 16 & 17, 2012

<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Section 8.8. Misfires</b>	
<b>Subsection 8.8.1 (1) Surface Misfires</b>	
<i>Are misfired hole on the surface shall be clearly marked off for a distance of 8 meters around the collar of the hole and equipment restricted?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
N/A	
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Part 8 – Total out of 95</b>	<b>83</b>
<b>Part 8 – Percentage out of 100%</b>	<b>87%</b>

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

### Section 10.1 Mine Plan and Reclamation Program Information

#### Subsection 10.1.2 Producing Mines

*Does the mine have a permit authorizing the work from the Chief Inspector?*

*Does it include information on the following:*

- Surface or underground development or production for coal and mineral mines, or major modification of existing producing coal and mineral mines of the buildings available on site*
- Underground exploration requiring excavation, large pilot projects, bulk samples, trial cargos, test shipments*
- Has work proceeded without the Chief Inspector granting a permit or authorization?*

Initial Audit - Inspector Comments:

Yes permits are in place M229 and TSF M229A

Score

5

Initial Audit - Manager's Reply:

[Click here to enter text.](#)

Audit Follow Up – Inspector Comments:

[Click here to enter text.](#)

Adjusted Score

Audit Follow Up - Manager's Reply:

[Click here to enter text.](#)

2<sup>nd</sup> Audit Follow Up - Inspector Comments:

[Click here to enter text.](#)

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2<sup>nd</sup> Audit Follow Up - Manager's Reply:

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Subsection 10.1.4 Mine Plans</b> <i>Does the mine have a plan that has the relevant information as requested by the Code?</i> <ul style="list-style-type: none"> <li>Baseline information</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> All information is in the permit application document and the application	<u>Score</u> 5
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (f)?</i> <ul style="list-style-type: none"> <li>Designs and details for dumps, open pits, impoundments, underground workings including areas that may be affected by subsidence, stockpiles, processing facilities, water management structures, water storage and /or water treatment facilities, haulage roads, road construction and significant transportation or utilities infrastructure, compatible with environmental protection, reclamation and mine closure?</li> </ul>	
<u>Initial Audit - Inspector Comments:</u> As builds are available for structures and reclamation report is due at year end.	<u>Score</u> 4

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	
<b><u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 Mine Plans</b> Does the mine plan have the requirements of Part 10.1.4 (3) (g)? <ul style="list-style-type: none"> <li>• Designs for material handling and waste disposal procedures</li> </ul>	
<b><u>Initial Audit - Inspector Comments:</u></b>	<b><u>Score</u></b>
Waste disposal is handled by a contractor and dealt with off site. GFL waste oil, BFI waste for recycling. Storage of chemicals needs improvement, RheoTEC tank sitting in the yard with product still it exposed to the potential of being hit by a vehicle in winter conditions, also a tank of DELVO Stabilizer in the same condition. Waste oil storage area needs to be covered so it doesn't fill with water and float the hydrocarbons into the environment. Diesel fuel surface fueling station has diesel spilled on the ground and needs to have all contaminated soil removed and a system installed so it doesn't reoccur.	2
<b><u>Initial Audit - Manager's Reply:</u></b>	
<a href="#">Click here to enter text.</a>	
<b><u>Audit Follow Up – Inspector Comments:</u></b>	<b><u>Adjusted Score</u></b>
<a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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Click here to enter text.	
<b>Subsection 10.1.4 (3h) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (h)?</i> <ul style="list-style-type: none"> <li>Salvaging and stockpiling of surface soils and overburden materials</li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
The mine has stockpiled 170,000 m3 of topsoil and 300,000 m3 of till	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Subsection: 10.1.4 (3i) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (i)?</i> <ul style="list-style-type: none"> <li>Source, use and water balance for any water required in the operation</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> Fresh water comes from Kamloops Lake permit 139m3/min average is 124 m3 / min Water balance is not complete due to 3 different water balances and discussions on the water volume trapped in the tailings	<b>Score</b> 2
<b>Initial Audit - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Audit Follow Up – Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</b> <a href="#">Click here to enter text.</a>	<b>Adjusted Score</b>
<b>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</b> <a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.4 (3j) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (3) (j)?</i> <ul style="list-style-type: none"> <li>Overall site water balance</li> </ul>	
<b>Initial Audit - Inspector Comments:</b> Still work in progress	<b>Score</b> 3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 10.1.4 (4b) Mine Plans</b> <i>Does the mine plan have the requirements of Part 10.1.4 (4) (b)?</i> <i>Plan for environmental Protection that includes:</i> <ul style="list-style-type: none"> <li>• <i>Erosion control and sediment retention</i></li> </ul>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, but some erosion channels need to be improved before water leaves the property	3
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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<b>Subsection 10.1.4 (6) Mine Plans</b>	
<i>Does the mine plan have operational reclamation plans for the next five years that shows the progressive development of structures?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Work in progress due from consultant December 2012.	2
<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Subsection: 10.1.5 Design Standards</b>	
<i>Are the impoundments, water management facilities and dams designed in accordance with the criteria provided in the Canadian Dam Association, Dam Safety Guidelines?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes, audit by Geologic, Monte Christie still not complete	2
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.6 Design Standards</b>	
<i>Are the dumps designed in accordance with the Interim Guidelines of the British Columbia Mine Waste Rock Pile Research Committee?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Present dump is in pit and will be effected by the cave	4
<u>Initial Audit - Manager's Reply:</u>	
<a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
<a href="#">Click here to enter text.</a>	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<b>Subsection 10.1.7 Design Standards</b> <i>Are the dumps designed so as to allow for re-contouring such that final reclamation is consistent with the approved end land use?</i>	
<u>Initial Audit - Inspector Comments:</u> Not required as they are in pit	<u>Score</u> 4
<u>Initial Audit - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>Audit Follow Up – Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u> <a href="#">Click here to enter text.</a>	<u>Adjusted Score</u>
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u> <a href="#">Click here to enter text.</a>	

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Subsection 10.1.8 Design Standards</b>	
<i>Are the Tailings impoundments, water management facilities, dams and waste dumps designed by a professional engineer?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes Scott Elfen PE and stamped by Harry H. Kim P.eng	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 10.1.9 Design Standards</b>	
<i>Are there plans for the prediction, and if necessary, the prevention, mitigation and management of metal leaching and acid rock drainage which shall be prepared in accordance with the Guidelines for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Using MLARD program as laid out in permit and full data base on NG computer system.	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Subsection 10.1.11</b> <i>Has the Owner, Agent or Manager notified the Chief Inspector in writing of any intention to depart from the mine plan and reclamation program authorized under sections 10.1.1 or 10.2.1 of the Code to any substantial degree?</i> <i>Has the Manager received the written authorization of the Chief Inspector prior to implementing the proposed changes?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
No Changes at this time	4
<u>Initial Audit - Manager's Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Section 10.5 Operations</b>	
<b>Subsection 10.5.1 Operations</b>	
<i>Did the operation of tailings or water management facility commence prior to an “as-built” report prepared by a professional engineer certifying that the facility was designed and constructed according to section 10.1.5 of this Code being submitted to the Chief Inspector and a permit to operate the facility was received?</i>	
<u>Initial Audit - Inspector Comments:</u>	<u>Score</u>
Yes ,Reviewed by George Warnock P. Eng. MEMNG and signed off	5
<u>Initial Audit - Manager’s Reply:</u>	
Click here to enter text.	
<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager’s Reply:</u>	
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>2<sup>nd</sup> Audit Follow Up - Manager’s Reply:</u>	
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Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

## Part Ten – Reclamation and Closure

October 16 & 17, 2012

<b>Subsection 10.5.2 Operations</b> <i>Does the mine have an Operation, Maintenance and Surveillance (OMS) manual?</i> <i>Was this manual prepared and provided to an Inspector and to all employees involved in the operation of major dam or major impoundment, prior to commissioning?</i> <ul style="list-style-type: none"> <li><i>Is the manual revised regularly during operations, decommissioning and closure of the structure?</i></li> </ul>	
Initial Audit - Inspector Comments:	Score
Yes, In place	5
Initial Audit - Manager's Reply:	
Click here to enter text.	
Audit Follow Up – Inspector Comments:	Adjusted Score
Click here to enter text.	Choose an item.
Audit Follow Up - Manager's Reply:	
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Inspector Comments:	Adjusted Score
Click here to enter text.	
2 <sup>nd</sup> Audit Follow Up - Manager's Reply:	
Click here to enter text.	
<b>Subsection 10.5.3 Operations</b> <i>Has the Manager submitted an annual dam safety inspection report prepared by a professional engineer on the operation, maintenance and surveillance of the tailings and water management facilities and associated dams to the Chief Inspector?</i>	
Initial Audit - Inspector Comments:	Score
Not Due until March 31, 2013	3

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Part Ten – Reclamation and Closure

October 16 & 17, 2012

<u>Initial Audit - Manager's Reply:</u>	
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<u>Audit Follow Up – Inspector Comments:</u>	<u>Adjusted Score</u>
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<u>Audit Follow Up - Manager's Reply:</u>	
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<u>2<sup>nd</sup> Audit Follow Up - Inspector Comments:</u>	<u>Adjusted Score</u>
Click here to enter text.	
<u>2<sup>nd</sup> Audit Follow Up - Manager's Reply:</u>	
Click here to enter text.	
<b>Part 10 – Total out of 90</b>	<b>65</b>
<b>Part 10 – Percentage out of 100%</b>	<b>72%</b>

Scoring: **Maximum points available per subsection = 5**

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# Ministry of Energy, Mines and Natural Gas Health and Safety Audit for New Afton Mine

Employee Questionnaire

October 16 & 17, 2012

We believe that one of the most important aspects of your operation is to provide a safe and healthy work environment for all employees. To help us evaluate this goal, we asked your employees the following questions.

Y = YES, N = NO, NS = Not Sure

## Company: New Afton

1) Does Management visibly demonstrate an interest in the safety and health of their employees?

Percentage of those interviewed: Y = 97% / N=1% / NS= 2%

2) Does your supervisor show interest in the health and safety of the employees on your crew?

Percentage of those interviewed: Y = 100% / N / NS

3) Are identified health and safety concerns or hazards addressed and or corrected in a timely manner.

Percentage of those interviewed: Y = 95% / N = 1% / NS =4%

4) Have the Company health and safety rules and procedures been clearly explained to you.

Percentage of those interviewed: Y = 98% / N / NS = 2%

5) Are all workplace accidents and/or near misses reported?

Percentage of those interviewed: Y = 95% / N = 1% / NS = 4%

6) Does your supervisor conduct effective monthly safety meetings?

Percentage of those interviewed: Y = 100% / N / NS



Ministry of Energy, Mines and Natural Gas Health and Safety Audit for  
New Afton Mine

Employee Questionnaire

October 16 & 17, 2012

7) Have you been given enough training and information to do your job safely?

Percentage of those interviewed: Y = 98% / N = 2% / NS

8) Is positive feedback is given to increase health and safety awareness.

Percentage of those interviewed: Y = 99% / N / NS = 1%

9) Do you know what to do in case of an emergency (i.e. fire, injury, chemical spill, etc.).

Percentage of those interviewed: Y = 100% / N / NS

10) Do you have opportunities to provide input into the health and safety program?

Percentage of those interviewed: Y = 99% / N / NS = 1%

11) Are Health and Safety inspections of your work area conducted monthly?

Percentage of those interviewed: Y = 98% / N / NS = 2%

12) Is the Occupational Health and Safety Committee an active and effective group?

Percentage of those interviewed: Y = 95% / N = 1% / NS = 4%

13) Are all new employees given adequate safety orientation?

Percentage of those interviewed: Y = 98% / N / NS = 2%

14) Do you report every workplace injury or illness to your supervisor regardless of severity?

Percentage of those interviewed: Y = 98% / N = 1% / NS = 1%



Ministry of Energy, Mines and Natural Gas Health and Safety Audit for  
New Afton Mine

Employee Questionnaire

October 16 & 17, 2012

15) Are safety rules sometimes disregard in order to get the job done?

Percentage of those interviewed: Y = 1% / N = 97% / NS = 2%

16) Is it possible to achieve a "Zero Accident Culture?"

Percentage of those interviewed: Y = 96% / N = 2% / NS = 2%

	Question #1	Question #2
	Provide one positive aspect of the Mines Health and Safety program?	If you could improve one thing in the Mines Health and Safety program what would it be?
	The Joint Occupational Health and Safety Committee	Continue with the positive feedback to all employees
	Concerns are always dealt with	Have Bi –Weekly meeting because of shift rotations
	Safety concerns are dealt with ASAP	More frequent meetings
	Refuge stations for emergencies	Ventilation needs to be checked in all aspects and areas of the mine on a regular basis
	It forces the company not to ignore health and safety. Routine checking of work.	Send out questionnaires periodically to get a feel for how the workplaces are doing.
	Access to all PPE necessary to complete the job safety	Better dust control underground and ventilation
	Open communications at daily meetings	Better availability of jack stands and booms support.



Ministry of Energy, Mines and Natural Gas Health and Safety Audit for  
New Afton Mine

Employee Questionnaire

October 16 & 17, 2012

	Provide one positive aspect of the Mines Health and Safety program?	If you could improve one thing in the Mines Health and Safety program what would it be?
	Third party objective view by someone other than corporate looking at things	Clarity from M.H.S to work (sometimes middleman are misinformed or unsure)