AGNICO EAGLE

December 14th, 2018

Erin Reimer
Technical Advisor I
P.O. Box 534
Arviat, NU
X0C 0E0

Re: Agnico Eagle's responses to Nunavut Impact Review Board's 2017-18 Recommendations for the Meadowbank Gold Project and the Whale Tail Pit Project with Board's

Dear Erin Reimer,

As requested, the following information are intended to address the recommendations outlined in the *2017-18 Annual Monitoring Report for the Meadowbank Gold Project and the Whale Tail Pit Project with Board's Recommendations* dated November 7, 2018.

Should you have any questions or require further information, please do not hesitate to contact us at the below.

Regards,
Agnico Eagle Mines Limited – Meadowbank Division

Regards,

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1 MEADWOBANK MINE SITE (03MN107)

1.1 Spill Management – Condition 26

Concern: In review of Agnico Eagle's 2017 annual report, and similar to the concern expressed by the Kivalliq Inuit Association and the Crown-Indigenous Relations and Northern Affairs Canada, it is noted that even though there was a slight decrease in the number of reportable spills from 2016 to 2017, the number of spills still remain high for the 2017 monitoring period. In addition, it is noted that the number of non-reportable spills have increased since 2014. No discussion was provided by Agnico Eagle on the possible reasons for why the number of non-reportable spills continue to rise even though additional training has been implemented based on the Spill Reduction Action Plan.

Recommendation 1: The Board requests that Agnico Eagle provide a written submission explaining the conditions which contributed to the increase in spills on site for 2017 (both reportable and non-reportable spills) and provide a discussion on what is being done at site to reverse this trend. The Board recommends that Agnico Eagle increase its spill reporting frequency to occur each quarter, to improve the ability to determine the effectiveness of its spill reduction efforts.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:

As stated in the 2017 Annual report, 442 spills (reportable and non-reportable) occurred on the Meadowbank Mine Site and the Amaruq Exploration Access Road (AEAR).

Agnico acknowledges that the overall number of spills have increased but also would like to mention that the totals reported in the 2AM-MEA1526 Meadowbank 2017 Annual report included spills along the AEAR, that were also reported under the 8BC- AEA1525 AEAR 2017 Annual report. Thus, double accounting was included within the tabulations of Meadowbank reporting.

To be consistent with previous years, only spills on the Meadowbank Mine site, AWAR and Bake Laker infrastructures should be used for comparison. Refer to Table below for a spills summary from 2011-2017.

Table 1. Total reportable and non-reportable spills for the Meadowbank, AWAR and Baker Lake Infrastructures from 2011 to 2017.

Year	*Number Reportable Spills*	*Number Non-Reportable Spills*	*Total*
2011	*12*	*68*	*80*
2012	*16*	*82*	*98*

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2013	*7*	*85*	*92*
2014	*9*	*63*	*72*
2015	*18*	*148*	*166*
2016	*34*	*374*	*408*
2017	*28*	*383*	*411*

Data from 2017 shows a decrease of 18% in reportable spills and a slight increase of 2% in overall non-reportable spills for the Meadowbank site.

Moving forward, Agnico will ensure data is presented in future annual reports in a manner to prevent confusion and help the review process.

Agnico Eagle is already reporting spills on a monthly basis via the NWB Monthly report required under Water License 2AM-MEA1526 and quarterly via the KIA Production Lease Report. If required by NIRB, the report can be provided to the Inspector as well.

Agnico notes that emphasis on spill reporting and proper data collection was put forward in 2016, and as showed effective in identifying areas of focus and improvements. By continuing education and awareness within our sites, we are confident that the overall environmental impacts are limited.

As stated in the 2016 Annual report, the general awareness on spill management and reporting with management and operations were expanded by meeting equipment users and stakeholders. Increased focus on reporting, identifying and notifications assisted in finding opportunities of reduction and also contributed to the increase noted above. This process enabled proactive maintenance to be done on equipment identified and reduce the overall quantities of material spilled. Mandatory spill training is included in the Meadowbank site induction and the Environmental Department is working in a collaborative approach to ensure field personnel are reminded consistently on best practices in spill management. Refresher training is also being developed.

Furthermore, Agnico continues to reference the Spill Reduction Action Plan started in 2016. Key Performance Indicators (KPI) were developed to monitor reported spills. Spill Frequency is calculated and reported to the daily management meeting. The Spill Frequency is the ratio of the total number of spill to date in the year over the number of days in the current year. The total number of spill to date includes the spills internally reported as well as the spills reported to the regulators. This KPI is used to follow trends related to spill increase or reduction, and to guide corrective actions when required. As well, "bad actors" identified through the data collected on spill reports are now mentioned within the daily management meetings.

All internal reported spills and to regulators are managed according to our spill contingency plan. Spills are contained and cleaned, contaminated material is disposed to

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the appropriate area, such as the onsite landfarm and the clean-up actions are monitored by the Environment team.

Recommendation 2: The Board requests that, within future annual reporting, Agnico Eagle present the number of reportable and non-reportable spills (from 2011 onward) in a table or graph for ease of review.

Agnico Eagle is to include the requested information commencing in its 2018 Annual Report submission to the NIRB.

Agnico Eagle's Response:
Agnico Eagle acknowledge the NIRB recommendation and will include the information in the 2018 Annual Report, as mentioned in NIRB Recommendation 1 above.

1.2 Placement of local area marine monitors – Condition 36

Concern: Term and Condition 36 for Project Certificate No. 004, Amendment 2 requires that Agnico Eagle place/hire local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet. Even though approximately 36 ships with fuel and goods arrived in Baker Lake from Chesterfield Inlet in 2017, only one (1) marine mammal monitor was hired for the period between July 25 to July 28, 2017. Agnico Eagle did not provide a reason on why marine mammal monitors were not hired for the other ships that were travelling through Chesterfield Inlet.

Recommendation 3: The Board requests that Agnico Eagle provide a written explanation of why local marine mammal monitors were not utilized for all vessels transporting fuel or materials for the Project during the 2017 season, with a description of any alternative monitoring and mitigation employed by the Proponent and its effectiveness. Confirmation of planned efforts to achieve full compliance with Term and Condition 36 of Project Certificate No. 004 amendment 02 in the future must also be provided.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:
Agnico eagle has tried to maximize the use of wildlife monitors based from the community of Chesterfield Inlet as per previous barge seasons. Although the 2017 Annual report shows only monitoring reports from July 25th to 28th, monitors were present all through the off-loading season. Unfortunately, monitoring record sheets were lost/destroyed in the transfer process and during the change-over between wildlife monitors.

Monitors were present from July 25th to August 12th for the first phase and from September 6th to 17th and September 27th to October 2nd for the second set of transfers. For multiple reasons (sickness, family related matters, personal issues, alternative work), the hired

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monitors had to be replaced during the seasons, creating gaps in monitoring. This should have been stated in the Annual report. A total of 4 monitors were used during the 2017 season.

Agnico Eagle remains committed to meet compliance with Condition 36 and is intending to seek out monitors from the Chesterfield Inlet when possible. With availability of possible monitors being challenging in that area, Agnico would, alternatively, hire monitors from other local communities to ensure the condition is met.

Agnico Eagle will also ensure better training is given to the hired monitors to prevent further issues with records sheets being lost and/or destroyed. Agnico Eagle will continue to put all the necessary effort and find alternative solutions to comply with Condition 36.

1.3 Participation in Surveys –Conditions 51 and 54

Concern: In 2016 and 2017, Agnico Eagle suspended the harvest data collection for both the Creel Surveys (fish harvesting) and the Hunter Harvest Survey (HHS) due to decrease in participation rates. This issue of non-compliance was brought up by the Board in 2017 as Agnico Eagle noted that the HHS would be implemented during the fall migration of 2017. However, the study was not implemented in 2017 and no reason other than participant fatigue and the overall need for renewal was noted. In response to the Board's 2017 Recommendations, Agnico Eagle noted that it would be exploring other ways to gather harvest data in consultation with stakeholders. This appears to contradict the information that was provided in the 2017 Annual Report as it gives the impression that Agnico Eagle will not implement the Creel Surveys and the HHS in 2018 as required by Term and Conditions 51 and 54 of Project Certificate No. 004, Amendment 2. The NIRB is concerned that both the Creel and Hunter Harvest surveys are not being completed and the NIRB and other agencies are not seeing results and a gap in available knowledge is developing which needs to be addressed. This is important as Agnico Eagle is proposing additional development in the region and plans to be in the region for the long term.

Further, as requested by the Board in its 2017 Recommendations, a plan that includes a clear indication of timelines, next steps in development of the Creel Surveys and the Hunter Harvest Surveys, measures for success, contingency planning and limitations on the effectiveness of the current studies employed at the Meadowbank Project was not provided by Agnico Eagle.

Recommendation 4: The Board requires that Agnico Eagle provide clarification on when and how it will meet the objectives of both Term and Conditions 51 and 54 of Project Certificate No. 004, Amendment 2 moving forward.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation.

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Agnico Eagle's Response:

A Hunter Harvest Study (HHS) committee was planned to be initiated in 2018 as stated in the 2017 Annual report. The intention to have a community led program was slower to implement then originally planned. Third party projects presented within the community created confusion and dispersed availability of resources within the proposed HHS committee.

Research alternatives were also assessed and discussions held with ARCTIConnexion and ELOKA, for example, to develop a program that would be led and managed by the community stakeholders and make harvest data collecting more efficient. This would have ensured that data within the program would have been shared and accessible for all participants and make data collecting silos, where every party collects data without sharing, obsolete. Unfortunately, limited resource availability made moving forward in this path impossible in 2018.

Agnico Eagle has also contracted consultants to assess alternative methods of collecting data for the HHS and feasibility of re-starting the study in 2018 but the tight timeline for implementation combined with multiple similar projects within the community on data collection (community base water monitoring programs, watershed studies, MWMB Harvester recruitment) caused resources to be spread. Thus Agnico Eagle decided to hold it's HHS strategy to not add confusion and impact community based projects.

Agnico Eagle is already started planning the 2019 HHS, ultimately, if alternatives are not satisfactory, the pre-exiting HHS would be re-started in time for Caribou migration. This would ensure also consistency in data collected.

Recommendation 5: The Board requests that Agnico Eagle provide an action plan regarding development of the Creel Surveys and the Hunter Harvest Surveys, with a clear indication of timelines, measures for success and contingency planning. The submission should highlight any identified limitations on the effectiveness of studies currently employed at the Meadowbank Gold Mine Project with a discussion of the feasibility of alternative studies and mechanisms designed to ensure that a gap in available knowledge is not developing.

The action plan should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:

Agnico will refer to comments and responses for recommendation 4 above, the creel survey will be included within the same processes to meet compliance of the Project Certificate.

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1.4 Suppression of surface dust –Condition 74

Concern: Term and Condition 74 of Project Certificate No. 004, Amendment 2 directs the Proponent to employ environmentally protective techniques to suppress any surface road dust. As noted in previous NIRB annual reports, in review of annual reports and during site visits (see Appendix I for the 2018 site visit report), Agnico Eagle has limited its dust suppression techniques to haul roads at the mine site, between the Meadowbank gatehouse (at the airstrip) and Exploration Camp site, between the Baker Lake marshalling facility and the Baker Lake gatehouse and the airstrip. Agnico Eagle utilizes calcium chloride at most of the aforementioned sites; however, it uses water on the mine site haul roads (including the Vault road) and the airstrip. Dust suppression is only applied at five (5) key areas identified by the community of Baker Lake along the all-weather access road (AWAR) between Baker Lake and Meadowbank, and monitoring results in 2017 indicated that rates of dustfall were effectively reduced in those locations.

In its response to the Board's 2017 recommendations Agnico Eagle noted that six (6) locations were identified to have high priorities for dust suppression. As such, clarification is required to determine whether it is five (5) or six (6) locations that have been identified along the AWAR as high priorities for dust suppression. In addition, Agnico Eagle maintained that it is meeting Term and Condition 74 of Project Certificate No. 004, Amendment 2 and that the approach where chemical suppressants are used in an intermittent fashion along a long-distance roadway in priority areas only is similar to other project sites in Nunavut. No references to the other project sites were provided to be able to compare methodologies.

The NIRB acknowledges the efforts made by Agnico Eagle to suppress dust around the Meadowbank and Exploration Camp sites, and further recognizes the dustfall monitoring program conducted along the AWAR since 2012 and the additional studies that are ongoing since 2016. With the exception of continuing the dustfall monitoring along the AWAR and applying dust suppressants along the high priority areas, Agnico Eagle has not indicated any further commitment to apply dust suppressant to the whole AWAR in the future. Term and Condition 74, requires the application of dust suppression measures along all project roads including the AWAR [emphasis added]. The Proponent has not fully met the requirements of Condition 74, as dust suppression techniques were not being applied along the AWAR from Baker Lake to the mine site. The NIRB stresses that Term and Condition 74 applies to all mine roads including the AWAR. The NIRB notes that Agnico Eagle has been in non-compliance with this condition since the Project entered operations, as no dust suppression measures have been employed along the AWAR from Baker Lake to the mine site with the exception of the five (5) areas since 2017 as identified by the community to be of importance.

Recommendation 6: The Board reminds Agnico Eagle that Term and Condition 74 of Project Certificate No. 004, Amendment 2 applies to the suppression of dust on all surface roads including the all-weather access road (AWAR). As such, Agnico Eagle must provide a plan of action on how it will meet the objectives of Term and Condition 74 along the AWAR moving forward, with a clear indication of timelines and discussion of proposed alternative management measures should Agnico Eagle be unable to meet this condition.

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The action plan should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:
It is Agnico Eagle belief that the dust suppressing efforts in areas identified by community stakeholders and extensive monitoring studies completed and ongoing on the different projects roads, meets the intent of Condition 74 of the Project Certificate.

Dust suppressant is applied throughout the summer months and monitoring results indicated that rates of dustfall were effectively reduced in those locations.

Constant wildlife monitoring also ensures that dust related impacts would be identified during dust sensitive season.

Thus, Agnico Eagle intents to continue active monitoring as per the Air Quality and Dustfall Monitoring plan and continue dust control measures as stated in the 2017 annual report.

Recommendation 7: The Board requests that Agnico Eagle provide clarification regarding its references to other project sites in Nunavut which use the same/similar approach to applying chemical suppressants in a discontinuous fashion along a long-distance roadway.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:
The reference to other sites in Nunavut using discontinuous chemical dust suppressant was related to the Meliadine Division, which, previously was using a partial strategy for dust management. It is our understanding that this is not the case anymore. The reference was also included to ensure successful product alternatives deployed within our Nunavut sites would be assessed globally.

Concern: In 2017 the Board made two (2) additional recommendations to Agnico Eagle related to dust suppressants and monitoring: 1) provide a submission which describes its assessment of the effectiveness of dust suppression efforts using water to date and demonstrates its consideration for the use of alternative dust suppressants (e.g., TETRA flakes, Dust Stop®, EnviroKleen®) and more frequent application; and 2) report on the quality assurance and quality control protocols used to ensure data reliability and proper functioning of the dust monitoring equipment used for the dust sampling program along the all-weather access road. In response to these recommendations, Agnico Eagle noted that the monitoring data indicated that dust is effectively being controlled onsite, that application of alternative dust suppressants is not considered onsite and that the dust sampling methodology along the all-weather access road is more effective compared to the methods employed at other mine sites.

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Recommendation 8: The Board requests that Environment and Climate Change Canada review and comment on the information provided by Agnico Eagle in response to the NIRB's 2017 Annual Report related to dust, including whether it agrees with Agnico Eagle's conclusions that alternative dust suppressants at the mine site are not required and that the dust methodology using canisters on the ground along the all-weather access road is more effective compared to other methodologies currently used. Limitations on the effectiveness of the current dust suppression employed for the Meadowbank Project (including the all-weather access road) should also be discussed.

The Board respectfully requests that Environment and Climate Change Canada provide a response to this recommendation within 30 days' receipt of the Board's correspondence to Environment and Climate Change Canada.

Agnico Eagle's Response:
Agnico Eagle look forward to see ECCC response to this recommendation.

Recommendation 9: The Board requests that Environment and Climate Change Canada confirm whether it agrees with Agnico Eagle's conclusion that based on the dust monitoring results to date along the all-weather access road, it is unlikely that Final Environmental Impact Statement predictions are being exceeded and that impacts to valued ecosystemic components (vegetation community productivity and wildlife) from dust dispersion are not occurring beyond the smallest assumed zone of influence (100 metres).

The Board respectfully requests that Environment and Climate Change Canada provide a response to this recommendation within 30 days' receipt of the Board's correspondence to Environment and Climate Change Canada.

Agnico Eagle's Response:
Agnico Eagle look forward to see ECCC response to this recommendation.

1.5 Air Quality

Concern: In the review of the available 2017 Incinerator Daily Report Logbook, the NIRB noted that there were several recorded temperatures below 1000ºC temperature in the secondary chamber (October 3, October 4, November 16, and December 1) with the lowest temperature recorded as 251°C. In its 2017 Annual Report, Agnico Eagle noted that for 2017 there were no recorded temperatures below 1000°C in the secondary chamber and considers that maintenance work conducted at the incinerator between 2014 and 2016 was effective in improving efficiency of the unit. This contradicts the available record and Agnico Eagle should clarify the discrepancies.

Finally, it is noted that Agnico Eagle indicated within the 2016 Annual Report that it will revise the Incinerator Management Plan with the operators and continue to sensitize the employees to the importance of good waste segregation. However, this does not appear to have been done as

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Agnico Eagle notes in the 2017 Annual Report that the Incinerator Waste Management Plan will be updated to reflect the stack testing schedule.

Recommendation 10: The Board requests that Agnico Eagle provide an explanation for the incinerator having not achieved the recommended temperature of 1000ºC and above in 2017, and whether additional steps have since been undertaken to ensure that the incinerator stays above 1000ºC in the secondary chamber.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:

Agnico recognizes that the statement included in the 2017 Annual report, stating that there were no recorded temperatures below 1000ºC, was incorrect. After revalidating data, Agnico has noted that there *are 6 times during 2017 where the temperatures did not reach 1000°C in the secondary chamber. This represents 1.72% of the total burn, which can be considered as minor given the fact the incinerator is in full operation daily during the year. Agnico is still in the opinion that the maintenance performed at the incinerator between 2014 and 2016 has been effective. See Table 2 below showing lower temperatures incidences.*

Table 2. 2017, dates of recorded daily average temperatures below 1000°C for the Meadowbank Incinerator

Date	*Temperature secondary chamber (°C)*	*Comments*
July 19, 2017	*990*	
July 31, 2017	*894*	
October 3, 2017	*621*	*Mechanical issues with burner*
October 4, 2017	*68*	*Log indicate 0 minutes for burn time. Incinerator was not in operation.*
November 16, 2017	*543*	
December 1, 2017	*251*	

In 2017, Agnico has continued to conduct weekly visits, proceeded to regular inspections at the incinerator and provided advice to the operator, if needed. Toolbox meetings were also conducted to stress the importance of maintaining a proper and detailed log of the Incinerator. Staff on site are also reminded regularly on proper waste segregation through departmental toolbox meetings and site wide communications.

The Energy and Infrastructure group, responsible for operating the incinerator, has also implemented training sessions on the operation of the equipment as part of the

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integration of new employees assigned to the incinerator. Regular preventive and corrective maintenances are done throughout the year to meet the required temperatures. If any issues are observed, repairs will be done to ensure compliance of the incinerator.

Agnico will ensure that improvements are done towards ensuring that incinerator maintains consistently the required temperature all year long. Modifications could include additional information on the log sheets (time of readings, for example) to enable better referencing in troubleshooting issues.

Recommendation 11: The Board requests that Agnico Eagle provide regulatory authorities with an updated Incinerator Management Plan for review.

The updated Incinerator Management Plan should be provided within 60 days to the Board and regulatory authorities following the issuance of this recommendation.

Agnico Eagle's Response:
In March 2017, the Incinerator Management Plan was updated and provided in Appendix I1 of the 2016 Annual Report. The update (section 3.1) included clarification on stack testing frequency following an exceedance as detailed in the Annual Report. The sentence in the 2017 Annual report regarding the management plan update should have been removed, as it was complete via the 2016 Annual Report.

Agnico continues to sensitize employees to the importance of good waste segregation and have tried to focus on making sure employees understand the requirements of the Management Plan and the importance of a good data recording and incinerator functioning.

Also, on October 2, 2018, an updated Incinerator Management plan was submitted to the NWB for approval, to include composter activities. As per NWB notification, parties had until November 2, 2018 to provide their comments. The management plan was approved by the NWB on November 28, 2018.

1.6 Appendix D, the Annual Report and the PEAMP

Concern: The NIRB notes that Agnico Eagle's 2017 Annual Report provided a detailed analysis of results from its 2017 monitoring program and that it compared observed impacts noted in 2017 to predictions made within the Final Environmental Impact Statement (FEIS). Agnico Eagle's evaluation focused on the valued ecosystemic components (VECs) that had been identified in the FEIS, including the aquatic environment, the terrestrial and wildlife environment, noise quality, air quality, permafrost and socio-economics. The NIRB acknowledges that Agnico Eagle has worked to improve upon its reporting of findings within its post-environmental assessment monitoring program (PEAMP) and notes the general clarity of the presentation of information in its tables of potential impacts, potential cause(s), proposed monitoring, monitoring conducted for

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the year, predicted values and measured values/observed impacts. However, the NIRB found that the discussion and analysis within the PEAMP could be expanded upon especially to include trends that may be observed. The NIRB recognizes Agnico Eagle previously conveyed interpretation of Appendix D as not explicitly dictating that the PEAMP involve producing a trend analysis of previous years' monitoring data; however, the Board would like to note that the objective of the PEAMP as detailed in Appendix D is to provide this trend analysis as part of the summary report.

In reviewing the Annual Report and as noted by regulatory parties, there was an increase in a number of water quality parameters that are exceeding predictions from the year to year since 2012. The overall lack of reference to baseline data or to data from previous years makes it difficult to quantify or measure the relevant effects of the Project. While comparison between monitoring as proposed in the FEIS and monitoring undertaken in 2017 was helpful, rationale for why these were different was not always clearly presented.

Recommendation 12: The Board requires that Agnico Eagle provide a comprehensive update on the post-environmental assessment monitoring program for the Project. This must include a discussion that references the baseline and previous years' monitoring data and identifies any trends for each valued ecosystem component where an effect has been observed. The update must identify where original impact predictions can no longer be supported based on project experience to date and include an analysis of the effectiveness of management and mitigation strategies employed. The update must also provide a summary of lessons learned from the Project which can be used to improve future performance at this and other mining developments in Nunavut.

The comprehensive update should be provided to the Board within 30 days following the issuance of this recommendation, and also be included in the annual reports thereafter.

> ***Agnico Eagle's Response:***
> *It is Agnico's belief that a comprehensive update is not warranted as part as the PEAMP. According to the proponent's responsibilities identified under Appendix D of the Project Certificate, examinations are provided as required in individual monitoring reports. As such, trending analyses would also not be required under the aforementioned responsibilities. Agnico is confident that these discussions reference any potential impacts observed. In addition, the annual report is based on an extensive review of the FEIS throughout its content.*
>
> *Nonetheless, Agnico, is committed on improving identification of noted effects within the PEAMP summary report in this section and intends to highlight any trends observed for VEC's exceeding predictions with the 2018 Annual report and moving forward.*

1.7 Aquatic Environment

Concern: As in previous years, the post-environmental assessment monitoring program (PEAMP) section of the 2017 Annual Report did not provide any discussions on the Core Receiving

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Environment Monitoring Program (CREMP) or Agnico Eagle programs or any discussion on the changes observed/detected at the aquatic stations. Further, there was no discussion on the changes observed over time at these stations since operations commenced, or what the cause may be for the changes observed at these stations. As noted previously, a year-to-year comparison would provide a robust analysis and would have been useful to help identify trends in the data collected for the aquatic environment, specifically for the water quality and sediment quality data.

In review of Agnico Eagle's Annual Report, and as noted by regulatory parties, there was an increase in a number of parameters that are exceeding predictions from the year to year since 2012 or trigger exceedances in several parameters for both water quality and sediment chemistry. In response, Agnico Eagle stated that the CREMP continues to detect changes in some general water quality parameters that appear to be related to mining activity or that trends observed in sediment samples are due to natural spatial heterogeneity. Agnico Eagle also noted that these changes were reflected in higher concentrations of some parameters when compared to the model predictions in Final Environmental Impact Statement (FEIS). Agnico Eagle set thresholds and/or triggers at the 95th percentile of baseline data and concluded while that these results represent mine related changes, the observed concentrations are still relatively low and unlikely to adversely affect aquatic life. Further, Agnico Eagle indicated that due to the low likelihood of adverse effects on aquatic life, a discussion was not required on the management actions with respect to trigger exceedances observed in water.

Further, similar to the Kivalliq Inuit Association's concern, it was noted that the updated water quality model indicated that treatment may be required for aluminum, arsenic, cadmium, chromium, copper, fluoride, iron, nickel, and selenium so that the pit water quality will meet the Canadian Council of Ministers of the Environment (CCME) criteria at mine closure, while silver is no longer anticipated to be a problem at closure due to low loadings in the 2016 mill effluent. This represents a change from the previous annual report.

Recommendation 13: The Board requires Agnico Eagle to provide a trend analysis and discussion on the observed project effects on the aquatic environment based on the data collected to date under the Core Receiving Environment Monitoring Program. Further, a clear indication regarding whether outcomes align with the predictions made within the Final Environmental Impact Statement must be included. This is required under Appendix D for the post-environmental assessment monitoring program (PEAMP) and may be satisfied through inclusion in the broader PEAMP update required for the Project.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation, and also be included in the annual reports thereafter.

Agnico Eagle's Response:

Temporal and Spatial Trend Analysis of Water Quality Data *– Temporal and spatial interpretation of the water chemistry data is a core component of the annual CREMP. This is done through plots of chemistry parameters, comparison of results relative to trigger*

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and threshold values, and formal statistical analysis of the results in the before-after / control-impact (BACI) study design. The following text (see Section 2.4.1 of the 2017 CREMP) outlines the approach to analyzing and interpreting changes in water quality associated with mining and/or site related activities.

The focus of the trend assessment in recent years has been on the near-field locations in accordance with the more focused approach to monitoring developed in the CREMP Plan Update (Azimuth, 2015). Water quality data collected in 2017 were evaluated against triggers and thresholds consistent with the existing framework outlined in the CREMP: 2015 Plan Update (Azimuth, 2015). Formal comparison of the water quality data for decision-making purposes was done by comparing the yearly mean parameter concentrations to the trigger values developed separately for the Meadowbank projects lakes, Wally Lake, and Baker Lake areas. Parameters with yearly mean concentrations equal to or exceeded the trigger value were formally tested using a one-tailed test of the null hypothesis (significance level of p=0.05) according to the framework outlined below for Meadowbank and Baker Lake areas.

- *Meadowbank Project Lakes and Wally Lake – A Before-After-Control-Impact (BACI) statistical framework was applied. The BACI model is "paired" (i.e., BACIP) when multiple "before" and "after" events are available. In the BACI model, INUG is used as the reference ("control") area, and the other areas are tested as exposure ("impact") areas. Both PDL and TEFF are excluded as control areas in the BACI analysis because neither area was sampled in the "before" period between 2006 and 2008. True "pre-impact" data (i.e., when both INUG and the test area had "control" ("C") status; see Table 1.4 2 2017 CREMP) were used for the "before" data. Only events when both INUG and the test area were sampled in 2017 were used as the "after" data.*

- *Baker Lake – Baker Lake areas were designated as "control" (BAP) or "impact" (BPJ and BBD) when sampling started in 2008 (i.e., there was no detailed baseline sampling was conducted for Baker Lake; see Table 1.4 2 2017 CREMP), so there are no true "pre-impact" "before" data. While a spatial "CI" design could be used to test for differences between reference "control" and exposure "impact" areas, the design does not allow for distinguishing natural differences between areas from development-related changes. Given that no development-related changes had been identified to date, all years of data up to and including 2016 were considered in the "before" period while the 2017 results were considered "after" period data (i.e., allowing the more robust BACI analysis). Thus, the BACI analyses specifically looked at changes in 2017 at the two "impact" areas relative to previous years.*

The first step in the spatial and temporal trend analysis involves identifying the list of parameters that are routinely <MDL. In 2017, just over half (53%) of the parameters exceeded the MDLs at least 10% of the time. These parameters were carried forward for

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further assessment. The next step involved comparing the detection frequency between control and impact stations to avoid screening out parameters that are infrequently detected but may be associated with mining activities. The proportion of samples exceeding MDLs between "control" and "impact" samples were compared. The intent of this screen was to identify parameters with <10% detection frequency (i.e., those screened out above) for which there were detection frequency changes potentially associated with mining activity (i.e., where the proportion of detected values increased by 0.1 or more). No parameters were added back into the trend assessment based on this second screening level. Lastly, trend plots were used to identify parameters with measured values associated with periods/locations of known mining activities. No parameters were added back into the trend assessment process based on this screen.

Results of the spatial and temporal trend analysis are summarized in Section 3.2.2.2 of the 2017 CREMP report (Azimuth 2018). Consistent with recent monitoring cycles, the only trigger exceedances reported in 2017 were for constituent parameters without effects-based guidelines (i.e., parameters without CCME WQGs). Conductivity, alkalinity (total), hardness, and major cations (Ca, Mg, K, Na) have routinely been measured above their trigger values (95th %ile of baseline concentrations) at the near-field stations in more recent CREMP cycles. A thorough review of the significance of each parameter exceeding the trigger value was presented in Section 3.2.2.2. While these parameters, particularly conductivity, hardness, and major cations (Ca, Mg, K, and Na) have exceeded their triggers and are mining-related, it is important to note that they have been fairly stable in more recent years. Furthermore, all available information compiled for the various parameters suggests that the observed concentrations are well below levels of concern for the health of aquatic life.

***Water Quality vs FEIS Predictions** – In addition to the trigger/threshold evaluation, annual CREMP water chemistry data were also compared to the maximum whole-lake average water quality modelling predictions for Third Portage, Second Portage, and Wally Lakes made during the environmental assessment process (Cumberland, 2005). While direct comparisons were made, the difference in spatial focus (i.e., the CREMP at the basin scale and the water quality model at the whole-lake scale) warrants caution when interpreting any differences. To that end, the assessment criteria outlined in the Final Environmental Impact Statement (FEIS; Cumberland, 2005) for defining the predicted magnitude of impacts to water quality were used to provide the appropriate context for interpreting the screening results as follows:*

- *Negligible: water quality concentrations are similar to baseline;*
- *Low: concentrations are < 1x the CCME WQG;*
- *Medium: concentrations are between 1 and 10-times the CCME guidelines;*
- *High: concentrations are less than MMER but greater than 10-times the CCME guidelines;*
- *Very High: concentrations exceed MMER standards*

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Water quality constituents without effects-based CCME thresholds were not incorporated in the magnitude ratings for assigning effects in the FEIS; however, following the intent of the FEIS magnitude ratings, constituents exceeding baseline but below concentrations associated with adverse effects were considered as consistent with a "low" magnitude rating.

The same list of parameters that exceed the Meadowbank trigger values typically exceed the concentrations predicted in the FEIS, namely ionic compounds (calcium and magnesium), hardness, and total alkalinity. Chloride, fluoride, nitrate, and sulphate also exceed the FEIS predictions for Third Portage Lake, Second Portage Lake, and Wally Lake in at least one sample. Most metals are below the predicted concentrations for Third Portage Lake (Table 3.2 5. 2017 CREMP), Second Portage Lake (Table 3.2 6, 2017 CREMP), and Wally Lake (Table 3.2 7, 2017 CREMP) with the exception of silicon (all three lakes), strontium (Third Portage Lake) and isolated instances of aluminum, copper, iron, manganese, and silver. Strontium consistently exceeded the model predictions for Third Portage Lake, but importantly did not exceed the trigger (95th percentile of baseline) indicating current strontium concentrations are representative of pre-development conditions.

The FEIS predicted the magnitude of potential effect on water quality in each of the lakes as "low", meaning < the CCME, except for arsenic and cadmium at WAL, and cadmium at SP and Third Portage Lake. At the time the FEIS was issued in 2005, the CWQG for cadmium was lower than the MDL for the baseline data. A thorough review of the ecological significance of the predicted cadmium concentrations was presented in the FEIS, and the probability of cadmium causing toxicity was considered "extremely low" (Cumberland, 2005). Arsenic was also predicted to exceed the CWQGs in Wally Lake. Similar to cadmium, the MDL was equal to the guideline (i.e., 0.005 mg/L). The models were considered conservative because the MDLs were used as the baseline concentrations. The MDLs for arsenic and cadmium in the 2017 data are 0.0001 mg/L and 0.000005 mg/L, respectively. All of the samples collected in 2017 from Third Portage, Second Portage, and Wally Lakes were below the MDL for cadmium, as was the case in 2016. In the case of arsenic, the concentrations are below the trigger values applicable to Meadowbank project lakes and WAL, and over an order of magnitude lower than the CCME water quality guideline of 0.005 mg/L in all samples, corresponding to a "negligible" effect rating.

Recent temporal water quality analysis for stations in Third Portage Lake (TPE and TPN), Second Portage Lake, and Wally Lake indicates the results conform with the low effect rating predicted in the FEIS. This conclusion is corroborated by the phytoplankton community results, which show a diverse, abundant, and stable community relative to the baseline period.

***Temporal and Spatial Trend Analysis of Sediment Chemistry Data** – Temporal analysis of sediment chemistry is completed annually in the CREMP report. In years when sediment*

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cores are collected, the core chemistry results are compared to site-specific triggers/thresholds and cases where mean concentration exceeds the trigger value are formally tested using a before-after (BA) statistical model to assess whether concentrations are increasing over time. In years when only sediment grabs are collected, the approach to describing trends is purely visual. To aid in the interpretation of the temporal analysis, scatterplots of the concentration data over time are presented annually for sediment constituents (refer to Figures 3.2-54 to 3,2-61 in the 2017 CREMP report).

Trends identified in the sediment chemistry data have been documented for chromium and TPE (first identified and reported in the 2012 CREMP report [Azimuth, 2013]) and more recently for arsenic at WAL (2017 CREMP report [Azimuth, 2018]). In the case of TPE, chromium has now been tracked for a number of years and concentrations continue to exceed the trigger value at TPE. The "apparent" decrease in concentration noted in the 2016 CREMP (Azimuth, 2017) may have been an artifact of spatial variability within the sediment area, rather than an actual reduction in sediment chromium concentrations. The 2017 chromium concentrations are at the upper limit of the concentrations reported in 2015 when sediment toxicity testing and sequential extraction analysis were conducted to determine the ecological significance of the results (Azimuth 2016). At that time, the results showed that while chromium concentrations had increased, both the bioavailability and toxicity lines of evidence pointed to the sediments being non-toxic to benthic species (C. dilutus and H. azteca). For both TPE and WAL, coring and targeted bioavailability studies were completed in 2018 to: (a) confirm the 2017 results represent an ongoing trend or if conditions have stabilized and (b) determine if current concentrations of metals in sediment (i.e., chromium) pose a potential risk to benthic invertebrates.

Table 12.4 in the 2017 Annual Report outlines predicted and measured impacts to fish and fish habitat in the FEIS. With respect to sediment chemistry, the release of effluent (i.e., settling of TSS and altered sediment chemistry) "may impact benthos". Benthic invertebrate communities are monitored on an annual basis at the near-field stations. The identification of potential mine-related impacts generally involves visually examining the data for spatial/temporal patterns that matched mine-related events. Visual examination of the data was further supported with statistical analyses of the 2017 data to test for changes relative to baseline/reference conditions using the BACI model. As of 2017, there have been no exceedances of early triggers for biological effects to the benthic invertebrate community abundance or richness. Furthermore, temporal analysis of the benthic invertebrate community metrics present in Section 3.2.5.2 of the 2017 CREMP report shows that total abundance and richness at the near-field areas is within the ranges reported during the baseline period.

Recommendation 14: The Board requests that Agnico Eagle qualify why it considers the exceedances of the thresholds to be "relatively low" and provide evidence to support the statement that it is "unlikely to adversely affect aquatic life" with reference to findings from the biotic surveys (i.e., phytoplankton and benthic invertebrate community) conducted in 2017. In

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addition, a discussion of management actions with respect to trigger exceedances in water is to be provided, even if the likelihood of adverse effects on aquatic life is considered to be low.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:

There are two parts to the Recommendations 14. The first part is a request for evidence to support why exceedances of the threshold are considered "relatively low" and "unlikely to adversely affect aquatic life" with reference to findings from the biotic surveys (i.e., phytoplankton and benthic invertebrate community) conducted in 2017. The second part relates to the management response plan (MRP) in place for the AEMP.

This section deals specifically with evidence from the 2017 CREMP used to determine that adverse effects to aquatic life are unlikely. For phytoplankton, the stressor evaluation focused on changes in water quality parameters. Readers are also directed to Comment 13, which provides a detailed response regarding the assessment of water quality (or to Section 3.2.2.2 of the 2017 CREMP report [Appendix G1] for full details; Azimuth 2018). For benthic invertebrates, stressor evaluation included contaminant exposure via surface water and sediment exposure pathways.

***Phytoplankton** – biomass was statistically significantly higher at TPE, SP, and WAL in 2017 relative to reference/baseline conditions. The observed increase in the BACI assessment was not attributed to any observable Site-related activities. Higher biomass would be expected to occur if nutrient loading to the areas was identified in the BACI analysis of water chemistry, but nutrient concentrations remain well below threshold levels associated with increased primary productivity (see Table 3.2-1 in the annual CREMP report). Changes in biomass identified in the BACI assessment appear to be due largely to lower biomass at INUG (the reference area) in 2017 compared to the baseline period, whereas the opposite was true at the NF areas. The divergent patterns of phytoplankton biomass between INUG and the NF areas resulted in a large "perceived" increase in biomass for the NF areas. The absolute biomass values at the NF are in line with their historical values. Taking into consideration all the lines of evidence (BACI and absolute values plotted over time), there is no evidence to suggest mining operations are increasing primary productivity in the NF areas. Phytoplankton richness was similar to previous monitoring cycles. Overall, there is no evidence to suggest the health of the phytoplankton community at the near-field stations is adversely affected by mine-related activities. While natural variability is considered the most likely explanation for the observed differences in 2017, it was concluded that the trends should be closely watched in 2018 to see if initial conclusions are corroborated or if there is stronger evidence of mine-related causality.*

***Benthic Invertebrates** – There were no effects-based threshold exceedances for water quality parameters at any of the near-field locations in 2017. Threshold exceedances for sediment chemistry parameters were noted for TPE (Cr) and WAL (As, Cr, Pb) in 2017. At*

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TPE, chromium concentrations measured in 2017 continue to exceed the trigger value. Previous targeted studies (implemented in 2015; Azimuth 2016) at TPE using data generated from laboratory toxicity tests and sequential extraction testing of the sediments provided evidence that chromium in the sediment was non-bioavailable and non-toxic. These results were integrated with the benthic invertebrate community data in a sediment triad assessment to provide confidence that sediment metals were not affecting the benthic invertebrate community at TPE. Since the target study in 2015, chromium concentrations (as measured in the sediment cores), while initially stabilizing in 2016, trended higher in 2017, prompting further investigation (see below). Over this time, benthic invertebrate community results have been largely consistent with historical results at TPE. While the temporal trend analysis showed relatively lower total benthic invertebrate abundance at TPE relative to INUG over the past three years, the trend appears to be driven by increases at INUG (i.e., natural variability) rather than by decreases at TPE. In addition, no changes were observed in benthic invertebrate community diversity (taxa richness) at TPE, which would be expected to occur if there were mining-related changes. Thus, evidence to date points to natural variability, rather than mining, as the cause of the relative differences in abundance observed at TPE in 2017; these conclusions will be re-assessed in 2018. A repeat of the 2015 targeted bioavailability assessment and the 2017 sediment coring was completed in 2018 to assess whether current conditions at TPE present risks to the benthic invertebrate community; results of these targeted studies, coupled with the routine CREMP benthic community monitoring, will help determine the ecological significance of observed changes in sediment chromium concentrations and will be included in the 2018 CREMP report.

Arsenic, and to lesser extent lead and chromium, exceeded their trigger values in sediment cores at WAL in 2017relative to the baseline period and compared to the most recent 2014 coring results. Sediment triggers for WAL were developed in 2017 now that WAL is the receiving environment under MMER (discharge from the Vault attenuation pond). The trigger for arsenic is 44.5 mg/kg, which is the 95th percentile of the baseline sediment arsenic concentrations measured in 20 samples between 2008 and 2012. The trigger value is 7-fold higher than the CCME ISQG of 5.9 mg/kg, indicating arsenic is naturally elevated in WAL. Abundance and richness of the benthic invertebrate community remain high at WAL as evidenced by the results of the BACI analysis presented in Appendix G (2017 CREMP; Tables 3.2-16 and 3.217). Notwithstanding the overall health of the benthic invertebrate community, Agnico Eagle made a management decision to pursue targeted sediment coring and toxicity/bioavailability studies in 2018 to fully address risks to the benthic invertebrates at WAL; these results will be reported in the 2018 CREMP.

***Management Actions for Water Quality Trigger Exceedances** – The MRP describes the process of identifying potential risks to the aquatic environment and developing appropriate management responses. Figure 4-2 in Azimuth (2010) provides an overview of the MRP for the Meadowbank AEMP and outlines the steps involved in data evaluation, assessment, and mitigation. The scope of management actions depends on the nature of the problem, the spatial scale, evidence for causality, reversibility and uncertainty.*

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Management actions may involve no action beyond routine CREMP monitoring, continued trend monitoring, or active follow-up with more detailed quantitative assessment. Changes to water quality to date: (a) are considered "low" in magnitude (i.e., are consistent with the magnitude predicted in the FEIS) and are not expected to result in any adverse effects to aquatic life and (b) appear to have stabilized; recommended management actions focus on continued close monitoring of these trends. Changes to sediment quality at TPE and WAL have resulted in the implementation of additional targeted studies to help (a) verify the observed trends (particularly for WAL) and (b) determine the potential for adverse effects to the benthic community; the results of these studies and their implications in the context of the MRP will be reported in the 2018 CREMP.

Recommendation 15: The Board requests that Agnico Eagle explain why there has been an increasing trend in the number of parameters predicted to require treatment at closure.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation.

Agnico Eagle's Response:

The increasing trend from year to year in the number of parameters forecasted to exceed the CCME guidelines in the pits at mine closure can be attributed to the following:

1. *In past Annual Reports, the forecasting of the metal concentrations were based on the dissolved fraction since it was assumed that the suspended particles should settle out in the pit and not be re-mobilized in the water column once the dike is breached. As of last year's Annual Report, total concentrations of the metals were considered in order to assess its impact if the suspended particles did not settle out in the pit. This approach results in a more conservative assessment and results in identifying additional parameters of concerns.*

2. *Furthermore, as of last year's Annual Report, the model considers the concentration loads from the pit seepages, which result in an increase in the loads of certain parameters into the pit water. For total aluminium, total arsenic, total chromium, total iron and fluoride, the higher forecasted concentrations can be attributed to these additional seepage loads to Portage Pit and Goose Pit. The analytical results from the groundwater sampled around the Portage and Goose Pits also confirm this observation. Parameters such as aluminum, arsenic and chromium are measured in very low but detectable concentrations in the groundwater. Fluoride is also present in the groundwater sampled around the Portage and Goose Pit.*

3. *Also, every year, the water quality forecast model is adjusted based on the mill effluent sampled during that year. The quality of the mill effluent varies from year to year. In 2015, higher concentrations of dissolved copper, dissolved silver and dissolved selenium in the mill effluent were measured in the mill effluent and used in the model*

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when compared to the 2014 model, resulting in the identification of silver and selenium as additional parameters of concern. Silver was not identified as a parameter of concern in the 2016 model based on the mill effluent sampled that year. In the current 2017 model, forecasted nickel concentration was detected to be slightly higher than the CCME guidelines in Goose Pit due in part to the higher concentration measured in the mill effluent that year.

4. *The water quality forecast model provides a conservative estimate, especially with regard to the pit seepage loadings that were assumed to be constant throughout the years until the pits are completely flooded. This is a conservative assumption. There should be a decrease in seepage flow since the hydraulic gradient between the pit water and groundwater level will decrease over time.*

Agnico Eagle would like to point up that using the CCME guideline for treatment objectives should be considered as a conservative approach. As per Licence 2AM-MEA1526 Part E Item 7, water quality prior to lake reconnection in the re-flooded area should meet CCME Water Quality Guidelines for the Protection of Aquatic Life, baseline concentrations, or appropriate site specific water quality objectives. Subject to the Board approval, if water quality parameters are above CCME Guidelines, a site specific risk assessment must be conducted to identify water quality objectives that are protective of the aquatic environment.

1.8 Noise Quality Monitoring

Concern: With respect to noise quality monitoring, the 2017 Annual Report did not provide a comparison of date to the final environmental impact statement (FEIS) predictions for noise levels nor was a trend analyses provided. It was noted in review of the 2017 Annual Report that the exceedance of predicted sound levels were resolved at station R5 which has been elevated in previous years. No discussion in the annual report was provided on how the exceedance of predicted sound levels were resolved.

Further, Agnico Eagle committed to evaluate the noise model in the 2017 Annual Report and predicted impacts within the FEIS would be discussed further. This information was not provided within the 2017 Annual Report as submitted by Agnico Eagle in April 2018.

Recommendation 16: The Board requests that Agnico Eagle clarify how the exceedance of predicted sound levels was resolved at noise monitoring station R5, recognizing that the levels have been above the predicted sound levels in previous years.

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Agnico Eagle's Response:

Previous exceedances at R5 were resolved by having helicopters based at the Meadowbank site thus reducing peak noise levels during take-off and landing in the vicinity of the station. In previous years, helicopters were maintained with the exploration activities in the area.

A landing pad was used on the Meadowbank tarmac to allow helicopter traffic to be stationed within the operations. This permitted to alleviate certain issues concerning air traffic landing/take-off within the R5 area, as stated in previous reports. As the exploration activity in the area was still ongoing, having only overhead traffic allowed to keep sound levels below predicted levels.

Recommendation 17: The Board requests that Agnico Eagle clarify whether an evaluation was undertaken for the noise model and, if so, whether the results were compared to the predictions within the Final Environmental Impact Statement for the Project.

The requested information should be provided to the Board within 30 days following the issuance of this recommendation, and also be included in the annual reports thereafter.

Agnico Eagle's Response:

In the Nunavut Impact Review Board's 2015-2016 Annual Monitoring Report for the Meadowbank Gold Project and Board Recommendation response letter dated December 9th 2016, Agnico Eagle committed to evaluate the noise model and predicted impacts within the FEIS. This exercise was subsequently completed in the 2016 Annual report, section 12.3.2.

"By monitoring sound levels at five locations around the mine site for two 3-4 day periods annually, the current monitoring program provides a conservative assessment of the accuracy of predicted noise levels. A review of the impact assessment methodology was performed, and it was determined that assumptions of the noise model with respect to site activities remain valid."

In relation to the FEIS, noise monitoring results were assessed to be conservative in comparison.

Results are also compared annually to the accuracy of predicted impacts in the annual report.

2 WHALE TAIL SITE (16MN056)

2.1 Dust Management and Monitoring Plan – Term and Condition 2

Concern: As required by Term and Condition 2 of Project Certificate No. 008, Agnico Eagle has not provided the updated Dust Management and Monitoring Plan for the Meadowbank Mine site

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including verification of commitments made to the utilization of dust suppressants along the all-weather access road, the Amaruq haul road and other roads and trails associated with the Project. However, it is noted that Air Quality and Dustfall Management Plan was submitted by Agnico Eagle in June 2018 but the information within this plan does not appear to address the requirements of the Term and Condition.

Recommendation 1: The Board requests that Agnico Eagle provide an action plan for provision of the following outstanding information required by Project Certificate No. 008: an updated Dust Management and Monitoring Plan

Agnico Eagle's Response:

There appears to be some confusion on the above stated plans. Agnico does not have an existing Dust Management and Monitoring Plan. The intent was for the approved Air Quality and Dustfall Management Plan to meet the letter of the condition.

Agnico Eagle have provided the information requested by Condition 2 in the Air Quality and Dustfall Management Plan (May 2018) submitted in June 2018. More specifically, Section 8.3 of the Whale Tail Pit Haul Road Management Plan (August 2018) detailed the use of dust suppressant:

> *Based on the modelling of the dust emissions on the road, and the experience and monitoring data of the Meadowbank AWAR from Baker Lake to the mine site, use of chemical dust suppressants is not expected for the Whale Tail Pit Haul Road. However, if there are safety concerns or areas of particular interest, chemical dust suppressants may be only used as a last resort and only in accordance with the Environmental Guidance for Dust Suppression published by the Government of Nunavut Department of Environment (GN, 2014).*

Agnico Eagle recognizes that the actual Air Quality and Dustfall Management Plan does not fully meet the requirements of the Term and Condition and proposes, to reduce confusion, and for simplicity to include information within a revision of the Air Quality and Dustfall Management plan that would satisfy the term and condition. Agnico would wait upon reception of comments from ECCC (see recommendation #2, below) to ensure all comments and recommendations are integrated, if needed, with this revision. The revision would be included in the 2018 Annual report.

Agnico also agrees to continue to investigate alternatives dust mitigation measures in its Nunavut sites and intents to keep the board informed through the annual reports on efforts deployed in dust management.

Recommendation 2: The Board requests that Environment and Climate Change Canada review the Air Quality and Dustfall Management Plan submitted by Agnico Eagle in June 2018 and provide feedback regarding whether the plan meets the requirements under Terms and Conditions #1 and #2 of Project Certificate No. 008.

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The Board respectfully requests that Environment and Climate Change Canada provide a response to this recommendation within 30 days' receipt of the Board's correspondence to Environment and Climate Change Canada.

Agnico Eagle's Response:
Agnico Eagle look forward to see ECCC response to this recommendation.

2.2 Site-specific Permafrost Monitoring, Mapping and Thermal Analysis –Term and Condition 10

Concern: Term and Condition 10 of Project Certificate No. 008 requires the Proponent to consult with applicable regulatory agencies to undertake additional site-specific permafrost monitoring mapping and thermal analysis with the results of these studies provided to the NIRB at least 30 days prior to the start of construction of project infrastructure such as the Whale Tail pit, water management structures, mine site and haul roads, waste rock storage facilities, etc. During the 2018 site visit in August, construction of several of the above-mentioned infrastructures has commenced; however, the NIRB has not received any information from the Proponent on the results of the studies as requested. Agnico Eagle did provide a Thermal Monitoring Plan in May 2018 which summarized the current permafrost conditions based on data collected up to October 2017. Further, Agnico Eagle provided a copy of a presentation provided to Crown-Indigenous Relations and Northern Affairs Canada in July 2018 that covers the hydrogeological model (to meet Term and Condition 6) but does not appear to provide the information related to additional site-specific permafrost monitoring mapping and thermal analysis to document permafrost conditions, including season thaw and amount of ground ice. In addition, the information as presented within the presentation does not inform the detailed design of project infrastructure as outlined above. As Natural Resources Canada was not consulted on this information and the results not provided to the NIRB, it appears that Agnico Eagle has not met the requirements of Term and Condition 10.

Recommendation 1: The Board requests that Agnico Eagle provide an action plan for provision of the following outstanding information required by Project Certificate No. 008: evidence of consultation with applicable regulatory agencies to undertake required site-specific permafrost monitoring mapping and thermal analysis

Agnico Eagle's Response:
Agnico Eagle believes we have met the requirements of Condition 10 and submit that sufficient information herein is provided to NIRB to conform to Condition 10. Agnico Eagle has documented permafrost conditions on site with several thermistors placed at strategic location recommended by the different designers and consultants involved in the project. The memo summarising the thermal monitoring program at Whale Tail Pit Project from the period of 2015 to 2018 (see Appendix 1) which was provided to NRCan and CIRNAC to ensure compliance of the Term and Condition 10.

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The data presented in this memo informed and will continue to inform the detail design of the project infrastructure such as the Whale Tail pit, water management structures, mine site and haul roads, waste rock storage facility and tailings storage facility. Agnico Eagle consider also that the detail report submitted to the Nunavut Water Board as per Licence 2AM-WTP1826 Part D Item 1 and 2 is inclusive of the requirements listed in the Term and Condition 10.

Furthermore, below is a summary of consultations conducted several face-to-face consultation meeting with regulators as listed below:

- *July 26, 2018: Agnico Eagle meets with CIRNAC in Ottawa to present the Whale Tail Pit Project Mine Contact Water Modelling Commitments were the result of the Updated Thermal-Hydrogeological Assessments were presented to CIRNAC.*

- *October 17, 2018: Agnico Eagle meets with CIRNAC and NRCan in Iqaluit to discuss of the Outstanding Issues on the Potential for Post-closure Exceedance of Arsenic in the Flooded Whale Tail Pit, and the Absence of Data to Validate Hydraulic Gradient.*

The Nunavut Water Board has approved the detail designed of the Whale Tail Dike, Mammoth Dike, WRSF Dike, North East Dike, Starter WRSF and Pit. Agnico have a pending approval with the NWB for the Whale Tail WRSF, NPAG Stockpile and Overburden Stockpile Design Report and Drawings. Agnico Eagle considers that these infrastructures were designed in accordance with the Water Licence, term and condition 10 and the integrity of these infrastructure will be maintained after construction.

Agnico Eagle recognizes that these detailed reports should have been submitted to the Nunavut Impact Review Board, NRCan and CIRNAC as per Term and Condition 10. The detail design reports of these structures can be found directly on the NWB FTP Site (ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-WTP1826%20Agnico/3%20TECH/D%20CONSTRUCTION/). Agnico can also provided a copy directly to the NIRB, if required. In the future, Agnico Eagle will include Nunavut Impact Review Board, NRCan and CIRNAC in future submissions of the detailed reports that are submitted to the Nunavut Water Board as per Licence 2AM-WTP1826 Part D Item 1 and 2.

Recommendation 3: The Board requests that Crown-Indigenous Relations and Northern Affairs Canada and Natural Resources Canada review the information provided by Agnico Eagle for Term and Condition 10 of Project Certificate No. 008 in relation to the additional site-specific permafrost monitoring mapping and thermal analysis studies and confirm whether the information is complete and that this condition has been satisfied.

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The Board respectfully requests that Crown-Indigenous Relations and Northern Affairs Canada and Natural Resources Canada provide a response to this recommendation within 30 days' receipt of the Board's correspondence to both Crown-Indigenous Relations and Northern Affairs Canada and Natural Resources Canada.

Agnico Eagle's Response:
Agnico Eagle look forward to see CIRNAC and NRCan responses to this recommendation.

2.3 Invasive Species Mitigation Plans – Term and Condition 25

Concern: Agnico Eagle has not provided an Invasive Species Mitigation Plans, Protocols, Monitoring and Inspection Program as required by Term and Condition 25 of Project Certificate No. 008 to date. This was to be provided to the NIRB for review at least 30 days prior to the first shipment of equipment and supplies to the site. In correspondence received in October 2018, Agnico Eagle indicated that it is working on developing a plan for the 2019 barge season.

Recommendation 1: The Board requests that Agnico Eagle provide an action plan for provision of the following outstanding information required by Project Certificate No. 008: an Invasive Species Mitigation Plan

Agnico Eagle's Response:
Agnico is working on developing a plan for the 2019 barge season. The plan should be submitted in the 2018 Annual Report.

2.4 Finalized Terms of Reference – Term and Condition 27

Concern: Term and Condition 27 of Project Certificate No. 008 requires that Agnico Eagle provide a finalized Terms of Reference (TOR) for the Terrestrial Advisory Group (TAG) to the NIRB within six (6) months of issuance of the Project Certificate. Within the Terrestrial Ecosystem Management Plan provided to the NIRB in June 2018, Agnico Eagle noted that it is committed to the establishment of a TAG consisting with the appropriate representatives and that the TOR will be discussed and completed by Q4 of 2018 for the TAG. To date, the finalized TOR has not been provided to the NIRB.

Recommendation 1: The Board requests that Agnico Eagle provide an action plan for provision of the following outstanding information required by Project Certificate No. 008: finalized Terms of Reference (TOR) for the Terrestrial Advisory Group

Agnico Eagle's Response:
Finalized Terms of Reference for the Terrestrial Advisory Group was submitted to NIRB on November 1, 2018.

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2.5 Initial Listing of Formal Certificates and Licences – Term and Condition 52

Concern: Term and Condition 52 of Project Certificate No. 008 requires that Agnico Eagle develop and maintain an easily referenced listing of formal certificates and licences that may be acquired via on-site training or training during project employment. The initial listing was to be provided to the NIRB within six (6) months of the Project Certificate being issued. To date, no listing of formal certificates and licences have been provided for review. In correspondence received in October 2018, Agnico Eagle indicated that it is working on developing a listing which would be provided by November 2018.

Recommendation 1: The Board requests that Agnico Eagle provide an action plan for provision of the following outstanding information required by Project Certificate No. 008: development of an easily referenced listing of formal certificates and licences that may be acquired via on-site training or training

Agnico Eagle's Response:
Please find in Appendix 2 the Agnico Eagle Training List dated August 28, 2018.

2.6 Occupational Health and Safety Plan –Term and Condition 57

Concern: An updated Occupational Health and Safety Plan was to be provided to the NIRB within six (6) months of issuance of the Project Certificate (No. 008) as per Term and Condition 57. To date, no updated plan has been provided. In correspondence received in October 2018, Agnico Eagle indicated that it is working on developing a listing which would be provided by November 2018.

Recommendation 1: The Board requests that Agnico Eagle provide an action plan for provision of the following outstanding information required by Project Certificate No. 008: an updated Occupational Health and Safety Plan.

Agnico Eagle's Response:
The updated Occupational Health and Safety Plan can be found in Appendix 3.

2.7 Viability of flooded South Basin as an effective offset for habitat loss – Condition 24

Concern: In review of the Whale Tail Fisheries Habitat Offsetting Plan submitted by Agnico Eagle in May 2018, it is not clear if the requirements under Term and Condition 24 of Project Certificate No. 008have been met. The NIRB would like confirmation from Fisheries and Oceans Canada that the plan as submitted meets the requirements of Term and Condition 24 and whether the concern that the increased surface area of Whale Tail Lake is a viable offset to habitat losses resulting from the development of the Project and whether Whale Tail end pit would support fish in the post closure scenario has been addressed.

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Recommendation 4: The Board requests that Fisheries and Oceans Canada (DFO) provide confirmation that the Whale Tail Fisheries Habitat Offsetting Plan as submitted meets the requirements of Term and Condition 24 of Project Certificate No. 008 and whether the increased surface area of Whale Tail Lake is accepted as a viable offset to habitat losses resulting from the development of the Project. The Board further requests that DFO clarify whether previously raised concerns regarding whether Whale Tail end pit would support fish in the post closure scenario have been satisfactorily addressed.

The Board respectfully requests that Fisheries and Oceans Canada provide a response to this recommendation within 30 days' receipt of the Board's correspondence to Fisheries and Oceans Canada.

Agnico Eagle's Response:
Agnico Eagle look forward to see DFO response to this recommendation.

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APPENDIX 1

Memo - Summary of Thermal monitoring at Amaruq Site from 2015-2018

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AGNICO EAGLE Memo

From: Bruno Lessard

CC: Frederick Bolduc and Alexandre Lavallee

Date: November 28th 2018

Subject: Summary of Thermal monitoring at Amaruq Site from 2015-2018

This document present a summary of the thermal monitoring at the Amaruq project from 2015 to 2018. During that period, thermistor strings were installed around the Amaruq site to support various studies for the construction of the different infrastructures of the project.

A total of 15 boreholes for thermistors were installed between May 2015 and November 2018. 11 of the installation are still functional and continue to be monitored on a bi-weekly basis, either manually or with Dataloggers.

Figure 1 show a plan view of the location of the thermistors installed between May 2015 and November 2018.

Table 1 present the thermistors installation, their coordinate and their status.

Figure 2 to 16 present the thermistors data, either active or not. For clarity purpose, a representative numbers of readings (approximatively once per month) for the reference period are presented.

Table 1: Permanent and temporary thermistors installation coordinates and status

Name	*Area*	*Easting (X)*	*Northing (Y)*	*Elevation (Z)*	*Azimuth*	*Dip*	*Installed*	*Active (Y) or (N)*
AMQ17-1159	WTD	**607580.20**	**7254827.60**	**152.56**	--	-90	2017	Y
AMQ17-1188	WTD	**607209.90**	**7254681.30**	**151.76**	--	-90	2017	N
WTD_TH-0+336	WTD	**607298.44**	**7254713.44**	**157.00**	--	-90	2018	Y
Stkd299	WTD	**607689.94**	**7254751.01**	**153.74**	--	-90	2017	Y
MD-02-2015	MD	**605906.10**	**7255094.50**	**152.27**	--	-90	2015	Y
AMQ15-294	WTP	**607073.20**	**7255676.10**	**155.93**	322.67	-45.18	2015	Y
AMQ15-349 A	WTP	**607064.90**	**7255627.50**	**155.30**	204.41	-45.32	2015	N
AMQ15-421	WTP	**607098.30**	**7255490.80**	**155.09**	273.93	-51.31	2015	N
AMQ15-306	WTP	**606714.80**	**7255363.80**	**154.92**	96.30	-45.41	2015	N
AMQ15-324	WTP	**606496.80**	**7254995.20**	**161.79**	323.41	-55.46	2015	Y
AMQ15-452	WTP	**606627.20**	**7255687.90**	**156.16**	159.5	-49.98	2015	Y
AMQ17-1265 A (2)	WTP	**606950.00**	**7255414.00**	**140.00**	196.03	-79.99	2017	Y
AMQ17-1277 A	WTP	**606911.00**	**7255964.00**	**153.00**	193.06	-60.17	2017	Y
AMQ17-1337	IVR	**607078.00**	**7256522.00**	**155.00**	260.37	-59.62	2017	Y
AMQ17-1233	IVR	**606778.00**	**7256254.00**	**162.00**	252.71	-59.06	2017	Y

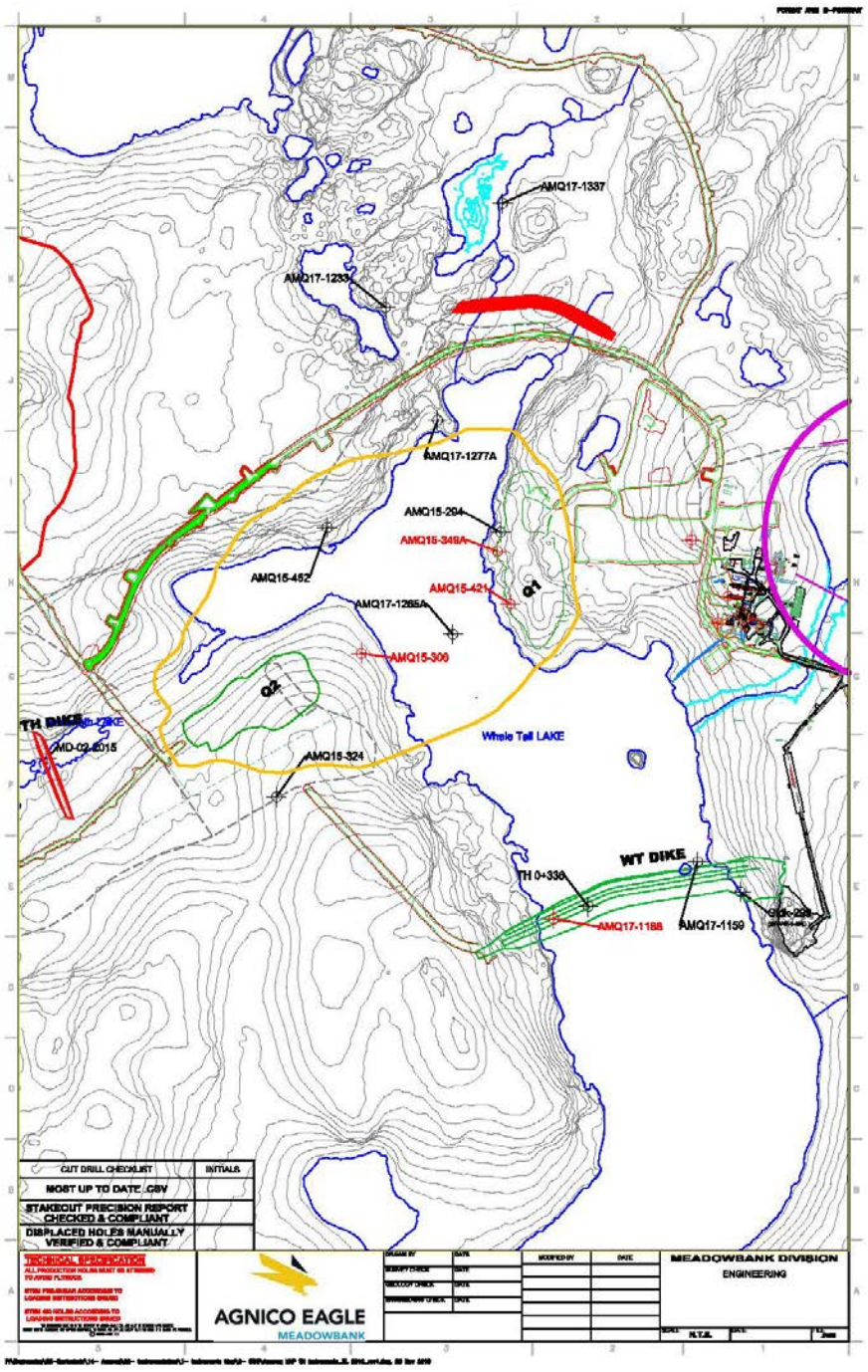

Figure 1: Amaruq Thermistor Location Plan View (active instrument in black)

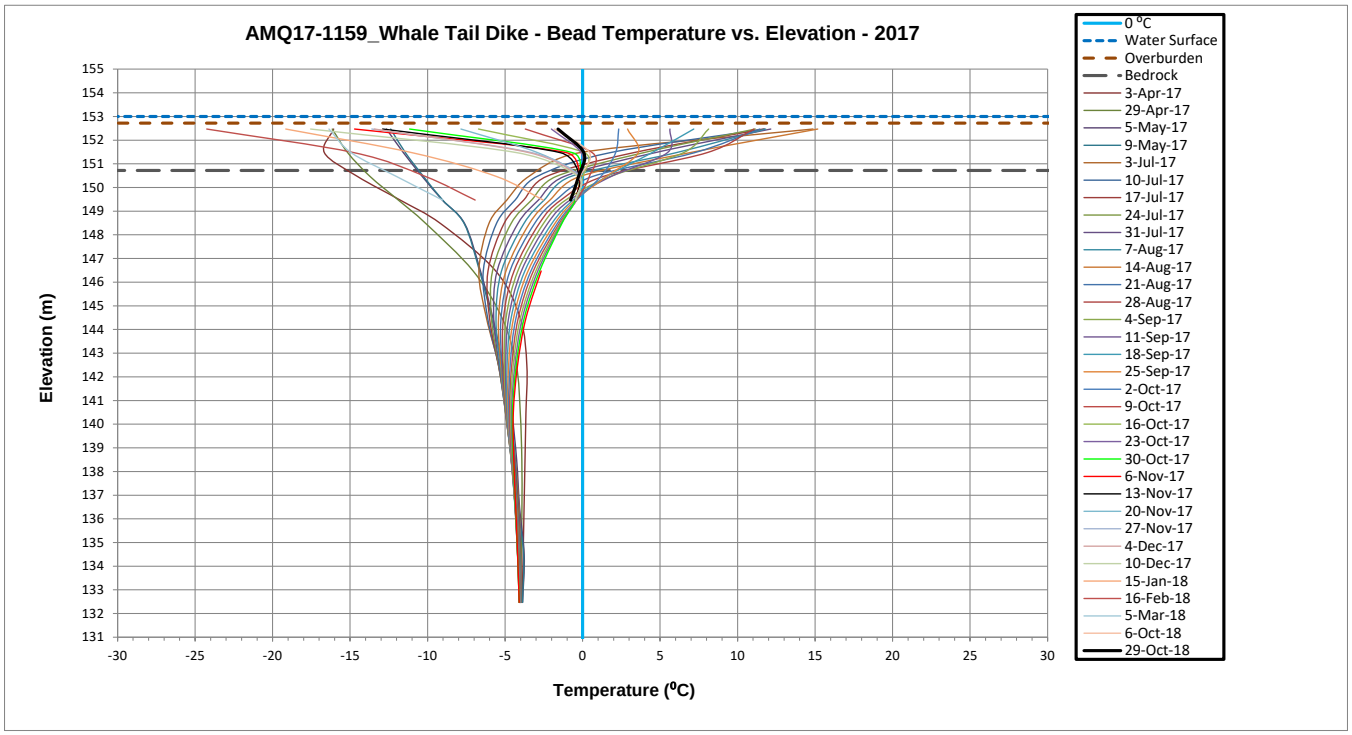

Figure 2: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ17-1159

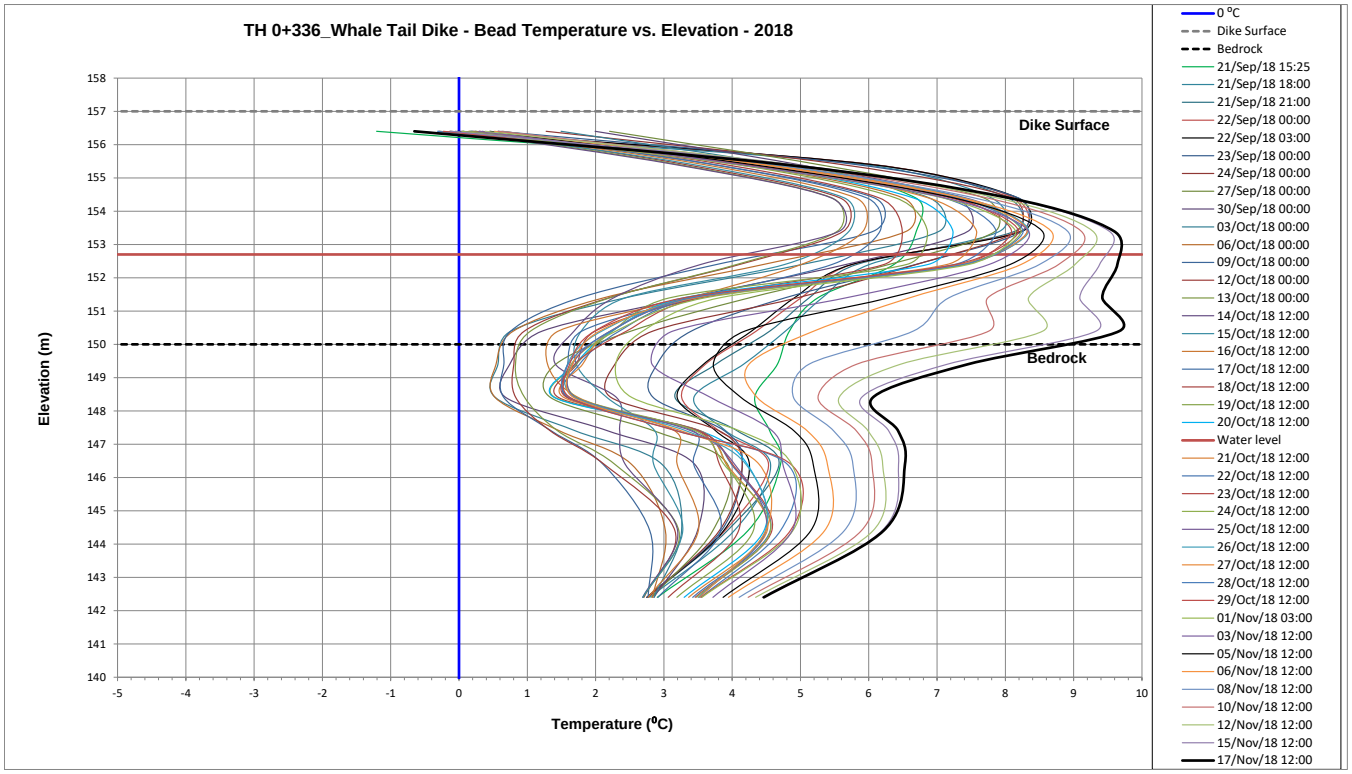

Figure 3: Temperature profile (Celsius) as a function of elevation (masl) from installation to November 2018 for thermistor TH 0+336

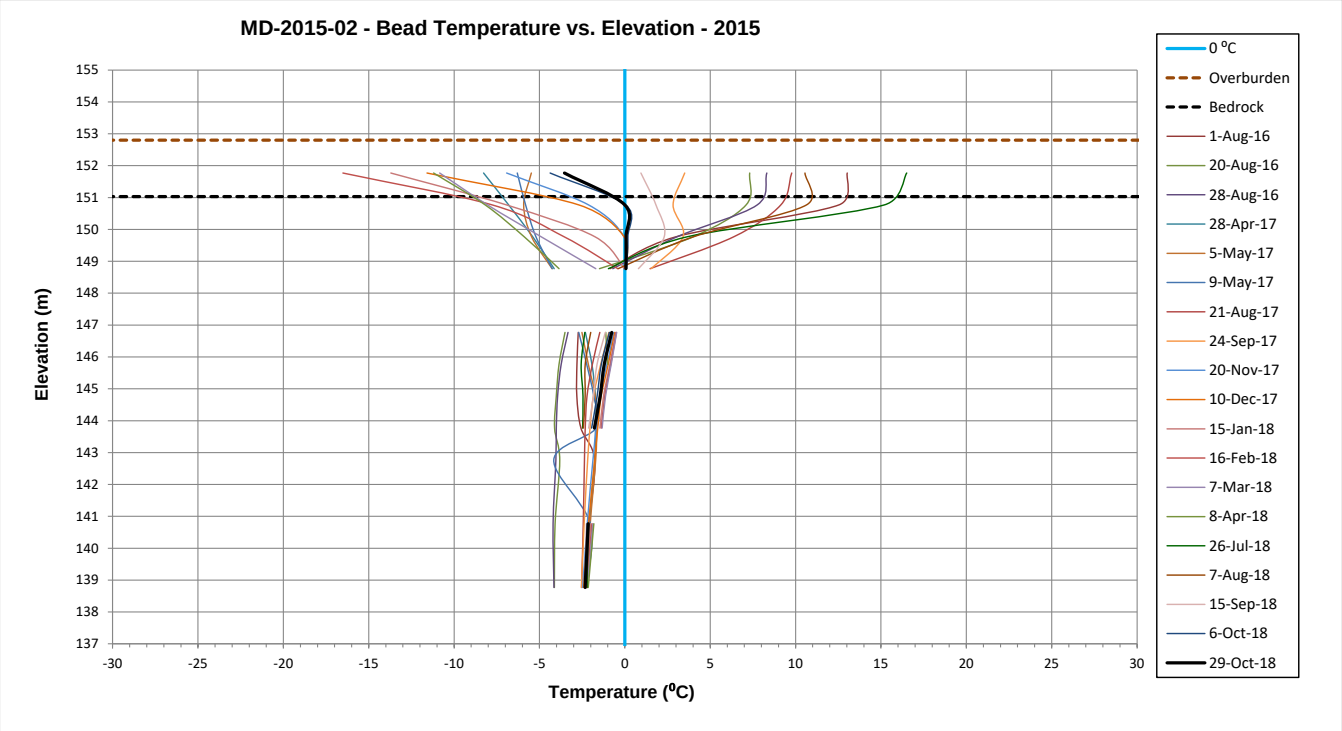

Figure 4: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor MD-2015-02

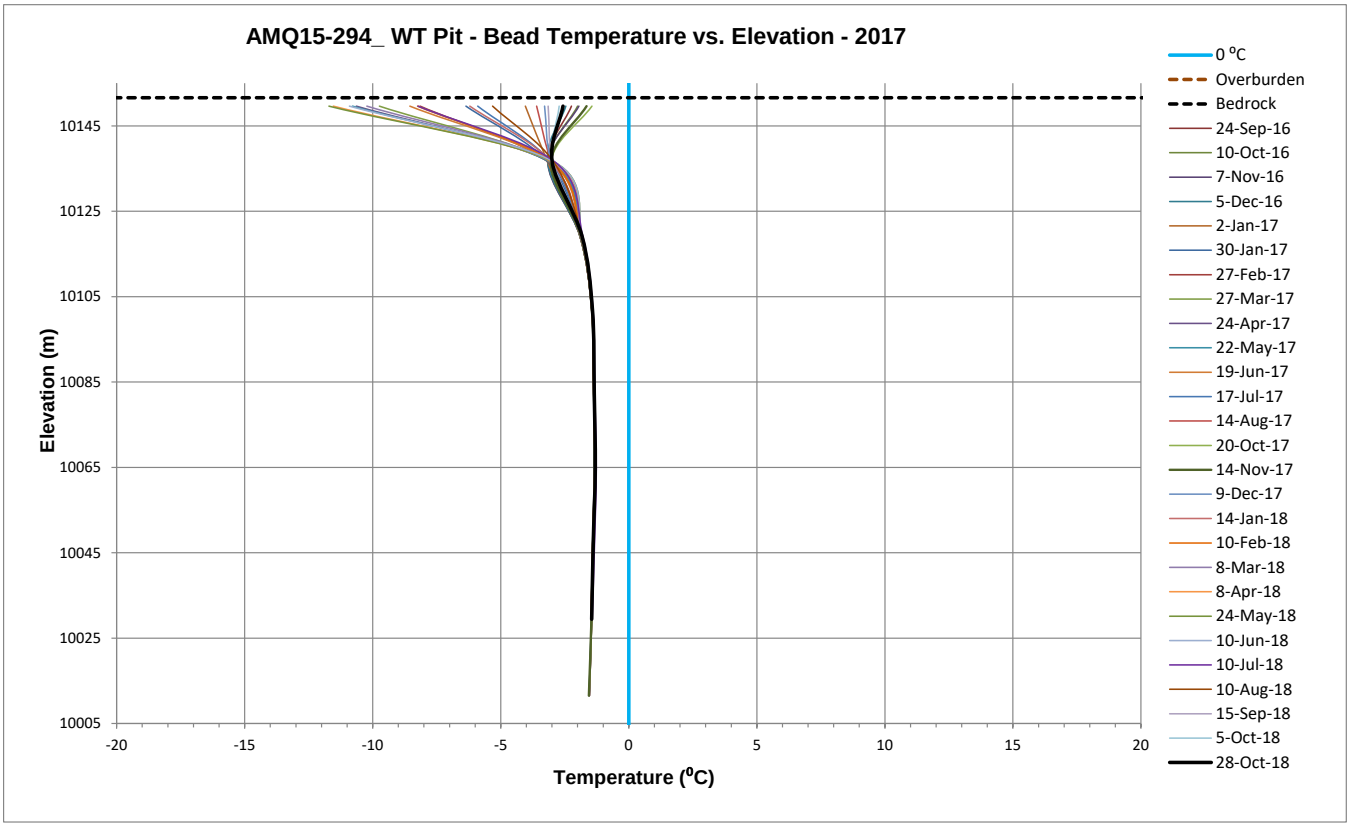

Figure 5: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ15-294

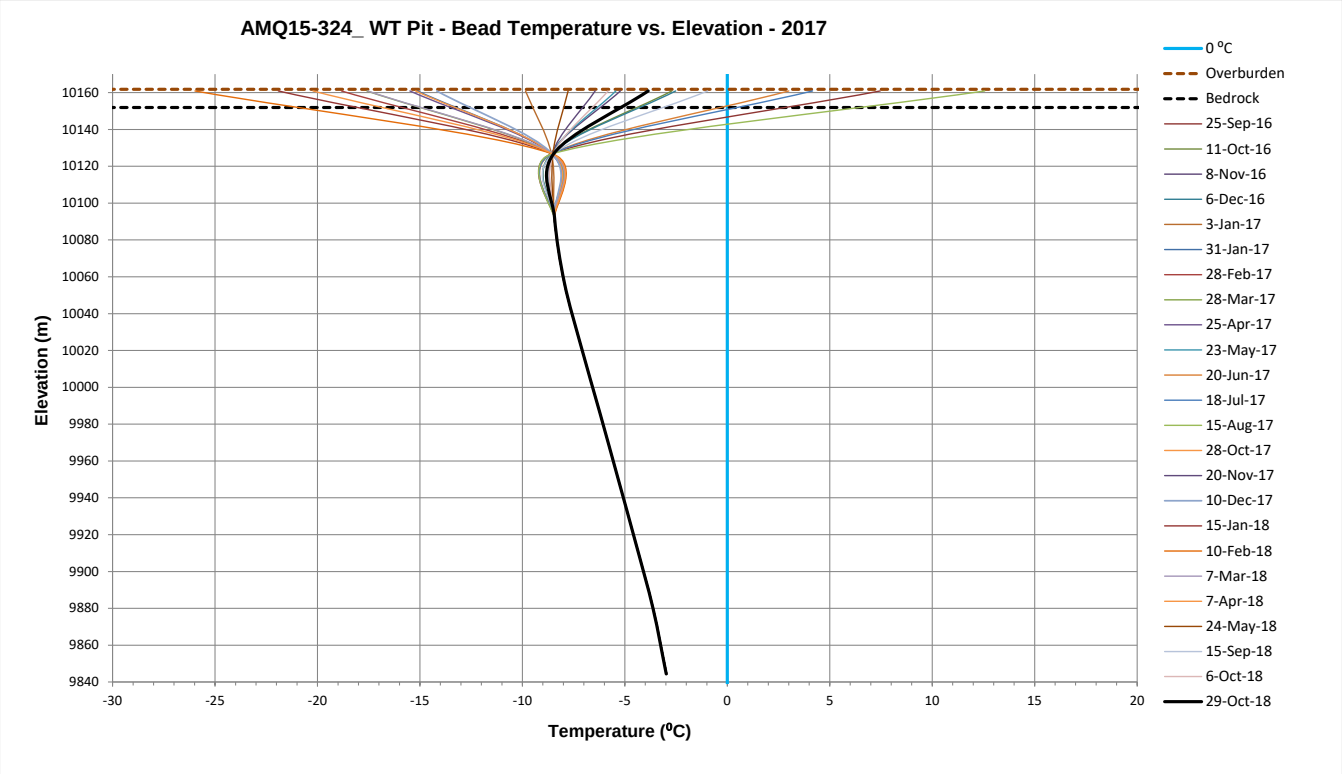

Figure 6: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ15-324

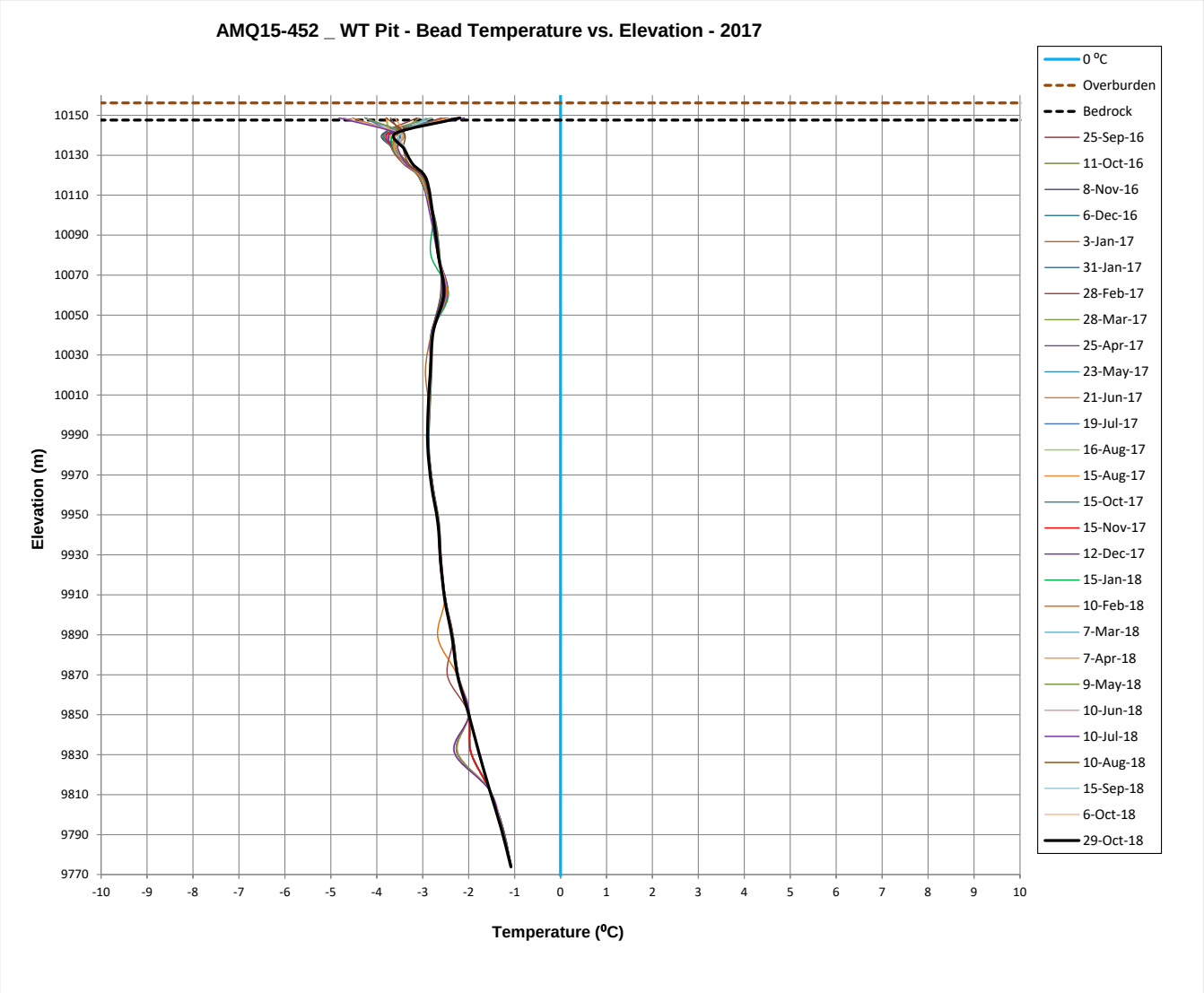

Figure 7: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ15-452

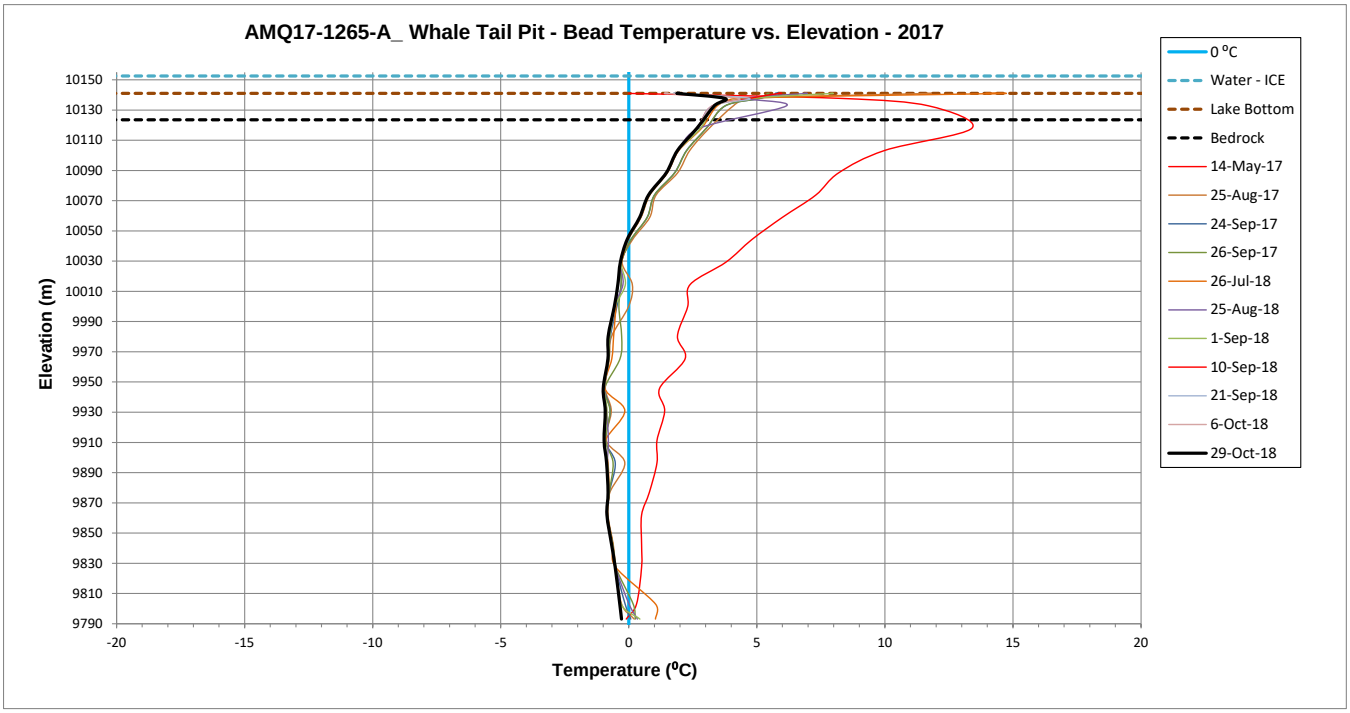

Figure 8: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ17-1265A

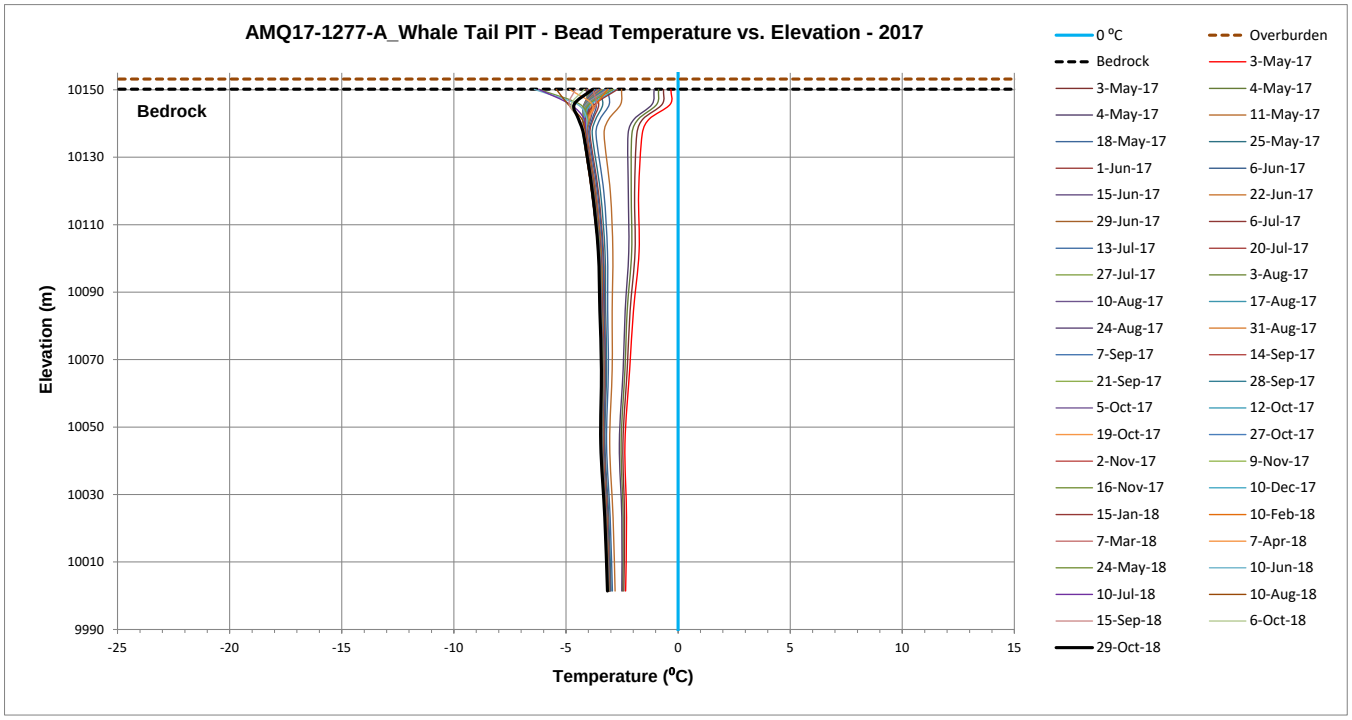

Figure 9: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ17-1277A

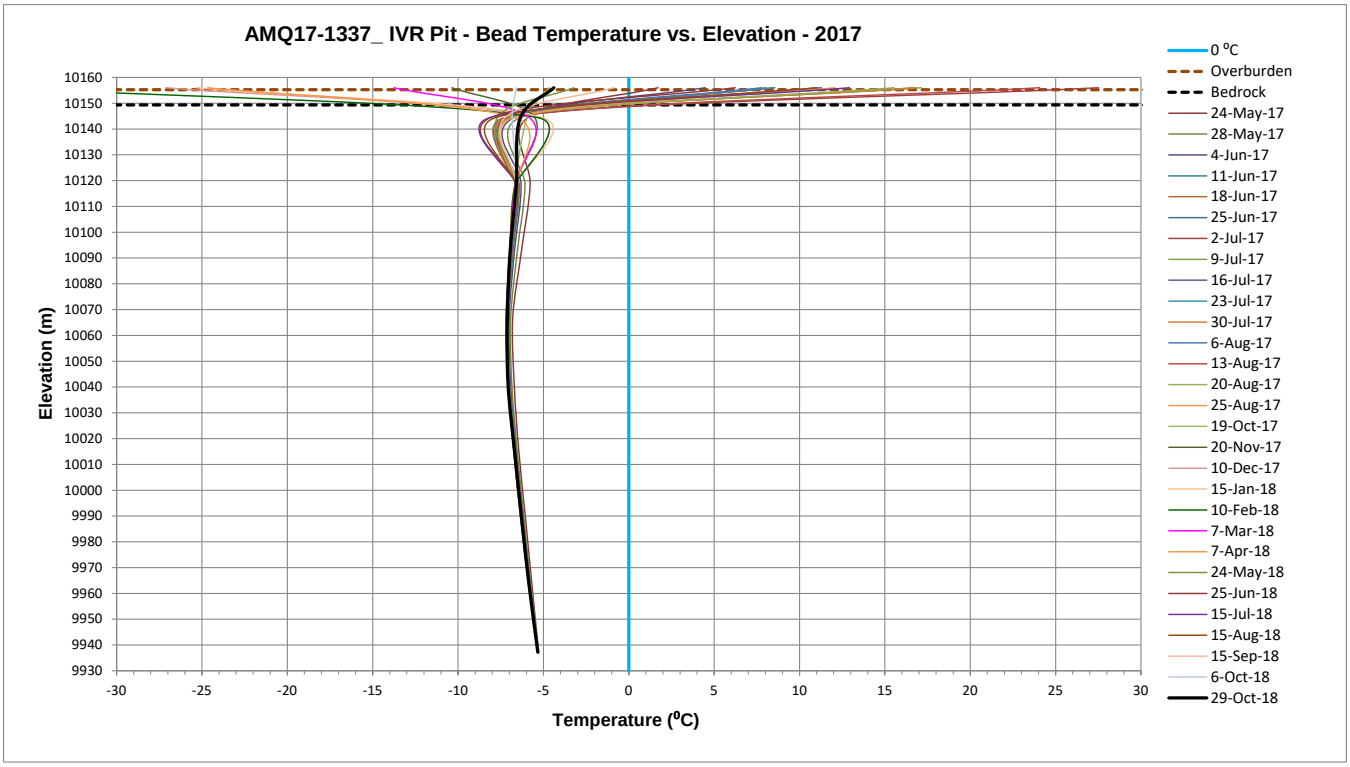

Figure 10: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ17-1337

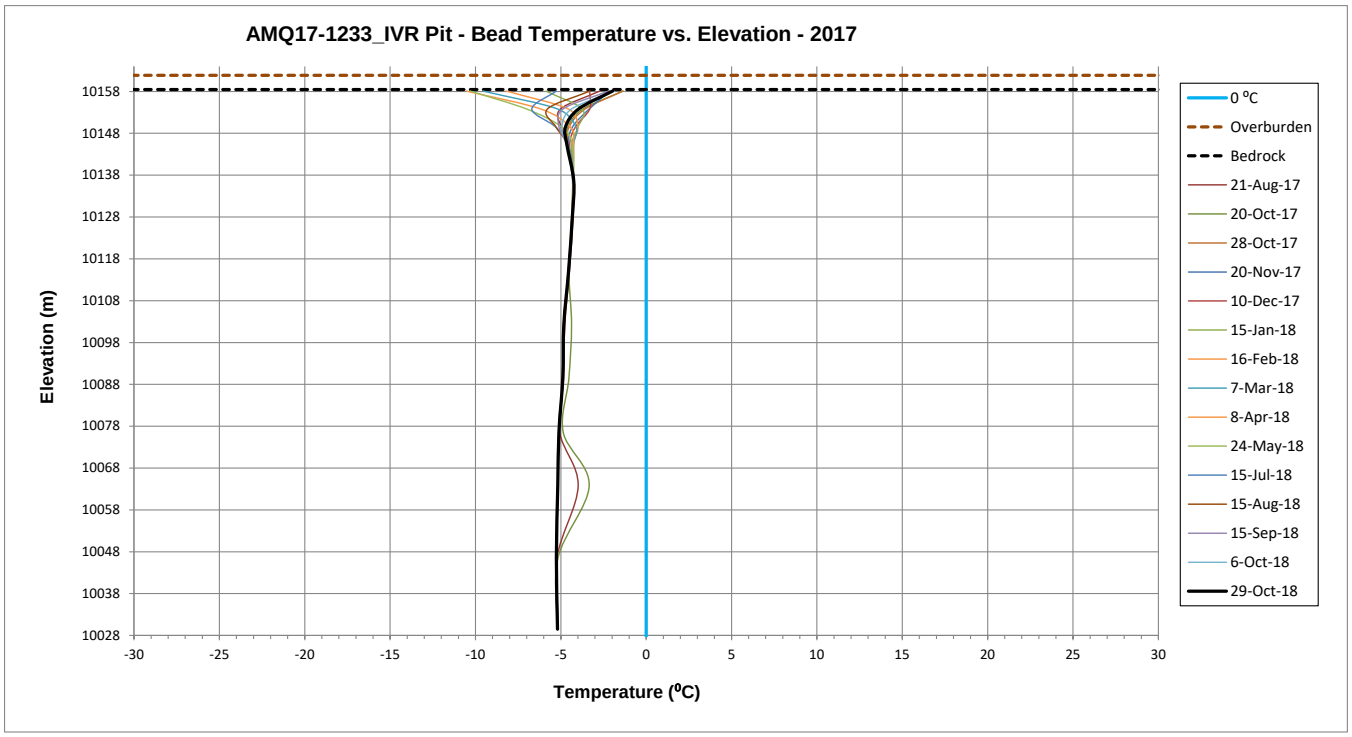

Figure 11: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor AMQ17-1233

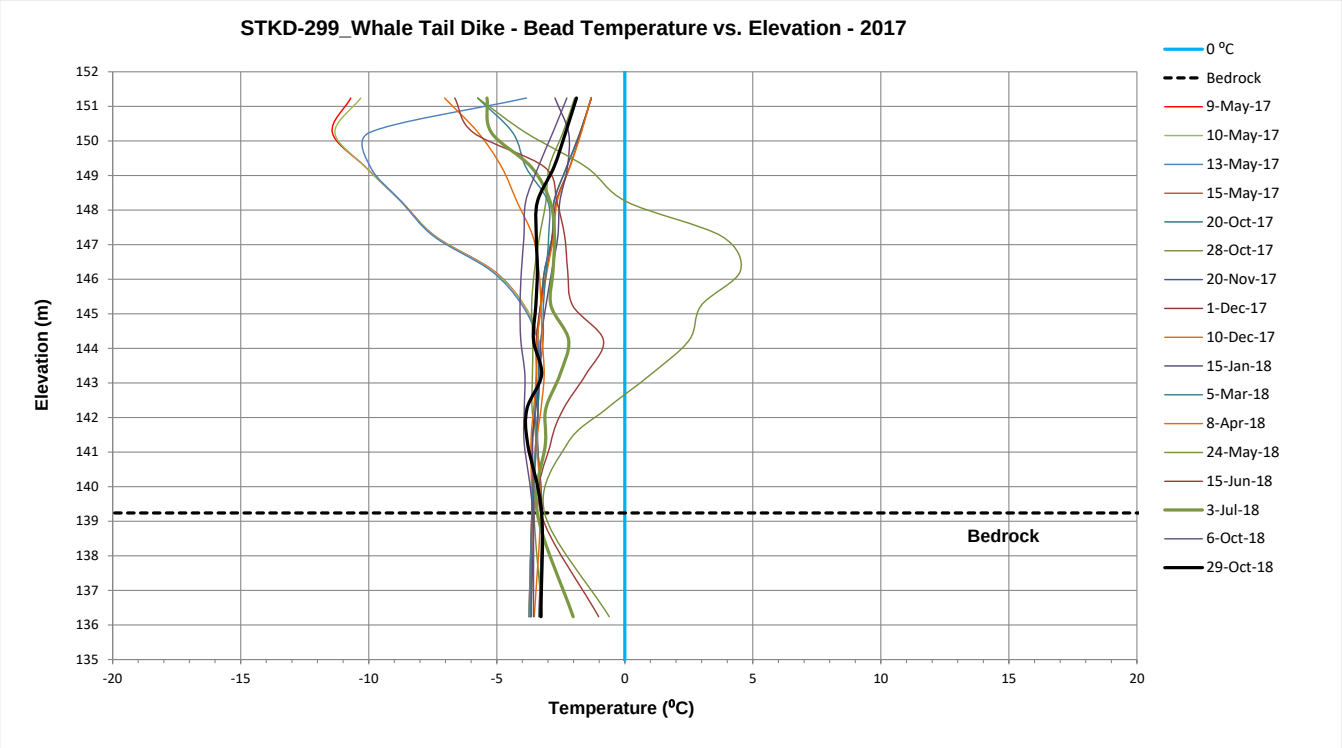

Figure 12: Temperature profile (Celsius) as a function of elevation (masl) from installation to October 2018 for thermistor STKD-299

Non Active thermistors:

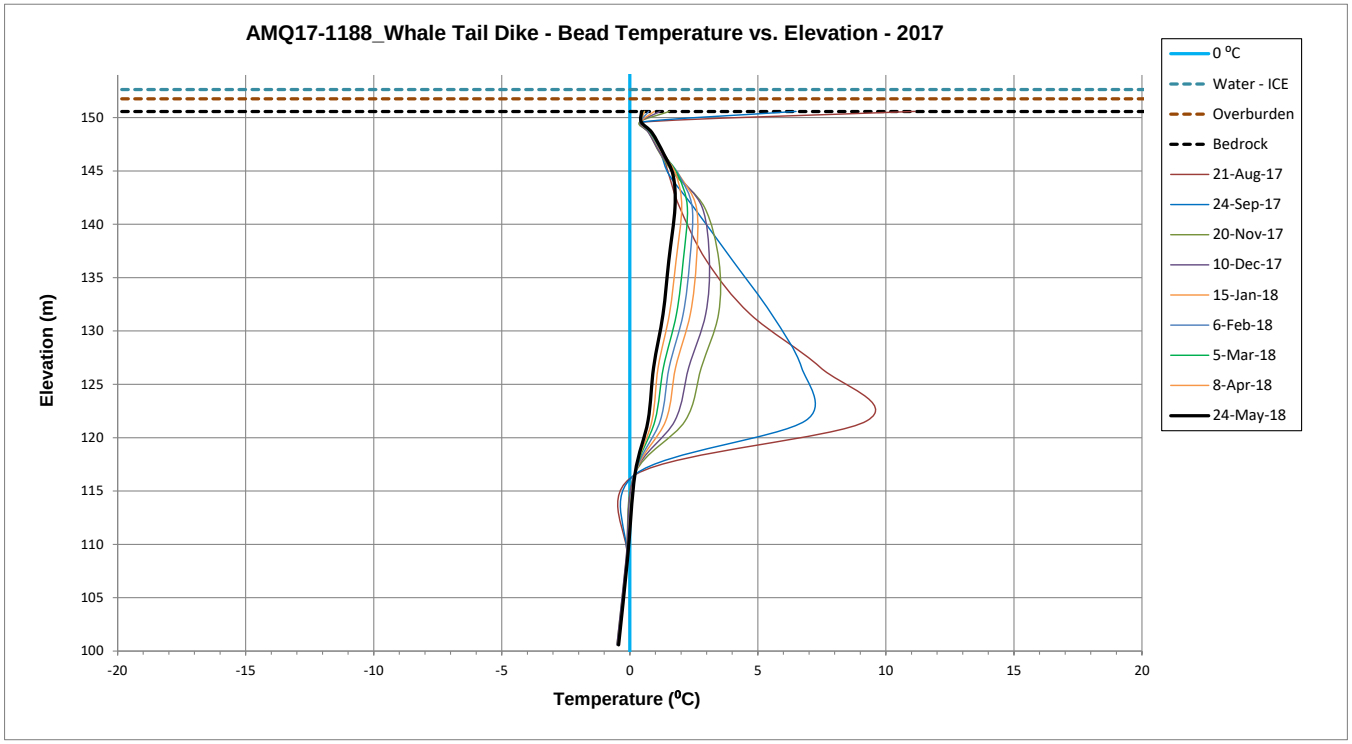

Figure 13: Temperature profile (Celsius) as a function of elevation (masl) from installation to May 2018 for thermistor AMQ17-1188

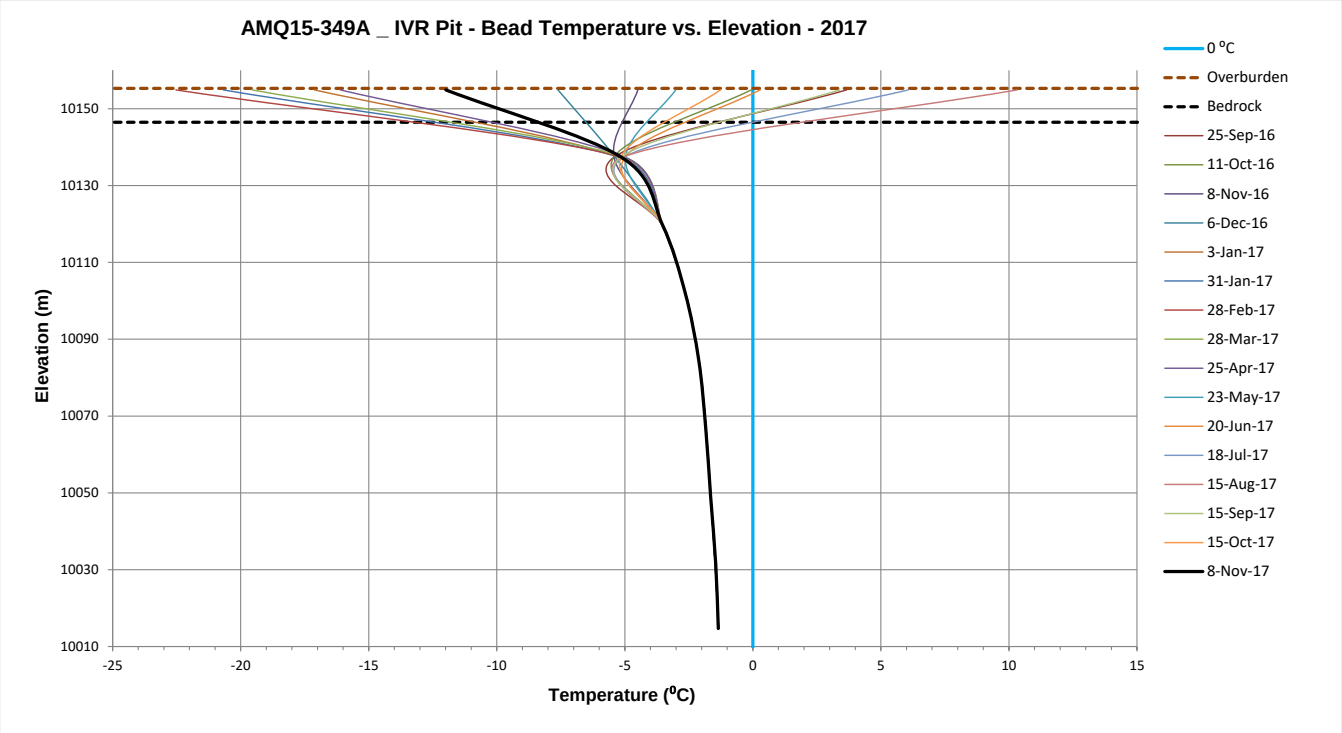

Figure 14: Temperature profile (Celsius) as a function of elevation (masl) from installation to November 2017 for thermistor AMQ15-349A

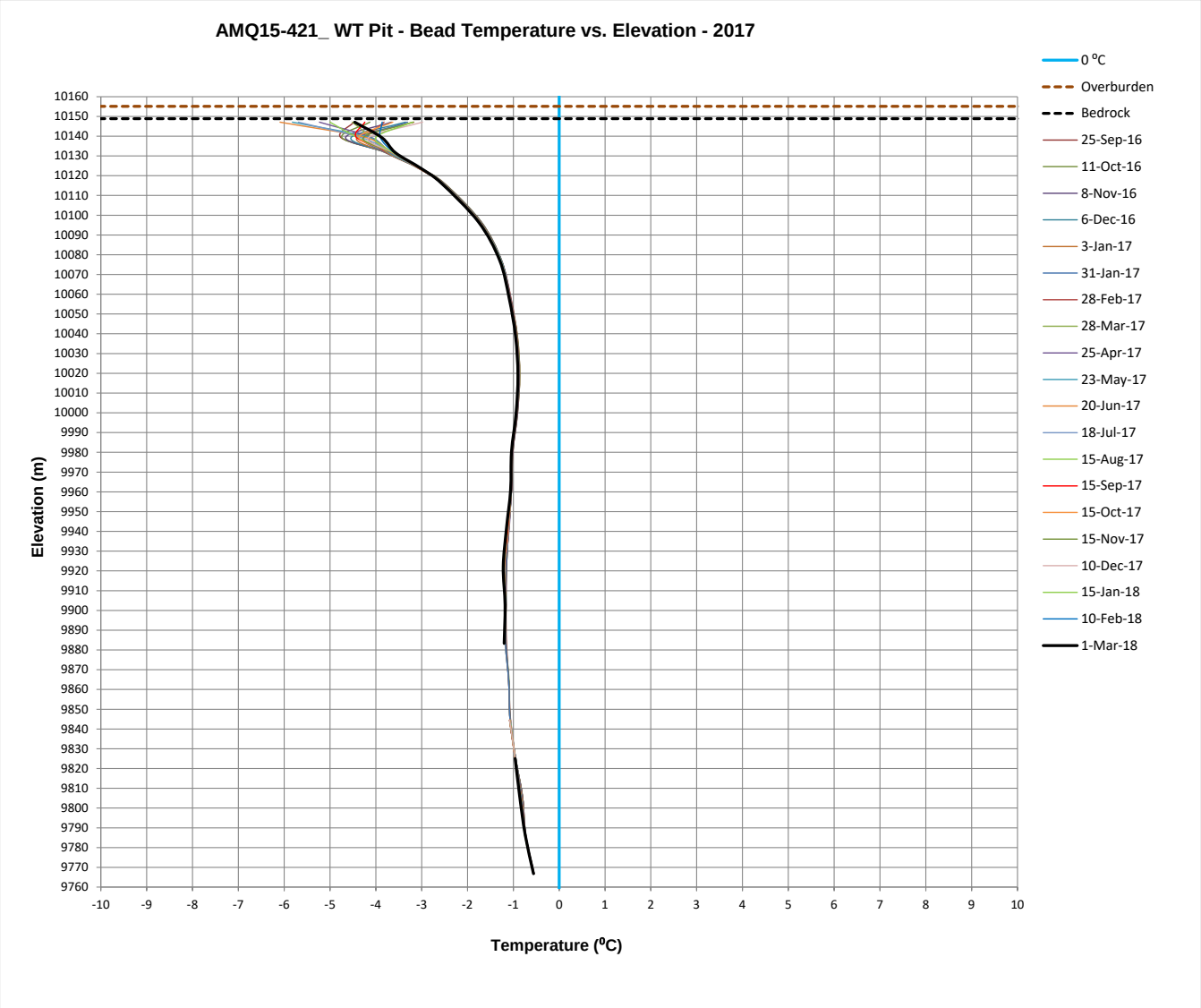

Figure 15: Temperature profile (Celsius) as a function of elevation (masl) from installation to Mars 2018 for thermistor AMQ15-421

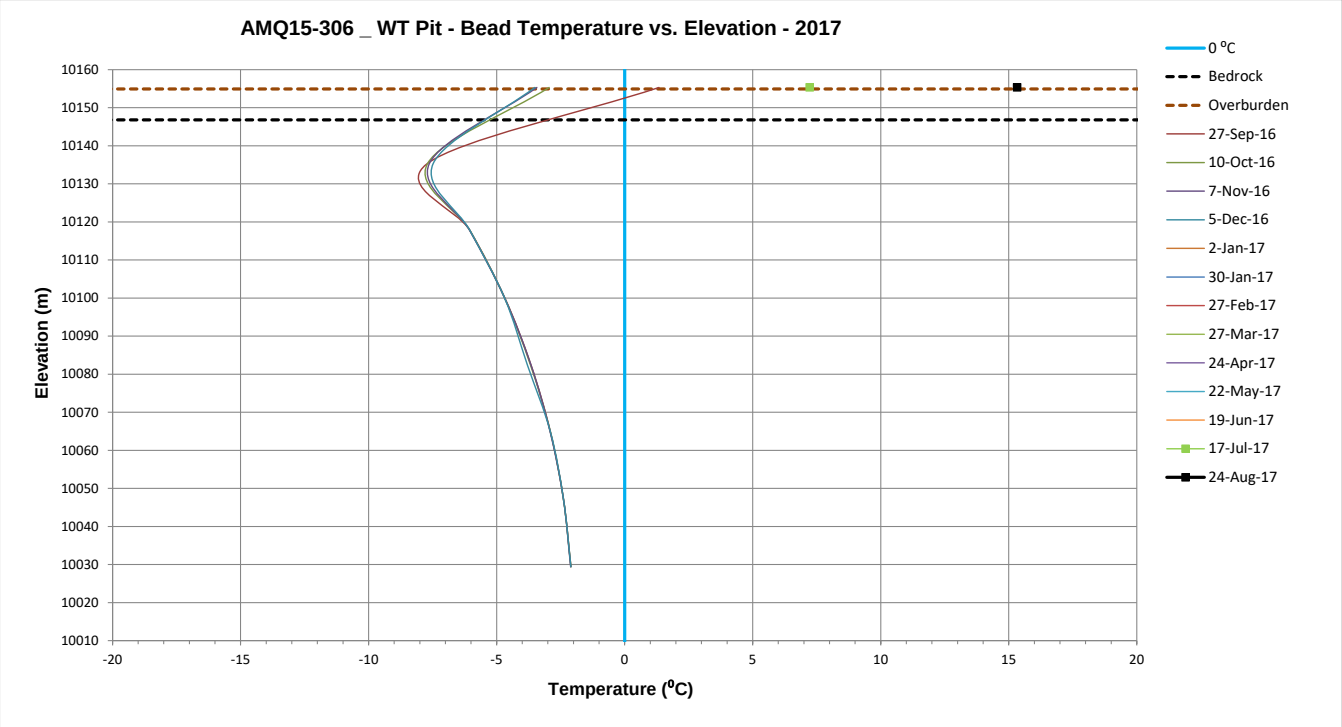

Figure 16: Temperature profile (Celsius) as a function of elevation (masl) from installation to August 2017 for thermistor AMQ15-306

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APPENDIX 2

Term and Condition 52 - Training List

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Course ID	Course Type	Course Name	Lenght of Training (hrs)	Regulation Source	Recognized vs in-house
2531	General	2015 Fusion Goal Setting Process	2		In-House
2532	General	2015 Fusion Goal Setting Process Training for Managers	2		In-House
1088	Health and Sa	Accident/Incident Investigation	0		In-House
1061	General	Aerial Work Platform	5		In-House
2582	Specific	Air Conditioning	24		In-House
2889	Specific	Ansul Vehicle F.S.S Overview	8		In-House
5031	Specific	APS Emulsion Pump	12		In-House
2670	Specific	Backhoe	84		In-House
3450	Health and Sa	Bearwise Training	12		Recognized
1063	Health and Sa	Blasting Certificate - Surface	0	Nunavut Mine Act	Recognized
1065	Health and Sa	Blasting Certificate - Underground	0	Nunavut Mine Act	Recognized
2481	Health and Sa	Boat License	0		Recognized
2461	Specific	Cat Hose	24		In-House
2689	Specific	Caterpillar SIS Introduction and Overview	12		In-House
1035	Health and Sa	Chemical Awareness	0.5		In-House
2890	General	Civility in the Workplace	4		In-House
1016	General	Civility in the Workplace - for Employees	2		In-House
3014	Specific	Coaching on Equipment	3		In-House
2205	Health and Sa	Coaching Phase - Supervision Formula	5		In-House
2891	General	Communication 101	3		In-House
2219	Health and Sa	Conduct a Safety Meeting	3		In-House
1113	Health and Sa	Confined Space	2		In-House
225	Health and Sa	Construction General Health and Safety (CGHS)	3		In-House
947	Specific	Container Handler	24		In-House
2502	Specific	Crane Truck F-450	5		In-House
1001	General	Cross-Cultural	5		In-House
1011	Specific	Crushing Circuit	84		In-House
3200	Specific	Dispatcher Wenco (e-learning)	30		In-House
931	Specific	Dozer - Open Pit	84		In-House
2153	Specific	Dozer - Site Services	84		In-House
973	Specific	Drill CM785	84		In-House
934	Specific	Drill DM45	84		In-House
2545	Specific	Driver License Class 1	0		Recognized
2546	Specific	Driver License Class 2	0		Recognized
3301	Health and Sa	Emergency Measures Induction - Meadowbank	1.5		In-House
3300	Health and Sa	Emergency Measures Induction - Meliadine	1.5		In-House
2412	Health and Sa	Emergency Medical Responder	80		Recognized
2411	ERT	ERT Practice	12		In-House
229	Health and Sa	ERT Practice Meliadine	10		In-House
2093	Specific	Excavator - 6020	84		In-House
927	Specific	Excavator - Auxiliary Equipment	84		In-House
1790	Specific	Excavator - Production Equipment	84		In-House
982	Specific	Excavator - Service Equipment	84		In-House
2882	Health and Sa	Explosive Access Regulation Document	0		Recognized
2631	Specific	Failure Analysis	16		In-House
1067	Health and Sa	Fall Protection	2		In-House
1070	Health and Sa	Fire Suppression System	0.5		In-House
1072	Health and Sa	First Aid & AED/CPR Level A	16	Red Cross/St-John/CNESST	Recognized
1074	Health and Sa	First Responder	40	Red Cross/St-John/CNESST	Recognized
2573	Specific	Fixed Equipment	5		In-House
935	General	Forklift	5		In-House
975	Specific	Front Shovel - RH120	84		In-House
2571	Specific	Fundamentals of Industrial Mechanic	84	Northern College	Recognized
996	Health and Sa	General Induction	0.5		In-House
946	Specific	Grader - Open Pit	84		In-House
2159	Specific	Grader - Site Services	84		In-House
1012	Specific	Grinding Circuit	84		In-House
2658	Specific	Haul Truck - 773	84		In-House
963	Specific	Haul Truck - 777	84		In-House
981	Specific	Haul Truck - 785	0		In-House
2854	Specific	Haul Truck Trainee Program	336		In-House
1346	Specific	Haul Truck Trainee Program I (NGA)	168		In-House
1346	Specific	Haul Truck Trainee Program II	168		In-House
2108	Health and Sa	Hoisting and Rigging	2		In-House
3420	Health and Sa	How to Conduct a Job Hazard Analysis	4		In-House
2262	Specific	Hyster Forklift	5		In-House
3109	General	Intelex Basics and Incident Management	1		In-House
2572	Specific	Intermediate Industrial Mechanic	72	Northern College	Recognized
1085	Health and Sa	Intermodal Transportation of Dangerous Goods	36		In-House
1779	General	Introduction to Driving	5		In-House
2263	Specific	Introduction to Grade Control - Meadowbank	1		In-House
3000	General	Inuit Impact and Benefit Agreement Awareness	1.5		In-House
1786	General	JDE Maintenance Planner	6		In-House
1785	General	JDE Maintenance Supervisor	2		In-House
1007	General	JDE Maintenance Tradesmen	4		In-House

Course ID	Course Type	Course Name	Lenght of Training (hrs)	Regulation Source	Recognized vs in-house
1787	General	JDE Process Plant Operators	2		In-House
1782	General	JDE Procurement & Logistics	2		In-House
1097	Health and Sa	Job Hazard Analysis	1		In-House
2176	Health and Sa	Job Hazard Analysis and Work Card	0.5		In-House
2991	Health and Sa	Job Task Observation	5		In-House
3400	Health and Sa	Joint Occupational Health and Safety Committee Certification	42		In-House
304	Health and Sa	Joint Occupational Health and Safety Committee eLearning	8		In-House
303	Health and Sa	Joint Occupational Health and Safety Committee Induction	0		In-House
2993	Specific	Kidde Vehicle F.S.S Overview	5		In-House
2198	General	Labour Relation System	2		In-House
4000	General	LDP - M0: Launching Activity	10		In-House
4001	General	LDP - M1: Communicating for Performance	10		In-House
4002	General	LDP - M2: Coaching to Enhance Capabilities	10		In-House
4003	General	LDP - M3: Mobilizing in Action	10		In-House
4004	General	LDP - M4: Managerial Courage	10		In-House
1114	Specific	Leach/CIP Stripping Circuit	84		In-House
2172	Specific	Leach/CIP Stripping Circuit Evaluation	0		In-House
2539	Specific	Lincoln Grease System	6		In-House
929	Specific	Loader - Auxiliary Equipment - Open Pit	84		In-House
2156	Specific	Loader - Auxiliary Equipment - Site Services	84		In-House
952	Specific	Loader - Production Equipment	84		In-House
2496	Specific	Loader - Service Equipment - Open Pit	84		In-House
953	Specific	Loader - Service Equipment - Site Services	84		In-House
1121	Health and Sa	Lockout	2		In-House
2225	Specific	Long Haul Truck	84		In-House
2211	Specific	Mechanics Service Truck TRK 44	24		In-House
307	Health and Sa	MHFA - Mental Health First Aid	4		In-House
1009	Health and Sa	Mill Induction	0.5		In-House
1055	ERT	Mine Rescue - Surface	48		Recognized
2848	Health and Sa	Mine Rescue - Underground	40		Recognized
1731	Specific	Mixing and Distribution Circuit	84		In-House
2180	Health and Sa	Occupational Health and Safety	0.5		In-House
3410	Health and Sa	OHSC Act Regs - Duties Roles and Responsibilities - IRS Training	4		Recognized
2520	Specific	Oil Sampling and Filtration	2		In-House
2497	Specific	Operations in Aircraft Ground Icing Conditions	8		Recognized
1013	General	Overhead Crane	3		In-House
2259	Health and Sa	Oxygen Administration	4	Red Cross/St-John/CNESST	Recognized
2235	Specific	Passenger Bus	5		In-House
3020	General	People Management Tools	3		In-House
2626	Specific	Planning and Scheduling	16		In-House
2569	Specific	PMO Training	2		In-House
3013	Specific	Primary Evaluation	0		In-House
2570	Specific	Process Plant Trainee Program	504		In-House
2849	General	Professional Development	0		In-House
2600	Specific	PSS BG4 Technician	24		In-House
335	Health and Sa	Quantitative Fit Test	0		In-House
3016	Specific	Respa CF	4		In-House
1068	Health and Sa	Respiratory Protection	2		In-House
2182	Health and Sa	Roles and Responsibilities	3		In-House
2204	Health and Sa	Scaffolds	12		In-House
1632	Health and Sa	SCBA	4		Recognized
2589	Specific	Service Truck - Powerhouse	84		In-House
1082	Health and Sa	Shiftboss - Surface	0	Nunavut Mine Act	Recognized
1084	Health and Sa	Shiftboss - Underground	0	Nunavut Mine Act	Recognized
1091	General	Skid Steer	5		In-House
2850	Specific	Sleipner	5		In-House
1867	Specific	Snow Blower	24		In-House
2265	Specific	Snow plow - Open Pit	24		In-House
5050	Health and Sa	SOP Mine - Underground Visitor	2		In-House
5051	Health and Sa	SOP Mine - Underground Worker	3		In-House
5052	Health and Sa	SOP Surface - Meliadine	2		In-House
2662	Specific	Specialized Building Mechanic	3		In-House
1791	Health and Sa	Spills Response	0.5		In-House
1071	Health and Sa	Stairs & Ladder Safety	1		In-House
1093	Health and Sa	Standard Operating Procedure Mine	2		In-House
1083	Health and Sa	Standard Operating Procedure Surface	2		In-House
2210	Specific	Steam Cleaner	5		In-House
1094	Health and Sa	Supervision Formula	5		In-House
2397	Health and Sa	Supervisor Safety Responsibilities	10		In-House
1087	Health and Sa	Supervisor's Certificate Level 1 - Exploration	0	Nunavut Mine Act	Recognized
1077	Health and Sa	Supervisor's Certificate Level 1 - Surface	0	Nunavut Mine Act	Recognized
1078	Health and Sa	Supervisor's Certificate Level 1 - Underground	0	Nunavut Mine Act	Recognized
1086	Health and Sa	Supervisor's Certificate Level 2 - Exploration	0	Nunavut Mine Act	Recognized
1079	Health and Sa	Supervisor's Certificate Level 2 - Surface	0	Nunavut Mine Act	Recognized
1081	Health and Sa	Supervisor's Certificate Level 2 - Underground	0	Nunavut Mine Act	Recognized

Course ID	Course Type	Course Name	Lenght of Training (hrs)	Regulation Source	Recognized vs in-house
4990	Specific	Surface Articulated Haul Truck	84	Nunavut Mine Act	Recognized
2491	Specific	Tandem Truck - Open Pit	84		In-House
1977	Specific	Tandem Truck - Site Services	84		In-House
938	General	Telehandler	5		In-House
985	Specific	Tow Haul	24		In-House
4997	Specific	Underground Block Holer	168		In-House
4999	Specific	Underground Boom Truck	5		In-House
4992	Specific	Underground Cable Drill	168		In-House
4993	Specific	Underground Cassette Man Carrier	12		In-House
4995	Specific	Underground Concrete Truck	84		In-House
5000	Specific	Underground Development Bolter	84		In-House
5010	Specific	Underground Development Jumbo	84		In-House
5020	Specific	Underground Development Scoop	84		In-House
5030	Specific	Underground Emulsion Charger	84		In-House
5070	Specific	Underground Grader	84		In-House
5100	Specific	Underground Haul Truck	168		In-House
5095	Specific	Underground Haul Truck 50T	168		In-House
5101	Specific	Underground Jumbo 422	84		In-House
5065	Specific	Underground Lube/Fuel Truck	84		In-House
5102	Specific	Underground Man Carrier	5		In-House
5104	Specific	Underground Modules (Common Core) Certification	0		In-House
5140	Specific	Underground Production Cubex Drill	168		In-House
5143	Specific	Underground Production Emulsion Loader	168		In-House
5150	Specific	Underground Production Rhino	168		In-House
5153	Specific	Underground Production Scoop	168		In-House
5156	Specific	Underground Production Solo Top Hammer Drill	168		In-House
5126	Specific	Underground Remote Controlled Scoop - 12 yards	5		In-House
5125	Specific	Underground Remote Controlled Scoop - 8 yards	5		In-House
5110	Specific	Underground Scissor Lift	84		In-House
5105	Specific	Underground Service Excavator	5		In-House
5107	Specific	Underground Service Loader	5		In-House
5108	Specific	Underground Service Scoop	84		In-House
5120	Specific	Underground Service Tractor	5		In-House
5130	Specific	Underground Shotcrete Sprayer	168		In-House
2495	Specific	Used Oil Analysis	10		In-House
1099	Specific	Utility Person Circuit	84		In-House
977	Specific	Water Truck - 773	24		In-House
2501	Specific	Water Truck - Kenworth	5		In-House
2208	Specific	Water Truck - Kenworth	5		In-House
933	Specific	Wheel Dozer	84		In-House
1080	Health and Sa	WHMIS	0.5		In-House
102	Health and Sa	WHMIS 2015	0.5		In-House
1064	Health and Sa	Work Card	1		In-House
2149	General	Work Readiness	40		In-House
1946	General	Work Readiness Part 1	20		In-House

AGNICO EAGLE

APPENDIX 3
Occupational Health and Safety Plan (Version 2, December 2018)

10 200, Route de Preissac, Rouyn-Noranda, Québec, Canada J0Y 1C0
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Occupational Health & Safety Plan

	PROGRAM NUMBER:MBK-HSS-PLN – Occupational Health and Safety Plan		
People concerned	• All employees, contractors and visitors	**Prepared by**	Health and safety
		Authorized by	Markus Uchtenhagen Health and Safety Superintendent
Effective **Revised**	April 24, 2013 December 6, 2018	***"Safety First, Safety Last … Safety Always!"*** ***"No Repeats" – Our Stepping Stone to ZERO HARM***	
This program corresponds to the required minimum standard. Each and every one also has to comply with the rules and regulations of the Nunavut Government in terms of health and safety at work.			

Objective:

- To establish the framework, rules and procedures for ensuring the health and safety of all employees, contractors and visitors at Meadowbank and Amaruq sites.

Concerned departments:

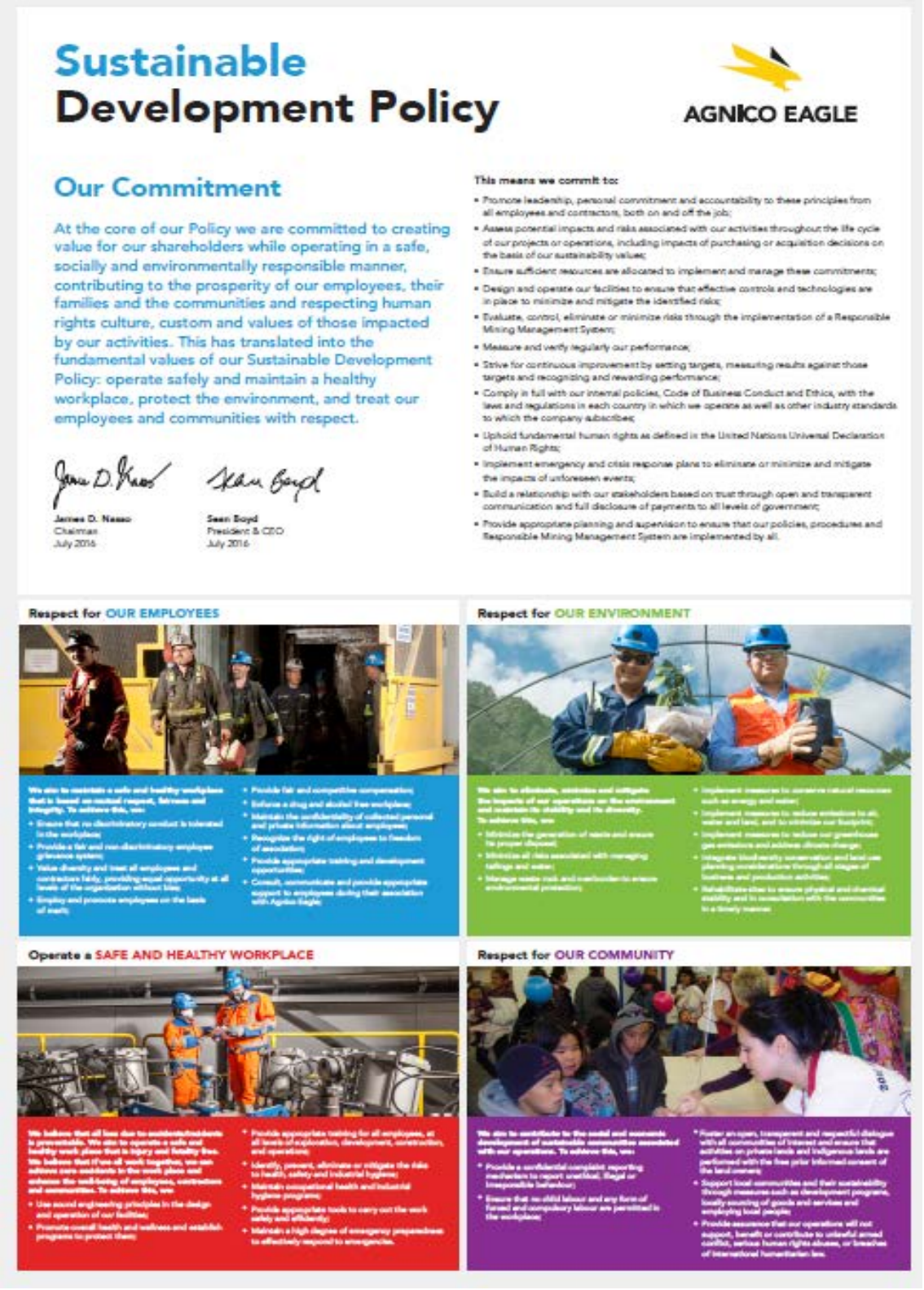
All departments

Required equipment:

- Knowledge

Risks /Impacts legend

Health & Safety	Process/Quality	Costs	Environment



Sustainable Development Policy

AGNICO EAGLE

Our Commitment

At the core of our Policy we are committed to creating value for our shareholders while operating in a safe, socially and environmentally responsible manner, contributing to the prosperity of our employees, their families and the communities and respecting human rights culture, custom and values of those impacted by our activities. This has translated into the fundamental values of our Sustainable Development Policy: operate safely and maintain a healthy workplace, protect the environment, and treat our employees and communities with respect.

James D. Nasso
Chairman
July 2016

Sean Boyd
President & CEO
July 2016

This means we commit to:

- Promote leadership, personal commitment and accountability to these principles from all employees and contractors, both on and off the job;
- Assess potential impacts and risks associated with our activities throughout the life cycle of our projects or operations, including impacts of purchasing or acquisition decisions on the basis of our sustainability values;
- Ensure sufficient resources are allocated to implement and manage these commitments;
- Design and operate our facilities to ensure that effective controls and technologies are in place to minimize and mitigate the identified risks;
- Evaluate, control, eliminate or minimize risks through the implementation of a Responsible Mining Management System;
- Measure and verify regularly our performance;
- Strive for continuous improvement by setting targets, measuring results against those targets and recognizing and rewarding performance;
- Comply in full with our internal policies, Code of Business Conduct and Ethics, with the laws and regulations in each country in which we operate as well as other industry standards to which the company subscribes;
- Uphold fundamental human rights as defined in the United Nations Universal Declaration of Human Rights;
- Implement emergency and crisis response plans to eliminate or minimize and mitigate the impacts of unforeseen events;
- Build a relationship with our stakeholders based on trust through open and transparent communication and full disclosure of payments to all levels of government;
- Provide appropriate planning and supervision to ensure that our policies, procedures and Responsible Mining Management System are implemented by all.

Respect for OUR EMPLOYEES

Respect for OUR ENVIRONMENT

Operate a SAFE AND HEALTHY WORKPLACE

Respect for OUR COMMUNITY

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AGNICO EAGLE

The following document presents Meadowbank and Whale Tail Pit Occupational Health and Safety Plan (the Plan) in support of Meadowbank Nunavut Impact Review Board (NIRB) Project Certificate No.004 and Whale Tail NIRB Project Certificate No.008, condition 57. This plan outlines Agnico Eagle's strategy for Health and Safety.

1. Goals for the Occupational Health and Safety Plan

The prevention program focuses on eliminating dangers to health, safety and protects the physical integrity of all workers (this includes all Agnico-Eagle Mines employees, Contractors and visitors).

Specific objectives:

- Identify and assess the risks in the process and the work environment;
- Propose effective and sustainable technical controls to ensure the health and safety of employees/contractors;
- Adequately protect workers exposed to specific risks by setting health and safety standards;
- Adequately protect all personnel and contractors working on sites against specific risks, by setting health and safety standards, for every risk encountered;
- Ensure the preventive maintenance of personal and collective protective equipment;
- Train the employees and contractors on the risks related to their work and their environment.

2. Policy

Agnico Eagle Mines – Meadowbank Division recognizes the importance of eliminating as much as possible the risks of an accident and/or occupational disease. To achieve this goal, Agnico Eagle Mines - Meadowbank Division established a policy for these objectives, and, always maintains harmonious relations with their employees.

3. Application

The prevention program is for all employees of the Meadowbank Mine, Agnico and contractors. All contractors, suppliers and visitors working at the Meadowbank Division site must comply with the content of this program.

Accident prevention necessitates the involvement of everyone. Every employee and contractor has a specific role to play and is responsible for their health and safety. In other words, we can say that, at Agnico Eagle Mines, Meadowbank Division, we have as many safety specialists as we have employees, contractors at the site.

4. Responsibilities of the parties

4.1 Management team

- Provide material, financial and human resources to implement, maintain, update and improve the prevention program;
- Maintain the prevention programs to provide workers and contractors a safe and healthy work environment;
- Participate actively in the assessment, review and monitoring of the program activities;
- Ensure the implementation, improvement and monitoring of the Supervisors' Formula and the work card;
- Ensure that the employees and contractors have the training and the necessary information to avoid endangering their health or safety and / or their colleagues;
- Correct with immediacy, a known situation that might endanger the health or safety of someone; and
- Collaborate with the occupational health and safety committee and with any public health and safety institution or regulator.

4.2 Health and Safety/Training Officers/Emergency Response Coordinators/Security

- Coordinate the implementation, application and improvement of the prevention program;
- Coordinate all activities by managing health and safety and security;
- Support and coach employees, Supervisors and Management in performing their duties;
- Collaborate in the identification, evaluation and controlling risks in their respective workplaces;
- Ensure compliance with Act and Regulations, Standards and Site policies/procedures;
- Inform members of the management team of any suspicious circumstances that may affect the health or safety or security;
- Ensure the implementation, improvement and the follow-up of the Supervision Formula and the work card;

- Ensure that workers have the necessary training and information to minimize the possibility of endangering their health, safety or security and / or their colleague;
- Correct with immediacy, a known situation that might endanger the health or safety or security of someone;
- Collaborate with the safety representatives in the various mandates entrusted to them;
- Collaborate with the (Workers Safety and Compensation Commission) WSCC inspectors or other regulators during their visits;
- Collaborate with health team on site or mandated by the WSCC; and
- Ensure an effective and properly trained Emergency Response Team. Ensure an adequate number of trained personnel for both Surface and Underground settings.

4.3 Supervisors

- Correct immediately any potential hazard in the workplace;
- Collaborate in the identification, evaluation and control of any hazardous situation in the workplaces;
- Inform the Health and Safety Department of any situation that could affect the health or safety of the workers;
- Provide individual and/or collective protective equipment for workers;
- Ensure that workers have the training and the necessary information to avoid endangering their health and safety and / or their colleague;
- Follow the Act/Regulations, rules, standards, procedures and site Policies/Protocols;
- Ensure the implementation, improvement and follow-up of the Supervision Formula and the work card with an emphasis on "immediacy" for the corrective actions to be taken;
- Ensure that all incidents are properly reported in a timely manner to the Health and Safety Department, and Department, using the appropriate forms;
- Investigate all incidents/accidents and document findings and recommend corrective measures on appropriate forms; and
- Work with the Occupational Health and Safety Committee and the safety representative in the various mandates that were given to them.

4.4 Worker

- Protect their health, safety and physical integrity or that of others in the workplace;
- Respect the preventive measures established in the Health and Safety plan;
- Respect the information given during the induction program, postings, and safety meetings;
- Participate in the identification, evaluation and control of hazards in the workplace;
- Wear personal protective equipment and/or collective protective equipment required for specific jobs to protect their health and safety;
- Participate in identifying and quantifying of the contaminants in the workplace;
- Respect the Act/Regulations, safety rules, standards, procedures and policies/protocols at all times;
- Inform the supervisor of any doubtful situations that may affect the health or safety;
- Report all accidents, incidents or close calls (near misses) to the supervisor immediately (within the working shift);
- Participate in training or/and health and safety information sessions; and
- Work with the Joint Occupational Health and Safety Committee on different health and safety issues that were mandated to the committee.

4.5 Nurse (Health Care Provider)

- Coordinate the health program for the site;
- Inform managers, supervisors and workers on contaminants potentially present in their workplace;
- Propose to the management team methods to control risks that could affect the health or safety of workers;
- Initiate screening biological tests on contaminants potentially present in the workplace;
- Provide immediate care to injured personnel and follow-up;
- Training as required;
- Participate in the identification of Health hazards in the workplace;

- Provide information on sexual health and well-being; and
- Work with the Occupational Health and Safety Committee on the various mandates given to the committee.

4.6 Industrial Hygiene Technician

- Identify all the contaminants in the workplace that could pose a health and safety hazard to workers;
- Determine the potential exposure of workers to the identified contaminants with good sampling and analysis strategy;
- Inform supervisors and workers on the results of exposure present in their workplace and how to protect themselves;
- Provide managers with methods to control risks that could affect the health and/or safety;
- Perform maintenance and monitor the calibration of measuring instruments used in industrial hygiene;
- Develop and maintain an Industrial Hygiene Program;
- Develop and maintain an Asbestos Management Plan;
- Provide training in Industrial Hygiene subjects with all concerned; and
- Work with the Occupational Health and Safety Committee on the various mandates given to the committee.

4.7 Contractors

- Transmit to Agnico Eagle Mines– Meadowbank Division a Health and Safety program specific to their activities on the site. Agnico Eagle Mines- Meadowbank Division reserves the right to request changes that they consider important;

  Note: Any contractor on site for a period of less than fifteen (15) days does not have to submit a Health and Safety program. However, they must comply with the Health and Safety program of the site and made available to workers.

- Transmit (before the job starts) all plans certified, signed and sealed by an engineer recognized in the Nunavut Territory for construction on surface;
- Provide Agnico Eagle Mines – Meadowbank Division with a current letter indicating that they are in good standing with WSCC in Nunavut;

- Transmit the Health and Safety program specific to their activities on the site, which must contain a list of risks in regards to construction work and, indicate the controls put in place in regards to those risks;

- Submit in writing to Agnico Eagle Mines– Meadowbank Division all changes that were made to the work procedures and have them available for the workers and their supervisors;

- Take measures to ensure that all workers under their supervision are informed of the risks they are exposed to;

- Inform, immediately, Agnico Eagle Mines– Meadowbank Division of any accident/incident in the execution of various contracts;

- Inform in writing Agnico Eagle Mines– Meadowbank Division of any writing or report issued by the WSCC to the contractor;

- Update a bulletin board dedicated exclusively to health and safety at work inside the trailer or any other location easily accessible to workers;

- Hold a weekly safety meeting for each crew. Send a copy of the minutes of the meeting with the names of participants to Agnico Eagle Mines – Meadowbank Division Health and Safety Department;

- Provide a written document stating that your enterprise as a contractor on the site will abide to Agnico Eagle Mines– Meadowbank health and safety programs;

- Provide monthly hours worked by their employees and sub-contractors (if applicable) as well as its accident/incidents statistics;

- Provide workers with personal protective equipment determined by legislation or by the Occupational Health and Safety Committee according to the tasks they must accomplish;

- Ensure that the employees wear their personal protective equipment at all times while at work and that they use the proper tools to accomplish their tasks;

- Ensure that the corrective measures requested by Agnico Eagle Mines– Meadowbank Division be completed in the time frame prescribed;

- Submit a list of workers who have a valid or current first aid certificate;

- Ensure that all equipment complies with Agnico Eagle Mines – Meadowbank Division and Nunavut Regulations;

- Provide a list of all current MSDS sheets for products that you as a contractor are bringing on site;

- Ensure that all temporary structures and / or permanent are safe and that they comply with legislation or site specifics ex. (railings, guarded openings, etc.).

If the contractor or any person within its jurisdiction fails to comply with the terms of the program, Agnico Eagle Mines– Meadowbank Division can then take any necessary action to correct the situation, and that at the expense of Contractor.

4.8 Suppliers

- Comply with the Health and Safety program of Agnico Eagle Mines– Meadowbank Division, standards and procedures applicable to them (especially when they perform delivery or assemble their products or equipment on site).

4.9 Joint Occupational Health and Safety Committee

- Approve the Health and Safety Plan;
- Make periodic follow-up of the Health and Safety plan by actively participating in various activities to identify, assess and control;
- Cooperate with the WSCC representatives;
- Encourage the participation of managers, supervisors and workers in various elements of the program; work within the “Terms of Reference” guidelines;
- Receive suggestions and complaints from employees, employee representatives on health and safety issues at work;
- Receive and review the planned inspection reports, accident investigations, safety meetings and the WSCC mine inspector reports;
- Receive and analyze the accidents and incidents statistics;
- Receive and analyze the accidents / incidents investigations reports;
- Participate in accidents/incidents investigations and analysis and risk assessments for all job tasks on site;
- Hold a meeting with the Joint Occupational Health and Safety Committee members at least once a month;
- Provide recommendations to Management to resolve Health and Safety issues; and
- Actively and positively promote Health and Safety for all workers, contractors on site.

5. Elements of the program

5.1 Risk identification

Identify all potential hazards from different health and safety activities in place within the Meadowbank and Amaruq site. Among these activities, we find the planned inspections, investigations and analysis of accidents/incidents, close calls, task observations, monthly safety meetings, job hazard analysis (JHA), and the workers comments on their work card.

In addition, periodic meetings are held with all the personnel to complete the list of possible hazards. This process requires the participation of every department and requires an effort from everyone. A listing of possible risks is presented at these meetings to guide workers in selecting potential hazards in their work place. The potential risks are then stored in a tabloid format. Once the list of potential risks is developed, a selection process is started to prioritize the hazards. This prioritization step consists of a consultation process with officials from each department and each committee member of risk management program.

5.2 Prioritization of risks

Prioritizing risks is mathematically based on a prioritization grid containing different risk parameters and control:

Legal requirement

- Site specific
- Extent of risk
- Probability of risk
- Severity of risk
- Risk of fire
- Effect on health as a function of exposure
- Administrative control
- Operational Control
- HR Dimension

Once the list is completed, every department will develop an action plan to address the most significant risks determined in the prioritizing process. In addition, the departments will also have created a list of training needs, a list of critical tasks to be observed and a list of hazards. Job Hazard Analysis will be completed when and where required.

5.3 Revision

The process of identification, assessment and risk control will be revised every three (3) years.

5.4 Activities and Specific Management Programs

5.4.1 Supervision Formula and work card

The Supervision Formula is a philosophy and is the basis for our entire Health and Safety Program, here at Meadowbank.

To meet due diligence, the supervisor must take immediate action on all situations that could endanger the health or safety of the employees. In other words, he must use the "immediacy" to correct outstanding situations and involve the employees.

5.4.1.1 Summary of Supervision Formula

The Supervision Formula is divided into six (6) phases which are:

- Greeting
- Inspection
- Planning
- Decision
- Execution
- Worker's comments

The **Greeting** phase allows the supervisor to discuss with workers on the tasks to be done during the day, list the equipment and tools they may need, check the understanding and above all, arousing all workers to have "a safety minded attitude all the time", followed by a talk about known abnormal conditions reported by the previous shift and the hazards they may encounter during the day.

The **Inspection** phase enables workers and supervisors to inspect the access to the work place, workplaces, tools, equipment to detect any anomalies that could lead to an incident or accident in the short, medium and long term. It also eliminates these deficiencies "immediately" when discovered. The inspection is the most important phase of the Supervision Formula, because at this stage, if we take the time to inspect and correct the deficiencies found, the risks will be minimized or even eliminated.

The **Planning** phase is the logical extension of the inspection, because when anomalies are found, we must define how to correct them. Then the planning of the day's tasks to be accomplished is revised with the employee on how it will be done, what tool and/or equipment to use and the most important part is to identify the specific risks that could be generated and how to control the risks identified.

The **Decision** phase is when the supervisor gives his/her agreement to do the task as planned. Before giving the agreement he/she must make certain that the employee understood him and agrees with the planning, the workplace is up to standard, the tools and equipment are good, the hazards have been identified and controlled, the employee has the training to accomplish the task, and then the supervisor will give the authorization to continue the work.

The **Execution** phase is to accomplish the work as agreed in the planning phase. However, we must remember at this stage to be vigilant at all times, because during the execution of work, we may have to repeat all the phases of the **Supervision Formula** that is: inspection, planning, decision and

execution.

Reviewing the **Worker's Comments** on the work card (at end of shift) is an extremely important part of communication for the incoming shift. This part allows workers to report any anomalies/deficiencies observed during their shift which could affect the health and safety of other workers. Workers also reports broken equipment, missing material etc.

The ideal tool for conveying the supervision formula is:

"The work card"

5.4.1.2 Using the work card

Every day, the employees/contractors receive a work card that they must complete at the workplace before the work begins. Workers notes on the work card the state of the access to the workplace, the work place, material to be used and equipment with special attention to sub-standard conditions. During his/her tour while applying the Supervision Formula, the supervisor approves the continuation of work by comparing the information written on the card to his own observations. Exchanges are done between the employees/contractors at the workplace and the supervisor.

At the end of the shift, the cards are handed by the employees to the supervisor so that he can read the comments and the situation of the work place. The supervisors will leave instruction to the incoming shift.

The work cards are kept in files for a period of one (1) year.

An evaluation on the quality of the work cards used by the employees and supervisors is done on a quarterly basis by the 2nd level supervisors. The evaluation results are then presented to the follow-up Committee of the Supervision Formula.

5.4.1.3 Follow-up Committee of the Supervision Formula

A follow-up committee meets periodically to evaluate the application of the supervision formula and the results of the work card. The follow-up team is composed of members of management and two (2) representatives of the Health and safety department.

5.4.2 The Health Program

The health program is part of the health and safety plan. It identifies some hazards associated with physical or mental health of workers and recommends a series of actions to protect all employees against the hazards in their work tasks or their environment.

5.4.2.1 The Medical Staff (Health Care Providers)

Two (2) registered nurses are present at the Meadowbank mine site, and (1) one nurse is present at Amaruq 24 hours a day, 365 days a year. They are registered in Nunavut territories and have accredited training in trauma (ACLS/TNCC).

To complement the health and safety team, a medical director conducts periodic visits to the mine site. During these visits, the medical director will do the medical examinations required by the legislation.

5.4.2.2 First Aid Emergency

First aid is provided by anyone who is qualified to give first aid. In addition our Health Care Providers provide higher level of treatment when necessary. They can direct the patient to specialized care if necessary. However, several people have been trained and can give first aid. The injured employee if/when transported must be accompanied by a nurse or paramedic in the ambulance or airplane.

5.4.2.3 Trained First aid personnel

First aid training is provided to a sufficient number of workers who are able to respond at all times. To ensure the continuous presence of rescuers/first aiders on all shifts, all supervisors are trained from all areas of the mine site. Furthermore, all Emergency Response team members received first aid training. A minimum of twenty (20) emergency response team members are on site all the time and trained to face every type of emergency.

In addition, some Emergency Response team members are trained to the advanced first aid level.

5.4.2.4 Emergency First Aid Kits

Emergency first aid kits are available in all AEM vehicles and workplaces at different locations on the site. The contents respect legislation requirements. We have MASS Casualty First Aid Supply is in place by entrance to Gymnasium. Our ERT teams are equipped to handle most Emergencies that can occur on site.

5.4.2.5 Registers and accident reports

In case of accident, an initial report is completed by the supervisor with the employee. The original report is then forwarded to the Health and Safety department. When the accident causes bodily harm that requires medical assistance, the Health Care Providers will open a file on the accident and if needed, they will fill out the necessary WSCC claim reports. All medical files are kept at the clinic under lock.

A weekly report is communicated to the management and the accident statistics are tabulated and communicated on a monthly basis to site and WSCC.

5.4.2.6 Clinic

(At Meadowbank site) The clinic is located on the ground floor of the service building adjacent to the Maintenance team offices and shop. (At Amaruq site), the clinic is located in the Exploration camp at far end – West adjacent to the fire hall.

The following equipment is available at the clinic:

- Oxygen and defibrillators
- Examination table

- Eye wash station
- Scale, Bandages
- Medications
- Burn Kits
- I.V. solution
- Material Safety Data Sheets (MSDS)
- First Aid Equipment
- Heart monitoring equipment
- Trauma Supplies
- Multiple Casualty equipment

5.4.2.7 Medical Examinations

Medical pre-employment

Prior to employment with Agnico-Eagle Mines, Meadowbank Division, each candidate must have a full medical examination and a hearing test. The pre-employment medical ensures that the candidate is fit for the job for which he/she is hired.

When hired, the new employee/contractor completes an induction session (e-learning) with different modules. A Health Care Provider explains their programs such as what to do in case of an accident or sickness. Each worker will have a confidential medical record kept under lock in the clinic. Only nurses and physicians will have access to the medical files. In addition, the physician will meet with workers upon their request.

5.4.2.8 Monitoring during an illness or accident

During a prolonged absence from work, the Health Care Provider is responsible for systematically monitoring the health of the worker. If the absence lasts more than three (3) days, the procedures for insurance is undertaken jointly with the worker and Human Resources Department. For absences due to an accident at work, the case is managed with the WSCC.

During a medical visit following an accident, the worker must contact the nurse or his supervisor to transmit the doctor's decision if he has allowed the injured worker to be assigned to light duty work as soon as possible.

To facilitate rehabilitation, the worker is assigned to light duty work until his/her injury is healed. The supervisor is notified of employees' work limitations/restrictions as well as the probable date of return

to regular work. At the clinic, each employee has a separate file for personal sickness and for work related accidents.

5.4.2.9 Medical exam when leaving the company

Every employee leaving the company shall, before his/her departure, pass a hearing test if his last test exceeds six (6) months and be referred to a specialist if required.

5.4.2.10 Health and Well-Being

Our Health Care Providers have included health and well-being information in our employee orientation program and our “Site Readiness” program. When any new employee arrives on site, they will be informed of topics such as sexual health, well-being, mental health, fatigue management, addictions, being “fit for duty” etc.

They will communicate and share with all workers the range of health services available onsite and update it as necessary as new services are available.

Periodic crew meetings with the different departments to inform our employees of our health and well-being services on site.

Brochures are developed and made available to all employees on subject matter.

We have also made available condoms on our site to promote sexual health.

We endeavor to ensure that all brochures are available in English and Inuktitut.

5.4.2.11 Review of Health Program

To audit the health program, an annual evaluation of the program is made by the Health Care Providers.

Any request for modification, addition and revision should be made to the Health Care Providers.

5.4.3 Investigation and analysis program

The investigation program and accident analysis aim to ensure and maintain a process of investigation and clear analysis so that it will:

- Clarify the responsibilities of all concerned parties;
- Ensure the quality of investigation reports and analysis based on criteria established and recognized;
- Identify the immediate and root cause of accidents or incidents;
- Recommend preventive and corrective measures following related events;

- Follow-up preventive and corrective measures;
- Eliminate the hazards and threat to health and safety of workers.

Important Information:

Under the NU – Mines Safety Health Act and Regulations, the employer must inform a WSCC Mines Inspector, as soon as possible (without delay) (ex. by telephone), and, within (72) hours, make a written report with the information required by regulations, regarding the events that have caused:

- Fatal injury to an employee;
- Serious injury to a worker; (as defined by Section 16.01 and 16.02 of NU Mines Safety Health Act and Regulations (Reportable Incident).

Furthermore, the NU Mine Safety Health Act and Regulations states that the inspector must be advised as soon as possible for any Dangerous Occurrence incident as defined by Section 16.01 (within 24 hours). The Dangerous Occurrence final investigation report must be submitted to the Mines Inspector within (72) hours.

At Agnico Eagle Mines – Meadowbank Division, the WSCC mine inspector will be informed by the General Manager, or by the Health and Safety Superintendent or Designate.

5.4.3.1 Procedure for investigation and accident analysis

At Agnico Eagle Mines - Meadowbank Division, accidents are divided into the following categories: fatality, lost time accidents, accidents resulting in modified/light duty assignment, medical aid, first aid, reported incidents, fire incidents, incidents (but no injury) and near miss or close calls.

Depending on the frequency and severity of the situation, some accidents/incidents must be investigated, in order to collect all the information and evidence or facts that cause the accident/incident. This information is used to determine the root causes of the accident/incident and finally, to recommend corrective and preventive measures to prevent its recurrence. The following chart summarizes the accidents that should be investigated.

Fact PARTICIPANTS

Guidelines for assembling persons for the investigation process: always keep in mind the "potential" severity and not the result.

Worker;
Supervisor;
JOHSC Representative
General Foreman;
Dept. Superintendent/Designate
Health and Safety Dept. Rep.
General Manager /Designate (if required)

Worker;
Supervisor;
JOHSC Representative
General Foreman;
Dept. Superintendent/Designate (if required)
Health and Safety Dept. Rep.

Worker;
Supervisor;
JOHSC Representative to review;
General Foreman to review
Health and Safety Department Rep.;

Worker;
Supervisor;
JOHSC Representative to review;
General Foreman (if required);
Health and Safety Department Rep (if required);

** If an investigation is requested*
Worker;
Supervisor;
JOHSC Representative to review
Health & Safety Dept. (if required);
General Foreman to review

Note: All accident/incident reports are to be forwarded to Meadowbank Health and Safety Department!!!

5.4.3.2 Accident report

Steps:

1. Any employee/contractor involved or that witnesses an accident must immediately notify their immediate supervisor or designate of the situation and keep the scene intact or undisturbed to allow time for the investigation, except to prevent further accidents.

2. Any worker involved or witnesses an accident must complete with the supervisor the initial incident report form, as soon as possible after the event but at the very least before the end of the shift.

   Note: The official accident with bodily harm log book is located in the clinic.

3. The immediate supervisor or his designate must immediately notify the general foreman who will notify the health and safety department of the accident. Depending on the severity and/or potential of the accident/incident, the OHSC representative will also be notified by the Health and Safety department or by the Department Management in which the event occurred.

Note: Reportable incidents – (Any incident listed in the "Serious Injury" portion and as described in Section 16.01 of the Regulations must be reported without delay to a Nunavut Mines Inspector and OHSC Co-chairs, by the Manager and/or his designate.
Dangerous Occurrences – (Any incident listed in the "Dangerous Occurrence" portion and as described in Section 16.01 of the Regulations must be reported within 24 hours to a Nunavut Mines Inspector by the Manager and/or his designate and OHSC Co-chairs.
Within 72 hours after a "Dangerous Occurrence" or "Reportable Incident", the Manager and/or designate shall send a report to the Mines Inspector and OHS Committee Co-chairs.

The investigation:

1. When an accident happens, the supervisor shall, if possible, go immediately to the scene of the accident to control the scene and collect the facts of the accident. The scene shall be secured pending investigation and only released after all facts have been gathered. In the case of a "Dangerous Occurrence" and/or "Reportable Incident", the scene shall not be released until the Mine Manager and/or his designate release it and only after consultation with Mines Inspector and OHSC Co-Chairs.

2. The supervisor will evaluate the loss and he will contact the appropriate officials.

A Supervisor or Health and Safety Department representative may demand an investigation for an accident without injury or even a first aid accident in the case if the consequences could have been worst (potential severity).

3. The immediate supervisor or designate will immediately initiate, if necessary, the process of the investigation, if possible, with the injured worker or workers who witnessed the accident. The investigation will be done whenever possible at the scene of the accident.

4. The supervisor fills out the investigation report with, if possible, the injured worker or/and the worker/s that witnessed the accident.

5. The investigation report must be signed and a copy must be sent to the Health and Safety Department as soon as possible. The Health and Safety Department is responsible for forwarding a copy of the investigation to the Manager (as needed) and to the Occupational Health and Safety Committee without delay. A copy of the investigation report must also be reviewed by the OHSC safety representative.

Accident analysis:

An analysis must accompany every accident investigation. This analysis is essential to determine the root causes of the accident and to recommend corrective and preventive measures necessary to prevent the accident from recurring. The analysis includes three (3) major steps:

- Initial analysis of all the information gathered in the investigation to keep only the contributing factors;
- Identification of all the causes and factors that contributed to the accident;
- Separation of contributing factors into two (2) categories:
  - Immediate causes
  - Root causes

The method of analysis:

This method involves taking the consequences as a starting point and looking for causes by asking "Why?" At each step, ask the following question: "Why did it happen this way?"

Each answer must be complete and sufficient to explain the reason the accident happened. If they do not explain it completely, there is/are another cause/s to be determined.

Please find enclosed the steps in completing an accident/incident investigation:

The accident/Incident

Need a complete description of the event, location and who was involved.

↓

Immediate causes

Immediate Causes categories:
- Work practices, behaviors
- Environmental conditions, equipment/material
- Use of protective equipment
- Conditions of protective equipment

↓

Fundamental Root Causes

Fundamental (Root) Causes categories:
- Personal factors
- Organizational factors

↓

Consequences

Results in Injury, Damage to Equipment, Fires, Damage or Spills to Environment, Loss to Process

↓

Corrective Measures

Ensuring good corrective measures will prevent Re-occurrence of accident/incident
Communication of incident/accident is very important as well

↓

Follow-Up

Ensuring that corrective measures are in place, in force and doing what they were designed to do
Sharing corrective measures within the Department and site wide to prevent similar accidents/incidents from occurring again

To do this, the immediate supervisor or his designate must initiate the review process once the investigation is completed. The analysis may be conducted away from the scene of the accident by completing the investigation and analysis formula of the accidents.

Furthermore, it is essential that recommendations and remedial measures following the investigation and analysis of the accident are followed-up for the immediacy of corrective actions.

5.4.3.3 Training in investigation and analysis

Training in investigation and analysis of accident is a must for all supervisors, general supervisors and occupational health and safety committee members. This training aims to provide supervisors and members of the occupational health and safety committee good knowledge, techniques and skills to effectively fulfill their responsibilities outlined by the management team. A refresher course will be given when needed.

5.4.3.4 Review the program of investigation and analysis of accidents, incidents

The accident investigation and analysis program is revised as needed.

Any request for modification, addition and/or revision must be made to the Health and Safety Department.

5.4.3.5 Entry into Intelex – tracking system

All incidents / accidents will be logged into Intelex in a timely manner and incidents will be closed out on a monthly basis.

5.4.4 Inspection of workplace

Objectives of the inspection of the workplaces:

- Eliminate accidents, improve the quality of life, increase productivity and efficiency;
- Protect the health, safety and integrity of workers;
- Identify and correct the situations and conditions that may cause loss;
- Identify non-compliances with the standards in the work areas;
- Develop appropriate remedial action following non-compliances and ensure follow-up.

5.4.4.1 Description of the different types of inspections

General planned inspection:

Systematically inspect one or more areas to check compliance of area, equipment and work environment. Pay attention to the working methods to detect dangerous actions or methods. Good housekeeping is a must.

Specific inspection:

Check one specific aspect following an investigation and analysis of accident/incident, a specific request of the JOHSC, an evaluation of the accident log book or any other situation with a potential of loss.

Daily inspection (work card):

Daily inspection of access, work places, tools, equipment listed on the work card to detect and correct with immediacy sub-standard conditions. This inspection is to be done by worker/Supervisor.

Daily pre-use inspection of equipment:

All users of mobile equipment must check compliance of their mobile equipment and complete inspection card associated with the equipment at the beginning of each shift to ensure that equipment is compliant and it creates no risk to the safety and health for operator and others. Once completed, the cards are stored and kept for a period of one (1) year.

5.4.4.2 Frequencies of the inspections

- **Site General Manager** will plan and participate in general inspections to cover the surface operations as needed (2) times per year.
- **Department Superintendent/Assistant:** must attend a minimum of four (4) planned, general inspections with the supervisors, or general foremen of his department, or area of responsibility.
- **General Foreman** must attend a minimum of four (4) inspections with the supervisors via Supervision Formula and (1) planned inspection per month in area of responsibility.
- **Supervisor** will conduct daily inspections planned in his sector with his workers (as per work card) and occasionally with a member of the Health and Safety Department. Monthly, he and an OHSC rep. will conduct (1) planned inspection in his/her working area.

- **Health and Safety Department personnel: (Health and Safety Superintendent/Assistant and H & S Advisors)** will conduct minimum of (2) inspections per rotation in different areas of the site.

- **JOHSC Representatives** will be invited to participate in monthly inspections with each level of the management team named above in their area of responsibility. Note: JOHSC must conduct one inspection per month as legislated in the Mine Regulations Section 3.19 – 3.22.

- **Worker** will conduct a daily inspection of access, work places, tools, equipment listed on the work card to detect and correct with immediacy sub-standard conditions.

5.4.4.3 Methodology of Inspection

To be effective, the people responsible for the inspection must be prepared, organized and have the right tools. Four (4) steps are necessary to ensure an inspection of quality:

- Planning
- Inspection
- Report
- Corrective actions and follow-ups

Objectives of the inspection report:

- Identify all items inspected (compliant or non-compliant); **(Note: non-compliance must be based and in reference to Mine Regulations, Company Policies/Procedures etc.)**
- Identify the sector and / or equipment inspected;
- Classify risks for each observed deviation;
- Determine corrective action;
- Identify a person responsible for each corrective action;
- Determine a timeframe;
- Indicate the number of the work order and/or completed formulas to apply corrective measures.

Note: the report must be written legibly or typed, saved electronically

Distribution of the inspection reports:

Once the report is completed, participants in the inspection must send the original to the health and safety department. A copy of the report must be sent to the department heads concerned by the inspection and to the manager.

The participants keep a copy of the inspection report and when the sub-standard anomalies have been corrected, they will send a copy of the report with the corrective actions completed to the department heads concerned by the inspection and the safety and health department.

Follow-up of the corrective action:

The responsibility to follow-up the corrective action should be incumbent to those who conducted the inspection. The department head will make certain that the follow-up is completed.

The Health and Safety Department will produce an update on the frequency of inspections and the amount of corrective actions that were completed every month. The report will be sent to the JOHS Committee for review.

Classification and time frame for the corrective measures

Severity	Time frame for temporary corrective actions	Time frame for permanent corrective actions
A) Action or condition that could have resulted in permanent disability, fatality, loss of a limb; damages that created a loss of production and/or material exceeding $50,000	Immediately	Started Immediately and corrections completed within (24) hours following the report Note: if corrections cannot be completed within (24) hours – a plan must be put in place to ensure the health and safety of all concerned.
B) Action or condition that could cause a temporary disability with a duration of more than the day of the accident; damages that created a loss of production and/or material exceeding $10,000 but less than $50,000	Immediately	Started Immediately and repairs completed within (3) days (72 hours) following the report
C) Action or condition that could cause a minor accident necessitating first aid treatment and or a medical assistance without a loss of time; damages that created a loss of production and/or material less than $10,000	Within (24) hours	Started Immediately and repairs completed within (7) days following the report
H) Action or condition that is considered a housekeeping item and if left unattended or not taken care of could result in trip and fall or other injury or damage to equipment or environment.	Within (24) hours	Started immediately and maintained continuously. No time limit to fix, repair or clean up. An on-going effort is required to maintain good housekeeping.

5.4.5 Objectives of management of cutting and welding activities

- **I**dentify the contaminants in the welders' workplace;
- Assess the physical and chemical contaminants in the cutting and welding activities;
- Provide effective lasting controls to ensure health and safety of employees;
- Train and inform employees about the contaminants in their asks and their environment;
- Prevent fire hazards;
- Follow up on these activities;

The risk assessment will be done through field inspection, task analysis and sampling of contaminants on/with the personnel. The sampling methods used are consistent with those proposed by the Institute of research for Health and Safety (IRSST), OSHA and A.C.G.I.H.

5.4.5.1 Information on contaminants potentially released with the activities of cutting and welding

Health effects of certain metals may be present in fumes from welding and cutting

Contaminants	Source or process	Possible effects on the health
Aluminum oxide	Composition of welding rods or aluminum alloy.	Aluminosis: particle deposition forming of fibroids in the lungs.
Cadmium oxide	Silver electrode surface in some alloys and rustproof of the steel.	Highly toxic substance that can cause lung and kidney lesions. Carcinogen.
Chrome	Alloy in stainless steel, rust-proof paint or covering chromed parts	May cause lung damage and asthma. Carcinogen.
Copper	Copper concentrate and copper welding electrodes (brass or bronze).	May cause metal fume fever (fever welders) similar to that of zinc.
Tin	Welding electric wires and copper pipe.	Lungs irritation
Iron Oxide	Ferrous metals and steel, welding electrode, may represent 50 to 60% of welding fumes.	Respiratory irritation, low toxicity dusts of iron oxide, may be due to siderosis.
Manganese	Alloy steel rods and composition of capital.	Irritation of upper respiratory tract attacks the nervous tissue and causes weakness and poor coordination.

Molybdenum	Composition of some steel alloys.	Irritation of eyes and lungs.
Nickel	Metals nickel, stainless steel.	Carcinogen.
Lead	Metals coated with paint containing lead present in certain alloys and metals, coatings and tank armor, welding tin.	Toxic substances that affect blood, nervous tissue, gastrointestinal tract and brain.
Silica	Embedding electrode can be found in welding fumes.	May cause lung damage.
Titanium	Coating of electrodes and in some alloys (ferrovanadium).	Respiratory irritant that can cause fibrosis.

Health effects of certain gases may be present in fumes from welding and cutting

Gas	Source or process	Possible effects on the health
Ozone	Gas with a characteristic odor formed during arc welding resulting from the action of UV on oxygen.	Low concentration: irritation of nose, throat and respiratory tract. Elevated: headache, dizziness, nausea, vomiting, fainting
Carbon Monoxide	Produced by the incomplete combustion of organic matter in the form of plaster, paint or coating electrodes, welding under protective gas (CO2).	Low concentration: headache, dizziness. Elevated: nausea, vomiting, unconsciousness, asphyxia resulting in death.
Nitrogen oxides	Suffocating gas and highly flammable formed during the process of arc welding or welding in shielding gases especially when welding stainless steel.	Low concentration: irritation of eyes, nose and lungs. Elevated: irritation of the eyes, coughing, chest pain, and pulmonary edema.
Phosgene	Irritating gas formed when a flame or heated surface at high temperatures or UV rays of the arc are in contact with chlorinated solvents.	Low concentration: sensation of dryness and burning throat, numbness, vomiting, difficulty breathing. Elevated irritation leading to pulmonary edema, chronic bronchitis, pulmonary emphysema .
Hydrogen fluoride	Formed by heat flux, decomposition coatings (applied on stainless steel), coated electrodes	Low concentration: irritation of nose, throat, nose bleeds. Elevated pain in the eyes and nose, pulmonary edema, burning the skin. Chronic Exposure: disease = bone fluorosis (increased bone density).

5.4.5.2 Reduction at the source

The reduction at the emission point is the most effective way to protect the health of workers potentially exposed to contaminants in the air. It is to prevent the emission of contaminants into the air.

Variants of the welding process must be adjusted to produce maximum performance while reducing emissions of contaminants into the air.

Parameters affecting production of contaminants

Parameters	Consequences
The power intensity	In general, the higher the amperage, the higher the emission of smoke.
The diameter of the electrode	With/when equal current is used: the small diameter electrodes produce more smoke than those with larger diameter.
The tension	The amount of smoke rises in direct proportion to the tension.
The polarity of the electrodes	The welding direct current positive at up to 30% more smoke than welding in direct current negative.
The length of the arc	The longer the arc, the more smoke is produced.
The shielding gas	The type of shielding gas used helps determine the volume of emissions. For example, the volume of emissions can be reduced by 15% to 25% by the addition of argon to carbon dioxide instead of using it in its purest form. Ozone concentrations are reduced significantly when adding nitric oxide gas protection in welding of aluminum MIG.
Substitution	Is characterized by the fact of replacing certain ingredients in the welding electrode by others with similar metallurgical characteristics, but emitting less smoke (ex. replacing an electrode lead with an electrode containing lead and tin).
The cleaning of the surfaces	The surface cleaning (grease, dust, paint, etc.) reduces the emission of contaminants into the air.

5.4.5.3 Means of technical control

Ventilation is the primary means of technical control to reduce the exposure to welders from fumes produced by welding and cutting.

General ventilation:

General ventilation can dilute contaminants dispersing in the work area. General ventilation can be mechanical (fans) or natural (open door). It can be very effective if used in order to remove the contaminants from the breathing zone of the welder.

Local ventilation:

The local exhaust ventilation will capture pollutants as close as possible to their emission sources and remove them from the workplace. Since most emissions occur near the arc, the local exhaust ventilation is more effective than general ventilation. The system of local exhaust ventilation is designed to capture fumes and gases before the welder breathes it. However, the performance of the local exhaust systems may be greatly affected by air currents and the distance between the contaminant source and the sensor arm (90% efficiency at 22 inches).

The extension arms are inspected periodically to determine the system performance. This assessment takes place every six (6) months and is made by the industrial hygienist. The data collected is stored in the log book.

Example of a “smoke eater” as used by welders

Example of an extension arm with a fume captor

5.4.5.4 Respiratory Protective Equipment

The personal protective equipment for respiratory system should be used as a last resort when other means of control are not possible. These personal protection devices must be used according to specifications of the Respiratory Protection Program of the establishment (next section).

5.4.5.5 Other risks related to activities of cutting and welding

Other risks associated with welding, apart from the fumes and gases, are radiation, noise, electricity, sparks, heat and explosions.

Protection against radiation:

The ultraviolet radiation emitted by the welding process can cause eye problems ranging from simple irritation to conjunctivitis. Therefore, eye protection devices (properly shielded safety eyewear) must be worn by the entire welder group and those assisting them in their work, unless protective screens are used and in place.

The presence of shield against radiation is necessary for places where bystanders are likely to be exposed to radiation.

Example of shields against radiation

Tinted goggles (grade 5) may be used for small amount of cutting or brazing with torch (flame cutting) while the face shield should be used for all other types of welding and cutting. Different degrees of protection for the lenses are necessary depending on the type of welding.

The welder must change the protective lenses when they are damaged.

Protection against sparks:

Sparks projected during the cutting or welding can cause burns, fire or explosion. Welders must wear protective clothing (flame retardant) such as Indura soft (like coveralls) at all times while performing

work of cutting and welding. Long non-flammable gloves should also be used. This equipment, gloves and clothing must be changed when they are damaged.

5.4.5.6 Hot Work Permit

Welding and cutting are not permitted without obtaining a Hot Work Permit. Hot Work permits are required whenever welding, cutting or any task where open flames are required such as torch use, tiger torch, whether working inside or outside (except in designated areas such as a welding bay).

On the permit is a list of precautions to be taken. This must be completed by the welder himself/herself before commencing work. It is important that all safety precautions listed on the permit are followed as they are subject to rigorous inspection by the worker. During his inspection, the supervisor approves the continuation of work by signing the permit on the back. When the work is completed, workers must clean up their workplace and conduct a continuous check for fire for 30 minutes and monitor and check the area for a minimum of 2 hours after the welding, cutting or burning activities are finished. The employee that does the final check for fire ultimately signs the permit and gives it to the supervisor. It is kept in a register for a period of one (1) year.

To ensure the strict enforcement of permits for cutting welding, Agnico-Eagle has established an audit program with the following objectives:

- Maintain good standards of application in terms of how to safely perform hot work;
- Ensure compliance of hot work performed;
- Promote the importance of fire protection on the site.

The audits will be held every four (4) months and the results will be compiled in a register.

Fire Extinguishers:

In addition to fire extinguishers located at strategic locations and near building EXIT doors on the site and in buildings, every oxy/acetylene cutting torch set up (fixed) or (dolly) mobile is equipped with a fire extinguisher. Fire extinguishers must always be in working order. An inspection must be made before commencing work. Note: this is part of the “work card” inspection process.

All extinguishers are checked on a monthly basis. Extinguishers on equipment are checked daily as part of the pre-operational vehicle check.

Stop Work:

When welding and cutting are suspended even for a short period of time, welding machines and cutting torches must be turned off, the electrodes must be removed from their rack, valves and equipment for the cylinder compressed gas must be closed and / or stored in a safe place (as defined in the procedure for hot work).

5.4.6 Lock out and tag out

Repairs, installation and verification of equipment powered by electricity or any other energy are always a risk. Each employee must take some responsibility and ensure his/her own safety and that of fellow employees respecting the lock out tag out procedure and ensure “zero energy” state.

The lockout procedure and making a “zero energy” state is part of the prevention program at the Meadowbank Division.

5.4.6.1 Tools

The tools for the lock out tag out have several components. These various types of locks, multiple lock link, lock-boxes, keys, covers valves, chains and labels.

Personal Padlocks and departmental padlock:

Each worker exposed to a hazard that necessitates to lockout tag out must have a “brass” padlock with a single key and identification tag. This “brass” lock will have the owner’s identity on it. Locks for service department cannot be used in a personal way. It is forbidden to lend your personal lock to another person.

5.4.6.2 Zero-energy Procedure

No piece of equipment can be de-energized and locked to zero energy until the workers in the area where the work is to be performed have been told. The supervisor will then allow the employee to stop the equipment. The supervisor involved must make sure to inform all the other employees on the work to be done by the crew.

All contractors must follow the lockout procedure of Agnico-Eagle.

Note: In many areas, there are specific procedures related to certain equipment. Before you lockout inform the supervisor.

Examples: mobile equipment, radioactive devices, overhead crane, etc.

Application of the procedure:

- **Locking out equipment of 750 volts or less**

  When repairs or check-ups requiring a simple lockout, the worker shall, lockout the equipment and check to see if the equipment can start after being locked out to make sure that the equipment is not operational. Lock the master switch on equipment in the off position. It is important that other workers working on this equipment affix their padlocks by using a multiple lockout system. The last hole of the multiple lockout system must be kept to add another multiple lockout devise if ever we must add more padlocks.

- **Multiple lockout equipment of 750 volts or less**

  To accomplish a checkup or repair on equipment, it is required to use multiple lockout system (multiple padlock devices). The qualified person responsible for checking the deactivation or lockout of the equipment must take the necessary amount of locks to ensure through testing by startup of the equipment. He must lockout the master switch on the equipment in the off position and put the keys in the red lockout box by ensuring that the identification numbers of the locks are visible. The lockout box should be locked with a multiple lockout system and locked with padlocks. A lockout tag must be installed and a final start-up of the equipment must be made to make certain that the equipment will not start. All other employees who work on such equipment must affix their locks on the lockbox.

- **Lockout equipment at high voltage (over 750 volts) equipped with knives switch (inside a closed box)**

  All equipment of high voltage with knives switches are identified and require the presence of an electrician to cut the power. He ensures that there is no more energy or power on the line. Then the lockout procedure applies.

- **Lockout equipment of high voltage (over 750 volts) with motorized switches (medium voltage circuit breaker) or aerial disconnect breakers**

  All equipment with high voltage motorized switch (medium voltage circuit breaker) or aerial disconnect breakers requires the presence of an electrician to cut off the power. He must use the specific procedure to accomplish the cutoff of power. Then the lockout single or multiple lockout procedures must be applied.

- **Ensuring zero energy on piping or pressure vessels**:

  Use the single or multiple lockout procedure considering that the energy source is compressed air or steam. Beware of secondary or residual energy that may remain under pressure. Leave the drain valve in case of a leak in the isolation valve.

  Various mechanisms are available to lock the valves of different types: handles, chains, etc. We must ensure that the mechanism is reliable. If in doubt, check with your supervisor.

5.4.6.3 Removing locks from a lock out situation

When an employee must leave, he/she must remove his/her lock. After the work is completed, the equipment must be unlocked in order to verify proper operation. Notify the responsible supervisor that repairs are completed and the equipment is functional.

During a shift change or when an employee must leave before the work is completed and the person replacing him/her has not placed his personal lock, he/she must ensure that equipment is locked by a Departmental padlock with a tag-out informing his replacement to put his padlock on. He/she must also notify his/her supervisor or the job leader. When work resumes, a start test should be performed.

5.4.6.4 Cut padlock security

If an employee forgets to remove his/her lock and that employee is no longer on site or at work, the supervisor or his/her delegate has the authority to cut the lock. This must be done with great care and a good judgment. Firstly, we must try to reach the employee. If he/she can't be reached, we must make certain that the employee is no longer on the site. The **"Lock Removal Form"** must be completed and the procedure in place before cutting the lock. Return the form to the general supervisor of the lockout.

5.4.6.5 Training on the lockout and ensuring zero-energy

It is important to note that the implementation of such a procedure must be accompanied by specific training. Training on lockout and ensuring zero energy aims particularly the employees working on equipment that may be started by others during the repairs.

The training includes the following:

- Legal aspects of standards and regulations lockout;
- Effects on safety;
- Tools;
- Lockout procedure and ensuring zero energy;
- Practical exercises.

5.4.6.6 Review

The lockout procedure and ensuring zero energy is revised annually by the Health and Safety Department and Training Department.

Any request for modification, addition and revision should be made to the Health and Safety Department and Training Department.

5.4.7 Respiratory Protection Program

The objective of the Respiratory Protection Program is to effectively protect personnel working in workplaces where technology controls do not permit or are not sufficient to eliminate the source of contaminants in the air.

This program also aims to help managers to identify ways to control the selection, use, and maintenance of respiratory protection.

5.4.7.1 Risk Assessment

The risk assessment is done by sampling personnel in the workplace. These assessments help to determine the type of respiratory protection and appropriate filters to be used.

5.4.7.2 Means of Risk Control

- **Reduction at the source**

Reduction at the source is the objective of the establishment and is the most effective way to protect the health of workers potentially exposed to contaminants in the air. It is to prevent the emission of contaminants into the air.

- **Control techniques**

  Control techniques are used to vacuum, abate or dilute the contaminant emissions in air. Among these, we find the air ducks, hoods, primary and secondary fan systems to induce the fresh air, dust collectors and sprinklers.

- **Personal Protective Equipment**

  The personal protective equipment for the protection of the respiratory system must be used as a last resort when other means of control are impossible. For respiratory protection, there are several types of equipment. The apparatus of respiratory protection used in Agnico-Eagle Meadowbank Division includes: filter type respirators, cartridge type, air powered (PAPR) and self-contained breathing apparatus (SCBA). According to protective factors established by NIOSH and CSA, these appliances offer different levels of protection ranging from 10 to 10,000 depending on the equipment.

  Information on respirators:

  ✓ **Appliances Air Purification**

  This category includes all half-masks and full face using chemical cartridges or as a particulate filters contaminants. These masks are negative pressure, which is to say that the lungs of the user are the generators of the circulation of air. To meet the requirements, different types of respirators are available in three (3) sizes: small, medium and large.

  ✓ **Appliances Air purification Air powered**

  This category includes mainly helmets or masks complete type of manufacturer 3M RACAL engine which propels the air inside a helmet then filters through chemical cartridges and particulate. Currently, the agencies give this product a protective factor that varies from 25 to 1000.

  ✓ **SCBA:**

  This category includes all full-face respirators equipped with a cylinder of compressed air breathing unrelated to an external airline. In setting, only mine rescue teams, firefighters and some specially trained workers are allowed to wear such equipment. This equipment provides a minimum protection factor of 10 000.

5.4.7.3 Criteria for selecting respirators

The choice of a proper respiratory protection is essential to protect the worker. We must therefore evaluate the following parameters when choosing a type of respirator:

- **Level of oxygen in the air**

  The NIOSH states that "the percentage of oxygen by volume in air at any workstation of an establishment must not be less than 19.5% at normal atmospheric pressure". All respirators Air-purifying approved by the National Institute for Occupational Safety and Health (NIOSH) should be used in workplaces only when the oxygen concentration exceeds 19.5%. Otherwise, the worker must wear respiratory protection equipment independently.

- **Types of contaminants present or potentially present**

  The industrial hygiene department established the physical, chemical and toxicological properties of contaminants, including their concentration, toxicity, nature, condition, the detection characteristics of each and their potential for eye irritation and skin absorption.

- **Intended use of the respirator**

  To make the best choice, workers and supervisors must take into account various environmental parameters and conditions to use a respirator, for example:

  - ✓ workplace;
  - ✓ task;
  - ✓ duration of use;
  - ✓ frequency of use;
  - ✓ effort to the task;
  - ✓ industrial process used;
  - ✓ comfort of the user;
  - ✓ need for mobility;
  - ✓ need for communication;
  - ✓ extreme temperature conditions (very cold or very hot).

FIT test:

Users of respiratory protection must be tested for sealing quality with the respirator. This fit test is required prior to issuing of a respirator.

The fit testing is conducted by the Training Department, Health and safety department or industrial hygiene technician. This training shows the user how to use proper respiratory protection.

Once the initial fit test done (when issuing the respirator), additional fit testing is required only when one has suffered of a facial morphology (ex. scarring, loss of weight, acne, etc.). He/she must be fit

tested again for leakage before using respiratory protection. Those who pass the fit test are logged in a log book.

Example of a quality fit test

5.4.7.4 Training on respiratory protection

It is important to note that the implementation of such a program must be supported by training. At Agnico-Eagle Mines– Meadowbank Division, we have training on respiratory protection. The training aims particularly the users of masks to purify air using chemical cartridges and / or particulate and users of helmet air-purifying (positive pressure). This course covers the selection, use and checking of disposable masks and chemical cartridge.

The training covers the following:

- ✓ Legal aspects of regulations and standards in respiratory protection;
- ✓ Inventory of contaminants and basic rules of industrial hygiene;
- ✓ Health effects of contaminants;
- ✓ Fit Tests;
- ✓ Technical knowledge on the function of all models of respirators;
- ✓ Inspection, maintenance, cleaning and storage of respirators;
- ✓ Practical exercise.
- ✓ Refresher training is also needed each year for workers, supervisors, responsible for the fit testing and the person responsible for checking and cleaning of respirators.

5.4.7.5 Revision of the respiratory protection program

The respiratory protection program is reviewed annually by the Health and Safety Department and Training Department.

Any request for modification, addition and revision should be made to these departments.

5.4.8 Hearing Conservation Program

5.4.8.1 Exposure assessment of workers

In order to identify work areas where noise exceeds 85 decibels (83 dBA or workers, working 12 hour shifts), the exposure of workers by job or workplace, is measured in accordance with CSA Standard Z.107.2-1973 entitled "Methods for measuring sound levels".

Employees with exposure to noise exceeding 85 decibels (A) are included in this program. Wearing hearing protection is mandatory for workers unless the means of source reduction of technical and administrative controls are in place.

The assessment strategy for the noise levels are in the "Industrial Hygiene Program" as well as legal requirements. Assessments must be made when purchasing new equipment or changes in processes or equipment.

5.4.8.2 Identification of noise zones

The areas likely to exceed 83 decibels must be identified with a poster at the entrance area or where there is noisy equipment. The sign identifies the requirement to wear hearing protection.

5.4.8.3 Potential Risks to health associated with exposure to noise

The main physiological risks associated with working in noisy environments are a loss of hearing (temporary or permanent) when exposed to noise without hearing protection. Hearing loss associated with exposure in industrial work will affect the high frequencies. The loss is recognized as an occupational disease when it reaches the thresholds listed in the Regulation on the scale of industrial injuries.

5.4.8.4 Methods used to reduce noise exposure

Management and workers must take steps to protect their health, their safety and physical integrity as required by the Occupational Health and Safety. The reduction at the source and engineering controls are the best means to reduce exposure of workers to noise. If these means do not reduce noise to an acceptable level, then use the personal protective equipment. Any reduction in noise, even a few decibels, reduces hearing loss, improves communication and improves concentration. All sources of noise must be evaluated to determine the appropriate method of protection.

Reduction at the source:

The reduction at the source involves a reduction of noise from equipment:

- ✓ Replacement of equipment;
- ✓ Relocation of noisy equipment.

Technical Means of control:

The technical means of control are expected to reduce workers' exposure to noise by changing the environment in which they work:

- ✓ Modification of vector transmission noise (acoustic insulation);
- ✓ Reduction of the reverberation (absorbent materials for walls and ceilings);
- ✓ Reduced vibration equipment (carpets, preventive maintenance);
- ✓ Changing a method of work;

- ✓ Mufflers.

Means of Administrative Control:

The administrative control is to reduce the duration of worker exposure to noise:

- ✓ Modify the hours of work;
- ✓ Rotate tasks to high and low exposure;
- ✓ Start-up of noisy machines when few workers left the area.

Personal and collective protective equipment:

This is the last possible alternative when the noise reduction is less than the permissible exposure limit after implementing technical and administrative controls. The hearing protectors designed to reduce transmission of the wave to the ear.

The effectiveness of hearing protection varies from one worker to another, it depends on proper protective equipment, fitted and worn during the entire period of exposure to noise.

Types of hearing protectors:

Earplugs: plastic foam Max TaperFit 2 UltraFit, Décidamp2, Ear Caps Caboflex) (category preformed caps);

Shells: passive type deductions with a headband (PELTOR H6b, Peltor H7B) or attached on each side of the safety helmet with headphones (PELTOR HTM7P3E) or without headset (PELTOR H7P3E, PELTOR H9P3E).

Noise abatement related to the hearing protector:

The sealing and acoustical properties of the materials determine the level of protection provided by the hearing protector. The shells form a seal around the ear while the ear plugs are against the wall of the canal. The index of noise reduction from the manufacturer (IAB or NRR (English word is: "Noise Reduction Ratio") is set in ideal laboratory conditions.

It is recommended by NIOSH 1996 (Summary of Appendix B, Methods for Estimating the Adequacy of Hearing Protector Attenuation, in the Occupational Noise Standard 29 CFR 1910.95) in calculating the exposure of a worker on its protection hearing, to deduct a percentage for each specific type of hearing protector. This percentage reduction prepared by NIOSH takes into account the performance offered by each type of hearing protector.

Type of hearing protection	***Reduction percentage***
1. For the shell type	75 % of the manufacture IAB
2. Earplugs	50 % of the manufacture IAB

Taking into account the criteria set by NIOSH, the factor of noise reduction for each type of hearing protector has been calculated.

Indices noise abatement set by the manufacturer for each hearing protector available to Agnico-Eagle to the mitigating factors under criteria modified NIOSH 1996.

Type of hearing protection	IAB (dBA)	(dBA) IAB Modified
Plastic foam plug Taper Fit 2	32	16
Plastic foam plug Ultra Fit	25	13
Plastic foam plug Decidamp	29	15
Plastic foam plug Max	33	16
Plastic foam plug Ear Caps	17	9
Plastic foam plug Caboflex	20	10
Shell *PELTOR H9P3E (yellow)*	23	17
Shell *PELTOR H7P3E (green)*	24	18
Shell *PELPOR H10PE3* (*black*)	27	20
Shell *PELTOR H7B (green for helmet)*	22	17

Note: The attenuation factor (IAB) proposed by type of protector is conditional to constant wearing of the protectors during exposure.

Medical Surveillance:

An audiogram is conducted for all employees as follows:

- ✓ Every employee working where the noise levels exceed 83 dB is required to pass an audiometric test every three (3) years;
- ✓ Employees and the clerical employees are required to pass an audiometric test every five (5) years or as needed;
- ✓ All employees leaving the company shall, before departure, have an audiometric test completed;
- ✓ In the hiring process, a person must pass an audiometric test.

5.4.8.5 Training Information

Training is mandatory for all workers likely to work near a source of noise. This training consists of the following:

- Regulations;
- Responsibilities of employees;
- Effects on health over the hearing capacity and the body: short and long term;
- Source reduction;
- Control methods: technical and administrative;
- Hearing protection equipment selection, maintenance and use;
- Meaning of posters;
- Audiogram.

5.4.8.6 Hearing Conservation Program

The program for hearing protection is revised as needed by the Health and Safety Department.

5.4.9 Confined Space Management Program

The program management to work in confined space remains an important reference tool for all supervisors and workers involved in supervising and working in confined spaces area. Depending on the nature of work and the nature of the confined spaces, the risks will vary. It is the responsibility of the supervisors and workers to ensure that all preventive measures are taken when there is work to be done inside a confined space area.

5.4.9.1 Definition of a Confined Space:

“Confined Space” means a tank, process vessel, underground vault, tunnel or other enclosure that is not designed or intended for human occupancy and that a person would only enter if there were work to be done.

5.4.9.2 Assessment of potential hazards in confined spaces

Atmospheric Risk:

Confined spaces are regular atmospheric hazards that make the air unsafe to breathe for the worker. Whether a lack of oxygen, super oxygenation, the presence of flammable or toxic gases, all of these conditions pose a significant risk to the worker and should be considered before entering inside a confined space.

Physical hazards:

Physical hazards potentially present in a confined space are numerous: there is a restraint entry or exit, a dangerous work area, a risk of engulfment, mechanical parts in motion, the presence of electricity, heat or cold, noise or poor visibility.

5.4.9.3 Preventive measures

Ventilation:

For some cleaning, welding, cutting, fabrication of fiber glass, sandblasting abrasive and solvent use, ventilation must be provided before and / or during the task is being done. The duration of this ventilation vary depending on the nature of work, the size of confined space and movement of natural air flow inside the confined space.

The natural or mechanical ventilation of the confined space must be done to avoid exposing other workers to contaminants. Therefore, the breathing of the air should be prioritized in certain activities (ex: welding and cutting activities).

Lock-out and tag-out the energy:

The lockout procedures and ensuring zero energy must be followed. In addition, some confined spaces, must be completely isolated by disconnecting, purging and sealing of all supply lines.

5.4.9.4 Entry Permit Confined Space

The entry permit for confined space is a written authorization indicating the location, staff involvement, hazard identification and control for a given enclosure. This is only valid for a period of 12 hours of uninterrupted work.

The permit must be completed before the start of work by a qualified person and it applies only to a single workstation. The permit must remain in the workplace so that work is ongoing and when the job is completed, the permit must be return to the Health and Safety Department.

If environmental conditions change in the environment or the execution of work, the permit must be corrected and the testing methods must be reassessed.

5.4.9.5 Opening an confined space at high risk

The opening of the confined space must be performed with appropriate respiratory protection. The specific list of confined space for each department indicates adequate protection for the contaminant found in the enclosed space.

However, when the concentration of contaminants inside the confined space is unknown, it is considered highly dangerous to life and health. The opening of the enclosure must be done with maximum care and if necessary, with a self-contained breathing apparatus.

Evaluation of the air inside the confined space:

To evaluate the quality of air we must:

- ✓ Check the quality of air with an appropriate instrument that measures gas and of oxygen, and this even before opening the enclosed space;
- ✓ Assess the quality of air near the opening by inserting the sampling probe inside the confined space. This step is essential when you suspect the presence of toxic or flammable gases;
- ✓ Assess the entire volume of air inside the enclosure to verify the presence of heavy gas, light gas and neutral gas.

5.4.9.6 Confined Space Training

It is important to note that the implementation of such a program must be accompanied by a sustained training.

It is prepared primarily for workers, supervisors and project leaders who are likely to work in confined spaces.

The training Recognition of confined spaces:

- ✓ Responsibility of all parties;
- ✓ Risks associated with confined spaces;

- ✓ Risk assessment;
- ✓ Preventive measures put in place for every task in confined spaces;
- ✓ Entry permit;
- ✓ Emergency procedures;
- ✓ Tools;
- ✓ Assessment of air quality.

A refresher training course will last approximately two (2) hours and will be given if required to the workers, supervisors that were previously trained on confined spaces.

5.4.9.7 Review of Confined Space Management Program

The management program for confined space work is revised as needed by the Health and Safety Department.

Any request for modification, addition and revision must be made to the Health and Safety Department.

5.4.10 Fall Protection

5.4.10.1 The safety measures against falls from height

Falls from heights or in dangerous openings account for (40% of injury cases); they can and usually cause serious injuries.

The legislation states that all workers must be protected against falling when exposed to a fall of more than 3 meters from a working position;

- when he may fall into a liquid or a hazardous substance, on moving parts, on equipment or materials presenting a danger;
- if exposed to a fall of over 1.2 meters using a vehicle.

Agnico-Eagle Mines – Meadowbank Division endeavors to reduce at the source instead of using other means. But, if this is impossible, here are other preventive measures that are used to ensure the safety of workers:

Guard Rails:

Guard Rails is the means of protection most appropriate for protecting workers against the risk of falling. There is a fence along the opening that restricts the movement of workers and ensures that he/she will not be exposed to a free fall. The guardrail must be placed alongside of an elevated floor, roof, a platform of a scaffold, stairway or ramp, around an excavation or any other place where a worker may fall:

- in water;
- from a height of 1.2 meters or more if he is using a vehicle;
- from a height of 5 meters or more of a perimeter roof and 3 meters in other cases.

They are made of various materials and must meet minimum strength and built as stipulated in the safety Code for construction work. On the site, the majority of the railings are fixed permanently. They are inspected periodically.

Warning: The installation of guardrail must always be made with a full body harness

Fixed ladders:

Fixed ladders are used to replace the stairs. They must be strong enough to withstand a weight of 90 kg in middle of a rung and exceed the upper tier of at least 900 mm. Finally, fixed ladders must be equipped with guardrails surrounding the floor opening with a removable rigid barrier (not chain) giving access to it.

Ladder Safety Training:

All persons working at Meadowbank must have ladder safety training as delivered by the Training Department.

3-Point contact should be practiced and followed at all times when ascending and descending any equipment, staircases, ladders, basically any place where handrails are provided – use them.

- All ladders are to be inspected before use
- Always use the 4:1 rule when setting up a ladder – i.e.: 4' rise X 1' from the wall or structure that you are putting the ladder against
- Always secure extension ladders
- Always have a minimum of three rungs extending past the landing or exit point off of ladder at top
- Never use a conductive type ladder near electrical installations

There are many types of ladders in use at our operation. Extension ladders, folding ladders, straight ladders, and they come in assorted sizes and lengths.

5.4.10.2 Personal Protective Equipment

Safety Miners' Belts

When a safety belt is made available to a worker, it can be used in combination with a lanyard to limit the movement of the worker or to keep him/her in his/her working position and this for all workers working near an opening where a (3) meter or greater fall can occur.

Caution: The miners' belt cannot be used as personal protective equipment to stop the fall of a worker. In other words, the safety belt is used to prevent workers from reaching the point of fall (ex. Dangerous openings or shafts).

Safety Full Body Harness

Wearing a Full Body safety harness is mandatory for workers exposed to a fall of more than three (3) meters (9.8 feet) from his working position.

The full body safety harness is used with an energy absorber which is connected to a lanyard not

allowing a free fall of more than 1.2 meters (3.9 feet) or a retractable lifeline (also known as SALA BLOCK name) which includes the energy absorber.

Safety harness

Wearing a safety harness is mandatory for workers exposed to a fall of more than three (3) meters (9.8 feet) from his working position.

The safety harness is used with an energy absorber which is connected to a lanyard not allowing a free fall of more than 1.2 meters (3.9 feet) or a retractable lifeline (also known as SALA BLOCK name) which includes the energy absorber.

All persons required to use Fall Arrest Equipment – must have training in good standing.

Only harnesses classified class A (according to CSA-Z259.10) with straps for shoulders and thighs are used on the site.

Warning: *It is strictly forbidden for a worker to reuse a safety harness and energy absorber which was used in a fall. It is the responsibility of the worker involved in the fall to discard the equipment and send it to garbage.*

Energy absorber:

The shock absorber is actually a breaking device which must always be part of a safety harness, and this, in order to absorb the shock that the employee would have in cases of a free fall.

We have (2) types of dampers. The conventional damper comprising a pouch containing various types of energy absorbers and terminal loops and the lanyard shock absorber provided with an outer envelope longer than the inner part.

Lanyard:

We use two (2) types of lanyards made of synthetic fiber with or without shock absorbers built.

The lanyard without damper is always accompanied by a miner's belt and can be used as equipment used to arrest a fall. The lanyard with integrated shock is always accompanied by a safety harness and shall not permit a free fall of over 1.2 meters.

Furthermore, all lanyards shall be provided with a hook with a safety self-latching latch.

Anchor points:

The attachment point for the lanyard to a safety harness or safety belt shall be:

- Anchored to an element having a rupture capacity of a least 18 kilo Newton (4046.6 pounds);
- Attached to an approved slide line;
- Attached to a system of horizontal lifeline and anchorage, designed an certified by an engineer, certificate available on the mine site

Inspection before use of anchorage systems fall arrest is essential for the safety of the worker.

Every anchor point that was involved in a fall arrest must be re-checked and certified by an engineer.

Horizontal lifeline:

The horizontal cable is a steel cable with a diameter of 12 mm released at an angle less than 5 degrees from the horizontal and the distance between anchors points shall not be greater than 12 meters. The anchors points of a horizontal lifeline shall have a rupture capacity of a minimum 90 kilo Newton (20,000 lbs.) and cannot be used by more than two (2) workers simultaneously. The cable clamps must be tensioned using a torque wrench as specified by the manufacturer.

Any lifeline involved in a fall must be changed or re-certified by an engineer.

5.4.10.3 Training on Fall Protection

Training sessions and information are conducted periodically by training department with the collaboration of the health and safety department. The objective of this training is to train and inform about collective and personal protection in place to protect the health and safety of workers working at heights.

Workers participating to this training are documented stating the type of training, names of participants, name of contact person and the duration of the meeting. Monitoring of these meetings is to periodically respond to demands for improvement from participants. This monitoring is the responsibility of the training department.

5.4.10.4 Revision

The fall protection program is revised as required by the Health and Safety department in collaboration with all departments.

Requests for amendments, additions and revisions should be made to the Health and safety Department.

5.4.10.5 Site Management

Good housekeeping can eliminate some hazard related to the workplace and minimize the tripping hazards. In fact, if we tolerate the presence of debris and spills, it becomes easy to overlook serious risks.

In addition to basic cleanliness, good housekeeping requires that work areas are clean of debris and that the floors and hallways do not pose a risk of slipping or tripping. We must include demarcation areas, demarcation of travel ways and pedestrian crossings. The lack of storage space could be critical to maintain good housekeeping. Good housekeeping of the premises must be maintained all the time.

To achieve this, Agnico-Eagle Mines– Meadowbank division will have the resources to improve and maintain housekeeping on its site, and this, through the Supervision Formula and the work card. Furthermore, planned inspections under the theme "Hazard and Housekeeping" occur systematically in each department and this on an ongoing basis.

Waste Disposal:

The waste must be collected regularly to ensure good housekeeping of the site and to facilitate the recycling program in the waste management program. Leaving waste materials accumulate, becomes a waste of time and energy because we must go back and take the time to do the cleaning. In order to encourage and facilitate the removal of debris, containers are placed near the working areas. All waste containers are clearly identified (ex. glass, plastic, metal, etc.). To ensure compliance to this element, the environment department makes regular inspections, writes reports to the department that was inspected and makes a follow-up for the corrective actions.

5.4.11 Management of Sulphur Dioxide (SO2)

5.4.11.1 Means of Control

Preventive maintenance
In order to minimize the risk of dispersion of SO2 in the environment in the workplace, facilities are thoroughly inspected and all employees assigned to maintenance of the system receive specific training.

Several stationary SO2 gas monitors are strategically placed throughout the process plant and SO2 Plant to ensure everyone's safety.

Personal Protective Equipment
In accordance with the respiratory protection program for the selection, testing, maintenance and inspection of respirators, the following provisions apply in the presence of sulfur dioxide gas:

Sulphur dioxide in the AIR	Types of respirators	Comments
0-2 ppm	*No protection needed.*	*Concentration is lower than the prescribed threshold limit for 8 hours*
2 –20 ppm	*A cartridge half mask with sulphur dioxide filters*	

20-100 ppm	*Full-face mask with sulphur dioxide cartridge.*	*Eye irritation at 20 ppm and over*
100 ppm et plus	*A self-contained breathing apparatus*	
Emergency entrance with unknown values	*A self-contained breathing apparatus.*	

5.4.11.2 Training Information

Each year, a reminder is provided to all workers and supervisors who may perform work in the presence of sulfur dioxide.

5.4.12 Cyanide Management

In case of leakage, it evaporates rapidly producing a toxic gas lighter than air, hydrogen cyanide (HCN), a colorless gas smelling of bitter almonds.

5.4.12.1 Means of Control

Preventive maintenance

To minimize the risk of spreading the cyanide into the environment and in the workplace, facilities are thoroughly inspected and all employees assigned to maintenance of the system receive specific training.

Personal Protective Equipment

As explained in the respiratory protection program for the selection, testing, maintenance and inspection of respirators, the following provisions apply in the presence of cyanide

HCN Concentration in the air	Type of respirators	Comments
0-10 ppm	*Do not need a respirator.*	*Concentration is lower than the permissible maximum for 8 hours*
10 ppm et plus	*SCBA needs a self-contained breathing apparatus*	*Maximum value permissible for 8 hours*
Emergency entrance with unknown values	*Must enter with a self-contained breathing apparatus*	

HCN detection and alarms:

Gas sensors positioned at strategic locations to ensure plant reliability. These are calibrated periodically with standard gases of known concentration and the results of these calibrations are recorded in the register provided for that purpose and kept at the mill.

5.4.12.2 Training

All persons working with Sodium Cyanide must have received the mandatory Cyanide Awareness Training. This training will cover such topics as: what PPE is required, how to use and manipulate sodium cyanide totes, first aid procedures in the event of exposure, proper hygiene and cleaning practices that should be followed to prevent exposure etc.

Each year, a refresher course is given to all workers and supervisors that may have to work on the cyanide system. They must be able to easily recognize the warning signals and be fully aware of procedures to follow in case of alarms. They must also know the emergency plan and have conducted drills with their crew.

Under WHMIS, workers, supervisors and guardians officers are also informed about the use of cyanide (and hydrogen cyanide) and first aid measures in case of overexposure.

Finally, employers and workers concerned are trained for respiratory protection.

5.4.12.3 Dealing with Ammonia

Ammonia is a by-product gas produced by the Electro winning of Gold in the carbon stripping process in the Plant. There are stationary Ammonia gas monitors strategically located in the process plant to ensure everyone's safety.

Stationary gas monitors are in place for all gases that may be produced in the process plant. The control room operator monitors the gas readings on a 24/7 basis. If there is a release of gas in any area of the process plant, the gas monitor will alarm and the control room operator will proceed with the safe procedures for evacuating the mill and/or have the area checked out by competent trained persons.

Proper PPE such as SCBA's, portable gas monitors are provided for trained persons to do so.

5.4.13 WHMIS Review and Training

5.4.13.1 WHMIS 2015 training

All new employees and contractors will receive Workplace Hazardous Materials Information System (WHMIS 2015) training during their induction at Meadowbank site.

WHMIS 2015 training is mandatory for all employees and contractors no matter if the employee and contractor have received it in the past.

Refresher training is available on a yearly basis in the form of a safety meeting huddle and/or as requested.

5.4.13.2 SDS sheets

A "product review form" is used for all new products coming to site. This form is filled out by the Department requesting the new product.

The SDS sheet is then attached to the "product review form" and is sent to Health and Safety Department.

The "product review form" and SDS sheets are reviewed and signed off by:

- Health and Safety Department
- Environmental Department
- JOHS Committee Representative, and
- Purchasing Department

Once the "product review form" and SDS has been reviewed and signed by all concerned, the SDS sheet is then entered into the Maetrix Electronic Binder Online service by the Health and Safety Department?. From this point on, the SDS Online service is responsible in ensuring that the most up to date SDS sheets for products are kept on file.

This is the icon that is on all AEM computers which when used will access all of our SDS sheets.

Hard copies of SDS sheets are kept on file in the clinic (First Aid room) and the Warehouse.

5.4.14 Induction to Site

5.4.14.1 Emergency Measures Induction

All new employees, contractors, and visitors arriving at site for the first time receive an Emergency Measures Induction. This induction occurs on the same day as the persons arrive @ 5:00 p.m. and is delivered by a Health and Safety Department Representative.

Topics covered during the Emergency Measures Induction:

- Fire Alarm and Evacuation Route
- Muster Stations and how to access – physically shown locations
- How to initiate a "Code 1" Emergency on radio and/or telephone
- What to do if you get injured – how to access Medical help (location of clinic)
- Wearing of slippers to keep camp clean
- Kitchen/cafeteria hours
- Confectionary store – access and hours
- Mandatory Induction Training to site (Saturdays and Sundays)
- Agnico-Eagle Mines – Meadowbank Division – Emergency Response Capabilities
- How to access Security on site – (lost keys etc.)
- Working language @ Meadowbank is English
- Blasting in Open Pit mine – Noise and shaking – Blasting info etc.
- Noise and Respect for neighbors in Camp dorm room and wings
- Smoking Policy – where smoking is permitted – legislation

- Dry camp – No drugs or alcohol permitted on site
- Food and wildlife issues – no food outside and in domestic garbage
- Safety items such as using Man doors and not large garage doors to access buildings
- Danger / Caution Tape rules and respect for such
- Tagging in or signing in to access the Mill – Mill Evacuation procedures
- Respirator mandatory use in Mill, Crusher Buildings, Some areas of Assay Lab
- PPE zones and requirements for site
- Recreational walking/running on site
- Use and location of telephone booths
- Wireless Internet services
- Laundry facilities
- Use of gymnasium – physically shown location and equipment
- Review use of Fire Extinguisher
- Luggage – Tags – Check Out Time
- Health Services that are available on site such as sexual health, well-being (The clinic discusses these topics at the end of the induction, where the employees fill their medical forms.)

5.4.14.2 Mandatory Induction Training

The following topics are covered in great detail during the mandatory induction (e-learning) here @ Meadowbank. All employees, contractors (who will be at site for longer than 15 days) will receive this training prior to arriving at the site.
General Induction – (includes the following: Human Resources, Camp, Security, Environment, Health and Safety, Clinic – Health Care Providers) Each of these groups give an overview of what persons can expect from them, rules to follow, expectations etc.)

- Fire Extinguisher safety and use
- Workplace Hazardous Materials Information System – WHMIS
- SOP Surface – Driving anywhere on surface but not in the Pit or Mine
- Stairs and Ladder Safety
- Job Hazard Analysis
- Work Card (as per Supervision Formula philosophy)

5.4.14.3 Other Training provided

The following training is provided by our Training Department on an on-going basis and/or upon request. This list is not all inclusive but rather a general breakdown on some of the more common type of training that occurs at our site.

- SOP Mine – Driving in Pit and/or Mine – a person requires SOP Surface before he/she is eligible to be trained in SOP Mine.
- Aerial Work Platform
- Backhoe Operation
- Forklift Operation
- Telehandler Operation
- Over Head Crane Operation
- Lock Out / Tag Out Safety
- Fall Protection

- Confined Space
- Skid Steer
- Respiratory Protection
- Standard First aid – CPR – Oxygen Therapy
- Mill Induction

5.4.15 Emergency Response Program

5.4.15.1 Selection of Candidates

Person(s) wanting to become part of Meadowbank's Emergency Response Team may do so by filling out the application form and submitting it to the Health and Safety Department. Person(s) with previous experience in Emergency Response, Mine Rescue, Fire Fighting, Ambulance, First Aid, etc. are encouraged to apply.

5.4.15.2 Medical Evaluation

All person(s) wanting to be an active member of the Emergency Response Team must undergo and pass a Medical Evaluation. This medical is conducted by our Health Care Providers and results are sent down to our Medical Director who will review and advise accordingly.

5.4.15.3 Basic Mine Rescue Training

All person(s) who have completed and passed their medical evaluation will receive Basic Mine Rescue training. Training is of 40 hour duration and involves:

- Introduction: Principles, Requirements and Certification
- Mine Rescue Operations: Emotional Stress, Personal Safety and PPE, Team Procedures
- Mine Gases: Recognition, Effects and Treatment, TLV's, Hazards, Gases and Chart
- Gas Detection and Equipment: Introduction, Gas detection pumps and tubes, Electronic Devices
- Oxygen Therapy: When, The oxygen unit, Safe Practices, Storage and Handling
- Electrical Safety: Basic Facts and Hazards, Potential Injuries, Safe Approach and Lock Out / Tag Out
- Rescue Rigging: Introduction, Webbing and Rope, Equipment, Knots.
- Fire: Safety, Ignition Temperatures, Combustion, Fire Phases, Ventilation, Fire Habits, Fire Extinguisher. Fire-Fighting and PPE
- Respiratory Protective Equipment: Introduction, Hazards, SCBA, Donning, Doffing
- Rescue Rigging: Harnesses, Lowering, Anchoring, Packaging Systems and Shallow, Slope Rescue
- Special Hazards of Winter Conditions.
- Rescue Operations: Tools, Airbags, Winching, Vehicles, Buildings and Cave Ins
- Scene Assessment and Incident Command: ICS, Activation, Team, Classifications, Scene / Hazard Size Up / Zones
- Team Practical: Fire Drill Exercise, Equipment Donning, Searching
- Team Practical: Rescue Rigging, Repelling
- Final Evaluation and Written Exam

Upon successful completion of the Mine Rescue course – the individual will receive a Certificate from WSCC.

At the present time, we have three qualified Mine Rescue Instructors at site.

5.4.16 Critical Procedures

5.4.16.1 The Critical Procedures

- The Fundamental Critical Procedure
- Fit For Work
- Lifting and Mechanical Handling
- Working at Heights
- Permit to Work
- Energy and Machinery Isolation
- Confined Spaces
- Water Bodies and Liquid Storage
- Chemicals and Hazardous Substances
- Surface Mining
- Mobile Equipment and Light Vehicle
- Equipment Guarding

The Critical Procedures are designed to explain how we the Meadowbank Division will operate safely while conducting tasks associated with these rules.

Each Critical Procedure will have policies, procedures, standards and training associated with them, which helps our workforce to safely conduct work related to the rule.

5.4.17 Environmental Spills / Wildlife

5.4.17.1 How to Handle Spills

Any person noticing or causing a spill shall:

1. Stop the activity causing the spill
2. Contain (avoid spreading)
3. Decontaminate
4. Segregate – soil/snow – use pads, or booms
5. If larger than 100 liters – Call the Environmental Dept.: ext. 6747, 6728, or Radio channel 9.
6. Complete an Environmental Spill Report and give to Environment Department

5.4.17.2 How to Handle Wildlife

1. Make no sudden moves
2. Find a Safe shelter
3. Call Environmental or Security Department – Environmental (6747, 6728 or Radio channel 9), (Security 6748, 6817 or channel 9)
4. Do not provoke animals
5. Do not feed animals
6. Do not liter

7. Properly dispose of your food waste
8. Beware of animals while driving
9. Report all animal sightings – date, time, specific area, number of animals etc.

6. Review of Health & Safety Plan

On a yearly basis, the Health and Safety Department will produce a Health and Safety report. The purpose of this report and analysis is, among others, to reveal a tendency on the type of accidents that occur most often and to reveal the root causes behind these events, and this, in order to establish action plans for the coming months.

The results are presented to the Joint Occupational Health and Safety committee and the management team to assist them in their future goals. It must contain the following aspects:

Health Section:

- number of injuries and incidents;
- frequency of events
- severity of events;
- part of the body injured:
- type of injury;
- nature of injury;

Safety Section:

- root causes behind the events;
- main immediate causes behind the events;
- equipment involved in the events;
- time of day when events occur;
- sequence of work where events occur;
- trade affected;
- seniority workers to the task when an event occurs;
- event involving a fire hazard;
- comparison to previous years;

To be reviewed by Management and the OHSC on yearly basis.