Comments on the Draft Tailored Impact Statement Guidelines

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The Impact Assessment Agency of Canada (IAAC), in its Draft Tailored Impact Statement Guidelines has provided a thorough list of most of the aspects needed to ensure that Kinross's Great Bear Gold Project will be 'climate change ready'.

Section 13 – Effects of Potential Accidents or Malfunctions

In Section 13.1, Risk Assessment, the proponent must 'provide an explanation of how these events were identified (e.g. information sources, recognized risk assessment methodology, professional expertise, similar project, participants' input)'. Overall, the points that are elucidated by IAAC in Section 13.1 – Risk assessment, are very comprehensive, requiring the identification of risks from any accidents, specifically, should they occur in close proximity to the mine site.

Similarly for Section 14, Effects of the Environment on the Project, the same process should be applied. The same detail should be expected when the 'Effects of the Environment on the Project' are reviewed and analysed and written.

Section 13.2 Mitigation Measures

The various types of severe weather events, especially those brought on by climate change, point to the urgent need for rapid mitigation plans that are versatile and timely. Obviously, prevention and proper, priorly set up mitigation plans have the possibility of lowering the impact of any particular climate event. The mitigation measures itemized in Section 13.2 Mitigation Measures in the Draft Guidelines are quite thorough taking into account all potentially affected parties.

Section 13.3 Emergency Management

Detailed descriptions for Emergency Management, as required by the Agency provide for the many and varied contingency plans. Existing municipal level emergency preparedness plans are essential prior to catastrophic events. The first responders will be the quickest on site. These plans must be in lockstep with provincial and federal plans in terms of need for coordination, depending on the size, scope and temporality of the event.

Section 14. Effects of the Environment on the Project

In the last few years, the increase of wildfires, specifically in these remote areas, in scope and length of the wildfire season and intensity of fires, time of the season, makes it a very high priority for emergency preparedness.

Access for firefighters, or any kind of emergency response team requires adept planning, and should be an integral part of any mining operation.

Outreach to those most directly impacted and involved with emergency preparedness systems must be done in advance, akin to fire drills, to better prepare all involved, not just the first responders.

This planning takes place at all three levels of government, federal, provincial and municipal. Coordination is imperative to have a smooth and effective response for any given emergency.

For Kinross as well, any unimagined consequences of a flood or wildfire on their mining territory could be catastrophic. A flood or wildfire may be an event that is not that frequent but if it occurs its consequences would be catastrophic, particularly if not planned for appropriately. Therefore imagined scenarios would be the best approach in these changing climatic conditions.

To add to the requirements that must be provided by the proponent: Requesting descriptions and risk assessments that consider multiple scenarios is essential but providing the underlying methods of how their assessments were done, with ensuing results, and with explanation of how they arrived at their modelling results would be important. How and why the proponent chose their method should also be ascertained.

Identifying the Potential Effects of the Environment on the Project

The process of identifying all of the potential hazards should be based on the physical components of the project itself intersecting with the natural components. The best example of this has been to use a geo-referenced database identifying all of the stream and river crossing points and vulnerable potential flooding zones in close proximity to the mine site and components on the mine site. This same methodology can be used for all of the most vulnerable ground and water zones.

This would prioritize the areas that require the most urgent attention resulting from climate change related events for one, as well as other potential malfunctions resulting from events other than climate change such as malfunctions and/or accidents.

Again, the same methodology using a geo-referenced database for wildfire risk should be utilized. There should be a comparison of historical and recent wildfire maps of Northern Ontario to identify forest zones that are in close proximity to the mine site that put that area at the highest risk.

In the event of an uncontrolled wildfire that approaches the mine site many of the by-products of the mining processes at the Great Bear Gold Mine are at risk of burning and releasing toxics into the environment.

Mapping of all of these locations on the site in conjunction with mapping of the forest cover that could potentially burn depending on unpredictable wind patterns, despite these wind patterns being carefully monitored with respect to wildfires, is essential.

Add to this list of changing weather patterns due to climate change that can affect mining projects, an increase in Canadian tornados in Ontario. This is something to consider in light of the devastating effects that could result.

A quote from a recent article of June 6, 2024 on this study:

"*Canada's tornado alley is shifting east according to Western University's Northern Tornadoes Project (NTP) which has tracked and investigated how many tornadoes are hitting Canada to improve awareness and better predict severe weather.*

Since 2017, Western University's Northern Tornadoes Project (NTP) has tracked and investigated how many tornadoes are hitting Canada to improve awareness and better predict severe weather. Using statistics from 1980, Quebec ranks fourth in the country for tornadoes after Ontario, Saskatchewan and Alberta. But over the past decade, there seems to be more tornadoes happening in Ontario and Quebec and fewer in the Prairies, said NTP executive director Dr. David Sills."

https://www.cbc.ca/news/canada/montreal/tornadoes-quebec-ontario-preparedness-1.7225633

Section 7.1. Baseline methodology

Most importantly, the choice of where baseline data should be collected is of highest importance. After a thorough analysis of data, the locations used as the baseline data show quite high concentrations to start.

If the baseline data is contaminated, as often is the case when exploratory drilling has been undertaken, it follows then that the modelling done for clarity on the impacts of climate events will not be as accurate as it could or should be. The predictive impacts will possibly be inaccurate. Therefore a true and more representative baseline must be found, further away from the proposed mine site.

The information in the attached Word document 'Borehole Drilling Muds and Surface Water Contamination Risks at the Great Bear Gold Project', provides an insight into these issues and is provided to ascertain consideration of where the problems arise from the currently used baseline.

In conclusion,

All of these aspects have been looked at from a geo-referenced ArcGIS review. As well, Landsat satellite imagery has been used for even more up to date predicted conditions that can be/are analysed depending on the conditions at any given time. Using these geomatic tools has allowed for a perspective that will inform the details of the emergency preparedness plan that Kinross will provide as the Draft Guidelines become finalized Guidelines. The guidelines should state the model used and present the iterations of the results of the model.

The 'Effects of the Environment on the Project' intersect with all the other components, Risk management, Emergency management and Mitigation measures. They are all interconnected in one way or another. Consideration of this interconnectedness will instruct and inform the best decisions and follow through possible, to bonify the Great Bear Gold Project.

The earlier on in the planning stage of this project these considerations are formulated, the higher will be the subsequent success in arriving at the most appropriate preparedness plans that can be devised.

References or Sources used for these comments

CanVec data was derived from the Canadian Federal Government's website, Geospatial Data Extraction tool

GeoHub Ontario - Geomatics - consists of products, services and tools involved in the collection, integration and management of geographic (geospatial) data.

Land Information Ontario (LIO) data was also cross-referenced with the CanVec data

Google Earth Landsat Copernicus satellite imaging