

Meeting Report on the Issues Scoping Session of Tyhee NWT Corp's Yellowknife Gold Project Environmental Assessment

Time of Session: 9:30 am

Date of Session: June 22, 2005

Location: Community Hall, Dettah, NT

In attendance:

Hugh Wilson – Tyhee NWT Corp

Ken Weagle – EBA (Consultant for Tyhee)

Lionel Marcinkoski – INAC Environment and Conservation

Rachel Crapeau – Yellowknives Dene First Nation (YKDFN) – Lands and Environment Committee

Louie Azzolini – Consultant for YKDFN Lands and Environment Committee

Leo A. Betsina – YKDFN Dettah

Isadore Tsetta – YKDFN Dettah

Michel Paper – YKDFN Dettah

Noel Crapeau – YKDFN Dettah

Peter D. Sangris – YKDFN Dettah

Napoleon Mackenzie – YKDFN N'Dilo

Ed Sangris – YKDFN Dettah

Rose Betsina – YKDFN N'Dilo

Noel Doctor – YKDFN Dettah

Margaret Liske – YKDFN Dettah

Julia Lynn – YKDFN Dettah

Paul (?) – YKDFN Dettah

Georgina Drygeese – YKDFN Dettah

Sheryl Grieve – North Slave Metis Alliance

Camilia Zoe Chocolate – MVEIRB

Mary Tapsell – MVEIRB

Patrick Duxbury - MVEIRB

Introduction

The meeting commenced at approximately 10:10. Mary Tapsell of the Mackenzie Valley Environmental Impact Review Board (MVEIRB) chaired the meeting. She stated that this was second scoping session to be held regarding the Yellowknife Gold Project (YGP) and its stated purpose was to help the Board produce a better Terms of Reference (ToR) for the Environmental Assessment (EA).

Following introductions, Tyhee's representative, Hugh Wilson, gave an overview of the YGP. It was the same presentation given in Yellowknife during the previous week. A copy of the Tyhee PowerPoint presentation is available on the MVEIRB web site at: <http://www.mveirb.nt.ca/asp/Results.asp?ProjectID=60&cid=24>

Following Hugh Wilson's presentation, Mary Tapsell asked the group if they had any questions or comments concerning the project description. The following comments were noted:

1. A question was raised about the relationship between the parent company, Tyhee Development Corp, and its subsidiary, Tyhee NWT Corp, which is proposed to run the YGP. More information was requested as to how the directors of the parent company will influence decisions regarding the YGP.
2. A further explanation of the milling process flow diagram (as shown in the presentation) was requested. It was noted that a *cyanide destruction circuit* will be part of the system and that it will be designed to meet the requirements of the Metal Mine Effluent Regulations (MMER).
3. A question concerning the potential of the YGP to generate arsenic problems, similar to those encountered at the Giant and Con Mines was asked. It was noted that the Giant mine utilized a roaster process that was responsible for the generation of arsenic trioxide. The YGP operation will not be conducted in the same way.
4. It was stated that the arsenic content in the Ormsby Zone ore is not a concern; however, there is some arsenic in the Nicholas Lake ore. It was stressed that the arsenic will not enter into the environment the same way as what happened at Giant or Con and that details for this would be provided in the DAR. Gold in the Ormsby zone isn't present in arsenopyrite, but is mostly in a quartz structure.
5. It was noted that tailings deposited at the Discovery Mine were quartz based. The Discovery Mine used mercury to extract the gold; however no mercury will be used at the YGP.
6. A fairly sophisticated assessment of effects on Narrow Lake will be part of the DAR.
7. It was mentioned that there is ongoing metallurgical test work that will examine the whole suite of metals that may be present in the ore. This information will be included in the DAR. It was also noted that there would not be shipping of any concentrate, as the basic target is gold. Silver may be present as an impurity.
8. It was stated that gold will be smelted on site into dore bars. The refinery used for this will have a proper exhaust system built into it and details will be provided in the DAR.
9. Meeting the NWT's ambient air quality guidelines was mentioned. Other pertinent air quality guidelines to be applied include standards for rock crushers and incineration. It was further noted that the lack of air quality guidelines for the NWT was a concern for the EA.
10. A question regarding the working relationship between DIAND-Contaminated Sites Office (CSO) and Tyhee was posed. It was mentioned that cooperation between Tyhee and CSO's contractor was excellent. However, there may not be much opportunity for further cooperation as the Discovery Mine reclamation should be complete in 2006. The CSO's remaining equipment will likely go to the Tundra Mine clean-up.

11. It was noted that the airstrip is a critical part of the mine infrastructure. Tyhee has applied for a Land Use Permit (LUP) amendment, which will in part allow it to respond to CSO's concerns about potential impacts associated with continuing to use the tailings cap as an airstrip. Tyhee's geotechnical experts have indicated that continued use is not a problem. To respond to CSO concerns, Tyhee has proposed geotechnical drilling on the airstrip and the current access route. As part of the geotechnical program, Tyhee proposes to install thermistors and piezometers to assist in data collection.
12. It was noted that Tyhee must, when conducting its geotechnical analysis, keep in mind that the DAR has to address the long term use of the tailing cap in anticipation that the Discovery Mine airstrip is to be use beyond the exploration phase. Upgrading of the airstrip would likely be required to bring it up to standard for full mine operation. Quarried material would likely be required and should be considered.
13. It was mentioned that the conceptual design and upgrade of the Discovery Mine airstrip would be included in the DAR.
14. It was stated that alternative airstrip location must also be considered in the event that the Discovery Mine airstrip is not available. The impacts of the various alternatives have to be weighed. Tyhee is planning a detailed archaeological and wildlife assessment of the esker as a potential alternate airstrip which would be presented in the DAR.
15. It was suggested that a model should be developed that would permit the public to better understand the mining and milling process. An animation may serve well for this purpose.
16. It was stated that if the Discovery Mine airstrip isn't available after September, then conducting exploration before the winter road period is questionable, if not impossible.
17. It was noted that Tyhee is hoping for a response on its LUP amendment in the very near future as there are geotechnical drills lined up for the end of July. Due to booming exploration activity, drills are less available then they were a few years ago.
18. The Mackenzie Valley Land and Water Board is seeking legal opinion on Tyhee's application.

Discussion on the **Air Quality/Noise** component

Hugh Wilson briefly discussed the Valued Ecosystem Components selected for the EA and presented an impact matrix that examined the project components, their interaction linkages to the VECs and possible mitigation measures. His presentation then continued on to discuss the YGP's relationship to the air quality/noise environmental component and the following items were noted:

1. It was noted that the air in the YGP area is relatively pristine. A question was posed as to whether Tyhee's approach to air quality is one where they emit to the limits of the guidelines or if they are to approach air quality management by determining how their activities will change air quality and the significance of that

change. It was further suggested that significance shouldn't be determined based upon guidelines for ambient air quality, but rather upon the change the project will bring about in air quality.

2. It was noted that Tyhee is conducting baseline air quality measurements this summer that will factor into the DAR.
3. It was mentioned that Tyhee will use the best practical technology to control emissions from its diesel-powered electrical generators. Camp incineration guidelines are being developed which, if in place, will be followed. Details will be provided in the DAR.
4. It was stressed that that Tyhee's engineers should design their systems to minimize emission not just to meet guidelines levels.
5. It was noted that in the case of the Snap Lake Diamond Project, management of air was encased in an *Environmental Agreement* between government, aboriginal groups and the Proponent. There are regulatory gaps in the management of air quality in the NWT that encouraged that approach.
6. It was requested that the ToR should explore Tyhee's willingness to enter into an environmental agreement for aspects where the regulatory framework is lacking.
7. It was noted that an environmental management system may be an option instead of a formal environmental agreement.
8. The issue of an alternate energy supply from Snare Lake was brought forward. It was stated that this source is believed to be at its' maximum potential and this should be not considered. Also, power lines are capital cost prohibitive.
9. The question of managing acid rock drainage was brought forward. It was noted that Tyhee intends to place acid-generating waste rock underground as backfill, however the material will most likely have to be stored on surface until space is available underground. If it is stored on surface then it will be located in an engineered containment facility where it can be monitored. If there are large quantities of water from the waste rock containment area, then it will be pumped to the Tailing Containment Area (TCA).
10. The restricting of animals from waste rock and the TCA was mentioned. It was noted that restricting access by wildlife to number of facilities, including the airstrip and TCA will be considered in the DAR. It was noted by Tyhee that putting mechanisms in place to "keep animals out" may also have the effect of keeping some animals in.

Discussion on the **Water Quality** component

Hugh Wilson briefly described Tyhee's approach concerning the YGP's potential impacts on water quality. The following points were made:

1. A question regarding the flow of water in the YGP areas was posed. It was noted that eventually all the water will flow into the Yellowknife River and that no water from the site will enter Giauque Lake.
2. It was requested that the flow direction be animated to help illustrate the hydrology concepts.

3. It was suggested that a risk-based or context-based approach to water quality, as was applied for Snap Lake, be considered for the YGP DAR. It was however noted that the MMER does not apply to diamond mines, but it does directly apply for the gold mines.
4. It was mentioned that the MMER may use fish species to measure resilience that do not exist in the YGP area.
5. It was noted that the EA approach should be concerned with the impacts on aquatic biota, regardless of what regulations are applicable. It was further stated that the fish don't care about the MMER, what is important is to minimize the impact and substantiation has to be particularly robust. A risk or fish-based approach to assess the significance of the change could be considered. It was stressed that there may be more impacts on fish than is warranted if Tyhee does not consider using a risk-based system.
6. It was noted that the MMER has an Environmental Effects Monitoring system that is designed to detect changes and impacts. The YGP will be the first gold mine in the NWT to be placed under the regime.
7. It was suggested that the ToR address the possibility of implementing a risk-based assessment for impacts to fish that would request Tyhee to determine what is the final risk, what level of risk is acceptable and where does it lie?
8. It was noted that the water inspector cannot enforce a risk-based assessment and that the YGP is a small gold project that doesn't have the resources that the diamond companies have that go into various things. It was further stressed that the ToR should be clear and concise and not just imported from other projects.
9. It was stated that the issue of change in water quality from the background levels is something that needs to be addressed in the assessment and just because effluent meets Canada-established standards doesn't necessarily mean that aboriginal interests in the water is being protected.
10. It was noted that the protection of water to the standards of aboriginal people hasn't been addressed; this requires consultation with aboriginal people who require to know what the change is, what it means; whether or not this complies with somebody's regulations or not.
11. It was acknowledged that the mine will make some changes to the water as it will be used for storing tailings and eventually discharged. Ground water issues were also mentioned as a concern.
12. It was noted that DFO is the enforcer for protecting fish and that they will allow certain types of fish to be used for research which may differ from those that the YKDFN agree upon.
13. It was noted that the YKDFN have been led to believe that diamond mining isn't such a big deal, compared to gold mining. There is a distrust of gold mining and more information on how the water quality is going to be monitored is required.
14. Concerns about mine closure were stated. It was requested that the DAR request the company to provide details concerning how the project will be designed, particularly towards a minimum intervention or "walk away" scenario. It was noted that a conceptual closure and reclamation plan will be included in the DAR.

Discussion on the **Fish and Fish Habitat** component

Hugh Wilson briefly described Tyhee's approach to the YGP's potential impacts to fish and fish habitat. The following points were recorded:

1. It was mentioned that Tyhee's 2005 research program has been focused to help address concerns identified by DFO. Investigations to date have indicated that no fish are in Round or Winter Lake; however DFO wanted Tyhee to carry out more detailed fish studies in Winter Lake this year. Additionally, the access road between Ormsby and Nicholas Lake is to be examined and results are to be included in the DAR.
2. It was noted that electro-fishing is being done to minimize impacts on fish; however sacrificing fish is part of baseline studies as metal content have to be determined in the fish tissue. Additionally, DFO has asked Tyhee to use traps at the outlet of Winter Lake. Scuba surveys and clam studies will help determine if fish frequent Winter Lake.
3. A restriction on fishing by mine employees was mentioned. It was noted that this is a trend at several new mines, and it would be fairly easy to enforce.
4. An Elder's visit by members of the YKDFN and NSMA was proposed by Tyhee.
5. It was stated that the maps available in the Project Description Report aren't in format that can be used in typical GIS packages. It was recommended that the ToR request for maps that are in a workable format. However, it was noted that the data is the property of Tyhee and misuse of the data is a concern.

Lunch was held at approximately 12:30. Following lunch, Patrick Duxbury was requested to summarize the points made from the June 15 and 16 scoping sessions in Yellowknife. Discussion on fish and aquatic habitat continued. The following points were noted:

6. The uncertainty about attributing of impacts to water due to the presence of the Discover Mine was noted.
7. It was mentioned that baseline data has been collected by Tyhee, in addition to that collected by DIAND and DFO. That information has provided a good baseline of what currently exists and it will be used to develop a predicted water quality model for Narrow Lake.
8. It was requested that the ToR ensure that there is an explicit understanding of what impacts are attributable to Tyhee, or to the Discovery Mine, or where there is overlap. It was noted that cumulative effects should be able to cover this.
9. A question regarding the power line was posed. It was noted that DIAND-CSO will remediate the power lines during 2005 and 2006. Wire will be salvaged and most of the poles will be removed.
10. It was requested that the ToR ensure that quantitative numbers are provided to rationalize why diesel-generated power makes sense. Some indication of how much it would cost to put in the lines was requested. It was stressed that with energy issues and greenhouse gas issues at the forefront, a greater emphasis on the justification for this sort of thing is required.

11. A question about the scope of the project was posed regarding how the EA will consider the road between Ormsby and Nicholas Lake.

Hugh Wilson then briefly described Tyhee's approach concerning the YGP's potential impacts to wildlife and wildlife habitat. The following points were recorded:

1. A question was asked concerning the use of the winter road to haul fuel. It was noted that the land lease and water license will require a spill contingency plan. Any spills will be reported to the 24-hour spill line.

A group of Dene elders began to voice their opinions and concerns regarding the project, the following points were noted:

2. It was stated that when Yellowknife was being developed, the chiefs were not informed about what would happen. The gold mines used (produced?) toxins and people were not told about this.
3. It was noted that 25 years ago, people were trapping annually near the Discovery Mine. Toxins have destroyed the land there and that should not happen again. When people go to the Discovery Mine, they are warned not to eat fish from the water in that area.
4. It was mentioned that after the mining [Discovery?] town was built, contamination began to flow to the Great Slave Lake. The native people in the area were not informed about the contamination in the water. It was stressed that if someone knows that something is going to cause an impact, then they should inform the people. There were geologists who knew something was happening, yet they did not speak about it.
5. It was stated that if there is going to be another mine built, people need to know ahead of time and consultation will be necessary. In the past when the old mine was built, the aboriginal people weren't consulted, now they must consult.
6. It was noted that money will be made, then the mine has to be reclaimed and re-vegetation has to be done.
7. It was stated that people use to live in the Discovery Mine area there. There are ancestral trails there where people use to travel and trap. People who lived in the Yellowknife area used to use that route to go to the tundra for hunting.
8. It was noted that due to the past mines, lands were destroyed. The past mines made the people unhappy. Assistance [compensation?] regarding this mine will be asked for.
9. It was stated that the diamond mines do not use [produce?] toxins and perhaps information can be shared between the mines. The people will want to know about the chemicals that will be used and how disposal of waste, water treatment – water that goes through the machines will be done. It is expected the water that comes out of the mine system should be clean
10. A question was asked about how long the mine will operate for. It was noted that the YGP is projected to be an 8-year mine. It was further stated that Tyhee will not be working in the old mine. The Discovery Mine was built during a period where there were no regulations.

11. A question was asked about what will happen after the 8 years. It was mentioned that the mine may go on longer, as was the case at Lupin Mine, whose original lifespan was only 2-3 years and ended being much longer than that.
12. A question concerning benefits was brought forward; particularly for the Elders as they are in their 70's and 80's and will not be around long.
13. It was noted that Tyhee, in addressing socio-economic considerations, wants to hire as many local people as it can, while keeping in mind that there are labour restrictions in terms of availability and skill levels.
14. Benefits besides employment were requested, particularly for the Elders who perceive their land having been destroyed.
15. It was noted that Tyhee could provide benefits through business opportunities. Compensation for Elders hasn't been thought of; however it could be discussed at the site visit
16. An elder noted that in 1934 the white people came. Over time the environment has become less healthy. It was mentioned that many people from his generation and family have died.
17. It was stated that the water is contaminated and once water is contaminated it cannot be fixed, yet millions have been made by mines in the area.
18. It was noted that people in Fort Simpson think aboriginal people in Yellowknife are rich, however that is not the case. Millions have been made, yet Elders do not have enough to eat. People are still poor and the water cannot be drunk. If the wildlife is destroyed then people will be poorer.
19. It was stated that the Giant Mine made millions but it is not good to look at now and it emitted unhealthy smoke.
20. It was stressed that people should work together and be cooperative. The Elders will be happy to get benefits.
21. It was stated that Diavik Mine has provided good benefits to Elders, however nothing so good has been received from the Ekati Mine.

Discussion on the **Vegetation** component

Hugh Wilson briefly described Tyhee's approach regarding the YGP's potential impacts on vegetation. The following points were made:

1. It was noted that the DAR will examine what areas of the mine footprint could be re-vegetated. The possibility of using native species will also be examined.
2. A question was posed by an Elder about emissions from the mine travel. It was noted that such emissions are not healthy for wildlife and people have stopped going to areas that have been affected as caribou do not go there.
3. It was stated that the YGP operation is not the same as the Giant Mine's. The Giant Mine had a roaster that required a stack. Baseline air quality program will be done this summer, in combination with meteorological data. There will be an estimate about how far the emissions will go.
4. It was stated that the water quality in Giauque Lake is good; Tyhee in fact draws its water from the lake. The problem is that metals in the sediments that were

consumed by small biota where in turn were eaten by fish; bioaccumulation occurred.

Discussion on the **Socio-Economic** component

Hugh Wilson briefly described Tyhee's approach regarding the YGP's potential impacts on the socio-economic environmental component. The following points were made:

1. It was noted that Tyhee will cover socio-economic issues in the DAR.
2. It was requested that community-specific, positive and negative socio-economic impacts be identified. It was also noted that the question of impact equity is a concern; whether the "winners" are compensating the "losers" from a social welfare economic point of view. It was further noted that some people may feel certainty in terms of the rights to land and resources, however others may not, depending on the point of view that is taken as there are claims to land and rights that are unresolved.
3. It was mentioned that there are issues about opportunity costs about people and political issues; there are a lot of unresolved political and cultural issues that have a lot to do with unsolved land claims and the lack of respect for aboriginal property right. This includes aboriginal people being existing water users but not getting the recognition that they deserved through legislation; from the aboriginal point of view it is an issue and a cost to them.
4. It was stated that the Giant Mine and Con Mine did not give much back to the aboriginal people and that is something that is hoped won't happen again. It was hoped that socio-economic impact assessment will look at the community-specific benefits and costs and not lump everyone in Yellowknife into one pile.
5. It was stated that there are different socio-economic conditions, for example the Métis have been treated different than the Dene in terms of legislation, benefits and support. The Métis may use the land differently or have differing rights under the current legislation.
6. A question was posed concerning the handling of waste at the dump. It was noted that currently waste is buried, burned or backhauled to Yellowknife. When the mine goes into production, an engineered landfill will be constructed on site. There may be two facilities, one for non-hazardous material, and one for a hazardous waste facility. This will be discussed in the DAR.
7. It was requested that the ToR require Tyhee to depict the current socio-economic circumstances of the YKDene; which shall be a standard baseline data set.
8. It was requested that the ToR should require Tyhee to indicate the net benefits that will go to the YKDFN as there are methods for forecasting this. This was noted as being important because this mine currently has an 8-year mine-life.
9. It was stated that if the net benefits are less than the total impacts in the minds of the residents [YKDFN?], then it is a legitimate request that the mine not proceed, or that it only proceed when the benefits reasonably out weight out the impacts.

10. It was requested that the ToR ensure that Tyhee quantifiably articulate the total benefits going to aboriginal and non-aboriginal parties and to compare to the total impacts.
11. It was requested that guidance be given concerning an opportunity that cannot be fulfilled by the YKDFN. It was noted that practitioners in the socio-economic field will say that anybody who is capable of working will have a job in the current environment.
12. It was stated that just because Tyhee is not able to necessarily offer employment, it does not mean that it is absolved of providing benefits to the YKDFN. Tyhee should attempt to maximize the project benefits to the YKDene, in lieu of not being to offer employment.
13. It was mentioned that socio-economic agreements and environmental agreements should be considered; but not to the scale of the diamond mines. A contractual arrangement in the absence of direction from DIAND or other land managers was mentioned as being useful.
14. It was noted that the NSMA does not have any settlement of their lands or treaty rights and that the project will affect them differently than the YKDFN.
15. Questions were posed to the MVEIRB concerning the socio-economic and environmental agreements. Will the MVEIRB in its process encourage those agreements? Does the Review Board push for economic benefits worked about between aboriginal groups and proponents? How does the Review Board protect aboriginal rights in this regard? It was noted that the YKDFN are interested in jobs, however the NWT does not have many workers. Workers from the south are already being used at the diamond mines. This was noted as a reason why the YKDFN is pushing for benefits in other respect than this.
16. It was noted that there are also other departments which are responsible to uphold aboriginal rights to ensure that they are not infringed upon. For example, the GNWT has responsibilities as it pertains to socio-economic and environmental agreements.
17. It was stated that the priority in which the MVRMA act applies is first to aboriginal people, then residents of the Mackenzie Valley, and then finally to the rest of Canada. It was further argued that whatever the MVEIRB is bound by those principles when considering a DAR. The terms of reference have to reflect that. The nature and quantity of the benefits.
18. It was noted that employment is only one benefit and in areas where land claims have not yet been settle, there is a burden to clarify the process by some contractual agreement.
19. An Elder noted that people must communicate to get things done. Cooperation is important and appreciated so that they can get assistance (benefits?)

Discussion on the **Archeological/Heritage/Cultural Resources** component

Hugh Wilson briefly described Tyhee's approach to the YGP's potential impacts on the Archeological/Heritage/Cultural Resources environmental component. The following points were noted:

1. A question was posed concerning what literature was searched in support of the archaeological study.
2. A question was posed about the definition of cultural and heritage sites and if archeological sites are defined by being older than 50 years. It was noted that important harvesting areas may get overlooked because they are less than 50 years old.
3. It was asked if archeological sites and heritage sites were just two different categories of cultural sites and would cultural sites include a large number of other types of sites?
4. It was asked if Tyhee was concerned about cultural sites or just archaeological sites. It was noted that archeological sites are often concentrated upon because there is often a lack of resources and documentation on them; it is also a legal requirement to do that work. On cultural sites, many of the activities have occurred in more recent times. The cutoff in age where heritage sites become archaeological sites is somewhat unclear, but 50 years is a common threshold. It was mentioned that Tyhee's archeologist located several sites that were younger than 50 years in the YGP area.
5. An elder noted that as far back as 1930 people were living in the YGP area in tents and traveled to the barrenlands on various routes within the Yellowknife River basin.
6. It was stated that Tyhee hopes that when Elders visit the YGP area they can help to identify travel routes, camp sites, places that can be avoided.
7. It was stated that aboriginal ancestors lived in the YGP area and also the Elders when they were children. The trails throughout that area are known. Prior to interest from the mining companies, the areas were not studied.
8. It was stated that the archeological study was taken too quickly and was not well done. Areas may have been overlooked.
9. It was mentioned that the YKDFN should conduct their own traditional land use study of the area.

The meeting concluded with comments from Hugh Wilson and Mary Tapsell followed by a closing prayer.