

**Independent Environmental Monitoring Agency
94th Meeting of the Board of Directors
Yellowknife, NT
June 14, 2016
Summary of Discussion**

Directors

Jaida Ohokannoak
Emery Paquin
Kim Poole
Tim Byers
Arnold Enge
Doug Doan
Jesse Jasper

Staff

Marc Casas, Executive Director
Jessica Simpson, Communications and
Environmental Specialist

Meeting commenced at 11:00 am

AGENCY BUSINESS

Information Updates

Jaida: Jaida has been very busy at her full time position with Nunavut Impact Review Board and has had limited opportunities to review some of the Agency related documents. Emery will help with reviewing the Air Quality and Emission Monitoring and Management Plan (AQEMMP).

Emery: Reviewed and commented on Ekati's Water Licence and Environmental Agreement Annual Report. He also responded to the Sable phased security request. The Agency's response was in-line with the decisions the Agency made at the last meeting.

Jesse: Jesse has reviewed and edited chapters for the Agency's Annual Report.

Tim: There has been a lot of work to review related to the Aquatic Effects Monitoring Plan (AEMP). Tim has reviewed response plans for the Agency's Annual Report, the Sable AEMP which has comments due next week. He also attended a 1 day workshop on the AEMP Re-evaluation via teleconference.

Doug: Doug has reviewed a number of documents, and edited the Agency's annual report.

Arnold: Edited the wasterock section of the annual report, and reviewed the other sections. Arnold also participated in a DDEC teleconference on WRSA Seepage. DDEC submitted an initial report outlining their opinion of the receiving environments that could potentially receive seepage from the rock piles. They requested input which the agency provided. This will be used going forward on their closure and beyond wasterock seepage report, which is set to be submitted in Fall of 2016. GNWT suggested that the report be discussed so that all parties are on the same page. During the teleconference, it was mostly the Agency's comments that were discussed.

Kim: Worked on the Agency's annual report. Karen Clark, of GNWT-ENR, is heading up a task group on behavioral monitoring of caribou and Kim reviewed documents and participated in a conference call. Kim also reviewed the Water Licence Annual Report from the wildlife perspective and submitted those comments. Kim has started to review the WEMP – Management Plan, and the Caribou Road Mitigation Plan.

Marc: Worked on the annual audit with Crowe-MacKay, and finalized the budget and work plan. He also attended the AEMP Re-evaluation and sorted a few minor issues with Scotia-Connect.

Directors reviewed a task-tracking list and added some due dates and reviews. Directors decided that the Agency will set an internal deadline of 5 days prior to the actual deadline.

Financial Items

Jaida and Marc reviewed that auditors report. Jaida had concerns that were easily sorted out and clarified, such as the process for verifying journal entries. It was also noted that there were more changes to journal entries than past years. Another concern was with the financial statement regarding how items were named and itemized. Marc and Kim will take these questions to the Agency's follow up meeting with the auditor before the report is finalized. To finalize the report, Director approval can be done by e-mail.

Emery asked about the separate fund. What happens to the separate fund if it is

Action Item #1: Marc, Jessica and Kim will make sure the assets list is up to date.

underspent – does it go back to the company? The separate fund is core funding specifically budgeted for legal and other processes. If underspent, it goes back to the company.

Directors reviewed the Expenditure Year-to-date. The majority of money spent so far this year was on the Agency's annual report.

NEW BUSINESS

Environmental Agreement Implementation Meeting:

An Environmental Agreement Implementation Meeting was held in the morning of June 14, 2016. The meeting was attended by the signatories to the Environmental Agreement. There will be a lot of items for review over the next couple of months, and it will be really busy for everyone. Jaida provided Directors with an overview of the meeting.

EA Implementation Meeting minutes are available on the Agency's website: monitoringagency.net

Action Item #2: Marc will ask Laurie McGregor if they can accommodate the Agency by scheduling the wildlife on July 20th and the air quality on July 19th.

Action Item #4: Marc will contact Laurie McGregor at ENR about adding the Agency to the spill list.

FOLLOW-UP ITEMS

2015 EnviroKleen Pilot Study Report

Kim and Emery reviewed the new dust suppressant analysis. Both agree that it looks like there is promise with this new dust suppressant, and DDEC plans to do more testing over the summer months.

Although the study did not include a cost-benefit analysis, some things we know are that the Enviro-Kleen dust suppressant is more expensive than DL 10, but the applications save time and money down the road.

Some of the correspondence related to the issue were only sent to Jaida from DDEC, and not to Agency staff. We need to ensure that staff are also included to make sure the information is posted properly.

Action Item #5: The Agency staff will contact DDEC to ensure that the information is being posted properly and that Agency staff are included in the dissemination of information.

AEMP Consultant for 2016-17

At the last board meeting (March), Marc suggested the Agency consider hiring an aquatic ecologist for examining the AEMP Re-Evaluation.

Michael Paterson works with Environmental Lakes Area (ELA) and has been doing

Action Item #3: Emery will speak with April to give DDEC another opportunity to respond to the Agency's recommendations.

plankton research for 35 years, most of which has been with Department of Fisheries and Oceans (DFO). Tim visited Michael at the ELA office in Winnipeg to discuss technical matters in the AEMP that the Agency is hoping he can address. Further discussions occurred on the costs and benefits of hiring Mr. Paterson. The Agency agreed to proceed with the contracting process.

EIR Report Process

The Directors discussed the contents of the Report of Environmental Assessment. Overall, Directors were pleased with the report and got a sense that the Mackenzie Valley Environmental Impact Review Board listened to the parties that attended the workshops and hearings.

Action Items #6: Each Director will go through the Jay REA and will put their comments in a table in Dropbox.

COMMUNICATIONS UPDATE

Jessica produced brochures based on the Agency's community visit. These will be sent out as the Agency's way of "reporting back" to the community about what we heard.

Jessica's summer project will be updating the new website so that it can go live. This will include Ekati Timeline and Facebook.

Jessica gave an update about the work done and the work that needs to be done for the annual report. Directors discussed how they will work on the second draft.

Jessica reported that the Agency staff will require new e-mail addresses. The Agency will now use monitoringagency.net. Tamarack Computers is losing control over the domain yk.com. Jessica will manage the "switch" over.

UPDATES

GNWT Environment and Natural Resources – Laurie McGregor

The Directors introduced themselves to Laurie MacGregor of ENR. Laurie is replacing Kate Witherly, who was filling in Laurie's role while she was on Maternity Leave. Laurie asked to be here this morning to meet the directors and to provide an update. Laurie works in the Conservation, Assessment and Monitoring Directorate, the Environmental Impact Monitoring group. Her group oversees ENR's involvement in regards to the implementation of the various Environmental Agreements, including coordinating the reviews, comments and Ministerial approvals.

Laurie mentioned that she will be coordinating the Ekati Water Licence and Environmental Agreement Annual Report process, the 2015 Environmental Impact Report for Ekati was distributed this morning, and ENR will also be present for the Jay Project water licence hearings as well.

Marc asked to clarify if ENR runs the review and coordination of comments for all non WLWB submissions, such as the Environmental Impact Review, the Water Licence and Environmental Agreement Annual Report, the Wildlife Effects Monitoring Plan, and Caribou Road management plan (this requires specific approval based on a measure from the Jay EA). Laurie said yes, they do.

In regards to when the next EIR will occur, the GNWT has no preference if the next review is in 3 years from now, or if we go back to the original 3 year date (which will be in 2 years). She also said that ENR would appreciate if the Agency could send a letter on their position to ENR.

Aileen Stevens is ENR's new Air Quality Coordinator. ENR is currently looking for a second air quality specialist.

Kim asked about the Wildlife Environment Management Plan. Is ENR going back to having 1 document? Laurie agreed that is the understanding right now. There is a Wildlife & Wildlife Habitat Protection Plan (WWHPP) and a Wildlife Effects Monitoring Program (WEMP) working group to figure out how to move forward and it looks like this is what they are leaning towards: 1 document. That is the understanding right now.

The Directors asked about changes to the Environmental Agreement. Laurie confirmed that ENR is trying to move forward with the changes. It seems to be that INAC's position is moving through their government system, and ENR is looking to finalize their position soon.

GNWT Inspector Update – Marty Sanderson

The last two inspections at Ekati have been excellent. DDEC has an improved approach to quickly and effectively address concerns raised by the inspector. At the end of each

inspection there is a close out meeting with all responsible parties for each component of the mine. This way, if Marty needs something addressed, it is now direct with the person in charge of that area, rather than having the inspector's feedback going through a chain. Marty has noticed that this change has created a lot of improvement.

Marty reviewed the areas that he inspects with the Directors:

- The landfill: Inspected on a regular basis. There were issues in the past, and they have made a lot of effort to ensure that things that should not be in the land fill are not showing up.
- Contaminated snow facility: Inspected on a regular basis – in the summer and the fall. Skim and then pumped out and the water disposed in the LLCF. As a precaution put up bird wires so waterfowl doesn't land there.
 - Marc asked what happens to the skimmed liquids? Marty answered that it get drummed up and sent south as contaminated waste.
- Laydown 6: A storage area that needed pallets and wood debris cleaned. The debris showed up in the spring after the winter. It's minor, but still needed to be cleaned up.
- Heavy equipment boneyard: Where big pieces of machinery get stored for parts. Marty's rule of thumb is if there is no purpose for the vehicle, it should be shipped off site. Marty will soon be getting a list of what has been shipped off on the winter road.
- Refueling and bulk offloading facility: Marty has noticed a lot of improvements.
 - Arnold asked about how inspections are documented, so other inspectors can point to an example that all abandoned vehicles should be drained of fluids. Marty explained that there is an in-house policy. There is no written rule, but it is the inspectors decision on what long term is.
 - Trucks have many component, and f the truck is stationary in the lay down area, and the area is not looked at frequently, the inspectors will get them to repair and add drip trays as a precautionary measure.
- Land farm: In case there was a large spill, Marty wanted to ensure that DDEC had the capacity to hold those materials. So to make room, a lot of materials were shipped off site in the winter.
 - Marc asked if DDEC is land farming, or if they are just storing hydrocarbon contaminated materials? Marty confirmed that DDDEC actually land farms.
- Zone S: Is an area to dispose any contaminated rock of a certain size that you can't put into a land farm. This rock will be disposed by having it buried and capped at closure.
- Refueling facilities: Last year there were issues with the sumps and Marty's message is that all sumps need to be pumped. Over all Marty is pleased with the refueling facilities. He thinks that

DDEC is “on their game” with the bulk off-loading area. One little issue is with the location of the underground refueling station – it needs to be pumped on a regular basis.

- During Christmas, 2500 litres of fuel were spilled at Fox Pit; it was contained to the pad. It was cleaned up, but the inspectors did not close the file until it could be assessed in the spring.
- Fox Lay Down: Foraco and Major are storing equipment here. Last year, Marty had to remind them to clean up the spills, and this year the area has been well organized and clean – no issues.
- Zone 12: This area is outside the main facility and is currently used by Nuna, who has been contracted by DDEC to construct the Sable Road. There is a waste segregation station to segregate their materials for waste disposal, fluids are within secondary containment facilities, the mobile trucks have drip trays under them (without any prompting from Marty).
- Truck shop: Where heavy equipment is serviced and repaired. Because there were always spills of various sizes and types of products, Marty asked DDEC to implement a maintenance program. There have been no issues since.
- Waterhouse Laydown: Liquid type materials that are used on site are stored here, such as glycols and hydrocarbons. This area is organized and clean.
- Lynx Pit: No sign of hydrocarbon spills.
- Misery Ready Down Line: Broken down equipment is stationed here. In the past, there were issues, but Marty asked them to initiate a maintenance program, and there have been no issues in a long time.
 - Misery 777 Parking Lot: This area is next to the pit where heavy equipment is stored or parked during breaks and lunch. There are some small spills, but overall the area is well maintained.
 - Wash Car Area is where heavy machinery is refueled. There are no concerns.
 - Lay Down 0: No concerns in the last few inspections.
- Paul Lake Bridge: They are adding 3.5 feet to both sides of the bridge. Marty is asking for a weekly update. So far Marty is pleased with everything.
 - Marc asked if DFO needs to be involved with the widening of the bridge. Marty said because the work is not in the stream bed, therefore DFO does need to be involved.
 - Tim inquired about the water mark, if it factors into their equation, and if construction started when there was ice or at freshet? In Marty’s experience, there is not a lot of fluctuation with the water mark, no more than a foot. Jaida thinks it fluctuates by no more than 2 feet.

- Underground Laydown: Storage for materials, parts, and tools for underground workings. There is not usually a lot of issues in this area.
- Grizzly Lake: This water used as freshwater for camp. The pump and backup generator are in small buildings. There are no concerns with the road that run along the channel.
- Diesel spill 15-505 at Misery. This spill was dealt with, the file was closed May 31, 2016
- Excavator spill 16-192: Spills from large machinery happen from time to time and they usually occur in the pit.
 - Marty inspects every spill provided it's safe.
 - Jaida explained to Marty that the Agency heard of a fine processed kimberlite (FPK) spill during a Community Visit in March. The Agency wanted to know how do these kinds of spills happen? Marty explained that FPK is like liquid sand paper, and can erode the pipe, especially the elbows. The company now knows that the pipes need to be pulled apart and inspected. In some cases, a better product might need to be used. 4-5 areas have identified for replacement.
 - Emery asked if Diavik Diamond Mine has had similar problems? Marty does not know.
- Tim asked what underground areas at Ekati are currently in operation? Underground operations never happened at Fox Pit, Panda Pit still has operations, and Koala North is closed.
 - Tim explained that Marty's predecessor was frustrated that the company had left remnants, like a conveyer belt and some wood stuff in an underground facility upon closure. He asked Marty if this has changed? Marty said that it has. An inspector did go underground and remarked that it was very clean.
- The Directors and Marty talked about the construction of the Sable Haul Road. The material used has to meet a certain criteria for stockpiling. Marty gets a weekly update on the road progression.

Dominion Diamond Ekati Corporation Update – Harry O'Keefe

Harry gave an update on operations at Ekati mine.

- There is now 7 km of road from the Misery/Lynx Development Area towards Jay.
- Sable Pipe is 15 km in a straight line from Ekati Mine. The road is very close to the length of the Misery Road.

- Harry gave an overview of the Jay Project, starting with that the area looks like currently, each phase of construction, 1 year of operation and after 10 years of operation, and reclamation and closure.
 - Misery to be completed 2019, and Jay is to start 2021. It just defers some of the capital investment. 2021 is the target for completion of the dyke and the dewatering.
- Jay will be an extension of the current mine life, the current camp. Other areas of Ekati will be reclaimed during mining of Jay Pipe.
- Tim asked if during construction, will there be more or fewer employees? If it's substantially more, do you need a sewage facility? Harry said that sewage will still be trucked – just increase the trips – and it will be managed at the sewage treatment place.
- 125-person camp at Misery, and looking to add 200 beds there as a temporary camp. That camp will be decommissioned post construction. Plan not to shut down Misery Camp yet. It will go back to 120-140 person camp.
- Jay Project Environmental Assessment: There are 23 measures in the REA and over 100 commitments from DDEC. Most of the measures are related to caribou, air, water, traditional knowledge and reporting. The Minister approved the REA as recommended by the Review Board on May 19th.
- EIR technical review July 19th and 20, then DDEC will complete the EIR report, send it to everyone and have a public meeting over two days in August.
- Harry also gave a brief update on measures, like the dike review panel, WEMP, Caribou Offsetting, Air Quality and Emissions Monitoring Management Plan, Traditional Knowledge and on the land cultural camp (DDEC started with the Elders group, which was key in developing the TK framework, and purchased a fish salvage camp, which will transfer to Jay On-The-Land Camp), reducing barriers to women (Women in Mining Strategy), closure and water quality.
- Water Licence: DDEC submitted the WL and LUP application to the WLWB on May 31, 2016 include Lac du Sauvage, crossing and infrastructure to the road, and the total footprint of the road.
- Still a lot of engagement to happen around the design of the Jay powerline and one portion maybe subject to change based on feedback and engagement. The main draft of the water licence was submitted June 6, which except of the WEMP monitoring plan and the CRMP.
- Overview of what the WL contains: Design reports, updated project description, dike construction monitoring, aquatic and fish monitoring plans, engagement summaries, waste management plans, reclamation closure plans, and status of measures and commitment from the environmental assessment.

- Terms of water licence: request for term to end of Jay operations in 2034. This WL is Jay specific, but when Jay comes out it will result in the complete review for the whole ICRP when the life of mine plan changes to incorporate it all.
- Aquatic and fish program: There are new effluent quality criteria (EQC's), AEMP and Design Plan, Mine water management plan.
- Dike construction and monitoring: to protect the ecosystem from suspended sediment during construction. Inner and outer turbidity barrier in open water season. Control construction rate in ice covered season. Inspect barriers and monitor water quality every day.
- Design reports – of many engineering components – road design, waste rock storage,
- Reclamation and closure – Cell B research, closure of dike, flooding the pit, breaching the dike, design of access/egress ramps, Jay Waste Rock Storage Area, and security estimates.
- Waste management: how to manage waste in accordance with a number of management plans for hydrocarbons, incinerator, composter, solid waste, hazardous waste, etc.
- Jay fish out and offsetting: This was conceptualized in the DAR and finalized through community engagement. Community members were used on fishing crews.
- In Whati, people were interested in making dry fish instead of sending fish already fileted.
- Fish Offsetting: Primarily to reintroduce Inconnu to Yellowknife River system, where there have been no Inconnu since the mid 1900's, likely due to over fishing. This is an important food to YKDFN.
 - DDEC will spawn Inconnu at the Tartan Rapids, which is likely the original spawning area. It could take 8 years to know if the project has worked, it takes that long for the Inconnu to come back and spawn.
 - Inconnu reintroduction pilot study in September/October. There will be a year-end report to DFO in December.
- DDEC is working with other communities on TK projects.
- Air quality monitoring: potential effects on everything. Concerns on dust, development of air quality and emissions monitoring plan, sent out on May 31, 2016.
- GNWT, through a measure, directed to draft air quality guidelines in the North.
- Wildlife – caribou: communities, focused on wildlife monitoring plans, including traffic and road alignment/design of the Jay Road and esker crossing and offsetting.

- May 31st, DDEC submitted a wildlife effects plan. A Caribou Road Mitigation Plan will be an appendix of the WEMP (Plan), which was last updated in 2002. Summer workshop to finalize input on the plans and submit them for approval by GNWT.
- A Caribou Road Mitigation Plan went out just before the closing of the public record (for Jay Project). Will be implemented this summer in time for the fall return of caribou. It includes strategies to reduce impacts from Jay and Misery roads, like trigger levels for augmented activities, and annual reporting of the measures.
- A conceptual WEMP (Plan) was submitted to GNWT on June 1st. An engagement workshop on WEMP occurred with communities and regulators on June 25, 2015 with an updated version submitted to GNWT on July 31, 2015.
 - Additional engagement on the WEMP will occur following the EA approval. Grizzly bear program again next year (2017) to determine the direction of population growth.
 - Kim wondered about how the data set from the south (Diavik) was supposed to be integrated with the Ekati-Diavik study area. Harry answered that the dataset is being worked on by someone at University of Calgary, but there has been no report, but it has been presented at conferences. That is it so far.
 - Wolverine DNA has been sent to Robert Mulders, and inquired if there is a date to expect a report and the answer was No.
- Sable Project: The road should reach the Sable development area by September 1st. A potential draw-down of Two Rock Lake will start in September. The draw down on Sable Lake won't start until 2017.
- No current plan for discharge of Sable? mine water until 2018.
- Sable Project:
 - Revised AEMP and the re-evaluation to WLWB June 30th.
 - Updated waste management plans, spill contingency plan, waste rock and ore storage management plan and water and PK management plan.
 - Construction of all season road to Ekati Mine to Sable area is currently underway.
 - Continued engagement on caribou crossing on the Sable Haul Road. Community groups can go out in September to fly over the road. Last summer they did identify 12-15 locations for potential crossings.
- Camera report is due this month (Ha!).

- During the Sable Lake fish salvage for the Sable Pit Development, DDEC will also do a project for DFO on how lakes recover in an Arctic environment The lake was last fished out in 2003.

Wek'eezhii Land and Water Board – Update Elissa Berril and Ryan Fequet

Elissa and Ryan provided updates on what to expect moving forward, especially with the Jay Licencing Process.

- Currently out for review there are Water Licence and Land Use Permits for Jay Pipe, and an early works permit for Jay; Pigeon Pit and Sable Haul Road are renewals.
- The Community Engagement Plan is out for review.
- Comments on the AEMP is due June 17; they are for fish, benthos, plankton benthos, chloride, phosphate. The AEMP Annual Report comments are due June 15, 2017.
- Marc commented that a lot of response plans make assumptions or determinations based on “further studies.” One of the Agency’s main concerns was with the potential approval of the action levels within the review plans without having the key information provided by the further studies.
 - Elissa hasn’t had time to review and is doing that right now. She does know that they have outlined further actions for other plans.
- The Aquatic Effects Synthesis report, is supposed to feed the biological response plans, has WLWB received that study? Do not believe so.
- There are these 5 response plans now, they are tied to the AEMP Framework, and soon we will have the AEMP Re-evaluation and re-design. How are all of these response plans being tied together?
 - The response plans are not necessarily tied to the re-evaluation, they are done in analysis of the annual report results. The re-evaluation is a separate analysis that informs the AEMP design moving forward. They are not necessarily connected, so Elissa is not sure how they are being tied together.
 - Ryan said that they might update the design at the next opportunity. If there are recommendations, then those updates can be made in the near future as well.
 - Tim concluded that the response plans might feed the AEMP re-evaluation, but are not a mandatory requirement of the re-evaluation.
- Elissa reviewed the items that will be due over the next 2 weeks:
 - Aquatics: AEMP Re-evaluation and Design Plan - June 30

- Sable AEMP – June 30. In response to the WLWB directive on Sable – there was a workshop.
 - Potassium response plan version 1.1. – there were additional actions as a result.
 - Waste Management plan 3.0 – update to include Sable, several items on WEMP, composting pad and the design of it and how to account for leaching. The building of the pad is this summer and so that WEMP is expected soon.
 - WROMP and WPKMP coming in for updates with Sable.
 - Spill contingency plan has just come in. It's a brief update for Sable. WLWB wants more context for their response, which is on the registry now. Might not put in the on the Online Registry System (ORS), will likely send an e-mail, which the Agency can comment on.
- Jay Dike Review Panel: The WLWB will make the decision based on the public review. The WLWB required an extra month.
 - There are a number of ways the panel could work, and everyone needs to be clear on that.
 - On May 31st, a letter was sent to all parties asking for comments by June 30th. The Dike Review Panel concept was put forward during the EA, which became a measure DDEC had to work on. DDEC tried to get ahead, and now it became a commitment and they have to consult with the communities. It's more about the tasks, how the panel works, are they on the panel for the company, the people, the process, so that's the point of this measure, to sort that stuff out to avoid future problems.
 - The tasks and terms of reference to show how the panel works has not been agreed on, or consulted on, and so that's the point of this review.
 - There are only 3 parties they are consulting.
 - AEMP Re-evaluation: DDEC held a workshop to explain the reports contents. The WLWB runs the process to ensure procedural fairness like adding workshops here and there. DDEC is always open to adjusting their engagement practices to make them meaningful and effective.
 - The Community Engagement Plan is out for review.
 - Marc's is concerned that if it is the only time to meet with everyone, then maybe it's not the best way to spend money, maybe a different time, once everyone has had time to review the document.
 - Emery said that in the ICRP, DDEC made a closure commitment during the public hearing (EA), has the WLWB had a discussion on scheduling that update? We don't want to have a duplicate process. Elissa and Ryan responded that right now there is a lot of Closure stuff on Jay, which will hopefully be sorted soon. The conversation for the next ICRP will be this fall.

- WLWB staff are going through the land use permit and water licence. They've contracted Eco-Metrix to do a lot of the water issues on site. They are hoping to have it distributed for public review on Thursday.
- Elissa is leaving – this is the last Agency board meeting. Meaghan Schnurr will be the new lead.
- Ryan explained the overall governance of the land and water boards.
- September 4th is the date DDEC set for stripping material at Sable to finalize the road with. Fish salvage is occurring in June.

OTHER BUSINESS

Future Meetings

The September board meeting and site visit was discussed.

Directors decided that the next meeting will be in September 12, 2016. Directors decided to not visit Ekati Diamond Mine at that time.

Meeting adjourned at 6:00 pm on June 14, 2016.



**Summary of Discussion Approved by
Kim Poole, Secretary Treasurer**
