Dominion Diamond Ekati Corporation

Workshop Summary Report

Traditional Knowledge Elders Group September 12-13, 2017

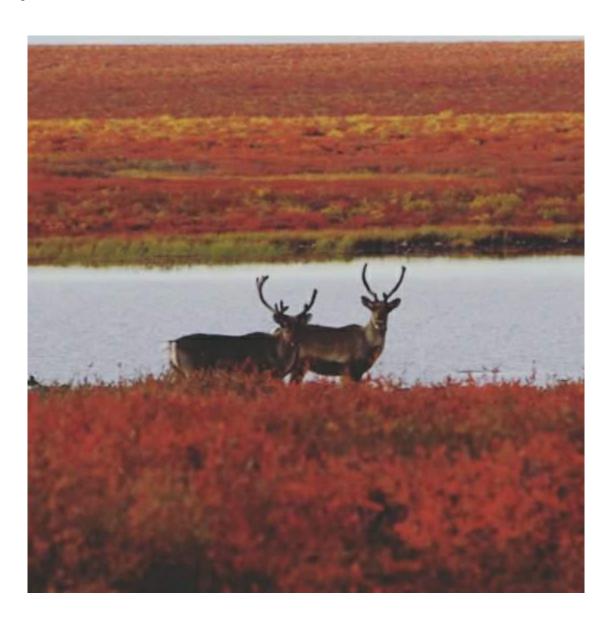




Table of Contents

1.0 Introduction	3
2.0 Presentation and Discussions	4
2.1 TKEG Participant Update - Jay Road/Crusher	4
2.2 Ekati Caribou Compensatory Mitigation PlanPlan	
2.3 Traditional Knowledge in Water & Fish Monitoring Programs (AEMP)	
2.4 Jay Project Update & Misery Underground Project Update	11
2.5 Interim Measures and Reclamation Plan (ICRP)	14
3.0 Site Tours	17
3.1 Sable Road/Caribou Tour	
3.2 Jay Road/Esker Construction Tour	19
4.0 Summary and Next Steps	21
4.1 Summary	
4.2 Next Steps	

Appendix A – Agenda

Appendix B - Meeting Notes

Appendix C – Ekati Caribou Compensatory Mitigation Plan, Presentation

Appendix D – TK in Water and Fish Monitoring Programs (AEMP), Presentation

Appendix E – Jay Project Update & Misery Underground Update, Presentation

Appendix F – Interim Measures and Reclamation Plan (ICRP), Presentation

Appendix G - Site Map

Appendix H – Summary Table of Measures from the Annual Report



1.0 Introduction

Dominion Diamond Ekati Corporation (DDEC) hosted a Traditional Knowledge Elders Group (TKEG) meeting on September 12-13, 2017 at the Ekati Diamond Mine. The TEKG was formed in response to Measure 6-5 (Traditional Knowledge-based caribou monitoring and mitigation) of the Report on Environmental Assessment (REA) for the Jay Project. The Mackenzie Valley Environmental Impact Review Board prescribed the formation of a Traditional Knowledge Elders Group to provide specific Traditional Knowledge (TK) input into the design and operations of the Jay Project (Project) to further mitigate impacts on caribou.

This is the fifth TKEG workshop and was held at the Ekati Diamond Mine. The visit was comprised of workshops and discussions on the Ekati Caribou Compensatory Mitigation Plan, the Interim Closure and Reclamation Plan (ICRP), the Aquatic Effects Monitoring Program (AEMP), Jay Project and Misery Underground Updates, and site tours of the Sable Road, Jay Road Esker Cut. A summary of the discussions and a list of action items are included in section 2 and 3 of this report



Tour of the Sable Road, TKEG Members observe caribou crossing the road. September 2017



Tour of the Sable Road, Caribou crossing the road. September 2017



2.0 Presentations and Discussions

2.1 TKEG Participant Update Site Tour – Jay Road Crusher and Jay Road Construction

Lawrence Mercredi, Joseph Judas, and Edward Sikyea presented an overview of the TKEG Participant Update – Jay Road Crusher and Jay Road Construction, which was completed in July 2017.

Detailed notes of the discussions and talking points can be found in the meeting notes in Appendix B.

- The group went to look at the crusher because there were concerns that were raised at the last meeting, and some dust suppression issues from last time.
- Group went to the crusher and the program manager was the guide.
- The crusher was in operation and the group observed the spray techniques. They had a tank with a series of nozzles along the end of the rollers (along the belt), and were spraying the materials that were coming out of the primary crusher. Those materials were then being fed into a secondary area where they were separated into two piles. High pressure spray nozzles were used on the material as it was coming out. There was a very negligible amount of dust coming out of the crusher itself because of the spray nozzles.
- The environment was safe to work in; the operators had a separate booth and we could see quite clearly the whole operation. The group could see where the loader was taking materials and loading it into the crusher, and the final area where it was fed out of the belts.
- The group was on the site for about an hour and there was quite a bit of information provided by Shawn, who had told us that information would be provided. The group was satisfied with the operation of the crusher, and the way they handled the dust suppression.
- The group requests an interpreter be present at future tours to ensure all participants can understand the information being shared.

Summary of Discussion Questions and Responses:

Crushing: Water Concerns

• There was discussion of crushing and how the rocks are washed, if the residue is contained, or, if not, where it would end up. DDEC replied that there was not a containment vessel for water but that the entire area is designed for this purpose. The water used is a spray for dust suppression, more than a rinse or washing of the rock and as such there is minimal outflow.



• Further concern was expressed regarding the lake as the receiving reservoir of any inputs, and for animal welfare in or on the lake. DDEC responded that the afternoon's activities included a Jay Road Construction Tour, which is adjacent to the Crusher. DDEC informed attendees that the crusher was not currently operating, but that the employees in the area (Shawn) would be able to provide greater detail on its operation, including water concerns.

Crushing: Dust Concerns

- In April we observed water washing material on the crusher was this for dust control or some other purpose? At the crusher water is drawn from a small tank at the main camp, for two reasons: (1) so that the rock is not dusty when it goes into the crusher (dust control), and (2) to keep people working there safe. There are other programs related to water and dust to keep both people and wildlife safe: we (DDEC) completed a program this July that tracked trucks and the airborne dust via four sets of sensors: at 30m, 60m, 90m, and 1km intervals. Other related programs include snow sampling, emissions monitoring, and a program to look at dust suppression and road leaching.
- How will the dust monitoring program run? How will it operate, and what will it measure? DDEC responded that all of this, including the Crusher, is a part of the larger Air Monitoring Program. This larger program will put together many pieces: analysis of dust gathered in glass tins from the side of roads, a lichen sampling program, emissions sampling, and more.

Action Items:

- 1. DDEC will provide more detailed information and schematics about how the Jay crusher works.
- 2. DDEC will organize a site tour for a larger group to see how the Jay crusher works when it is operational.

2.2 Presentation - Ekati Caribou Compensatory Mitigation Plan

Harry O'Keefe presented an overview of the Ekati Caribou Compensatory Mitigation Plan. This included: the scope of commitments; the Ekati mine schedule; community based monitoring; and reporting.

The document was created to address concerns about the new pit, and what this will mean for the caribou and people who access them. As part of the final submission, DDEC added an additional fund to aid research in the north by balancing the scientific and traditional knowledge perspectives. DDEC also supports programs that bring members from these communities out onto the land, to areas where they have access to caribou. Following the submission of this document three EAs that were carried out. They required DDEC to have enhanced mitigation onsite, and to apply all mitigation proposed for the Jay project to the rest of the site.



DDEC also proposed a Dust Mitigation Pilot Program and agreed to progressive and accelerated reclamation so that more areas may be brought back to a natural state. The mitigation would address these three specific things:

- Waste drop piles and how to improve safety for caribou;
- How caribou can get on and off a pile post closure; and Dust dispersion around site.

Further actions or considerations by DDEC toward caribou include:

- The Jay Road Caribou Migration Program -- formalized the process for traffic control, and ensured caribou have *the right away*; a piece of the larger Caribou Management Plan.
- The community based monitoring program provided 500,000\$ in matched funding toward scientific research, including TK input via the TKEG as a scientific steering committee.

Responses from the Public:

• One of the main suggestions to DDEC, and for the Jay project, was to have as few pits operating as possible; by the time Jay Pit is operational, the site will be much different than it is today As highlighted by the Ekati Mine schedule, there will ideally only be two pits operating at the time; at this time, there are four in operation. It was discussed in the last meeting that the new caribou collars that DDEC are using are much lighter, and there are many more wildlife-indicating marks near the mine. This allows researchers to see where the caribou are every hour, as opposed to every 8 hours.

It is worth expanding on the topic of radio collars, as this initiative has allowed DDEC to assist the GNWT to:

- Put in place buffers;
- Understand more about how caribou move;
- Understand ways to help caribou where there was, is, or might be future development; and to;
- Gather more information of the effects of mining on caribou;

The effect(s) of dust, both nuisance and physiological, will be included as a general item, and newly founded research programs will determine their objectives through steering by the TKEG. Once the CMP is in place, the results will be reported annually to communities and regulators in a culturally-sensitive, and time-sensitive manor. Select results will be reported to the GNWT's Ministry of Environment and Natural Resources, the Wek'èezhìi Renewable Resource Board, IEMA, and other bodies as necessary and where appropriate.

Summary of Discussion Questions and Responses:

Caribou



- What is community monitoring? It is community monitoring of the caribou? The LKDFN has come up with a program and we are helping to fund it. There is also a Tlicho program that involves sending people on to the land, to camp and spend 6 weeks from late June to late August with the caribou. Also looking into things such as food, and general overall health of the caribou.

 We make some logistic suggestions, but they are driven by the community.
- Would it be ok to show us the guidelines? Yes I think we are very open to that, but we first have to ask the Tlicho or Lutsel K'e. We are happy to help with some of the logistics. We are more than happy to help you develop a proposal.
- The Tlicho have a program every summer where they observe animals and their movement with blackflies, predators, and what the caribou are doing for weeks at a time. It is behavioral in nature and I believe has a budget of \$100,000? That funding was 100,000\$, but it has now changed. The funding is now done in a way to help communities directly, and have funding available for the life of Jay Pit.
- Are Diavik and Ekati in a joint venture to fund caribou monitoring? *No we've only made commitments through Ekati to work with communities. We work with individual communities based on the scope.*
- There seems to be a lot of duplication amongst different projects; is it possible to have a greater sharing of information for areas with overlap: environment, dust, water, wildlife, etc.? We should not duplicate studies or research that could be better provisioned. These funds are meant to go beyond the effects of Ekati and Diavik. For example, the elders transfer of information to youth. It is not for us to say what that money is for; we also cannot tell the other companies how these extra funds beyond what is required, can be used.
- Does the program only go to communities with IBAs? *Not to my knowledge, but we can clarify that.* The water-board had suggested through the EA that an elder's tech. group would be comprised only as interveners would that be included? *Money would be available to all who were brought in as part of this type of group. In November we will hold a workshop to go over the migration plan and talk about community based monitoring programs. This support is either logistic or financial.*
- I noticed that the dotted geo-monitoring data is there. Is this the road going down to Misery? Yes that road is on the left-hand side of the data points. Do you have any data to share that shows the caribou crossing the energized lines? That was just the first set of data from the project, and is just an example. Hopefully more information will come out and the data will be processed at the end of the year.
- Are there any kinds of monitors that indicate how far out the energy can be monitored from power lines? No we don't have these kinds of monitors at this time, but we do have NRC funding. This year we were focused on the potential sounds with the energized powerline, and had set up our motion detection cameras to see if it was the energized powerlines that affected the movement of the caribou. Will you be putting in a monitoring line? No I think the technology is known, we just need to find someone who studies this and find additional information from those studies.



- We know that with the calving grounds there are time frames—is there movement in these timelines, and is it measured in days or weeks? Caribou are getting to the calving ground and calving at the same time in the three-week window. What I have heard from communities, is that sometimes the snow is already melting and the vegetation is already reached peak green. That means they are calving after peak greening. Also, the lakes are freezing later so they have to walk further to the tree line. What I have noticed is they are coming south later and later, and that is more comfortable for the caribou because it hasn't been as cold. The change in behaviour happens in the fall and it may not be ideal.
- I think the forest fires have a lot to do with it. The country is all burned. The caribou only come up so far on the south side of the lake and turn back because of lack of food. All that caribou range is affected by lack of access to food. The effects of forest fire on caribou might be something we'd want added to the list.
- How are you working Climate Change into your factors? *I don't think we have any factors predetermined. I think Climate Change could be the first factor.*

Misery Pit

• What about Misery Deep? Is it Misery pushback? Misery Deep would use the same vehicles as Jay. The underground process is much slower than the open pit process. With the open pit process, you can move 30,000-40,000 tonnes per day. Misery Deep does not extend past Jay, but provides additional value while waiting for Jay.

I saw in the newspaper before I came that operations will be open until 2042. What does that mean? Does that include all these pits, as well as the old pits you have here? I don't know about the year 2042. I mostly know about Caribou and wildlife. As far as I know, 2033 would be the end of mining. So that means at least another 15 years. From 2021 or 2022, the only pits we will be mining are the Sable and Jay pits—with the exception of the Misery Underground application that is still with the water board.

Action Items:

- 1. DDEC will provide additional information about dust as a general item.
- 2. DDEC will provide clarity on which caribou-related programs are exclusive to IBA groups.
- 3. DDEC will provide additional information on the effects of mining on caribou.
- 4. The TKEG will work on providing some TK research objectives to DDEC that can be researched alongside scientific research.



2.3. Presentation - Traditional Knowledge in Water & Fish Monitoring Programs (AEMP)

April Hayward gave a presentation on the Aquatic Effects Monitoring Program (AEMP), and how traditional knowledge can be used together with this program for better monitoring of lakes and streams around the mine.

The presentation began with a slide highlighting the amount of lake and streams that are located around Ekati mine, and the importance of maintaining water, sediment, and fish health. It highlighted that every year DDEC collects information from the water sediments and from lakes and streams around Ekati mine; information on sediments and fish are collected every 6 years. This information is then used to help DDEC understand if and why there are any changes in the lakes and streams related to mining.

The program has been very successful thus far, but most of the data collected is using scientific methods to collect and analyse it.

Traditional knowledge has also been very valuable in understanding mining activities and if they have affected fish. This had been done through:

- Placement of nets;
- Fish and net handling experiences; and
- TK knowledge used to evaluate the physical health of fish.
- DDEC would really like to know if there are other ways that traditional knowledge can help us better understand if there have been changes in lakes or streams that might be related to mining activities.

AEMP and monitoring from a scientific perspective is important. We should continue with:

- Monitoring; and
- Having people who live on the land come to help us look at the fish, to gain a holistic picture of health for these species.
- DDEC would really like to know your opinions on this joint approach: the combination of western sciences and traditional knowledge; is this something we should continue doing?

Here at the mine we monitor the number of parasites in the fish and whether or not it is a number that makes sense for community members and their experiences on the land. We also monitor the temperature of the water, however due to the nature of mining at DDEC we don't really have much effect on water temperature. I don't know much about the Snap Lake project. I do know that lakes of



assorted sizes that have distinctive characteristics can often contribute to health of fish in those lakes. If lakes are very shallow it can heat up very quickly, for example.

For the fish sampling, we have people with us and it is very important to use and value TK. We will continue to have community members with us so that we know which fish species' we should send to the communities.

For the containment facility we will look to see if that can happen tomorrow and see the revegetation. If not this trip, another trip. It is a good place to go to see how the Tundra is coming back onto the land.

Summary of Discussion Questions and Responses:

Fish and Fish Habitat

- There was a lot of talk about the past conditions of the land and the ability for one's ancestors to readily provide for themselves in that environment. Today, things are different and climate change has increased the risks; we need to be ever-watchful for these changes to remain ahead of the risks, like changes in the water level; Traditional Knowledge holders can see these changes. We would be interested in working that kind of TK into our program: the ability to detect changes in water or vegetation just by looking. We are also monitoring for dust fall, and how dust entering the water changes the water.
- From your recent studies, what is the overall health of the fish in this area? The overall health is very good, and we haven't seen many changes in the variables we measure and from fish health evaluations from traditional knowledge. Did you notice a difference in the testing from the small water lake fish, and larger water lake fish? When we do our studies, we don't focus on large or small bodies of water--instead we look to see if fish have changed close to the mine compared with further away. We do know that these fish have comparable properties with metal in their tissue, even from larger lakes to smaller lakes.
- Concern was raised for fish found in Coppermine River, within the KIA region, which were said to have visible deformations. Question was raised how far the aquatic effects monitoring program extends, or could extend to capture issues.
- We had another member from the KIA, and one of the concerns she raised was the health of the fish on Coppermine River. She mentioned she had seen some deformed fish. What is the range of the aquatic affects monitoring program? If communities have an issue, how far will your group go to investigate? We have a program that goes from the mine out to Lac de Gras. We haven't seen any changes that would make us see an effect on the fish from contaminates in the mine. If we saw changes in water quality contaminants, then likely we would continue to expand our program and would include a fish program as well if we thought there was indication that it would be a problem. We have in the past expanded our monitoring program.



Due to monitoring from close intervals to some very close to the mine. We feel we have a very good understanding of how far contaminants could reach.

Action Items:

- 1. DDEC will continue with the AEMP scientific monitoring program.
- 2. DDEC will continue to use scientific methods in their monitoring program.
- 3. DDEC and the TKEG will work together to have people from the communities who live on the land to help DDEC look at and better understand fish health.
- 4. TKEG will provide DDEC with additional feedback on how TK can be used to understand changes to waterbodies, fish, small organisms and sediments.
- 5. TKEG would like to see containment areas for fish.

2.4 Presentation - Jay Project & Misery Underground Project Update

Claudine Lee gave a short presentation on the update of the Jay Project and what they have been working on over the last few months, which mainly focuses on the Misery Project. During this same period, DDEC has also visited many communities and separate groups.

The first part of the presentation focused on an update of the Jay Project, and the project schedule.

Details of the update include:

- Amendment to the water license was completed in May 2017 and sent to the Minister for approval;
- Approval was received in July 2017; and
- Requirements as part of the water license.

The requirements under the water license include:

- Engagement Plan;
- Aquatics Plan; and
- A new Closure Plan.

One of the major things that were produced over the last few months was a report that came out of the EA and EAs submitted to the review board at the end of June.

Road Construction

The major focus of the Jay Project has been on road construction from Misery to the shore of Lac de Savage. The next step is construction of pipeline road. In previous meetings, there had been a lot of discussion about how a road should be built through a caribou migration area and Esker. It was identified as an *action*.



Crusher Operations

All the rough material to crush to build the road and do the work that was needed this year. If the site visit is at Jay, the crusher can be seen but is not operational. It will be used again next year for the construction season.

Details of the Sable Pit Update

Work has been started on Sable Pit and includes:

- Water containment area;
- Accommodations:
- Lunch room:
- Safety shack; and
- Truck shop.

Details of Misery Pit Update

Beginning in June and July, DDEC has held many meetings with various groups and with various communities, such as Behchoko, Wekweeti, Whati and others. DDEC also met with YKDFN chiefs, the Lutsel K'e chief as well as IBA council representatives to start talking about the project.

Throughout underground mining at Misery, no other land will be distributed. DDEC will use the camp we have. The plan is to start as soon as Misery Open Pit is closed next year, and before Jay. DDEC will keep our supply of diamonds from the Misery-Jay area and keep some of our underground workface. This will end in 2019. The mines will be continued to operate as they always have in that period, with our management plans in place. What will change is the management of water coming out of the ground; the process of storing the water while mining and when it is put back in the pit. Lynx will be used to store water, and that water will eventually move back into misery. DDEC has put in an application to amend our water license to amend Misery Underground. This out for review right now. IEMA staff is also looking at this.

If there are any questions, you can talk to your leadership or DDEC. One of the comments DDEC gets is to have more talk about these projects prior to submitting applications. But now that our application is out there maybe more questions.

Timeline and Schedule from previous meeting:

- The crusher will be operated this year and every year for the roads;
- Road construction continued this year;
- An increase in rod laydowns over the next couple of years;
- Under-dyke construction, to will begin in 2019 instead of 2018; and
- Delayed dike construction (+1 year) changing dewatering, construction, and dike construction.



Summary of Discussion Questions and Responses:

Follow-Up Measures

• What are the measures in the report? The review board had a year-long process and looked at all the pieces of the project. They then wrote a report for the Minister that had 23 recommendations that were needed to let the project go ahead. Those measures range from funding, to building culture camps, to this very group. One of our responsibilities is to report every year on how we are doing. Are we able to get a copy of this report? We can make sure everyone gets one. Can we have it as an agenda item of this group's next meeting to follow up on this? Yes.

Caribou

• Conversation was steered toward caribou crossings, and if DDEC could provide more info on how the crossings were going to better accommodate caribou: smaller sized rocks, more gradual angles, more crossing area, etc. DDEC agreed with the suggested additions, and added that the road is not yet completed; the road design team has been briefed on the more ideal caribou-crossing aspects and is committed to achieving them.

Waste Management

- There was talk about perhaps scheduling a trip to see the waste management facilities, as this aspect of mining is important for TK groups to see and be comfortable with. When we go out on the tour, I leave it to you guys to decide where we go. We can go to the containment area or Jay to see how we are managing the roads. I did write down how Albert and Joseph want a better understanding of how all the waste is managed. That is a bigger site tour for the next meeting on site.
- Is Waste Management not an EA topic? It is going through the screening at the water board level. DDEC does not believe it will need to go to EA because of all the components we have already implemented to manage water on-site.

Action Items:

1. DDEC will provide the TKEG with a summary table from the Annual Report from 2017.



2.5 Presentation - Interim Closure and Reclamation Plan

Lukas Novy gave a presentation about the Interim Closure and Reclamation Plan (ICRP) for DDEC.

The presentation provided an overview of what the plan is, when it was approved by the Wek'èezìi land and water board, and why the plan is being updated prior to submission to the WWLB in 2018; this includes the Jay Project.

The Closure and Reclamation Plan is applied to all the mining components, including:

- Open Pits;
- Underground Mines;
- Waste Rock Storage;
- Processed Kimberlite Containment Areas;
- Dams, Dikes, and Channels; and
- Buildings and Infrastructure.

The ICRP Reclamation Framework is structured with an overall reclamation goal, principals for the mine and individual objectives around each component. The closure objectives describe each of the following components for the desired outcomes, and how they meet the desired outcomes with the closure criteria. The objectives are:

- Air;
- Land;
- Water;
- Wildlife;
- Health and Safety;
- Community; and
- Operations.

As part of the site wide wildlife objective, each mine component has reclamation activities and criteria associated with it to ensure wildlife can safely use the reclaimed Ekati mine.

With Open Pit Reclamation, the plan is to fill the pits with water and make them pit lakes. This can then reconnect them to the environment. Bear Tooth Pit has been used to store our kimberlite deposits and reclamation is the next stage of operations for that pit. Once filled with water, the pit is not complete, because it contains by-products of kimberlite. That material is then removed, and clean water replaces it. There is underground mining occurring, and that will be flooded once all the hazardous materials are removed. Underground mines have a main entryway, as well as a 'Fresh Air Raise'; this is a hole through the underground cavity that brings fresh air to the mine. Upon closure, the main entryway and air raise will be filled in with concrete.



The waste rock storage areas are there to encourage the freezing of the piles, as well as materials that need a final cover material over the top of them. We are also asking for input on construction of ramps to the top waste drop piles to allow safe access for wildlife.

The areas that are still exposed kimberlite on rock piles are then covered in granite.

Reclamation Work

- Main goal to place vegetation and rock to limit dust or water erosion near lakes
- Construction of water channels that allows water to flow in and out of the LLCF

Wildlife

- Rock cover will allow caribou to pass over LLCF
- Plants will provide ground cover but not attract wildlife

We have a successful program that enables a lot of students from the communities to collect seed from the grasses from the area. What we do with that seed is collects it, store it and plant it on to the Long Lake Containment Facility (LLCF). One of the most familiar components used is the channel diversion to establish the natural flow after the mine site after it is reclaimed. We will then cut channels through the damns, and remove culverts and add rock and vegetation cover to protect the banks. Everything you see in the main plant area will be taken down. A key element is around the roads. Currently the plan is when the mine does not need the roads anymore, and will scarify the roads (that is break via cutting, similar to how farmers till soil). It is a strategy that is proven successful. The question I have is if this the best strategy for the roads? By doing that you compromise the wildlife usage of the roads. What is the best way to reclaim the roads?

Summary of Discussion Questions and Responses:

- **Pits and Wildlife** Question was raised about the number of pits that DDEC has and if they are safe for wildlife if equipment is deposited into them. With equipment, like what happened to Snap Lake, if the equipment is useable it will not be put it in a landfill. You want to have a lake that can be utilized by wildlife, and have boat access. I think you are right about 6 or 7 pits.
- A pit is not a lake; comments were given that although we try to restore things to their natural state, such is not always possible. We are very much on the same page, and understand that is not a lake, and those comments hold true for us. We are going to try out best to make sure when we refill it that we are monitoring the water, and will not let wilderness access it until we feel it is safe and connected it with other lakes. The comments around the waste rock piles, I have made notes about the comments around the piles as they are an important consideration as well. Will the pits be fully filled? Will the edges be sloped at all? This example is great. Where the water level is too low, we want to have it higher so it is safe. In terms of monitoring, we monitor the



- pits for water equality while we are filling the pits and when the pits are full. Prior to reconnecting it we would also be doing monitoring.
- On your work on the inflow and outflow and thinking about the particulate matter that has settled prior to opening it up; are you monitoring your particulate disturbance? We are putting in processed kimberlite and it settles out to create just water and solids. Right now, we have a value of 30 m of water that is above the solids level. Is processed kimberlite floating into environment? Kimberlite isn't toxic. It needs to be physically stabilized. This is going to be done through both vegetation and rock. The concrete caps, how long will those hold? The entrances will be a concrete cap that will last a long time; this is being done more for a safety standpoint: to prevent humans or wildlife from falling in.
- Discussion was had on the ability for public input into closure, reclamation, and long term planning. It is an excellent time to have community members present to ensure we are doing things right. Especially with some of the pits that are big, the flooding is going to happen over years. We should ensure that we don't take too much water from the other lakes. I like the idea of involvement of having community members helping out and monitoring during the pit flooding.
- Comments were raised on the Long Lake Containment Facility (LLCF) and re-vegetation on kimberlite vs. gravel. Form a chemical stand point, they are the same material, but from a texture standpoint they may differ in their substrate ability to grow vegetation. We are doing a lot of testing on fine kimberlite, but it is not something we can confidently say we can transfer to the fox piles. Currently, we know we can stabilize it with granite.

Caribou

- Currently the road shoulders are littered with boulders and sharp rocks, is it DDEC's plan to shape and slope these shoulders to better serve caribou? The current plan is to scarify the roads and knock down the berms. Do we want to focus on wildlife and focus on vegetation? Right now, it isn't in the plan to add more access for wildlife, but it does not mean we won't update the plan from your comments.
- There was discussion on the Traditional Knowledge Elders Group, and about the focus on mitigations for caribou. *That is what we are starting on now and the best use for reclamation.*

General

• There were comments that, for future presentations, questions that would be posed to the group should be provided to the elders prior. *DDEC agreed*.

Action Items:

- 1. DDEC will continue with LLCF reclamation work and provide information to the TKEG about additional research and findings.
- 2. DDEC will effort to provide any direct questions posed to TKEG ahead of time.



3.0 Site Tours

3.1 Sable Road - Caribou Crossing Tour

Site Tour of Sable Road Crossing

The site tour was changed to Sable Road because mining staff had reported seeing sightings of caribou on the land earlier in the day. The site tour involved driving down Sable Road toward a crossing where the caribou had been spotted earlier, in hopes to observe caribou using the designated road crossings. Around 30-40 caribou were observed crossing the road.

There was a lot of excitement about finally having the chance to observe so many caribou together on the land, and to finally see them cross a road.



Key Questions from the Elders:

Would there be dust suppression on this road and what was the time line?

Response: Working on a plan and when it would be applied and for how long. Also, to find the right type of application for the suppression.

How many crossings

are on the road?

Response: 10.

How do the vehicle waiting times and speeds work?

Response: Caribou have to be 100 m off the road before traffic can resume. Prior to reaching the 100m distance, vehicles are required to reduce speeds.



TKEG Sable Road Tour, September 2017

Key comments about the road:





TKEG Sable Road Tour, Caribou crossed, September 2017

- The sides of the road should have a smooth slope that is much longer than currently here.
- The caribou crossings should be located in areas where there is less natural rock that is located on the sides of the road.

- Instead of some of the larger jagged rock, smaller crushed rock should be used with poured sand.
- If the rock is too large at the caribou crossings, and the caribou is chased by predators, it could be at risk of crossing the road regardless of the rock size and being injured.



TKEG Sable Road Tour, Caribou approaching road September 2017

Action Items:

- 1. During the next visit dust stations can be part of the tour.
- 2. TKEG would like to monitor and view future progress on the roads.



3.2 Jay Road Tour – Esker Cut

Jay Road Tour

A site visit was held to show the elders the road construction techniques used along Jay Road. The elders were also able to view an Esker that had a road built through it, and how DDEC has kept all the materials from the removed Esker, and pilled the Esker material close to the removal site in order for the Esker to be rebuilt during mine closure. The specific area of road that will come through the Esker was chosen from previous meetings and from the EA, in such a way that it would minimize disturbances or require movement of more material.

Questions and Comments from the tour:



Where does the waste rock go, and can you provide a map?

Response: Do not know, but we can find out and provide a map.

When the Esker was removed, were there any gravesites found?

Response: There were not found.

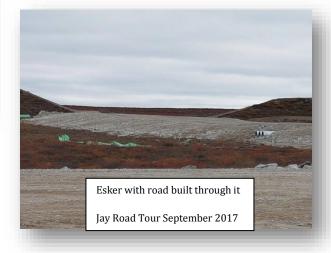
Have there been any caribou viewed walking on the

Eskers?

Response: None this year.

What is the elevation in metres of the Esker?

Response: Do not have an exact number, but can find out.





The slopes on some parts of the road seem very steep.

Response: The road is not done.

Can we have a diagram and some schematics about the crusher?

Response: yes.

This area is much better than other areas. The elders liked the fine gravel that was used, and a much more gradual slope. The elders noted that when it is time to remove the Esker materials from the storage area, that there should be close consideration paid to animals that may try and build dens.



Actions Items:

- 1. DDEC to provide map to show where the waste rock goes.
- 2. DDEC to provide more information and schematics as to how the Jay Road crusher functions.
- 3. DDEC to provide more information about the requirements for road design and construction.



4.0 Summary

4.1 Follow up - Summary

The TKEG had wanted to see the crusher that had been viewed by a smaller group of elders in July, but it was no longer in operation. The TKEG has also been interested in having a tour of visiting the containment facility, but it may not be possible the following day. Key things that the group discussed were:

- Dust control and dust monitoring;
- Information about the dyke and water board submission information;
- Caribou crossings; and
- Fish out.

It was also brought up that a document should be compiled that ensures everyone that is part of the TKEG has access to everyone else's contact information. There were also additional conversations about setting up a research group and another workshop in October. In addition, there was discussion about how to get communities access to funding, and how that funding could be used to host more workshops that are directly on the land and part of an ongoing process. The last point that was brought up was to try and find some land that would be more suitable for the culture camp as soon as possible.

4.2 Next steps

The TKEG agreed that the next full group meeting will be an offsite meeting in either Yellowknife, or Fort Resolution held in November / December. At the time of this report, it will most likely be held in Yellowknife the week of the 22nd in November. Topics for review and discussion will include:

- Additional information on dust reports and additional information on dust pilot projects.
- Additional information on waste and how waste water is managed on site.
- Additional information on the mine pits (where they are and how big they are).
- Additional information on reclamation processes until site closure.
- DDEC will include site maps in the package that goes out and include them in the next meeting.
- DDEC will provide site locations for discussion at the next meeting. DDEC will address the
 concerns raised here by viewing the property, land, and structures ahead of the first winter
 snowfall.

Action Items:

1. DDEC to provide TKEG members with a site map of the entire DDEC facility.



- 2. DDEC will take photos and send information to TKEG to provide feedback about placement of the Culture Camp prior to snowfall.
- 3. DDEC to follow up about logistical and financial information to ensure continued dialogue with TKEG members prior to workshops, and after workshops.
- 4. DDEC will pick some tentative dates for the week of the 22nd of November and book hotel rooms for a TKEG workshop in Yellowknife.

The workshop closed at approximately 4:30pm. With acknowledgements and thanks from all the parties involved, the workshop ended with a prayer from Joseph Judas with the Tlicho First Nations.



Appendix A – Agenda





Traditonal Knowldege Elder's Group (TKEG) Meeting #5 Draft Agenda

Date: September 11-13, 2017 (Location: Ekati Diamond Mine)

Background and Workshop Objectives

As per Measure 6-5: Traditional Knowledge-based caribou monitoring and mitigation of the Report on the Environmental Assessment for the Jay Project, Dominion Diamond will establish a Traditional Knowledge Elders Group (TKEG) drawn from Aboriginal organizations that participated in the EA to provide specific Traditional Knowledge (TK) input into the design and operations (including closure) of the Jay Project ("Project") to further mitigate impacts on caribou.

The TK input will include the Project, but may be applied to the Ekati Mine site to further mitigate impacts on caribou, water, land, air and fish.

The TKEG shall serve in an advisory role.

This workshop is the fifth of the TKEG and will be held at the Ekati Diamond Mine. Discussions and presentations will be held on the Ekati Caribou Compensatory Mitigation Plan, the Interim Closure and Reclamation Plan (ICRP) and TK involvement with the Aquatic Effects Monitoring Program (AEMP). A site tour of the Jay Road construction has been arranged.

Below is the updated agenda.

This workshop is part of Dominion Diamond's ongoing Jay Engagement Process.

DDEC will provide a report on the session discussion and share it with participants, communities and interested parties.

Materials from Meeting #3 in January 2017 and Meeting #4 in April 2017 were sent to participants on June 21, 2017

AGENDA Travel Day to Ekati Diamond Mine Monday, September 11, 2017 Responsibility Time Agenda Item Comments 4:30-5:00pm Check in for BBE is located at: Ekati Charter at 100 McMillan Street BBE Yellowknife, NT X1A 3T2 5:15-6:30 pm Fly to Ekati Charter 6:30-7:00pm Check in Ekati Main Accommodations and Safety Discussion 7:00 pm Supper

AGENDA Day 1 Tuesday September 12, 2017

Time	Agenda Item	Comments	Responsibility
8:00-8:30 am	Breakfast	Breakfast in Ekati cafeteria	
8:30-9:00am	Welcome	Welcome to participants	Facilitators
9:00-9:30am		Review January/April 2017 Minutes/Action Items/Commitments	Facilitators
9:30 am -9:45 am	Break	Break	
9:45-10:30am	July 10, TKEG Site Tour	TKEG participant Update Jay Crusher/Jay Road Construction	Lawrence Mercredi, Edward Sikyea, Mona Tiktalik, Joseph Judas
10:30am- 12:00pm	Presentation	Ekati Caribou Compensatory Mitigation Plan	Harry O'Keefe
12:00-1:00pm	Lunch	Lunch in Ekati Cafeteria	
1:00-1:30pm	PPE	Assignment of PPE for Site Tour	All
1:30-3:00pm	Site Tour	Jay Road Construction	All
3:00-3:30 pm	Break	Break	
3:30-4:30 pm	Discussion	Traditional Knowledge in Water and Fish Monitoring Programs	April Hayward
4:30-5:00 pm	Follow Up	Summary of 1 st Day Discussions	Facilitators
5:00 pm	Dinner	Dinner in Ekati Cafeteria	

AGENDA Day 2 Wednesday September 13, 2017					
Time	Agenda Item	Comments	Responsibility		
8:00-8:30 am	Breakfast	Breakfast in Ekati Cafeteria			
8:30-9:15 am	Presentation	Jay Project Update and Misery Underground Project	Claudine lee		
9:15-10:30	Presentation	Interim Closure and Reclamation Plan	Lukas Novy		
10:30-10:45 am	Break	Break			
10:45am- 12:00 pm	Site Tour	Time reserved for schedule change if needed for wildlife	All		
12:00-1:30 pm		Lunch in Ekati Cafeteria			
1:30-3:00 pm	Follow Up	Summary of discussions Next meeting/location	Facilitators		
3:00-3:30 pm		Break			
5:00	Check in for flight	Ekati	All		
5:30-6:30	Fly to Yellowknife	Arrive at BBE			

Appendix B – TKEG Meeting Minutes September 12-13, 2017



Meeting minutes are removed for final public submissions.



Appendix C – Ekati Caribou Compensatory Mitigation Plan Presentation





Jay Project

Caribou Mitigation Plan

- September 2017









Agenda

- Welcome and Introduction
- Overview
- Schedule







Development of CMP

Condition of Measure 6-2a

- Enhanced mitigation
- ZOI research
- Apply Jay mitigation to Ekati Mine
- Complete dust mitigation study
- Progressive reclamation of LLCF
- Caribou WRSA egress

Also addresses Measures 6-3 and 6-5

- Research on dust distribution
- Community monitoring







CMP scope

Scope of CMP Commitments

Jay Project Mitigation (Section 2)

Community-based Monitoring (Section 3)

ZOI Research (Section 4)

Bathurst Herd Research (Section 5)

Reporting Schedule (Section 6)



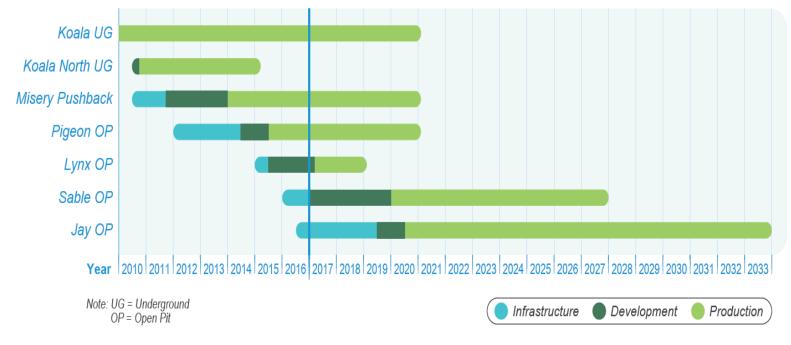




Jay Project Mitigation (Section 2)

Ekati Mine Operational Scheduling

Ekati Mine Plan, 2010 to 2030







Community-based Monitoring (Section 3)

- workshops with TK holders;
- community site-based monitoring programs for the caribou;
- recommendations on how TK should be aligned in the Caribou Monitoring programs;
- provision of regular caribou engagement reports to IBA communities; and,
- sharing information to foster an understanding with the communities on how caribou are monitored at the Ekati Mine.







ZOI Research (Section 4)

Geofenced activated caribou collar, 2015

LEGEND

• CARIBOU GPS LOCATION (NOVEMBER 3 - DECEMBER 30)

TERRITORIAL BOUNDARY

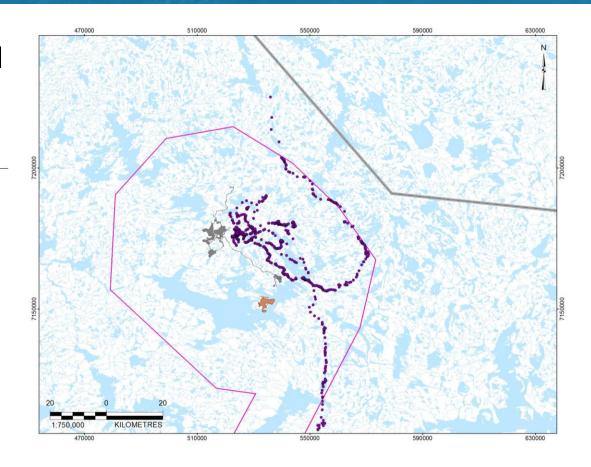
WATERCOURSE

DIAVIK FOOTPRINT

EKATI FOOTPRINT

GPS GEOFENCE BOUNDARY

WATERBODY







Bathurst Research (Section 5)

Objective is to determine primary natural factors contributing to the Bathurst decline

Working group will evaluate grant proposals

Grant funding of \$500,000 total \$200,000 in 2017 \$100,000 in each of 2018 – 2020)







Reporting (Section 6)

Measure 6-2a provides the guidance of annual reporting of the CMP including:

- in person to communities in a culturally appropriate manner; and,
- to ENR, Wek'èezhìi Renewable Resources Board, and IEMA.

Existing reports will also be used for reporting on CMP









Appendix D – TK in Water and Fish Monitoring Programs Presentation (AEMP)









Lakes and Streams Near the Ekati Mine

There are many lakes and streams close to the Ekati Diamond Mine.

The water and sediments in these lakes and streams are very good and they are full of life, including fish.

Lakes and streams in this area flow north to the Arctic Ocean along the Coppermine River.







Aquatic Effects Monitoring Program (AEMP)

Every year, DDEC collects information on water, sediments, small organisms that live in the water and sediments, and fish from lakes and streams near the Ekati mine.

Information on sediments and fish are collected every three or six years.





Aquatic Effects Monitoring Program (AEMP)

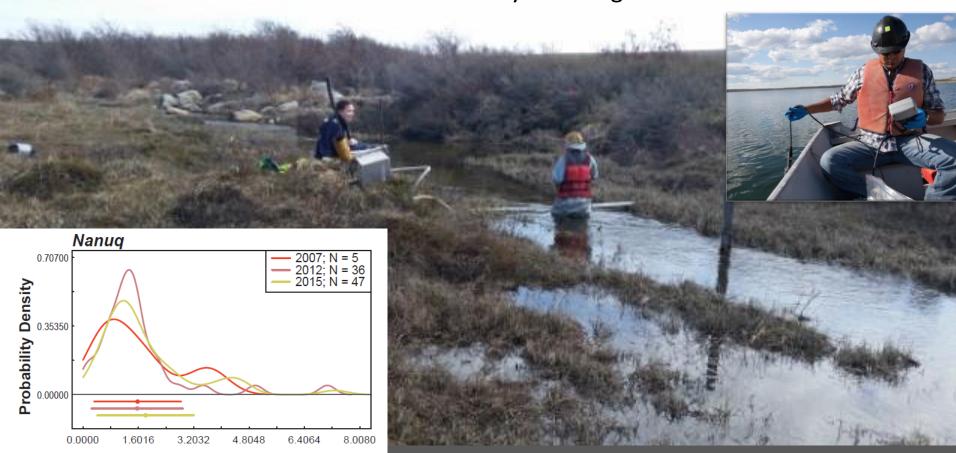
This information is used to help DDEC understand whether there have been any changes in the lakes and streams that might be related to mining activities.





AEMP - Scientific Methods

Most of the information is collected and analysed using scientific methods.





Traditional Knowledge has been valuable in understanding whether mining activities have affected fish:

- placement of nets
- fish and net handling experience
- evaluating physical health of fish





DDEC would like to know if there are other ways that Traditional Knowledge might help us understand whether there have been changes in lakes and streams near the Ekati mine that might be related to mining activities.





How can we know if a lake or stream has changed?

If a lake or stream has changed, how do we know if the change is important and whether it is good or bad?







How do we know if one lake or stream is like another lake or stream?

Is it important to compare lakes or streams?







How do we know if the water, sediments, or small organisms that live in the water and sediments have changed?

If the water, sediments, or small organisms that live in water and sediments have changed, how do know if the change is important and whether the change is good or bad?

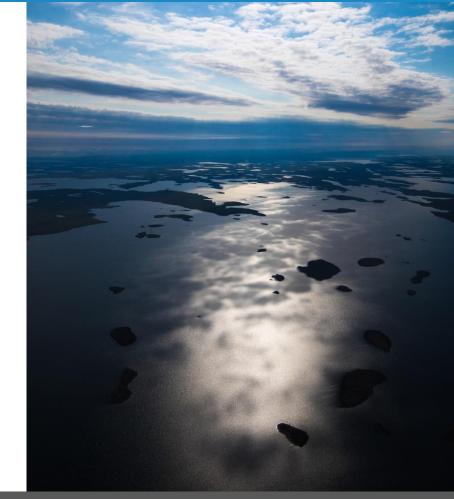




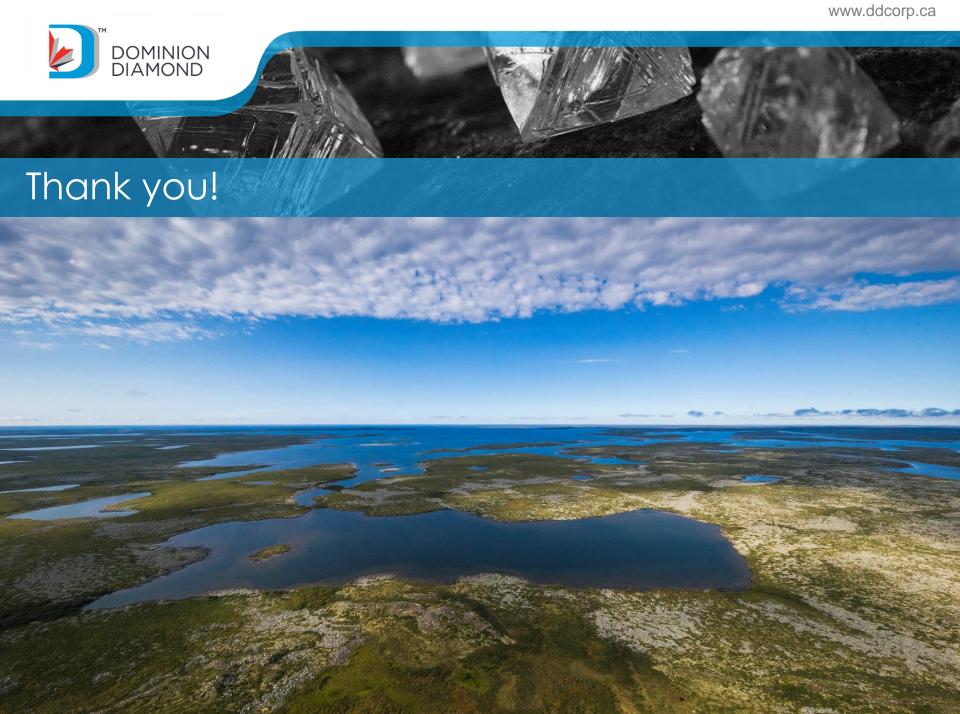


How do we know if the fish in a lake or stream have changed?

If the fish have changed, how do know if the change is important and whether the change is good or bad?







Appendix E - Jay Project & Misery Underground Project Update Presentation









Jay Project Update

Water Licence

- Amended Type A Water Licence sent to the Minister of GNWT-ENR on May 29, 2017
- Ministerial approval received July 6, 2017
- Updated Plans and additional studies due this fall

Report on Measures

Submitted to MVEIRB June 29, 2017







Jay Project Update

Road Construction

- Road built through Esker and to shore of Lac du Sauvage
- Continue to 30m from Lac du Sauvage
- Construction of pipeline road







Crusher Operations

- Crusher operated from May until August
- All material crushed for road









Sable Project Update

Start of stripping of Sable Pit

Complete Two Rock Sedimentation Pond

Continue construction of support buildings









Misery General Site Plan

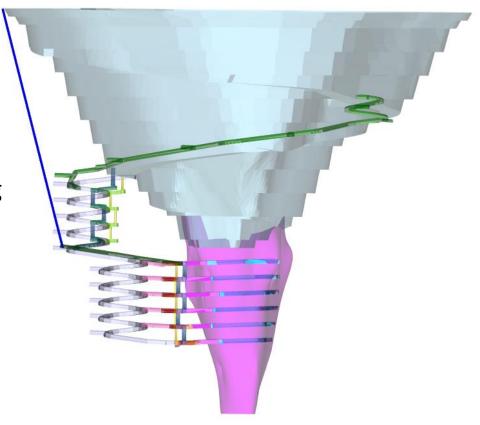






Design

- Similar to underground mining at the Panda and Koala Pits
- Operations within footprint of existing surface disturbances







Project Details

- No new areas will be disturbed
- Uses existing Misery and Ekati processing plant, road and power
- Extends Ekati life of mine 1 year (2033 to 2034)
- Keeps skilled workforce
- Job and contract opportunities







Project Components

Use of existing facilities with some upgrades

- Misery camp expansion
- Ventilation, mine air heating, compressed air
- Power from Misery camp
- Underground access excavations/construction
- Pipelines
- Minor King Pond modification







Environmental Components

- Uses approach assessed during Jay EA
- No new impacts to caribou or other wildlife
- Water management plan
 - Uses plans discussed during Jay EA
 - Upgrades to the King Pond
 - Use of Lynx Pit
- Updates to existing Ekati monitoring and management plans







Next steps

- Application to Wek'èezhìı Land and Water Board (WLWB) August 2017
- Continued engagement with communities and regulators
- Regulatory decision (2018 assuming similar timeline as Lynx application)
- Once approvals are in place, construction will begin







Timeline and Schedule - Misery, MUG, and Jay

Phase	Date
Expected Environmental Approvals and Permits MUG	2018
End of Misery open pit mining and beginning of MUG construction	2018
MUG Construction / Early operation	2019
MUG operations	2020 to 2022
Start of MUG closure activities	2022
Jay Project Dike Construction	2019 to 2021
Jay Dewatering / Operations (nil discharge to LdS)	2021 to 2028
Jay Operations (discharge to LdS)	2028 to 2035
Start of Jay Closure activities	2035





Long Term Construction and Mining

Construction Activity	2017	2018	2019	2020	2021	2022
Crusher Operations	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Jay Road and Laydowns Build	\checkmark	\checkmark	\checkmark			
Temp Construction Camp Build		✓	\checkmark			
Dike Construction			\checkmark	\checkmark	✓	\checkmark
*Misery Underground		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Fish Out					\checkmark	\checkmark
Pipeline Construction				\checkmark	\checkmark	
Dewatering (after Fish Out)						√
Start of Mining	16					✓





Appendix F – Interim Measures and Reclamation Plan Presentation (ICRP)



TKEG Group Meeting #5 Interim Closure and Reclamation Plan (ICRP) Date: September 13, 2017













Presentation Outline

- Introduction
- Interim Closure and Reclamation Plan Summary
- Break (Coffee & Snack/Washroom)
- Community Input Reclamation Questions



Interim Closure and Reclamation Plan (ICRP)

- Describes the work plan to reclaim the mine during and following the end of Ekati Operations.
- Approved by the Wek'eezhii Land and Water Board (WLWB) November, 2011.
- Plan is being updated for submission to the WLWB in 2018.
 Updated plan will include the Jay Project.



EKATI's Closure and Reclamation Plan

Mine Components

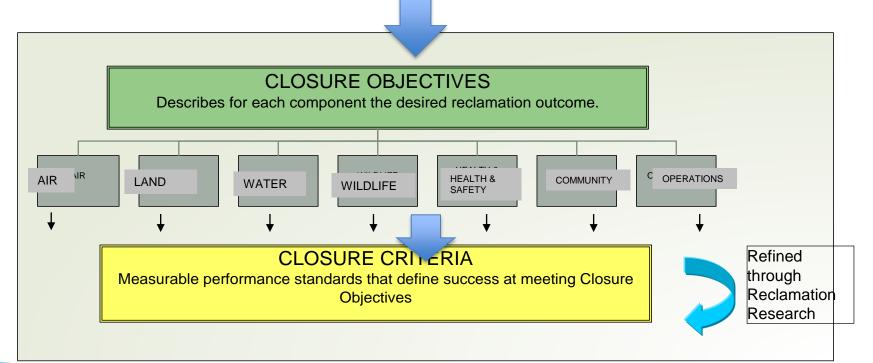
- 1. Open Pits
- 2. Underground Mines
- 3. Waste Rock Storage Areas
- 4. Processed Kimberlite Containment Areas
- 5. Dams, Dikes and Channels
- 6. Buildings and Infrastructure



ICRP Reclamation Framework

RECLAMATION GOAL

Return the EKATI Minesite to viable, and wherever practicable, self sustaining ecosystems that are compatible with a healthy environment, human activities, and the surrounding environment.





Site Wide Wildlife Objective

- Ensure that wildlife will be able to safely use the reclaimed Ekati mine
- Each of the mine components has different reclamation activities and associated criteria to ensure this object is achieved



Open Pits Reclamation

Reclamation Work

- Pump water from nearby lakes to fill the open pits
- Re-connect lakes to the streams nearby so that water flows to other lakes.
- Monitor the water quality while pit lakes are filling.
- Cut back edges of lakes to create shorelines.
- Stabilize slopes and plant vegetation to protect shorelines.

Wildlife

- Barriers will be built around the pits while they are flooding.
- Some of the original pit walls will be left above the lake level - available for use by birds (e.g peregrine).
- Caribou and people will be able to walk down to the edges of the lakes.
- Fish will move into and out of the lakes and have habitat areas around portions of the lake edges.





Open Pit Reclamation

Operations



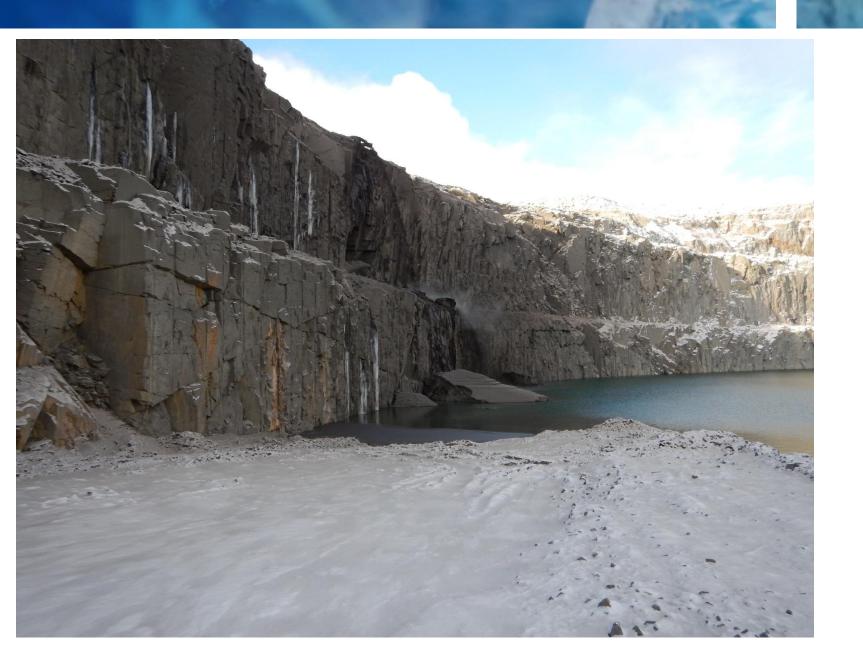
Reclamation



Mining of Beartooth Open Pit



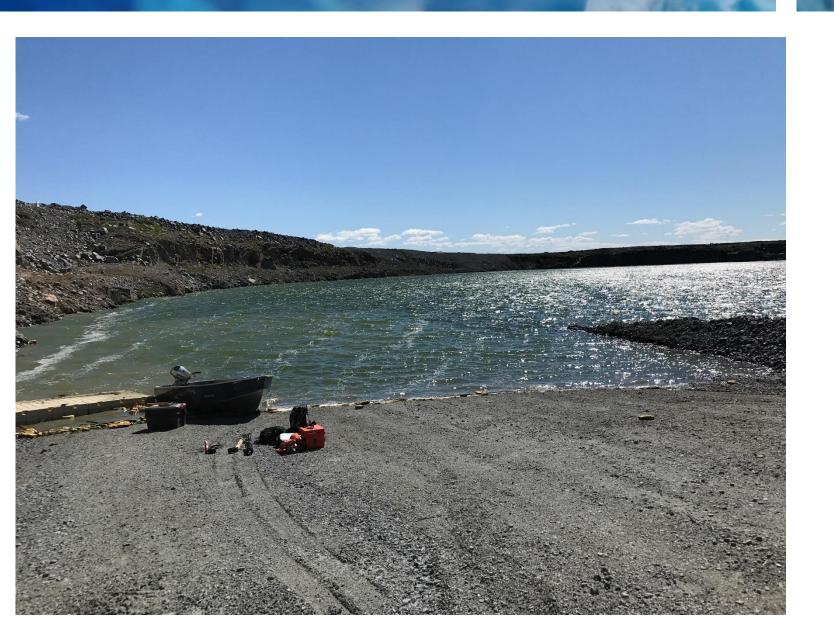
Deposition of Processed Kimberlite into Beartooth



Beartooth Open Pit filled with water



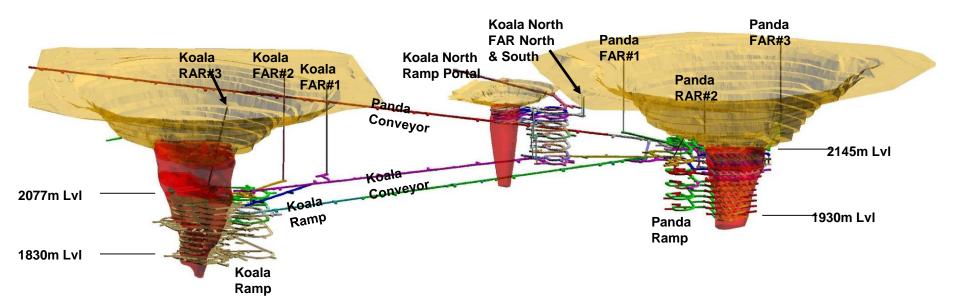
Beartooth Open Pit filled with water



Underground Mines

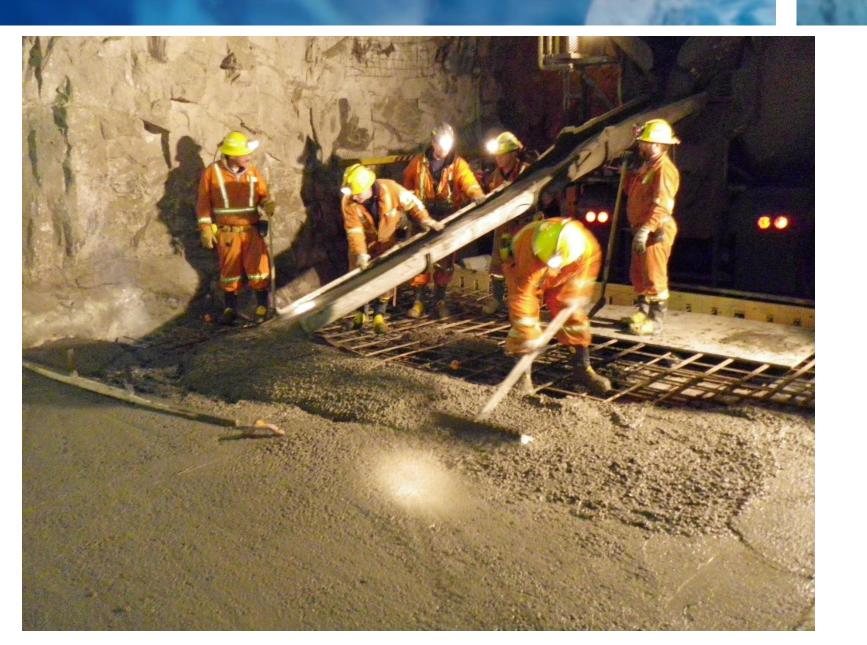
Reclamation Work

- · Remove hazardous waste materials
- Blocking access to mine entrances and sealing air raises





Underground Reclamation - Concrete Work



Waste Rock Storage Areas

- Encourage permafrost to grow into the rock piles.
- Cover reactive materials with rock or till
- Construct wildlife ramps on sides of waste rock piles to allow animals to safely access and leave the rock piles.







Fox Waste Rock Storage Area Reclamation



LLCF Reclamation Plan

Reclamation Work

- Place vegetation and rock to physically to limit dust or water erosion to nearby tundra or lakes.
- Construction of water channels to let water flow through and out of the LLCF

Wildlife

- Rock cover design will allow caribou to pass safely through the LLCF.
- Plant communities will be designed to provide ground cover, but not as an attractant to wildlife.







LLCF Vegetation Rock Trials



LLCF Surface Water Channels



LLCF Student Seed Collection Program



LLCF Wildlife Usage









Dams, Dikes and Channels Reclamation

Reclamation Work

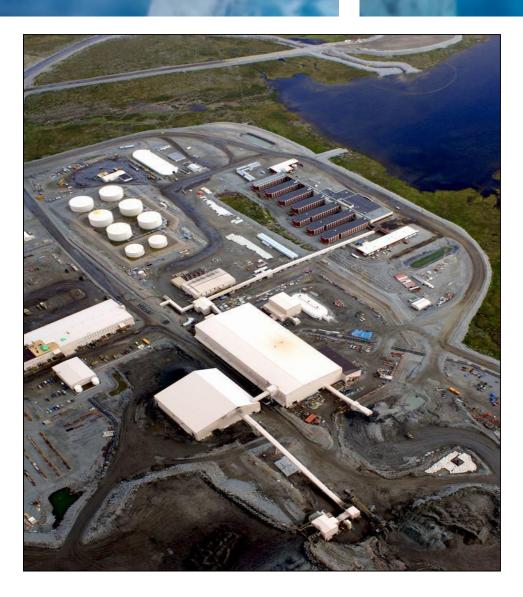
- Cut channels through dams and allow streams to flow.
- Remove culverts and bridges
- Protect stream banks with rock or vegetation cover.





Buildings and Infrastructure & Roads

- Break down and remove buildings.
- Landfill all inert material.
- Remove hazardous waste material
- Cover concrete slabs with waste rock.
- Contour remaining pads and establish drainage over the land.
- Remove berms on roadways.
- Scarify and vegetate roads and laydown areas





Road Scarification Examples









EKATI Mine Reclamation Community Engagement



Reclamation Community Input

- Community Assistance and Traditional Knowledge are important in understanding how to do the reclamation.
- Key component in the updating of the Interim Closure and Reclamation
- Specific questions around reclamation for community input are outlined





Community Input – Vegetation Growth

Question: Types of vegetation that can grow in a salty environment?





Community Input – Vegetation Growth

LLCF Site Visit by Kugluktuk Elders (July -2017)



Community Input - Site Wide Wildlife Movement

What is the best strategy for wildlife movement in closure?

Wildlife Access Ramps

Question: Should wildlife be allowed

access waste rock piles?

Question: If yes then how many and where?

Ekati Roads

Question: Should roads be scarified or left in place for wildlife travel?







Community Input – Lakebed Sediments

Question: Traditional uses for lakebed sediments?











Appendix G – Site Map





Ekati Diamond Mine Satellite Imagery

Appendix H – Summary Table of Measures from the Annual Report



	Measure	Party Responsible	Status
4-1: Closure Objectives	To prevent significant cultural impacts after closure from changes in water quality, the Wek'eezhii Land and Water Board will set closure objectives and criteria for the Jay Project components so that Dominion ensures that the area is suitable for traditional uses after closure. Closure objectives and criteria will be set for, but not limited to, the following components of the Jay Project: Jay pit Misery pit Lynx pit Jay waste rock storage area 	WLWB	 DDEC is not responsible for this measure, however, will provide support to the WLWB as needed.
4-2(a): Sitewater Management Plan	In order to avoid significant impacts to traditional use in the vicinity of the Jay Project after the Jay Project mining and closure have been completed, Dominion will submit a site water management plan to the Wek'eezhii Land and Water Board for approval, prior to the commencement of dike construction. Dominion will demonstrate how its plan, and the contingencies within, will ensure water quality in the Jay Pit, Misery Pit, Lac du Savuage, Lac de Gras and downstream will support traditional uses in the vicinity of the Jay Project after closure, while protecting the environment during operations. The plan will include, but not be limited to: • a list of contingencies that Dominion can use to manage water during operations and an evaluation of the feasibility of each • a description of the scenarios (i.e., conditions and timing) under which contingencies will be implemented • Dominion's preferred contingencies, with rationales, for each scenario • a description of how Dominion will monitor the quantity and quality of water, to: a) calibrate the water models used to make predictions in the EA b) assess the suitability of contingencies c) evaluate the performance of contingencies used	DDEC	 Discussed throughout the Jay water licencing proceeding. In its recommendation to the Minister for the Jay WL, the WLWB approved the plan with additional direction.

	Measure	Party Responsible	Status
4-2(b): Pit Lake Water Quality	To ensure that water quality in the Misery pit and Jay pit is compatible with traditional uses of the area in vicinity of the Jay Project and downstream after closure, Dominion will: establish meromixis for the Jay and Misery pits stabilize meromictic pit lakes for the long term If the above requirements cannot be met, Dominion will develop and implement contingencies to ensure the pit lake water quality is compatible with traditional use after closure. Dominion will submit a list of these contingencies, which describe the feasibility of each contingency, and the conditions and timing under which each would be implemented, to the Wek'eezhii Land and Water Board for approval prior to the implementation of any contingency. Suggestion: When considering the contingencies for water management and meromixis, Dominion and the WLWB should consider the options identified during the environmental assessment, including: providing a deeper cap of freshwater on the Misery and Jay Pits at closure; Discharging water to Lac du Sauvage earlier in the life of mine; using additional storage near the Jay Project, including the Lynx pit, the Jay runoff sump and King Pond; using additional storage at the Ekati mine main camp; and, Treating minewater before discharge to the environment.	DDEC	 Development of EQC for discharge from Misery Pit during operations. WLWB included monitoring for the establishment of meromixis and conditions around the use of contingencies and reconnection of pit lakes to the Receiving Environment in the Jay Water Licence
4-3: Fine Processed Kimberlite	To avoid significant adverse environmental impacts to the Panda and Koala pit lakes and to the downstream environment after closure from the deposition of fine processed kimberlite, Dominion will not deposit fine-processed kimberlite into the Panda and Koala pits unless the Wek'eezhii Land and Water Board approves the use of the Panda and Koala pits. The Wek'eezhii Land and Water Board's approval will ensure the protection of the downstream environment after closure and will consider the results of Beartooth pit fine-processed kimberlite trial. Otherwise, the fine-processed kimberlite will be deposited into an approved processed kimberlite containment area. Suggestion: To demonstrate the suitability of the Panda and Koala pits for fine-processed kimberlite, the Wek'éezhii Land and Water Board should require Dominion to complete a deposition study and a freshwater cap optimization study. The deposition study should investigate how fine processed kimberlite behaves once deposited into minedout pits and the quality of the resulting supernatant water. This should include data from the Beartooth pit trial.	DDEC	 WLWB approval of using Panda and Koala open pits for the deposition of PK. Completion of Panda and Koala Deposition Study is required by the WLWB prior to PK deposition into open pits.

	Measure	Party Responsible	Status
4-4: Dike Stability and Safety	To reduce the risk of dike failure and its associated significant impacts, Dominion will establish an independent dike review panel to evaluate and, if necessary, improve the design, construction, operation and maintenance of the dike. The panel will provide recommendations to the developer and the Wek'èezhìi Land and Water Board to ensure that impacts to the safety of people and the environment are minimized. The panel will, at a minimum: • review and accepts the dike design prior to the commencement of dike construction • review the dike operation Dominion will engage with the Wek'éezhii Land and Water Board, Government of the Northwest Territories and the Independent Environmental Monitoring Agency on the panel composition and tasks. Dominion will submit the review panel's final terms of reference to the Wek'éezhii Land and Water Board.	DDEC	 Jay Dike Review Panel established in 2015. Second Panel Meeting held on February 7-8, 2017 and report distributed to WLWB, IEMA, and GNWT for inclusion on the public record June 30, 2017. Dike design and related aspects reviewed and discussed during the water licencing process conducted by the WLWB
5-1: Protection of the Narrows	To mitigate significant adverse ecological and traditional use impacts resulting from unacceptable drops in water levels at the Narrows, Dominion will maintain water levels at the Narrows such that the Jay Project does not adversely affect fish passage and the continuation of traditional use of the area as an open water source. It will do so by monitoring the Narrows before and during closure, and by appropriately managing activities in Lac du Sauvage during closure. Prior to construction, a description of this monitoring will be submitted to the WLWB for its approval as part of the Aquatic Effects Monitoring Program design plan. The monitoring results will be reported in the annual AEMP reports and incorporated into the Aquatic Response Framework, specifying minimum required water levels and flow rates, and triggers for management responses during closure activities. Suggestion: DFO should fully consider the unique cultural significance of the area in Lac du Sauvage that will be permanently lost due to the construction of the Jay pit in its determination of fisheries offsetting requirements.	DDEC	 Aquatic Effects Monitoring Program Design Plan for the Jay Project – Construction Phase was submitted to the WLWB for approval. In the amended WL sent to the Minister on May 29, 2017, the WLWB recommended submission of a revised AEMP Design Plan to incorporate the Jay Development (Construction and operations). This is required within six months of the effective date of the WL and will be subject to an approval process.
6-1: Road Mitigation from Caribou Impacts	 a) In order to mitigate significant incremental and cumulative adverse impacts to caribou from roads used by the Jay Project, Dominion will: use convoys or other methods to manage traffic on the road in order to maximize interval between disturbances from vehicles use real-time caribou collar satellite information and other detection systems to enable early detection of caribou in the vicinity of the road as a trigger for action levels for management responses construct caribou crossing features along a minimum of 70 % of the length of the Jay road b) In addition, Dominion will update and revise the Wildlife Effects Monitoring Plan with the appended Caribou Road Mitigation Plan according to GNWT requirements under section 95 of the Wildlife Act and any future section 95 regulations. The plan(s) required under section 95 will be in force for the duration of the Jay Project. In the Caribou Road Mitigation Plan, Dominion will: 	DDEC	 WEMP and CRMP Approved by GNWT on June 1, 2017. DDEC implemented the draft CRMP on the Sable Road and at the Ekati mine in the fall of 2016. WEMP has been implemented across the Ekati site and monitoring of the Jay Project will commence at the start of construction.

Measure	Party Responsible	Status
investigate and implement innovative actions to mitigate impacts to caribou from barriers to movement at the esker, such as one-way traffic, buried power lines and pipelines, and remote sensory devices to monitor caribou and reduce impacts at the esker crossing define specific thresholds that trigger road management responses including actions to slow traffic, stop traffic and close the Jay and Misery Roads for an appropriate period if caribou are on or near these roads	Party Responsible	Status

	Measure	Party Responsible	Status
6-2(a): Caribou Offset and Mitigation Plan	i. Dominion will offset residual adverse impacts to caribou by human activities that cumulatively affect the Bathurst caribou herd, beyond direct impacts of the Jay Project. Dominion will set out these offsets in a Caribou Offset and Mitigation Plan, which it will complete within one year of Minister's acceptance of this Report of EA. This plan will be in force throughout the duration of the Jay Project ii. Dominion will implement the Caribou Offset and Mitigation Plan as described in DAR-MVEIRB-UT2-06 and incorporate the following into the Plan: • caribou offsets related to roads that result in enhanced mitigation, such as scheduling of activities during caribou migration or dust suppression offsite from Jay Project • zone of influence research with funding as committed by Dominion • identify mitigation actions from the Plan and apply at other Ekati operations • options for the scheduling of other Ekati operations to offset Jay Project impacts during caribou migration periods • an enhanced dust mitigation study including: • a pilot test pm application of dust suppressant • a dustfall sampling program • report on results and propose improvements to be incorporated into the Air Quality Emission Monitoring and Management Plan • if dust mitigation improvements are identified, Dominion will apply them on all roads at Ekati • accelerate progressive reclamation of Long Lake Containment Facility substantially beyond current Interim Closure and Reclamation Plan requirements to return it to productive caribou habitat sooner • incorporate waste rock storage area egress ramps, designed in consultation with Elders to prevent injuries and entrapment of caribou iii. Following implementation of the Caribou Offset and Mitigation Plan, Dominion will: • annually report on the effectiveness of monitoring, mitigation and adaptive management, to GNWT entrenses of monitoring, mitigation and adaptive management, to GNWT ENR, WRRB and IEMA • submit an updated Caribou Offset and Mitigation Plan for approval by GNWT ENR e	DDEC	Final CMP submitted to MVEIRB May 19, 2017 (EA1314- 01_DDEC_Caribou_Mitigation_Plan_measure_6-2a) Final CMP submitted to MVEIRB May 19, 2017 (EA1314- 01_DDEC_Caribou_Mitigation_Plan_measure_6-2a)
6-2(b): Research to Design Implement Successful Offsetting Design	The GNWT will measure and evaluate the effectiveness of Dominion's offsets that result from the approved Caribou Offset and Mitigation Plan. To better enable the GNWT to do this, it will conduct a study on the potential methods for evaluating and measuring the effectiveness of offsetting options described in the approved Caribou Offset and Mitigation Plan. The GNWT will publically report on the results of the study within one year of the approval of the Caribou Offset and Mitigation Plan	GNWT	 DDEC is not responsible for this measure. However, will provide information to the GNWT as needed.

	Measure	Party Responsible	Status
6-3: Air Quality Emissions Monitoring and Management Plan	In order to reduce adverse impacts from dustfall within the Jay Project area to caribou, so they are no longer significant, Dominion will finalize and implement the Air Quality Emissions Monitoring and Management Plan prior to construction. This plan will be applied throughout the construction, operation and closure phases of the Project. Dominion will: • describe how it will implement commitments made in this plan (PR#424 p1-5 to 1-6) along with management response linkages to the Caribou Road Mitigation Plan and the Caribou Offset and Mitigation Plan • reduce dustfall by continuing and improving the following management and monitoring practices, including: • applying dust suppressant to control dust emissions on haul roads during summer or non-frozen snow-free season • managing vehicle speed to limit road dust from vehicle wheel entrainment • implementing a dustfall monitoring program, methods, locations, monitoring parameters • sampling lichen tissues (heavy metal parameters) snow chemistry sampling • planning responses with triggers and action levels • allowing opportunity for public comment on updates or changes to the Air Quality Emissions Monitoring and Management Plan • annually report monitoring results, success or failure of dust mitigations and adaptive management to communities in person in a culturally appropriate manner • submit an updated Air Quality Emissions Monitoring and Management Plan for public review and approval process as required by the GNWT In addition, the GNWT will review and approve the Air Quality Emissions Monitoring and Management Plan as required by the Environmental Agreement and regulate in accordance with the Environmental Protection Act	DDEC	 Technical workshop on AQEMMP held in September 2016. Drafts of the Plan circulated for public review and comment. Approval of the Jay AQEMMP received from the GNWT on May 31, 2017.
6-4: Dustfall Standards	Prior to construction, the GNWT will develop an interim dustfall objective for all types of dustfall that impact caribou and caribou habitat, including impacts on lichen and other caribou forage within the Jay Project zone of influence. The objective will reduce dust-related sensory disturbances to caribou to the greatest extent practicable.	GNWT	 DDEC is not responsible for this measure. However, will provide information to the GNWT as needed.
6-5: Traditional Knowledge- based Caribou Monitoring and Mitigation	 Dominion will: develop and implement a collaborative research program incorporating Traditional Knowledge designed to identify the causes of the zone of influence for caribou avoidance within one year of acceptance of the Report of EA summarize and report annually on this collaborative research program as part of the Wildlife Effects Monitoring Program reporting implement the research findings which can help to reduce the size of the zone of influence on caribou Dominion will fund a Traditional Knowledge Elders group drawn from Aboriginal organizations that participated in the EA. This group will:	DDEC	 Caribou Mitigation Plan submitted to MVEIRB on May 19, 2017 (EA1314-01_DDEC_Caribou_Mitigation_Plan_measur e_6-2a). Four meetings of the TKEG held during the reporting period.

	Measure	Party Responsible	Status
	o recommend a contingency plan for the esker crossing if monitoring indicates that the road through the esker is a major barrier to caribou movement This Traditional Knowledge group will be in place prior to construction, throughout		
	operations and closure		
6-6: Timely Completion of Caribou Management Plans	To mitigate cumulative significant impacts from the Jay Project and other human activities on the Bathurst caribou herd, within one year of Ministerial approval of this Report of EA, the GNWT will: • investigate and report on the causes for the current population change • complete and implement an interim management plan for the Bathurst caribou herd • implement an interim herd recovery strategy towards a sustainable and ongoing Aboriginal harvest	GNWT	 DDEC is not responsible for this measure. However, will provide information to the GNWT as needed.
	Suggestion: GNWT should work towards producing interim thresholds for developments and other human activities within the range of the Bathurst caribou herd.		
7-1: Traditional Knowledge Management Framework	In order to mitigate the Jay Project's cultural impacts to traditional use areas or culturally valued components like caribou, water or aquatic life, Dominion will develop a Traditional Knowledge Management Framework that describes protocols for collecting, storing, managing and using Traditional Knowledge. This will be done in a manner that is culturally suitable for each community. Dominion will use the Traditional Knowledge gathered through the framework to inform Project decision making. This framework will be developed prior to the construction phase of the Project and will apply for the lifetime of the Jay Project (construction, operations and closure phases). In developing the Traditional Knowledge Management Framework, Dominion will consult with each Aboriginal group affected by the Jay Project, in a culturally appropriate manner, while developing the protocols. Dominion will report annually on how Traditional Knowledge influenced Jay Project decision making. Suggestion: To ensure that Traditional Knowledge is consistently being used in a manner that is agreeable to Aboriginal groups, each Aboriginal group affected by the Jay Project should develop a standard Traditional Knowledge Use Protocol. This protocol would inform how Traditional Knowledge is captured, managed, reported on and used. This protocol would facilitate Dominion's effort in establishing a Traditional Knowledge Management Framework that is meaningful to Aboriginal groups. Aboriginal groups should work with Dominion to establish what Traditional values should be monitored for Jay Project impacts, and how monitoring should occur.	DDEC	 A TK Framework has been developed and is in place prior to the construction phase of the Project. For more information see the Mackenzie Valley Review Board on line public registry for the Jay Project or EA1314- 01_DDEC_Traditional_Knowledge_Framewo rk_measure_7-1.
7-2: On the Land Culture Camp	In order to mitigate significant adverse impacts of the Jay Project on traditional use of the area and transmission of cultural values, Dominion will, during the construction and operations phases of the mine, support an on-the-land culture camp, in a traditionally used area near the Project. This culture camp will be used by Aboriginal groups to maintain or establish a connection with disturbed areas of land and restore Traditional Knowledge transfer between generations about the area affected by diamond mining. Dominion will consult with Aboriginal groups that participated in the environmental	DDEC	 Extensive engagement on all aspects of the Culture Camp. DDEC was issued a Type B LUP for the Culture Camp on June 20, 2017
	assessment to decide on the location, timing and frequency of use of the culture camp. Dominion will support the camp's use and access, financially or in-kind.		

	Measure	Party Responsible	Status
8-1: Minimize Negative Socio-Economic Impacts of the Project on Communities	In order to mitigate significant cumulative adverse socio-economic impacts of the Jay Project on health and well-being, the Government of the Northwest Territories will engage and work with diamond mining communities to adaptively manage adverse social impacts to health and well-being from the Jay Project, in combination with other diamond mining projects. As part of this process, the GNWT will actively investigate and address linkages of diamond mining effects on the health and well-being of affected communities. The GNWT will also meet with communities within one year of the Ministerial approval of this Report of EA, and annually thereafter, to discuss: 1) priority social issues at the individual, family and community level related to diamond mining, as identified by communities and by the GNWT; 2) the effectiveness of GNWT programs to address these identified issues; and, 3) Implementing improvements to mitigate identified issues. The GNWT will submit an annual progress report on the above to each diamond mining community, describing GNWT's engagement on and adaptive management of social impacts, and GNWT's plans to address identified issues. Suggestion: The GNWT should work with diamond mining communities to develop socio-economic baseline studies. The GNWT, working with communities, should: assess the vulnerability of each community with a corresponding assessment of the community's resilience to socio-economic impacts, and capacity to adapt to them; assess the existing cumulative impacts on well-being at multiple scales (including individual, family and community levels); produce a definition of well-being and describe how it is measured; and, establish qualitative and quantitative indicators of well-being appropriate for a socio-economic assessment.	GNWT	DDEC is not responsible for this measure. However, will provide information to the GNWT as needed.
	impacts, and evaluate how close each social impact indicator is to a threshold level.		
8-2: Supporting Increased Employment Opportunities for Women	To mitigate significant adverse socio-economic impacts on women, Dominion will consult with the Government of the Northwest Territories, the Status of Women Council of the NWT and the Native Women's Association of the NWT to update its strategy for the training, recruitment and employment of women in traditional and nontraditional occupations, prior to the construction phase of the Jay Project. Where Dominion has community liaisons, they will serve as additional resources for implementing initiatives for training, recruitment and employment of women. Dominion will report on employment and retention figures for women, and on the effectiveness of its revised policy, as part of its reporting per measure 13-1.	DDEC	 Workshop held on June 3, 2016 with GNWT, the Status of Women Council of the NWT, and the Native Women's Association, the Mine Training Society, and representatives from the Aboriginal groups. DDEC has updated and rolled out new Policies on Harassment and Discrimination. DDEC conducted a survey of women staff on training, hiring and retention. Work on this Measure is ongoing.

	Measure	Party Responsible	Status
9-1: Incineration – Stack Testing and Reporting	To reduce the likelihood of impacts resulting from the release of dioxins and furans, Dominion will conduct incinerator stack testing at least every three years and submit any stack test results to the GNWT Department of Environment and Natural Resources and Environment Canada no more than 90 days after the completion of stack testing. No more than 120 days after any failed stack test, (with failure determined according to the Canada Wide Standards for Dioxins and Furans or applicable regulation or guidance developed by the GNWT), Dominion will: 1) Develop an Adaptive Management Response Plan, containing: a. An assessment of the incinerator operations and management that contributed to the failed stack test, and methods to rectify them. b. A consideration of the need for increased monitoring of incinerator operational indicators associated with the formation of dioxins and furans. This may include inline continuous emission monitoring for, but not limited to: flow of flue gas, oxygen content, and carbon monoxide. 2) Submit the Adaptive Management Response Plan to the GNWT Department of Environment and Natural Resources and Environment Canada. 3) Implement the methods identified by Dominion (under 1a above) no later than the submission of the Response Plan, and earlier if feasible. Dominion will re-stack test the incinerators within six months of the initial failed stack test. This second stack test will verify the effectiveness of the methods proposed and implemented in the Adaptive Management Response Plan and demonstrate compliance with the Canada-wide Standards for Dioxins and Furans. All stack tests must be conducted in accordance with national standards, and include detailed documentation to demonstrate that representative composition and batch size of waste were used during the testing process. Exemptions for the second stack test and approval of the Adaptive Management Response plan by GNWT Department of Environment and Natural Resources, in consultation with Environment Canada Suggestion: The R	DDEC	 2 Incinerators tested in November of 2016. Results of stack testing submitted to ECCC and GNWT on February 17, 2017. GNWT approval of Jay AQEMMP (May 31, 2017) which incorporates the commitments made by DDEC related to stack testing/incineration (EA1314-01_GNWTAQEMMP_Measure_6-3).
9-2: Reporting on Greenhouse Gas Emission and Management	 Dominion will provide, in its Air Quality Emissions Monitoring and Management Plan annual report, information on its greenhouse gas management for all Project phases including, but not limited to: A calculation of greenhouse gas emissions by combustion source; greenhouse gas emissions reduction targets for the upcoming year and how they were determined; reporting of whether past reduction targets were achieved and how, or if they were not, why; a description of monitoring including the parameters, methods, frequency, and data analysis; a description of adaptive policies, strategies and mitigative actions undertaken, or proposed, to reduce greenhouse gas emissions, including but not limited to:	DDEC	 Development of and approval for the Jay Project AQEMMP (EA1314-01_GNWTAQEMMP_Measure_6-3) which sets out the calculation methods and requirements for annual reporting on greenhouse gases (Section 5.1). Alternative energies study completed and submitted to the Review Board on February 1, 2017 (EA1314-01_DDEC_Alternative_Energy_Concept_Study_01-Feb-2017_Commitment_52). Reporting and engagement on greenhouse gas emissions management is ongoing.

	Measure	Party Responsible	Status
	 the results of Dominion's proposed concept study on the use of alternative energies to offset a portion of the Jay Project's energy needs, including the methods and analysis; and, if the concept study leads to a feasibility study on the use of alternative energy to offset a portion of the Jay Project's energy needs, report on the results, including the methods and analysis. During its community visits, Dominion will engage on its greenhouse gas emissions management, and report on how results of past engagement have been incorporated 		
	into Dominion's management of greenhouse gas emissions.		
13-1: Monitoring and Adaptive Management by Dominion	In order to ensure that the measures that Dominion is responsible for are fully and effectively implemented, and significant adverse impacts on the environment are mitigated, throughout all phases of the development, Dominion will: 1. Implement monitoring programs to fulfill the following objectives: a. to measure the effects of the Jay Project on the environment; b. to assess the implementation and effectiveness of the measures in this Report of EA to prevent or minimize impacts on the environment; c. to assess the accuracy of predictions made during the environmental assessment, regarding the impacts of the project on the environment; and, d. to provide relevant data and information to support regional monitoring initiatives. 2. Implement adaptive management processes that use the results of monitoring programs to systematically adjust mitigation actions in order to minimize adverse impacts on the environment.	DDEC	 AQEMMP, WEMP, and CRMP approved. Various plans and associated monitoring programs will be discussed and reviewed once a WL is in place and the Jay Project proceeds
13-2: Engagement on Cultural Impacts	In order to evaluate and, through adaptive management, improve the effectiveness of Dominion's mitigation of cultural impacts, Dominion will: a) engage with Aboriginal groups that participated in the environmental assessment to identify cultural impacts, including cumulative impacts, from the Jay Project; b) seek the input of those Aboriginal groups on ways to strengthen Dominion's cultural impact mitigation initiatives; and, c) report annually to those Aboriginal groups on the effectiveness of Dominion's efforts to mitigate cultural impacts.	DDEC	 DDEC has many ongoing activities that promote engagement on cultural impacts. For more information see the Ekati Mine Engagement Plan on the WLWB on line public registry.
13-3: Annual Reporting from Dominion	In order to demonstrate how measures are being implemented and to evaluate the effectiveness of Dominion's efforts to prevent or minimize impacts on the environment, Dominion will, throughout all phases of the development, prepare an annual Report on Implementation of Measures. The Report will address the EA measures that Dominion is responsible for and will: a) describe the actions, including actions implemented through adaptive management, being undertaken to implement the EA measures; b) demonstrate how the implementation actions, including any actions implemented through adaptive management, fulfill the intent of the EA measures, including consideration of the following questions: i. How are implementation actions addressing a likely significant adverse impact on the environment? ii. How effective are implementation actions at reducing, controlling, or eliminating the impact or its likelihood? iii. If the measure is for monitoring or research, how is the monitoring/research being used to inform mitigation of impacts to the environment?	DDEC	 Annual Report provided to the MVEIRB for the reporting period of July 1, 2016 to June 30, 2017.

	Measure	Party Responsible	Status
	 iv. How are process considerations (such as engagement requirements, etc.) being considered, and, if applicable, how are they affecting implementation of the EA measures? c) include a concise summary of monitoring programs and results that are related to EA measures or commitments and, where applicable, references to complete information contained in other documents (such as documents related to aquatic effects, wildlife, or air quality programs); and, d) address any specific reporting requirements noted in the EA measures set out in this report and summarized in Appendix A. Dominion will provide a copy of this annual report to the Review Board prior to July 1 of each year. 		
13-4: Annual Reporting from Government and Regulatory Authorities	In order to evaluate the effectiveness of mitigation measures for the protection of the environment, each regulatory authority or government that is wholly or partly responsible for implementation of any measure in this Report of EA will prepare an annual Report on Implementation of Jay Project Measures. The Report will: a) describe the actions being undertaken to implement the EA measures or the part(s) of the EA measure for which the regulatory authority or government is responsible; and, b) explain how the implementation actions, including any actions implemented through adaptive management, fulfill the intent of the EA measures, including consideration of the following questions: v. How are implementation actions addressing a likely significant adverse impact on the environment? vi. How effective are implementation actions at reducing, controlling, or eliminating the impact or its likelihood? vii. If the measure is for monitoring or research, are the implementation actions clearly linked to mitigation and/or operations? viii. How are process considerations (such as consultation or engagement requirements, statutory obligations, etc.) being considered, and, if applicable, how are they affecting implementation of the EA measures? Prior to July 1 of each year, during all phases of the Jay Project to which a particular measure applies, each regulatory authority and government will provide a copy of this annual report to the Review Board.	GNWT/ WLWB (Regulatory Authorities)	DDEC is not responsible for this Measure.