



NWB Tools

Ida Porter <ida.porter@nwb-oen.ca>

RE: 160603 3BC-EUR1116 Questions for Amendment Application-ECCC

Cloutier-Dussault, Jean-Philippe (EC) <jean-philippe.cloutier-dussault@canada.ca> Mon, Jun 6, 2016 at 11:36 AM
To: Valerie Kogvek <valerie.kogvek@nwb-oen.ca>
Cc: Licensing Department <licensing@nwb-oen.ca>

Good day,

I don't understand. These questions have been answered a long time ago. See attached correspondence. We sent the answers to the questions on March 23, 2016.

Regards,

Jean-Philippe Cloutier-Dussault

Gestionnaire immobilier par intérim, Directions des actifs, des biens immobiliers et de la sécurité

Environnement et Changement climatique Canada / Gouvernement du Canada
jean-philippe.cloutier-dussault@canada.ca / Tél. : 514-283-4045

A/ Property Manager, Assets, Real Property and Security Directorate

Environment and Climate Change Canada / Government of Canada
jean-philippe.cloutier-dussault@canada.ca / Tel. : 514-283-4045

De : Valerie Kogvek [mailto:valerie.kogvek@nwb-oen.ca]

Envoyé : 3 June 2016 5:16

À : Cloutier-Dussault, Jean-Philippe (EC)

Cc : Licensing Department

Objet : 160603 3BC-EUR1116 Questions for Amendment Application-ECCC

Attached is a copy of Cynthia Ene's questions.

Please provide me with a response to this email that Cynthia Ene provided.

There is no record in our system or correspondence related to the questions that Cynthia provided.

Regards

Valerie Kogvek

----- Forwarded message -----

From: Paul Ducharme <Paul.Ducharme@pwgsc-tpsgc.gc.ca>

To: "Cloutier-Dussault, Jean-Philippe (EC)" <jean-philippe.cloutier-dussault@canada.ca>

Cc:

Date: Thu, 24 Mar 2016 13:13:06 +0000

Subject: FW: questions regarding undertakings in Eureka

[See responses from Nuna East.](#)

Paul

Paul G. Ducharme

Project Management

PWGSC/TPSGC

Suite 100 - 167 Lombard Ave.

Winnipeg, MB., R3B 0T6

Phone (204) 226-4341

Fax (204) 983-4444

e-mail: paul.ducharme@pwgsc-tpsgc.gc.ca

From: Rob Cook [mailto:robc@nunalogistics.com]

Sent: March-22-16 5:15 PM

To: Paul Ducharme <Paul.Ducharme@pwgsc-tpsgc.gc.ca>; Chris Petrovic <ChrisP@nunalogistics.com>

Cc: Cloutier-Dussault, Jean-Philippe (EC/EC) <jean-philippe.cloutier-dussault@canada.ca>

Subject: RE: questions regarding undertakings in Eureka

Hi Paul,

Please see our responses embedded in the text below and note that these responses are based on the original execution plan. If the results of the proposed geotechnical investigation in the spring lead to a change in the borrow source location or methodology we will revisit the quarry plan in further detail.

Let me know if there is anything further required at this time.

Thank you,

Rob

Rob Cook

Senior Project Manager

T: (780) 408-4532

C: (780) 504-1256

NUNA LOGISTICS LIMITED

9839 - 31 Avenue, Edmonton, AB, T6N 1C5

robco@nunalogistics.com

www.nunalogistics.com

You may withdraw consent for email communications from the Nuna Group of Companies by responding to the email with "Unsubscribe" in the subject line.

From: Paul Ducharme [<mailto:Paul.Ducharme@pwgsc-tpsgc.gc.ca>]
Sent: Monday, March 21, 2016 11:38 AM
To: Chris Petrovic <ChrisP@nunalogistics.com>; Rob Cook <robco@nunalogistics.com>
Cc: Cloutier-Dussault, Jean-Philippe (EC/EC) <jean-philippe.cloutier-dussault@canada.ca>
Subject: FW: questions regarding undertakings in Eureka

Gents,

Any progress on these questions sent by EC? EC needs responses as soon as possible.

Thank you,

Paul

Paul G. Ducharme

Project Management

PWGSC/TPSGC

Suite 100 - 167 Lombard Ave.

Winnipeg, MB., R3B 0T6

Phone (204) 226-4341

Fax (204) 983-4444

e-mail: paul.ducharme@pwgsc-tpsgc.gc.ca

From: Cloutier-Dussault, Jean-Philippe (EC) [<mailto:jean-philippe.cloutier-dussault@canada.ca>]

Sent: March-15-16 12:54 PM

To: Chris Petrovic

Cc: Paul Ducharme; Ste-Marie, Marc (EC); Matte, Dominic (EC)

Subject: questions regarding undertakings in Eureka

Good afternoon,

We received the following questions from Nunavut Water Board and we think you are the best person to provide the answers. Thank you very much in advance.

5) INAC recommends that the applicant be required to note in the project summary that wastewater from the Blacktop Creek washcar is also being deposited into the current lagoon, in addition to sewage from the modular construction camp. Clarification is sought as to whether the current lagoon has the capacity to receive wastewater from the Blacktop Creek washcar. INAC also recommends that the applicant be requested to clarify whether there are likely to be hydrocarbon contaminants from the washcar entering the sewage lagoon.

Yes, Nuna can confirm that the wastewater generated at the Blacktop creek washcar will also be deposited in the current lagoon along with the waste from the temporary construction camp. We can also confirm that there will not be any hydrocarbon contaminants in the wastewater generated from the washcar. Nuna is not able to determine or advise if the current lagoon has the necessary capacity to receive this waste. The volume of waste expected to be generated from the Blacktop Creek washcar is estimated to be approximately 150 litres per day. The washcar will be in use during crushing operations which are anticipated to be 30 days each in 2016 and 2017.

6) INAC has identified the following inconsistency in the Quarry Operation Plan and is requesting that the plan be modified prior to the issuance of the amendment water licence:

The Quarry Operation Plan (prepared by Nuna East Ltd.) states that "Given the natural ground of the quarry footprint, neither the permafrost layer nor vegetation are relevant factors in this case", however, the plan also notes that "The pit floor will also have a positive grade applied for drainage to flow and will not create a ponding effect". INAC recommends that the applicant modify the Quarry Operation Plan so that it clearly recognizes measures in place to prevent ponding, ensure proper drainage from the quarry pit, and mitigate permafrost melt.

Our quarry development plan is primarily targeted at harvesting suitable granular materials from within the active layer. Ideally, and dependent on the quality of the material found, for operational purposes we would prefer to limit the quarry development to nearby the crusher. The excavation will be designed to follow the existing naturally sloping topography such that water will continue to flow in the same direction as it does now. The slope of the quarry floor will mimic the slope of the existing surface and be improved where necessary to ensure positive flow and eliminate ponding. In areas where material is removed there is no doubt that the exposed permafrost surface will be affected by future annual thaw and that the active layer in those areas will penetrate into materials that have not previously thawed on a seasonal basis, creating a new permafrost surface. Our intent is to create a new surface drainage pattern in the excavated area that is very similar to the existing condition so that the permafrost regime can re-balance more readily without impact from unusual running or standing water.

7) INAC recommends that the applicant be requested to include in their Quarry Operation Plan how runoff collected in the collector ditches and basin will be assessed to ensure that this runoff meets the criteria for 'clean water', (e.g. meet criteria for Canadian Environmental Water Quality Guidelines for Protection of Aquatic Life and that the amended licence include a total suspended sediment (TSS) criterion for runoff water) and is not considered a 'waste' under Nunavut Waters Regulations.

Any runoff water that accumulates or collects in the ditches can be sampled at the exit point from the quarry development to verify their compliance with CCME criteria for Protection of Aquatic Life. The basin will be sized and monitored to ensure adequate retention time to allow TSS levels to be reduced naturally prior to release. It is expected that water accumulation will diminish towards the end of the construction season, allowing time for settlement, testing and discharge. Once the water has been discharged the holding pond will be breached and re-contoured to allow a natural flow of any further runoff that develops after quarrying is complete.

8) INAC recommends that the applicant be requested to confirm that no water will be required for dust suppression in relation to quarrying, crushing and sorting of aggregate, or the runway refinishing.

Nuna can confirm that no water will be required for the purposes of dust suppression related to quarrying, crushing and sorting of aggregates.

- 9) INAC recommends that the applicant be requested to explain the measures that will be taken to prevent dust from quarrying operations from entering nearby streams and water bodies.

Developing and employing excavation and loading methods to minimize the creation of dust during quarrying operations will be our first line of defense against dust transport to nearby streams. To the extent possible the aggregate source will be moved by machine as few times as possible. The coordinated effort of dozers to push the material into stockpiles followed by direct loading into haul trucks with a rubber tired loader the potential release of dust will be limited to the point of dumping into the truck. Operator training, to encourage low positioning of the bucket during dumping will alleviate this risk to some degree. Our operations will limit premixing, or moving the soil multiple times that would allow unnecessary drying of the soil prior to loading and moving. As conditions permit, we will choose our loading location to be as far as practical from any flowing streams to allow the maximum time and distance for airborne particles to settle on the ground.

- 10) INAC recommends that the applicant be requested to clarify whether ash from the temporary camp incinerator will be dealt with in the same manner as described in the Operations and Maintenance Procedures for the permanent incinerator.

Nuna will be providing a standalone incinerator to manage the waste from our operations and construction camp. It is our intention to package the ash into sealed metal drums and transport off site for disposal at a registered waste facility in southern Canada.

Jean-Philippe Cloutier-Dussault

Technicien aux installations, Directions des actifs, des biens immobiliers et de la sécurité

Environnement et Changement climatique Canada / Gouvernement du Canada

jean-philippe.cloutier-dussault@canada.ca / Tél. : 514-496-3948

Facilities Technician, Assets, Real Property and Security Directorate

Environment and Climate Change Canada / Government of Canada

jean-philippe.cloutier-dussault@canada.ca / Tel. : 514-496-3948

----- Forwarded message -----

From: "Cloutier-Dussault, Jean-Philippe (EC)" <jean-philippe.cloutier-dussault@canada.ca>

To: Cynthia Ene <cynthia.ene@nwb-oen.ca>, "Ste-Marie, Marc (EC)" <marc.ste-marie@canada.ca>

Cc: Ida Porter <ida.porter@nwb-oen.ca>, Robin Ikkutisluk <robin.ikkutisluk@nwb-oen.ca>

Date: Wed, 23 Mar 2016 13:34:43 +0000

Subject: RE: 3BC-EUR1116, Questions for the Amendment Application

Good day,

Please see answers below.

Regards.

Jean-Philippe Cloutier-Dussault

Technicien aux installations, Directions des actifs, des biens immobiliers et de la sécurité

Environnement et Changement climatique Canada / Gouvernement du Canada
jean-philippe.cloutier-dussault@canada.ca / Tél. : 514-496-3948

Facilities Technician, Assets, Real Property and Security Directorate

Environment and Climate Change Canada / Government of Canada
jean-philippe.cloutier-dussault@canada.ca / Tel. : 514-496-3948

De : Cynthia Ene [<mailto:cynthia.ene@nwb-oen.ca>]

Envoyé : 15 March 2016 11:57

À : Ste-Marie, Marc (EC)

Cc : Cloutier-Dussault, Jean-Philippe (EC); Ida Porter; Robin Ikkutisluk

Objet : 3BC-EUR1116, Questions for the Amendment Application

Good Afternoon,

On January 20, 2016, the NWB solicited comments for the amendment application for water licence 3BC-EUR1116 (High Arctic Weather Station, Eureka) submitted by Environment and Climate Change Canada. Comments were received from Fisheries and Oceans Canada (DFO) and from Indigenous and Northern Affairs Canada (INAC). I have attached to this email the comments from INAC, dated Feb 22, 2016, I will be making reference to it below in this email. Please note that all the received comments are on the NWB ftp site: <ftp://ftp.nwb-oen.ca/>

A response to the following questions and recommendations is required in order to proceed with your amendment application.

- 1) Have you recently submitted a project proposal application to NPC including a renewal water license application for 3BC-1116? **Yes**
- 2) In 2011, the NWB approved the "Interim Abandonment and Restoration Plan - Eureka High Arctic Weather Station" Plan; However, in 2011 the NWB stated in the issued water licence that "INAC identified that there is infrastructure and waste material on site associated with the DND. The Licensee should communicate to the NWB and INAC any agreements in place with the DND or other parties, for reclamation initiatives along with their respective implementation schedules". On Feb 19, 2016 you sent an email to the NWB on this subject matter (this email has been placed on our ftp site). It is unclear from the email received if you are confirming that there is no DND infrastructure and waste material on the site/within the scope of your licence 3BC-EUR1116. Has all DND infrastructure and waste material been clearly identified by DND and is it being handled by their A&R plan for 8BC-ERK1015? Can you confirm that there is no longer any DND infrastructure and waste material being handled under the scope of your undertaking? **We confirm. All DND infrastructure and waste material is handled by DND under their own licence.**
- 3) The current sewage lagoon has a capacity for wastes from 21 people however the current proposal for

quarrying and construction activities will include a modular camp to house up to 50 workers. Where will the hauled gray water and sewage from the activities be disposed of? Annual average capacity is around 21 people but the lagoon can accommodate punctual peaks without any problem. Since there is no more than 8 people during winter, there is plenty of spare capacity in the lagoon to accommodate the sewage created by the camp. We do not anticipate a lack of capacity in the lagoon.

The application simply states that the waste will be taken to 'an approved sewage disposal site' it is unclear what site this is referencing. If the existing sewage lagoon is to be the disposal site for the modular camp material, please provide an updated plan as to how sewage from the modular camp will be accommodated under the existing capacity of the sewage lagoon, or specify what alternative arrangements will be made to ensure proper treatment and disposal of sewage from the modular camp. Sewage will be trucked from the camp to the existing station sewage installations

4) The 2014 Annual Report states that the design of a new sewage treatment plant and lagoon was to be awarded to a consultant and plans made for proceeding with an RFP for tender. Can you confirm what the various design options for the new lagoon are, the proposed solutions for resolving the exceedances on the lagoon discharge, and the timeline for implementation.

The existing wastewater treatment system in Eureka was examined to determine whether it could be incorporated into a system upgrade. In order to meet more stringent guidelines it was decided that the lift station would remain, however a new mechanical/biological treatment system would be included for the site. A number of treatment processes were identified including sequencing batch reactors (SBR), membrane bioreactors (MBR), extended aeration (EA), moving bed bioreactors (MBBR) and lagoons. It was decided that a lagoon configuration would not meet the required effluent limits so an evaluation of mechanical/biological plants recommended the MBBR process. A performance based specification with sizing requirements is being incorporated into the upgraded design.

The treated wastewater effluent can be discharged direct to the Ocean, however, it was decided that it should pass through a storage area first. This lagoon structure will be cleaned out of existing sludge, the berms will be reshaped and an overflow will be installed so that it may operate as a detention pond. During normal winter operation the treated wastewater will be pumped to the detention pond rather than be discharged to the ocean. In summer, the treated wastewater will overflow direct to the Ocean from the detention pond. The pond is only acting as a storage vessel to accommodate winter ice and it is not performing as a treatment system.

Once the drawings and specifications are completed, they will be tendered at a date selected by Public Works and Environment Canada. The date of tendering is currently planned for the spring of 2016, however, logistical constraints may delay this for a year to accommodate the sea lift and availability of granular material on site. An in service date is planned for 2018 or 2019.

For additional information pertaining to the following INAC recommendations and questions, please refer to the attached comments received from INAC, dated February 22, 2016:

5) INAC recommends that the applicant be required to note in the project summary that wastewater from the Blacktop Creek washcar is also being deposited into the current lagoon, in addition to sewage from the modular construction camp. Clarification is sought as to whether the current lagoon has the capacity to receive wastewater from the Blacktop Creek washcar. INAC also recommends that the applicant be requested to clarify whether there are likely to be hydrocarbon contaminants from the washcar entering the sewage lagoon.

Yes, Nuna can confirm that the wastewater generated at the Blacktop creek washcar will also be deposited in the current lagoon along with the waste from the temporary construction camp. We can also confirm that there will not be any hydrocarbon contaminants in the wastewater generated from the

washcar. Nuna is not able to determine or advise if the current lagoon has the necessary capacity to receive this waste. The volume of waste expected to be generated from the Blacktop Creek washcar is estimated to be approximately 150 litres per day. The washcar will be in use during crushing operations which are anticipated to be 30 days each in 2016 and 2017.

6) INAC has identified the following inconsistency in the Quarry Operation Plan and is requesting that the plan be modified prior to the issuance of the amendment water licence:

The Quarry Operation Plan (prepared by Nuna East Ltd.) states that "Given the natural ground of the quarry footprint, neither the permafrost layer nor vegetation are relevant factors in this case", however, the plan also notes that "The pit floor will also have a positive grade applied for drainage to flow and will not create a ponding effect". INAC recommends that the applicant modify the Quarry Operation Plan so that it clearly recognizes measures in place to prevent ponding, ensure proper drainage from the quarry pit, and mitigate permafrost melt.

Our quarry development plan is primarily targeted at harvesting suitable granular materials from within the active layer. Ideally, and dependent on the quality of the material found, for operational purposes we would prefer to limit the quarry development to nearby the crusher. The excavation will be designed to follow the existing naturally sloping topography such that water will continue to flow in the same direction as it does now. The slope of the quarry floor will mimic the slope of the existing surface and be improved where necessary to ensure positive flow and eliminate ponding. In areas where material is removed there is no doubt that the exposed permafrost surface will be affected by future annual thaw and that the active layer in those areas will penetrate into materials that have not previously thawed on a seasonal basis, creating a new permafrost surface. Our intent is to create a new surface drainage pattern in the excavated area that is very similar to the existing condition so that the permafrost regime can re-balance more readily without impact from unusual running or standing water.

7) INAC recommends that the applicant be requested to include in their Quarry Operation Plan how runoff collected in the collector ditches and basin will be assessed to ensure that this runoff meets the criteria for 'clean water', (e.g. meet criteria for Canadian Environmental Water Quality Guidelines for Protection of Aquatic Life and that the amended licence include a total suspended sediment (TSS) criterion for runoff water) and is not considered a 'waste' under Nunavut Waters Regulations.

Any runoff water that accumulates or collects in the ditches can be sampled at the exit point from the quarry development to verify their compliance with CCME criteria for Protection of Aquatic Life. The basin will be sized and monitored to ensure adequate retention time to allow TSS levels to be reduced naturally prior to release. It is expected that water accumulation will diminish towards the end of the construction season, allowing time for settlement, testing and discharge. Once the water has been discharged the holding pond will be breached and re-contoured to allow a natural flow of any further runoff that develops after quarrying is complete.

8) INAC recommends that the applicant be requested to confirm that no water will be required for dust suppression in relation to quarrying, crushing and sorting of aggregate, or the runway refinishing.

Nuna can confirm that no water will be required for the purposes of dust suppression related to quarrying, crushing and sorting of aggregates.

9) INAC recommends that the applicant be requested to explain the measures that will be taken to prevent dust from quarrying operations from entering nearby streams and water bodies.

Developing and employing excavation and loading methods to minimize the creation of dust during quarrying operations will be our first line of defense against dust transport to nearby streams. To the extent possible the aggregate source will be moved by machine as few times as possible. The coordinated effort of dozers to push the material into stockpiles followed by direct loading into haul trucks with a rubber tired loader the potential release of dust will be limited to the point of dumping into the truck. Operator training, to encourage low positioning of the bucket during dumping will alleviate this risk to some degree. Our operations will limit premixing, or moving the soil multiple times that would allow unnecessary drying of the soil prior to loading and moving. As conditions permit, we will choose our loading location to be as far as practical from any flowing streams to allow the maximum time and distance for airborne particles to settle on the ground.

10) INAC recommends that the applicant be requested to clarify whether ash from the temporary camp incinerator will be dealt with in the same manner as described in the Operations and Maintenance Procedures for the permanent incinerator.

Nuna will be providing a standalone incinerator to manage the waste from our operations and construction camp. It is our intention to package the ash into sealed metal drums and transport off site for disposal at a registered waste facility in southern Canada.

As you prepare your written response to the above questions and recommendations, please do not hesitate to contact me if you need further clarification.

Sincerely,

2 attachments

 **noname.eml**
43K

 **noname.eml**
60K