

**FEDERAL REVIEW PANEL NORTH
VISIT REPORT
ENVIRONMENTAL MONITORING AND FOLLOW-UP**

**CANADIAN ROYALTIES INC. WHARF
DECEPTION BAY
September 2–4, 2014**

Background and site visit

1. Pierre Philie, the Federal Review Panel North (FRP-North) representative, was kept informed of the time required to transport the barge from the south of the province. Mr. Philie took a helicopter to Deception Bay on Tuesday, September 2. He arrived in Deception Bay two days after the barge was set up because of the limited number of flights to Donaldson Airport (one per week).

The FRP-North representative was very well received by the Canadian Royalties Inc. employees, had good meals and was provided with comfortable accommodations. During his stay in Deception Bay, he was free to visit the site at will, and the people he met were very professional and respectful (both with regard to the environment and the Inuit population). For the entire two days (Tuesday, September 2, and Wednesday, September 3), he was accompanied by Anissa Amri (from WSP, formerly known as GENIVAR), who was responsible for the environmental follow-up, and Harold Schmidt (field supervisor for Canadian Royalties Inc.). All the people Mr. Philie met on the site were more than willing to accommodate him.

During his stay in Deception Bay on September 2 and 3, the workers were adding the finishing touches so that the MV *Nunavik* could dock. The boat was already onsite, waiting for the workers to finish.

A delegation of 20 Chinese individuals, members of the Salluit and Kangirsujuaq landholding corporations and Makivik representatives attended the inauguration of the wharf on Wednesday, September 3. The FRP-North representative had a chance to meet people involved in the wharf project and speak to Inuit representatives. Everyone was impressed by the infrastructure, which was to be fully operational by the weekend of September 6–7.

2. When the FRP-North representative left Deception Bay for the EXPO mining site, the only thing left to do was to connect a part of the conveyor. A mechanical problem was preventing this section from being connected to the network. Everything was to be repaired by Friday, September 5, allowing the boat to dock for the first loading at the wharf (barge).

The FRP-North representative used Thursday, September 4—the day spent on the EXPO site—to prepare part of this report and increase his knowledge of the file by discussing it with the people available onsite. During his stay, the FRP-North representative also spoke to Stéphane Twigg (Canadian Royalties Inc. Superintendent – Environment).

Measures applicable as of the start of the construction phase

3. An environmental monitoring and follow-up committee was established to oversee the implementation of mitigation measures and environmental monitoring and follow-up programs during the construction and operation phases. The members of the committee were Gail Amyot and Stéphane Twigg (Canadian Royalties Inc.), René Lapierre and Isabelle Mayrand (Transport Canada), Catherine Pinard (Kativik Regional Government) and Pierre Philie (Kativik Regional Government and FRP-North).

4. The proponent (Canadian Royalties Inc.) hired WSP to oversee the work associated with putting the barge in place (the barge will serve as a permanent wharf for the mining company). The barge arrived in Deception Bay on August 29, 2014. As of August 31, the wharf was ready to welcome the MV *Nunavik*, which had been in Deception Bay since August 12. The ship was to dock at the wharf on September 5, just before the conveyor became operational. At the time of loading, the nickel and copper that had already been put in bags would share the boat's hold with the nickel and copper sent in bulk by conveyor some five days after the loading of the bags had begun. Anissa Amri (WSP) and two Inuit colleagues, Pitsiulaq Uqittuq and Ms. Lisa, were onsite while the new port infrastructure was being installed. They began carefully observing the various operations on August 26 (in Anissa Amri's case).

5. WSP will submit an environmental monitoring and follow-up report to Canadian Royalties Inc. in late September 2014. This report can be forwarded to the regional, provincial and federal authorities at a later date. As it took only a few days for the wharf to become operational, a meeting with the members of the environmental monitoring and follow-up committee could not be held at that time. The FRP-North representative (Pierre Philie) was able to access the Deception Bay site on September 2. After consulting a number of people who were present throughout the installation of the wharf, the FRP-North representative concluded that no incidents, spills or accidents of any kind had been observed during the operation. The weather conditions were outstanding throughout the work period (no wind, calm waters), and practically no traffic or marine mammals were seen in the bay (except one seal spotted by the people responsible for the environmental monitoring and follow-up).

6. The communities of Salluit and Kangirsujuaq were given prior notice of the work and the timelines for receiving the barge in Deception Bay. On September 3, 2014, representatives of those two communities (the Qaqqalik and Nunaturlik landholding corporations) and the Makivvik Corporation joined Canadian Royalties Inc. employees and subcontractors as well as other distinguished guests (a delegation of Chinese individuals from China, Montreal and Toronto) for the official inauguration of the new Deception Bay wharf.

It should be noted that while the work was being carried out on the wharf, a group of Inuit hunters benefited from the Canadian Royalties Inc. welcome: they were able not only to rest but also to borrow a vehicle from the mining company to get to a lake located approximately 10 kilometres from the Deception Bay camp.

A marine transport schedule was to be submitted to local and regional organizations shortly thereafter to inform the Northerners of the arrivals and departures of boats in Deception Bay.

7. The installation of the wharf began as soon as the barge reached Deception Bay. Canadian Royalties Inc. did not think it had to wait for the arrival of the FRP-North representative before beginning the work, given that three observers (one WSP representative and two Inuit representatives) were already onsite.

The wharf would not be completely functional for another few days, possibly not before September 5 or 6, since the conveyor was missing a part that would allow a section of it to be moved to a designated spot.

The MV *Nunavik* could still dock at the wharf on September 5 when the pre-bagged nickel and copper was starting to be loaded. The bulk cargo that would fill the rest of the ship's hold would follow. Once the material was loaded, the MV *Nunavik* would begin its long journey to China via the Northwest Passage.

8. In early August 2014, three officers from the Department of Fisheries and Oceans headed for Rotterdam (Europe) to implement their general follow-up program. They joined the MV *Nunavik*'s crew to cross the Atlantic to Deception Bay. They arrived at their destination on August 12. During the trip, they were able to carry out their respective tasks, including those relating to ballast water and the absence of exotic species on the ship's hull. A report was to be sent to the regional, provincial and federal authorities that requested it.

9. The WSP biologist began the marine mammal monitoring program as soon as she arrived in Deception Bay on August 26, 2014. As indicated above, practically no marine mammals were observed at the work site. During that same period, there was virtually no traffic in Deception Bay, except a few small boats used by Inuit hunters going to their hunting and fishing camps.

No acoustic tracking was done, as no pilings had needed to be driven in. According to the people present, the weight of the pilings (which weighed several tons and measured 50 to 80 feet) made it easier to access the bedrock. A full report was to be sent to the various authorities by late fall (2014).

10. The proponent, the Logistec contractor and McKeil Marine (owner of the barge and jointly responsible for the installation) had supervised the work from the time the barge arrived until it was operational. WSP, assisted by Inuit observers, was responsible for the environmental portion of the monitoring. They all agreed that the work was performed correctly, with due regard for the physical environment and its fauna.

11. While the port infrastructure was being installed, a 500-metre navigational exclusion zone around the work site was maintained. The MV *Nunavik* even dropped anchor approximately one kilometre from the wharf.

12. All the materials and minerals extracted are stored in the industrial sector. As of next year, the current storage place for some of the bags of copper that are ready to be shipped on the MV *Nunavik* will become the reception area of the buildings that currently house the workers hired to install the wharf. Relocating the camp will allow the employees to be nearer to the activity site. The number of employees in Deception Bay will significantly decrease at that point—from approximately 75 people (current number) to 7 or 8 employees once the work is finished—and spike again to about 35 people for future loads of concentrate.

13. The proponent committed to implementing the 19 standard mitigation measures listed in Appendix 21 of the Environmental and Social Impact Assessment of the Deception Bay Wharf and Sediment Management (Reference: Condition 6, Federal Administrator Authorization; Environmental and Social Impact Assessment Genivar 2012, Volume 2).

13.1 A spill response plan was put in place: a) control the spill after identifying the risk material, b) inform a supervisor and c) inform Environment Canada of spills exceeding 10 litres.

13.2 Response material for accidental spills of contaminants was placed in strategic locations (screens, tarps, flotation collars, etc.).

13.3 All fuel, oil or other petroleum products or contaminants are handled over 100 metres away from the waters in Deception Bay.

13.4 In the event of an accidental spill, employees must report the incident to their supervisors within 24 hours, and the spill must be cleaned up as soon as possible. Spills of less than 10 litres need only be reported to the supervisor, whereas spills exceeding 10 litres must be reported to Environment

Canada. For all spills in the water, a report must be prepared and sent to Environment Canada as soon as possible.

13.5 No garbage, waste, debris or materials were seen in the water while the FRP-North representative was in Deception Bay. According to Canadian Royalties Inc. employees, the probability of a major incident (e.g. ore in the water owing to human error or a broken conveyor) is low, and should any concentrate be spilled in the water, every effort will be made to recover it.

13.6 Biodegradable oil is not yet being used. According to some experts, this type of oil is not intended for use in temperatures as low as those in Nunavik and could even damage the machinery. The company's environmental department will be asked to research scientific literature and/or conduct internal research to determine whether it would be beneficial to use this type of oil, if only in the warmer seasons. It should be noted that oil changes are done on machinery and large vehicles only after a few years of use (oil filters are changed more often).

13.7 Chemicals and hydrocarbons are currently being stored more than 60 metres from Deception Bay. The facilities seem to comply with the regulations in effect.

13.8 The area for maintaining machinery and handling and storing hazardous materials is located more than 30 metres from Deception Bay.

13.9 Canadian Royalties Inc. seems to make a point of maintaining its machinery and vehicles in perfect operating condition. The company reminds its employees to report and control spills as soon as they occur.

13.10 Waste is sorted in Deception Bay (wood, metal, food waste). Tarps are placed under the bags of concentrate. No waste is incinerated in Deception Bay. However, waste is buried and incinerated at the dump at the EXPO site. As needed, trucks take waste to this dump, which is more than a two-hour drive from Deception Bay. Used oil is burned, providing significant energy.

13.11 The Inuit communities nearest to Deception Bay are contacted frequently. For example, they were informed of the nature and scope of the work in Deception Bay. A schedule will be sent to them shortly, indicating when boats will be departing from and arriving at Deception Bay. At this point, Canadian Royalties Inc. believes that 9 or 10 boats will be required per year to ship the concentrate (the time allocated for round-trip transport of the ore between Deception Bay and the final destination is approximately 40 days). The navigational exclusion from March 15 to June 15 will be maintained.

13.12 Wherever possible (depending on the season), Canadian Royalties Inc. asks its employees to avoid letting the machinery and vehicles idle when they are not being used.

13.13 Canadian Royalties Inc. tries to minimize the release of atmospheric contaminants by keeping its machinery, equipment and vehicles in good working order.

13.14 During ground transport, vehicles and even the conveyor are covered so that fine particles are not released into the environment.

13.15 The Glencore mining company, which maintains the roadways, sporadically uses a calcium-based dust control agent on the roads to prevent dust dispersion when there are dry spells in the region. However, this practice is kept to a minimum, as it is expensive and causes environmental damage. The Inuit population says that the dust adversely affects the drying of caribou, beluga and fish in the region.

13.16 Dust collectors are placed in strategic locations, and the results of the analyses are available upon request (Kativik Regional Government).

13.17 The speed limit on the Deception Bay site is 10 km/h and not 15 km/h. On the provincial section of the road between Deception Bay and the EXPO site, the speed limit is 70 km/h.

13.18 Waste is burned in open fires only at the EXPO dump, which is more than a two-hour drive from Deception Bay.

13.19 Wherever possible, Canadian Royalties Inc. tries to strictly limit stripping, clearing, excavation, backfilling and levelling in the work areas to preserve the natural topography and prevent erosion.

Measures applicable to the operation phase

14. Winter navigation in Deception Bay will be done in accordance with the following: a) navigational exclusion from March 15 to June 15 (unless a formal agreement has been reached in advance, in emergencies, with Inuit partners); b) maximum of three transports between December 15 and March 15, at a maximum speed of seven knots; c) the Canadian Royalties Inc. representatives were told to contact Glencore to synchronize the arrivals and departures of the boats in Deception Bay; and d) the schedule of Deception Bay arrivals and departures must be sent to the communities of Salluit and Kangirsujuaq to ensure the safety of the Inuit people regularly performing traditional activities in the Deception Bay region.

15. Canadian Royalties Inc.'s environmental department was advised to periodically review its marine navigation strategy in order to minimize the impact on the fauna and on the use of the bay by the Inuit people. After the first year of operations, Canadian Royalties Inc. was to inform the local, regional, provincial and federal authorities of the level of satisfaction with the type of wharf (barge) chosen to serve Deception Bay. We were informed that the captain of the MV *Nunavik* was concerned about the narrowness of the wharf, especially because he will have to move forward and backward when loading the bulk concentrate. The FRP-North representative asked Canadian Royalties Inc. (Stéphane Twigg, Superintendent – Environment) the following question: If the ice broken while the boat is moving accumulates arbitrarily along the length of the wharf and damages the infrastructure, could this cause the conveyor to break and the concentrate to be released into the environment and water?

16. With regard to emptying ballast water, the proponent was advised to comply with the Ballast Water Control and Management Regulations and, where applicable, Transport Canada and Fisheries and Oceans Canada directives. The quality of the ballast water will need to be analyzed and the results sent to the monitoring and follow-up committee as well as the regulatory authorities.

17. In accordance with Condition 13 of the authorization issued by the Federal Administrator, the proponent must hold discussions with the parties concerned as soon as possible to determine what will become of the structures after the operation phase. The proponent must also ensure that the site is properly restored or transfer the infrastructure to the local or regional authorities.

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September 12, 2014