



16 August 2017

Cynthia Ene Technical Advisor Nunavut Water Board P.O. Box 119 Gjoa Haven, NU X0B 1J0

Dear Ms. Ene,

Re. NWB 2BE-KUU----: NxGold Ltd. Response to Party Comments on Nunavut Water Board Application for the Kuulu Project, Kivalliq Region, NU

NxGold Ltd. is pleased to provide responses to party comments received on August 8, 2017 from the following parties with regard to our application associated with the Kuulu Project exploration program:

- Government of Canada
  - Environment and Climate Change Canada (ECCC);
  - o Fisheries and Oceans Canada (DFO).

Should you require further information to support licence issuance, don't hesitate to contact either myself or Sharleen Hamm at 604.996.1110 or <a href="mailto:sharleen@sharleenhamm.com">sharleen@sharleenhamm.com</a>.

Sincerely,

**Chris McFadden** 

**Chief Executive Officer** 

Encl.

Cc.: licensing@nwb-oen.ca

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E. Nichol, ECCC

V. D'Amours-Gauthier, DFO

J. Taylor, DFO



|      | Table 1. Response to party comments submitted regarding Type B water incence application 2BE-ROO |  |   |   |  |
|------|--|--|---|---|--|
| ID#  | Subject  | Party Concern  | Party Recommendation  | NxGold Response   |  |
| DFO1 | Fish and their habitat   | Party Concern  Drilling on ice during winter and spring Water withdrawal for ice pad construction, dust suppression and domestic use | Site Access and Preparation, Work Camps, Drilling  Use existing trails, roads or cut lines wherever possible to avoid disturbance to the riparian vegetation.  Vegetation removal is to be minimal and when practicable, prune or top the vegetation instead of uprooting.  Utilize previously cleared areas or natural openings for temporary work camps or otherwise limit the amount of vegetation that is disturbed.  Locate work camps, including storage areas, fuel caches and helicopter landing pads on dry stable ground, above the High Water Mark (HWM), and employ measures to prevent the release of sediment or deleterious substances into any water body.  Ensure that any temporary dock remains secure ad in good repair, and is fully removed from the below the HWM.  Contain all drill cuttings, fluids or sludge in closed systems for reuse, off-site disposal, or otherwise contain and stabilize them to prevent their entry into any water body.  Where sumps are utilized they are located above the HWM of any water body and are able to contain all drilling waste.  Use only non-toxic drilling additives and muds.  Plug and permanently seal any artesian flow that is encountered and any holes drilled in wet areas (e.g., lake or wetland) upon completion of the project.  On ice boreholes should be capped after drilling where feasible. | Acknowledged.  It is NxGold's understanding that lakes that freeze to the bottom do not provide overwintering fish habitat during winter months. Accordingly, we do not see the need to limit drilling on these watercourses during winter for this reason. |  |
| ı    |  |  | Small diameter/low density on -ice drilling (i.e., less than 100 mm with drill sites consisting of no more than   |   |  |



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|      |                           |  | three boreholes each, and drill sites space no closer than 15 meters apart may be undertaken except in known fish spawning habitat. Avoid drilling in gravel or rock rubble substrates in water depths less than 4 meters within water bodies where fall spawning fish species (e.g., lake trout, white fish) are likely to be present.  o If the waterbody is not frozen to the bottom, fish deterrent techniques should be used to avoid impact to fish.  o In waterbodies that freeze to the bottom, drilling should be limited or avoided in order to reduce impacts to fish as it could be used as overwintering habitat.  o Remove all project materials from the ice prior to spring break-up.  • Undertake pitting. trenching and surface stripping in a manner that ensures sediment-laden run-off does not enter any water body by using appropriate set-backs from the HWM and other effective sediment and erosion control measures (e.g direct run-off to vegetated areas away from a water body or to an appropriately located sump, and stabilize any stockpiled material to prevent sediment from entering any water body). |                 |
| DFO2 | Fish and their<br>habitat | <ul> <li>Drilling on ice during winter<br/>and spring</li> <li>Water withdrawal for ice<br/>pad construction, dust<br/>suppression and domestic<br/>use</li> </ul> | In order to avoid negative impacts to fish and fish habitat caused by flow alterations, reduction in water levels, or entrainment/impingement at water pump intakes, the following measures are to be incorporated for any water-taking activities:   | Acknowledged.   |



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|      |                           |  | <ul> <li>Whenever feasible, withdraw water from nonfish bearing water bodies only.</li> <li>If fish bearing water bodies cannot be avoided, use only larger streams or lakes and avoid small water bodies.</li> <li>Ensure water withdrawal volumes do not impact fish or fish habitat. Withdrawals from fishbearing waters should not result in any noticeable change in water level or downstream flows, particularly during sensitive life stages (e.g. by dewatering spawning or egg incubation areas).</li> <li>For any multiple or simultaneous water withdrawals, consider the cumulative impact of the total withdrawal volume on fish habitat by all water users.</li> <li>Ensure water pump intakes are designed and operated in a manner that prevents streambed disturbance and fish mortality. Guidelines to determine the appropriate design for intake screens may be obtained from DFO (e.g. Freshwater Intake End-of-Pipe Fish Screen Guideline 1995).</li> </ul> |                 |
| DFO3 | Fish and their<br>habitat | <ul> <li>Drilling on ice during winter<br/>and spring</li> <li>Water withdrawal for ice<br/>pad construction, dust<br/>suppression and domestic<br/>use</li> </ul> | Maintain an undisturbed natural buffer zone between areas of on-land exploration (e.g pitting, trenching. or surface stripping) and the HWM of any water body to assist in sediment and erosion control and retention of riparian vegetation.      Time any in-water mineral exploration activities to prevent disruption to sensitive fish life stages by adhering to appropriate fisheries timing windows (see   | Acknowledged.   |



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|     |         |               | the Nunavut In-Water Construction Timing Windows), With the exception of on-ice drilling, or any water withdrawal activities.  Operate machinery in a manner that minimizes disturbance to the water body bed and banks and prevents entry of deleterious substances into any water body.  Machinery is to arrive on site in a clean condition and is to be maintained free of fluid leaks.  Wash, refuel and service machinery and store fuel and other materials for the machinery away from the water, except for projects involving on-ice drilling where appropriate precautions are taken to prevent spills.  Keep an emergency spill kit on site in case of fluid leaks or spills from machinery.  Apply appropriate measures, including an emergency contingency plan for inadvertent spills, to ensure that deleterious substances such as drill cuttings, acidic or metal leaching water, petroleum products, sediment, and debris do not enter any water body.  Install effective sediment and erosion control measures. where appropriate. before starting work to prevent entry of sediment into any water body. Inspect them regularly during the course of the work and make al! necessary repairs if any damage or malfunction occurs.  Ensure that the discharge of any water into or near a water body is done in a manner that prevents sedimentation or erosion (e.g., by stabilizing the discharge site). |                 |



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|       |                 |   | <ul> <li>Stabilize and reclaim all disturbed areas upon completion of work. Immediately remove all debris or waste produced or associated with the work.</li> <li>Stabilize any waste materials removed from the work site to prevent them from entering any water body. This could include covering spoil piles with biodegradable mats or tarps or planting them with, preferably native, grass or shrubs.</li> <li>Vegetate any disturbed areas by planting and seeding preferably with native trees, shrubs or grasses and cover such areas with mulch to prevent erosion and to help seeds germinate. If there is insufficient time remaining in the growing season, the site should be stabilized (e.g., cover exposed areas with biodegradable erosion control blankets to keep the soil in place and prevent erosion) until naturally re-vegetated the following spring. If re-vegetation is not possible due to climatic extremes and/or lack of appropriate seed or stock, the site should be stabilized using effective sediment and erosion control measures. In areas with permafrost, care should be exercised to ensure these measures do not cause thawing or frost heave.</li> <li>Maintain effective sediment and erosion control measures until re-vegetation of disturbed areas is achieved or until such areas have been permanently stabilized by other effective sediment and erosion control measures, in the event that re-vegetation is not possible.</li> </ul> |   |
| ECCC1 | Sewage disposal | The Water Licence Application states that sewage from Pacto toilets will be incinerated and | ECCC recommends that the Proponent clarify if the incineration equipment chosen is specifically designed to handle sewage. Should the Proponent require additional information ECCC has  | NxGold can confirm that an incinerator specifically designed for sewage incineration will be installed on site. |



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|     |         | ash will be backhauled for disposal offsite. Incineration of black water and sludge is discouraged unless the incinerator is specifically designed to handle this waste and the manufacturer's operating instructions are strictly followed to achieve appropriate combustion. It is unclear from the Water Licence Application if the incinerator that will be used is specifically designed to handle the incineration of sewage. | developed a technical document for batch waste incineration that is available at the following link: <a href="https://www.ec.gc.ca/gdd-mw/default.asp?lang=En&amp;n=F53EDE13-1">https://www.ec.gc.ca/gdd-mw/default.asp?lang=En&amp;n=F53EDE13-1</a> |                 |