

# Update of DCE/GN's consultation response regarding the EIA of the Tanbreez project from 2013

English translation

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Scientific note from DCE – Danish Centre for Environment and Energy

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## Data sheet

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## **Update of DCE/GINR's consultation response regarding the EIA of the Tanbreez-project from 2013, dated 31 July 2020**

Translation of: "Opdatering af DCE/GN's høringsvar vedrørende VVM af Tanbreez-projektet fra 2013", dated 31 July 2020

At a telephone meeting on 27 July 2020, the Environmental Agency for Mineral Resources Activities (EAMRA) requested an updated evaluation of the EIA report (2013 and its updates from 2014) of the Tanbreez project. DCE and GINR assessed the Tanbreez EIA in 2013 before the EIA went into a public consultation.

At the telephone meeting, it was decided that DCE and GINR should re-assess the EIA from 2013, including its updates from 2014.

As the basis for the re-assessment, DCE and GINR used the consultation material from 2013, which can be found at the public consultations site: <https://naalakkersuisut.gl/en/Hearings/Hearing-Archive/2013/Tanbreez>. Furthermore, DCE and GINR used the updated EIA from December 2014. The assessment by DCE and GINR from 2013 is also available at the public consultation site.

At the telephone meeting on 27 July 2020, it was agreed that DCE and GINR should prepare a new assessment (herein document) as a supplement to the DCE and GINR assessment from 2013.

Based on the above agreement DCE and GINR have:

1. Updated all points of attention included in the DCE and GINR assessment from 6 November 2013.
2. Assessed if new developments in international practice since 2013 concerning limit values for discharges to the environment gives rise to changes in DCE and GINR assessment and recommendations from 2013.
3. Assessed whether new knowledge has emerged in the environment, such as should give rise to a reassessment of the mine project's environmental impacts.
4. Carried out a screening of whether the updated 2014 EIA and new aspects that have emerged that should be assessed or give rise to reassessment.

### **Regarding 1. Updated all points of attention included in the DCE and GINR assessment from 6 November 2013.**

The DCE and GINR assessment from 2013 includes a comment regarding fluoride-containing minerals in the area. DCE and GINR have recommended (2013) that if further chemical processing of minerals is to take

place in Greenland, a new EIA report should be prepared to take chemical processing into account.

### **Fluoride-containing minerals**

The DCE and GINR assessment from 2013 included a recommendation to obtain more information on the occurrence of minerals containing fluoride at the Tanbreez site. Further, DCE and GINR recommended that GEUS be involved in assessing the occurrence of soluble fluoride minerals in ore, and waste rock. Soluble fluoride minerals could cause fluoride pollution if discharged into the environment from the planned Tanbreez project “Kringlerne”.

Based on the GEUS assessment, DCE and GINR prepared a note dated 3 November 2014. This note concluded that it is unlikely that water-soluble fluoride minerals occur in the ore planned for extraction at Kringlerne. This evaluation is reflected in the updated EIA from December 2014. It is further supported by a Ph.D. study (Borst 2016) concluding that fluoride in the ore at Kringlerne is mainly contained in the mineral  $\text{CaF}_2$ , which is not water-soluble.

DCE and GINR, therefore, find that there is no risk of a significant discharge of soluble fluoride to the environment from the proposed Tanbreez project. Thus, this point of attention is no longer relevant.

### **EIA for a possible minerals chemical processing plant in Greenland**

DCE and GINR assess that a local chemical processing plant in Greenland is so comprehensive that the environmental impacts should be assessed in an EIA report according to the Mineral Resources Act. The project proposal from 2013 does not include a chemical processing plant in Greenland. In case the project will include a chemical processing plant, DCE and GINR recommend that an EIA for a local chemical processing plant should be prepared and approved before its commencement.

## **Regarding 2. Assessment if new developments in international practice since 2013 concerning limit values for discharges to the environment should give rise to changes in DCE and GINR assessment and recommendations from 2013.**

A revised guideline for preparing an environmental impact assessment for mineral exploration was published in 2015. The present EIA for the Tanbreez project was prepared according to the EIA guidelines from 2011. The revised 2015 guidelines contain updated water quality criteria and have been expanded with standards for air quality. DCE and GINR recommend that the updated criteria for water and air form the basis for project approval in connection with the preparation of §19/43 documents.

Generally, DCE and GINR recommend that it should be ensured that recent developments in “Best Available Technology” (BAT), “Best Environmental Practice” (BEP), and “Best Practical Control Technology” (BPT) shall be used as a basis for the preparation of §19/43 documents.

DCE and GINR recommend that the EU recommendations included in the document: “*Best Available Techniques (BAT), Reference Document for the Management of Waste from Extractive Industries*” (Ref. MWEI BREF, 2018) are used as a basis for the preparation of the §19/43 documents for Tanbreez. This may result in environmental requirements that are more restrictive than those described in the EIA from 2014. BAT should be employed in order to lower the concentration of lead and other potential pollutants in wastewater, process water, and drain water if it is likely that the water quality guidelines cannot be complied without treatment. The same principle applies to air quality, where the revised 2015 guidelines for EIA shall ensure minimisation of the dust emissions and dispersion from the mining activities.

The number of geochemical tests used for preparing the 2014 EIA report for the Tanbreez project was lower than the number recommended by DCE and GINR today (DCE/GN 2018). Accordingly, DCE and GINR recommend that an assessment is made before the §19/43 approval process of whether further geochemical analyses and tests are needed and performed.

**Regarding 3. Assessment of whether new knowledge has emerged in the natural environment, such as should give rise to a reassessment of the mine project's environmental impacts.**

In 2017, the world heritage site “Kujataa” was approved by UNESCO (UNESCO 2017). The area consists of five smaller areas. The goal of the heritage area is to preserve the cultural landscape in South Greenland. The Tanbreez project area is situated north of the buffer zone of the western smaller area, no. 5. In the presentation from UNESCO, it is emphasised that the integrity of the area can be threatened by proposed mining activities but also that the authorities have committed to protecting the buffer zones. Therefore, DCE and GINR recommend that the frames of §19/43 are used to ensure that the impacts from the mining activity on buffer zone 5 are minimised in both the short and the long term. This shall include but not limited to minimisation of dust spreading during mining activities and after mine closure and re-establishment of harbors and roads during the decommissioning of the mining area.

Below is the text from the UNESCO presentation of the area:

<http://whc.unesco.org/en/list/1536>: “*The condition of the attributes is satisfactory, and while there are potential threats, these are adequately managed. The integrity of the property is considered vulnerable due to the range and scale of proposed mining, energy and infrastructure development projects in this area of southern Greenland. The commitments made by the State Party to establish*

*legal protection for the buffer zones will assist in improving the integrity of the property.”*

**Regarding 4. Carried out a screening of whether the updated 2014 EIA and new aspects that have emerged that should be assessed or give rise to reassessment.**

DCE and GINR have screened the approved EIA to see whether new aspects might have arisen since 2014 that should be assessed or re-evaluated. DCE and GINR draw the attention to the document:

“DCE recommendations for Guidelines for the Safe Management of Radioactive Waste generated from the mineral and hydrocarbons industries in Greenland” by DCE prepared for EAMRA. These recommendations include requirements for the management of emissions and discharges of radionuclides to air and water, safe management of radioactive waste and for the closure of waste facilities containing naturally occurring radioactive material (NORM). The recommendations also include long-term monitoring of such deposits. DCE and GINR recommend that these recommendations are included in the documents developed during the §19/43 approval process.

In 2019, DCE prepared and forwarded to EAMRA the first draft of “Recommendations for Guidelines for the Safe Management of Radioactive Waste generated from the mineral and hydrocarbons industries in Greenland”. These recommendations for guidelines shall supplement the Mineral Resources Act and “Guidelines for preparing an environmental impact assessment, 2015” for the mining and oil and gas industry in Greenland. The draft recommendations for guidelines have been subjected to international scientific review. DCE expect to forward the recommendations for guidelines to EAMRA, within a month.

Finally, DCE and GINR draw the attention to:

- New and more stringent rules for shipping (Ballast Water Convention, IMO 2020, PolarCode). DCE and GINR recommend that these guidelines are used in the §19/43 approval process.
- The IMO ballast water convention (Ballast Water Convention) has been in force since 2017 and was implemented in the Greenland Law in 2020. The purpose of the convention is to avoid influx and spreading of new invasive species.
- The IMO polar code contains new and more stringent rules for the construction and security of ships (Polar Code). The rules include stricter limits for emissions from ships to air. Ships shall use fuel low in sulphur or clean the exhaust (IMO 2020).

## **References**

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