White Paper

Kvanefjeld Rare Earth, Uranium and Zinc Project

Public 35-Day Pre-Hearing On The 'Terms of Reference' For The Environmental and Social Impact Assessments

Responses to Questions Put Forward During the Pre-Hearing Period

Prepared by Greenland Minerals & Energy

(Final version october 2015)

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The purpose of the White Paper is to provide a summary of public consultation comments, key points raised in meetings and public forums, and describe how these comments have been addressed or incorporated into the EIA, the Terms of Reference for the SIA, and subsequent management plans.

The White Paper will be a publicly available document, ultimately including comments from both the pre-hearing process for the Terms of Reference as well as the public hearing process following submission of the Environmental Impact Assessment and Social Impact Assessment documents provided with the mining licence application.

I. Public Hearing Response Related To The ToR For The SIA

I. Stakeholder 1 GREENPEACE

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
1.1	Due to demonstrations and the political situation and upcoming election the development of Kuannersuit ought to be put on standby until people are heard and proper information is given.		Consultation and information flow and other matters related to involvement of the public will be handled according to the law, including the Mineral Resources Act. This presupposes among other things as a minimum a 35 days pre-consultation phase and a minimum eight weeks consultations phase. Further to this a number of public meetings focusing on uranium etc. presented by different researchers have been and will be arranged in Greenland. For further information see: http://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Erhverv-Arbejdsmarked-og-Handel/Uran-oplysning-2014	None
1.2	Urges a referendum in south Greenland, based on former Governments' promise.		The Government of Greenland has presently no plans about conducting a referendum related to this issue neither in Greenland as a whole nor in South Greenland.	None

1.3	Greenpeace request a reintroduction of the ban for exploiting uranium		Inatsisartut decided in 2013 to lift the ban on zero tolerance in Green-land. The Greenland Government acts according to this decision.	

I. Stakeholder 2 INUIT CIRCUMPOLAR COUNCIL (ICC) GREENLAND

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
2.1	ICC Greenland welcomes the prehearings. This is a step towards involving the stakeholders early in the process.		Noted. The Greenland Government agrees.	None
2.2	In principle ICC Greenland is against uranium mining. ICC Greenland recommends the Governments of Greenland and Denmark not to abandon the zero – tolerance of uranium. The lift of the ban showed a split in the population that strengthened the ICC's position on uranium.		Inatsisartut decided in 2013 to lift the ban on zero tolerance in Greenland. The Greenland Government acts according to this decision.	None
2.3	ICC Greenland is concerned about the long-term storage of tailings (radioactive waste) and the risk of contamination due to proximity to town. The EIA and SIA must offer real alternatives to a higher degree than what has been published in such documents for other mining projects.	The tailings have specific issues to address in terms of radiation that need to be managed in an appropriate manner, this will be addressed in the EIA. Test work is currently underway to evaluate the radioactivity and design a world's best practice storage facility for the tailings.		The following sentence has been added to section 6: " A description of a procedure for how claims for compensation from local farmers, local commercial hunters and fishermen will be ad-

				dressed”
2.4	ICC Greenland recommends the pre-hearing be post-poned until after the upcoming election.		The 35 days pre-consultation phase related to the Kuannersuit project has been conducted according to the provisions in the law.	None

I. Stakeholder 3 KANUKOKA

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
3.1	KANUKOKA finds the pre-hearing a major step forward in involving the citizens earlier in the approvals process for mining projects.		Noted.	None
3.2	General comments; Figures in general are too blurry, in many cases not possible or very difficult to read when the material is printed. Legends are not complete. p. 12: the description of the political situation – especially Greenland's relation to the Danish authorities is not correctly formulated. Referral to the proposed formulations from Kommune Kujalleq p. 4 Section 1.3 (and more) Workshop plural is workshopper (in Danish translation) p. 3.4 Title: Departementet for Erhverv og Rastoffer is not a ministry – the same comments apply to similar errors throughout the document	Noted; clear and extensive figures and maps will be presented within the EIA Noted; this will be corrected. Noted Noted	There should be a map in the SIA as well.	New versions of figure 4.1 and figure 4.2 has been inserted Additional text has been added for figure 4.3 and 4.5. Section 3.1 has been rephrased to describe the political situation correct. Correct name of the Department/Ministry will be used in the document.

3.3	There should be included incorporation of the cumulative effects on the labour market from other mining projects, major construction projects like building an airport in Qaqortoq and growth in other industries in the area.	Through the SIA process, the construction and operations phases will be assessed with regards to how the labour market will be impacted. GME will look at publicly available studies of other projects to consider cumulative effects.	When drafting this part of the SIA Report please have a look on the relevant section in Guidelines for Social Impact Assessments for Mining Projects in Greenland ("Guidelines (2009)"	Section 6 will be expanded to cover a list of all areas to be assessed in the SIA including the cumulative impacts.
3.4	The SIA mentions that power from hydroelectric power plant comes "later" but initially diesel power will be used. An explanation as to why hydropower is not established from the outset of the Project is lacking.	A hydropower plant in the initial stage of the project will not make it economically feasible to extract the products of interest. When the project has reached a positive cash flow and income a hydropower plant will be considered and eventually planned to replace the fossil fuel based power supply. The power plant will be placed near the production area up the valley. A hydropower plant study has been completed by Istak and results will be provided in the Feasibility Study and EIA. The Feasibility Study will be a part of the license application but is not a public available document.	A hydropower plant will require a specific EIA.	The following sentences has been inserted in section 4.2.6: "In relation to the above mentioned power source it has been assessed that a hydropower plant in the initial stage of the project will not make it economically feasible to extract the products of interest. When the project has reached a positive cash flow and income a hydropower plant will be considered and eventually

				planned to re-place the fossil fuel based power supply. The power plant will be placed near the production area up the valley.
3.5	There is no detailed study of settlement patterns of the outside workers, particularly at the operational phase. It is expected that some staff will settle per-manently in the area and how many of them could be expected to relocated to the municipality.	Foreign workers will be FIFO and perma-nently based in another jurisdiction, but accommodated in a purpose built village while on roster. The Greenlandic workforce will have the option of living in the accom-modation village or the town of Narsaq.		None

I. Stakeholder 4 KNAPK (NATIONAL FISH AND HUNT)

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
4.1	KNAPK and its branches wishes as much as possible to get an agreement on supplies in the form of the catch from hunters and fishermen during the construction and operation phases of the Project.	GME will work together with the local suppliers and establish a business relationship with the hunters and fishermen of Narsaq and the surrounding area.	Supply to the mine will also be an important element in the forthcoming Impact Benefit Agreement.	Section 6 has been revised with the following sentence: Potential business opportunities for local farmers, commercial hunters and commercial fishermen
4.2	How will KNAPK's input to the hearings become part of the final documents? (same as in EIA 5.2)	Specific suggestions to changes in SIA will be assessed and if relevant incorporated in the final documents. (same as in EIA 5.2)	Please specify	Section 3.2 and Section 5 have been revised

I. Stakeholder 5 KOMMUNE KUJALLEQ

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
5.1	The municipality proposes a development of a public relation/communication strategy		The MILT kindly asks the GME to include a draft for such strategy in the SIA.	Please see section Section 5.1 and especially 5.1d in the approved ToR
5.2	Kommune Kujalleq is of the opinion that a direct contact with the local authorities are required to provide a comprehensive overview of recent developments and in particular the plans for the future – this applies especially to 7.2.3 Traditional Living Conditions, 7.2.4 Infrastructure, 7.2.5 Local Use Study and 7.2.6 Health Study. The consultant preparing the SIA should respect the fact that the Municipality is one administrative unit, so that all dialogues with various administrations in the municipality is coordinated in cooperation with the Municipality head of mining relations.	Throughout the SIA process, independent consultants Grontmij will consult with Kommune Kujalleq on these, and other issues.		None

5.3	Kujalleq Municipality is in a situation where there is a possibility that large growth can occur in a short period as a result of mining and fishing industries, and development of a new airport. It is important that the SIA for the Kvanefjeld Project incorporates the issues associated with this along with the creation of new jobs in the region.	The project will generate 1171 jobs in the construction phase and 787 permanently in the operations phase. We will monitor other industry developments in the area as further information becomes available. The impact on the local labour and facilities will be minimised by the use of a Fly In Fly Out workforce. The FIFO workforce will stay in the accommodation village which will provide all living requirements and recreation facilities. The FIFO workers then return to their country of origin for the rest schedule.		Section 6 has been revised with the following sentence: "Potential effects on and potential conflicts with other economic activities"
5.4	The existing tax regime meant that the only significant income the local community receives is from new business generated, and direct and indirect jobs for locally registered residents. Income includes wages to the individual and his or her residence and tax to the Municipality.		New business activities will usually result in increased personnel taxes and, in some cases, increased corpo-rate tax and dividend revenue to the local community. The large tax in-comes are derived from increased activities in both direct, indirect and induced taxes as a consequence of new business activities. The question related to which municipality to receive what tax income, is decided according to the rules in § 68 in the income tax legislation. It follows from this legislation, that both ad-dress and stays in a municipality, can cause a tax payer to pay tax in	Section 6 has been revised with the following sentence: "(including public revenues)

			the municipality. It follows further from § 68, that in some instances the tax authority is considered the tax municipality. This is for example relevant for exploration or exploitation licenses in the mineral resources sec-tor and employees in these companies.	
5.5	When hiring from overseas and outside of the Municipality in Greenland, the local area will not receive the economic benefits. In addition the local area is presented with the challenges of increased pressure on infrastructure, private and public services and the environment. Therefore, it is important that the SIA includes in detail Municipal success criteria for new local business activities in the local area.	It is inevitable that a large number of foreign workers will be needed during the start-up and construction phase. The Company is conducting rigorous studies to ensure that there will be as little a negative impact as possible and these studies will be assessed by independent experts. During the start-up and construction phase GME will utilise local resources, services and cooperations where possible.	Involvement of local businesses will be a part of the forthcoming Impact Benefit Agreement. Normally use of Greenland workers; provisions concerning use of Greenland Enterprises and provisions concerning contributions to business/industrial development will be specified in the IBA	None

5.6	A major socio-economic problem in Kommune Kujalleq is the high level of unemployment, where many are non-job ready. Kommune Kujalleq believes it is important that this part of the workforce is integrated with the increase in economic activity in the Municipality. This can only happen with extensive rehabilitation efforts through job introduction, upgrading and addiction treatment that can make a big part of these non-job ready individuals prepared for a work carrier and following self-reliance.	GME has already presently (during exploration) some local employees and will when exploitation licence is issued work together with the municipality to minimize the unemployment rate. The work will most likely be intensified during the IBA negotiations. Historically GME has established a trainee program and will re-establish, at a suitable time, a crew of local driller foremen who will be responsible in creating their own teams with trusted and trained workers.		None - the employment opportunities is already mentioned in Section 6. In the SIA report the local job opportunities will be addressed
5.7	Another significant share of unemployment occurs due to seasonal fluctuations in employment. The SIA should assess how a mining activity can help to reduce seasonal unemployment.	The Kvanefjeld Project will operate 365 days a year, 24 hours a day. There will be no seasonal fluctuation of employment		None
5.8	Kommune Kujalleq considers it essential that the SIA makes recommendations from different parties to further develop the existing proposals to include the marginalised and excluded from the labour market.	GME is prepared to work together with the municipality of Kommune Kujalleq to establish programs to include the marginalized and excluded from the labour market.		None
5.9	Kommune Kujalleq wants a detailed plan of the accommodation both in the construction phase and operation phase. What are the social consequences of the accommodation in either Narsaq or further up the Valley? What will be the accommodation differences between the construction and operations phases.	The plan for the accommodation in the construction phase is to place it near the mine site. When operation commences the accommodation village for FIFO workers will be placed in the outskirts of Narsaq . Details of accommodation will be provided in the SIA		None
5.10	The SIA ToR in Section 4.2.7 states that two thirds of the workforce will be foreign workers. Would the	The aim is to have nearly 350 local workers to live in Narsaq or be FIFO workers from		None

	latter be primarily FIFO or will there also be a part of the foreign workforce that will stay in Narsaq as part of the permanent population? An approximate number of this group should also be indicated.	other parts of Greenland. The rest will primarily be foreign FIFO workers.		
5.11	Kommune Kujalleq is specifically interested in illuminating what the future mining project (with outside labour) could lead to in the development of the consumption of alcohol and drugs. Will there be a risk of increased use in connection with FIFO personnel, and if so, what would the impact be on the current local population in view of the existing problems in the area?	The project will become a 24/7 365 production site and will have a 0-tolerance towards drugs and alcohol. This means that any FIFO worker violating the rule will be disciplined appropriately. The rule applies to any worker whether being resident of Narsaq or FIFO. It is standard practice in Australia for mining operations in to follow the same rules. In the SIA Report there will be a list of all areas, which has been assessed in the SIA including the social risk with regard to FIFO staff as well as public health as use of alcohol and drugs.		None

5.12	The businesses within Kommune Kujalleq comprise a few medium sized enterprises and a large number of smaller companies. This structure requires special measures to ensure that local businesses have access to business opportunities associated with the mining company. Therefore it is important to understand the extent to which the indirect and induced economics of the mining project affects the local community. The multiplier effects are also important, especially where industries will remain after the mining operation closes.	For every worker hired in the mine a service provider of 1-3 times greater is needed from the associated businesses. This will be further discussed within the SIA document.		Section 6 has been revised with the following sentence: "Potential effects on and potential conflicts with other economic activities".
5.13	Kommune Kujalleq collaborates with local businesses in an effort to establish a cluster, where local businesses, labour organisations and local educational institutions can negotiate and agree on opportunities and challenges in the community in regards to new mining activities. It should be part of an SIA how such a cluster can form the basis for efficient communications and collaboration forum with mining companies.	GME has already established a network with the local business groups and will continue to develop the network. Both the local businesses in especially Narsaq and Qaqortoq as well as the local branch of Employers Association GA.	The SIA report should include a description of this network.	The following sentence has been inserted in section 7.1. in the ToR: "(including local businesses and existing business networks)"

5.14	An important aspect in the establishment of the Kvanefjeld Project is that the project includes the handling of radioactive materials. The challenges of this in relation to training of local labour and local businesses associated with the mine operation has to be explored in great detail in both the SIA as well as the EIA.	The area already has elevated background levels of radioactivity naturally. The operation of a mine in the area will not increase the levels of radioactivity. Internationally applicable and approved procedures will be followed (best practices) along with the rules and regulations of Greenland. These will be described in both the EIA and SIA. Prior to commencement of operations there will be extensive training in this area for all Greenlandic and non-Greenlandic workers	The TOR could make reference to the IAEA guideline etc. and that Greenland will accede to Radiation Protection Convention (ILO), 1960 (No. 115)	Section 6 has been expanded to cover a list of all areas to be assessed in the SIA including the potential risks regarding OHS and radiation issues. That Greenland will accede to Radiation Protection Convention (ILO), 1960 (No. 115) as well as relevant IAEA guidelines have been added to section 3.2. Legal Framework

5.15	Kommune Kujalleq wants a specific comprehensive analysis of the activities important for future development of the food industry, including agriculture, fisheries and related industries. The existing industry development has focussed on fishing and farming, and the region has established an identity based on these The SIA should therefore also include considerations about the effect that a large-scale mining project would have on this identity.	GME will through co-operation with the local food industries assist in developing the various branches, such as agriculture, fishing and the like. It is important for GME to have a healthy industry surrounding the project to be able to supply with local goods.	The MILT kindly asks the GME to pay specific attention to this issue. This should be assessed in the SIA report together with comments 5.17 below.	Section 6 has been expanded to cover a list of all areas to be assessed in the SIA including potential risks and synergies with other sectors such as the food industry, fishing/hunting as well as sheep farming.
5.16	Infrastructure, including (renewable) energy, transport by air/ sea, energy and waste management, should be included as options in the EIA (and SIA) as a basis for negotiation between the Government, local authority and the mining company in view of their importance for local community development. It is equally important for the Municipality the modern permanent housing for labour in the Project is established.	The necessary feasible infrastructure will be established for the project. During the IBA negotiations further developments in the future on certain areas of the infrastructure will be discussed and recognized.		None

5.17	It should be assessed whether the industry throughout the region will generally be affected, for example agricultural products reputation will be reduced. Particularly with regard to the slaughterhouse Neqi A/S, whether its quality and goodwill will be affected, and if the food industry should be moved to another location? (same as in EIA 6.20)	Potential impacts of the Project – both positive and negative – will be discussed and assessed within the EIA and SIA process. (same as in EIA 6.20)	The MILT proposes that the GME include experiences in the SIA Report for how this has been solved in other parts of the world, where mining uranium takes place in or near farming areas.	Section 6 has been expanded to cover a list of all areas to be assessed in the SIA including potential risks and synergies with other sectors such as sheep farming.
5.18	Indication of any spin-offs in tourism, which negative consequences will there be for tourism, including whether the cruise tourism in Narsaq and Qaqortoq will be affected.	Potential impacts of the Project – both positive and negative – will be discussed and assessed within the SIA documents. Increased infrastructure and improved transport and facilities should be a benefit to tourism in the area		Section 6 has been expanded to cover a list of all areas to be assessed in the SIA including potential risks and synergies with other sectors such tourism.

5.19	A key framework condition for local community development is necessary.		The Mineral Resources Act aims to ensure that activities under the Act are securely performed as regards, among others, social sustainability. This also counts the local community. This is regulated in the exploitation licence, different approvals and in the Impact Benefit Agreement.	Section 5 and 3.2 have been revised.
5.20	It is relevant to consider that construction activity in southern Greenland is being prioritised over the rest of Greenland if the Project goes ahead. Kommune Kujalleq wants this clarified in the SIA. An increase in construction activity in south Greenland could result in significant additional costs for the Municipality due to required new construction, renovation and expansion of local public institutions. Increased costs of labour and services are a result of increased demand (due to the mine Project).	An assessment of the impacts on the labour market and increased activities in general construction if the Project goes ahead will be included in the SIA.	As the project can have an impact on the local community, a prioritized effort is given to the local community. This is why the municipality in line with the company and the Greenland Government is part in the upcoming IBA negotiations. In this IBA forum different issues related to the project and the impact on the local community can be addressed.	Section 6 has been expanded to cover a list of all areas to be assessed in the SIA including potential pressure on the public service and infrastructure.

5.21	The ToR state that the Company is planning to burn solid waste at an incinerator in the mining area. Kommune Kujalleq is in cooperation with the mining company wishes to conduct a detailed assessment if the solid waste can be burned in the local incinerator where waste heat can be utilised for energy in one or more habitations.	GME is preparing an incinerator for solid waste. The plan to utilize the excess heat can become part of the IBA negotiations.	The MILT agrees but the upcoming SIA could if possible include scenarios of how this could be done in an environmental safe manner.	Section 6 has been expanded to cover a list of all areas to be assessed in the SIA including potential pressure on public infrastructure including waste management.
5.22	In Section 4.2.4 of the ToR (EIA and SIA) it states that the port facility is to accommodate ships of 32,000 DWT. The stated position of the port in Figure 4.2 should be further studied, as this area is inside the shallow cove of Narsaq Ilua. A more realistic location should be considered outside of the cove, on the bay of the area west of the existing landfill site. Furthermore, the port location should be indicated in Figure 4.3	A decision is made to place the port on the peninsula to the west of the town near the existing landfill. Figures in the EIA and SIA will be updated to show the location of the port on the peninsula. The landfill will be cleaned out. The location of the port and the process undertaken to arrive at a preferred location will be further described in the EIA.		None
5.23	The ToR specify in Section 4.2.6 that hydroelectric power is to be established later, as a diesel plant is to supply the electricity in the beginning. It should be explained why the establishment of a hydropower plant is not happening simultaneously with mining and processing facilities? Where will the power plant be located?	A hydropower plant in the initial stage of the project will not make it economically feasible to extract the products of interest. When the project has reached a positive cash flow and income a hydropower plant will be considered and eventually planned to replace the fossil fuel based power supply. The power plant will be placed near the production area up the valley. A hydropower plant study has been completed by		The following sentences has been inserted in section 4.2.6: “In relation to the above mentioned power source it has been assessed that a hydropower plant in the initial stage

		Istak and results will be provided in the the Feasibility Study and EIA. The Feasibility Study will be a part of the license application but is not a public available document.		of the project will not make it economically feasible to extract the products of interest. When the project has reached a positive cash flow and income a hydropower plant will be considered and eventually planned to replace the fossil fuel based power supply. The power plant will be placed near the production area up the valley.

5.24	It is important that the SIA scrutinise how future activities will put pressure on public citizen services, including health care, municipal institutions and government regulatory areas (customs, police and judiciary). It should also include detailed information of how foreign labour will strain public services in the region.	Potential impacts of the Project – both positive and negative – will be discussed and assessed within the EIA and SIA documents. The SIA in particular, through the Benefit and Impact Plan, Monitoring Plan and an Evaluation Plan (the basis for the Impact and Benefit Agreement) will discuss potential impacts such as increased pressure on public services.		Section 6 has been expanded to cover a list of all areas to be assessed in the SIA including potential pressure on public services such as health service, municipal institutions and government regulatory areas (customs, police an and judiciary).
5.25	The ToR describe six alternatives for the Project (three Scenarios and two alternative locations of the plants (East and West) (Sections 2.3 and 4.1). It is not clear from the ToR whether the three scenarios will be treated equally in the two statements, and if all three scenarios will be described fir the East and West locations. The Municipality believes that there should be a description of the consequences of all the alternatives, so that the choice between them can be assessed from a sustainable development and environmentally holistic approach.	This is not entirely correct. There are three development scenarios presented in the ToR which will be considered in the EIA and SIA and the one GME prefers is Scenario 2.	It is confusing for the reader that you use the term “scenario” in relation to the processing scenarios as well as the locations. Please modify for benefit of making it less confusing for the reader	The word “Scenario” has been replaced in Section 4.1 with “option” or “Location”

5.26	Changes have been made in the Project description since 2011 compared to the current status (Section 4.2) but the reasons for the changes are not described in the ToR. A statement should be included in the introduction.	The ToR mention that the three development scenarios were decided on as a result of discussions with the MRA and in consideration of Greenland's Mineral Resources Act. The nature of the processing facility has also completely changed since 2011.	Please put a statement in the introduction to the latest amendment in the Mineral Resource Act (Part 18a) and insert a reference to section 4.2 in the introduction. Due to the amendment of the Mineral Resource Act in 2014, it might cause confusion to use the term "approved" in connection to the ToR from 2011. Therefore please delete the term "approved", when used in connection with the ToR from 2011.	Section 1.4. in the introduction has been revised and a reference to section 4.2 has been inserted in the introduction Section 4.2 has been revised as well for the benefit of clarifying the difference between the Draft from 2011 and the ToR approved in 2015 The term "approved" has been deleted when writing about the ToR from 2011.
5.27	Section 4.2, Figure 4.3, it is not clear what the markings on the map addresses and includes. For example, it is unclear what the markings for the following specifically concern; dump at 33 years, pit at 33 years, RSF A, RSF B.	The figures included have been labelled to show the outline of the waste dump, and the outline of the open pit as they will look after 33 years of mining		Additional explanation has been added to figure 4.3

5.28	It is mentioned (Section 4.2.3) that the possibilities for the deposit of tailings include; in the valley, in the lake, in the fjord system. However, it is unclear where the actual location for deposit in the 'valley' and the 'fjord system' are located. The environmental impact of each of these options should be evaluated to find the most appropriate place for the disposal of tailings. (same as in EIA 6.24)	A number of locations were identified and assessed for suitability of tailings storage. The preferred option is Taseq. Studies completed to arrive at this conclusion will be presented in the EIA. (same as in EIA 6.24)		None
5.29	Infrastructure, including (renewable) energy, transport by air/ sea, energy and waste management, should be included as options in the EIA (and SIA) as a basis for negotiation between the Government, local authority and the mining company in view of their importance for local community development.	The necessary feasible infrastructure will be established for the project. During the IBA negotiations further developments in the future on certain areas of the infrastructure will be discussed and recognized.		None

I. Stakeholder 6 KOMMUNEQARFIK SERMERSOOQ (KS)

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
6.1	KS is grateful for the opportunity to respond to the 35 day pre-hearing of the Kuannersuit (Kvanefjeld) project in south Greenland. KS appreciates any initiative that promotes transparency and citizen involvement, and the introduction of a public pre-hearing is a positive step.	GME is the first exploration company to undergo a 35 day pre-hearing and happy to further our presentation of the proposed Project through this forum.	Please elaborate on how citizens have the possibility to influence the project during the approval process.	Among others for the benefit of emphasizing the early citizen involvement section 5.1. has been revised
6.2	It is clear that the purpose of the pre-hearing is primarily to provide a meaningful involvement early in the process. By conducting a pre-hearing prior to the public hearing, allows the company at an early stage in the Project, to make contact with relevant stakeholders and authorities, including the relevant municipalities. In addition, stakeholders can at an early stage make demands for alternative processes for the Project.		Please elaborate on how citizens have the possibility to influence the project during the approval process.	Among others for the benefit of emphasizing the early citizen involvement section 5.1. has been revised

6.3	KS has reviewed the material, and finds it very difficult to come up with alternative proposals and clarifying questions, as the Project is described in a very superficial level. It has not been possible to obtain the background studies cited in the material or detailed objective assessments of the processes involved in the Project.	All of the project reports are being finalized for the final feasibility report as well as the EIA and the SIA. Therefore not possible to extract any information unless completed. Work is ongoing and when completed will be documented in the EIA and SIA. The ToR are primarily intended to provide a preview of the of the EIA and SIA, without providing extensive detail, as this will be provided in the EIA and SIA.		Among others for the benefit of clarifying the purpose of the ToR section 5.1 has been revised
6.4	In the description of the political situation, it is written that the "21st June 2009 Greenland assumed self-determination with the possibility for responsibility for self-government of judicial affairs, policing, and the management of natural resources." This is not correct, as Greenland have not taken legal matter and policing to Greenland.	Noted; the correct description will be investigated and included in the EIA and SIA.	The information for the correct description can be found on http://naalakkersuisut.gl/~/media/Nanoq/Files/Attached%20Files/Engelske-tekster/Act%20on%20Greenland.pdf	See 10.6
6.5	In materials, it appears that the Project may result in up to 735 jobs during the operational phase, it is estimated that 207 jobs can be carried by local work force.	The aim is to reach 60% local workers after the commencement of production.	Under comment 5.3 in the white paper GME mentions 781 jobs during operation. So please clarify in the ToR if you estimate to use 781 or 735 in the operation.	Table 2.1 has been changed so it now appears that 781 will be used during operation781 The following sentence has been added to section 4.2.7: "The aim is to reach 3/5"

6.6	In the material, there is no description of the national economic impacts of the Project, and there are apparently no plans to describe the size of income tax, corporation tax or any royalties in a future SIA. At present the Project has produced a Feasibility Study which should have been enclosed in the pre-hearing material.	The Feasibility Study is being finalized and expected in the first quarter of 2015. A Pre-Feasibility Study was completed in 2012. Further discussion on economic impacts – positive and negative – will be dealt with in the SIA, specifically within the Benefit and Impact Plan. The Feasibility Study will be a part of the license application but is not a public available document.	The SIA shall include information about the government take and other public revenues, which will be generated from the project,	The following sentence has been added to section 6: "(including public revenues)"
6.7	With a project of this size, and with the obvious environmental hazards a process for an assessment should have been started early to assess whether the socio-economic considerations outweigh the risks, with a town near a mine containing several hazardous substances would cause. (same as in EIA 7.12)	GME is the first company to be involved in the process of a public hearing for the Terms of Reference. Stakeholder engagement has been ongoing since prior to 2011 and continues throughout the entire ToR and EIA / SIA process. (same as in EIA 7.12)	According to section 76 in the Mineral Resource Act then if an activity has a significant impact on social condition the applicant will have to conduct a social sustainable assessment. The purpose of this is among others to give the government valid information about the socio-economic impact and benefits from the project. In addition to this the EIA will provide the Government with information about the environmental impacts	Section 3.2 and Section 5.1 have been revised due to among others for the benefit of clarifying stakeholder engagement

I. Stakeholder 7 NAPP (NARSAQ FISH AND HUNT)

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
7.1	We would welcome the opportunity for sales of fish and other catch by local fishermen and hunters to the Project.	GME will work with the local fishing and hunting association and establish a business relationship related to their catch.	Local procurement will be a part of the forthcoming Impact Benefit Agreement.	Section 6 has been revised with the following sentence: "Potential business opportunities for local farmers, commercial hunters and commercial fishermen"
7.2	Important to ensure that potential contamination can be kept to a minimum with regard to fishing and hunting. Therefore, an agreement for compensation should be made prior to commencement of mining in case of contamination affecting fishing or hunting.	Baseline studies will help to describe the existing environment and we welcome your participation throughout the SIA process. IBA negotiations will consider areas such as compensation and also provide baseline information for reference.	In the SIA report please describe a procedure for how claims for compensation from local farmers, local commercial hunters and commercial fishermen will be addressed	Section 6 (p. 26) has been revised with the following sentence: A description of a procedure for how claims for compensation from local farmers, local commercial hunters and commercial fishermen will be addressed

I. Stakeholder 8 RASMUSSEN, JOHN

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
8.1	Recommends a referendum on the Kvanefjeld Project. GME should respect the outcome of such a referendum.		The Government of Greenland has presently no plans about conducting a referendum related to this issue neither in Greenland as whole nor only in South Greenland.	None
8.2	Recommends an in-depth and independent information campaign addressing risks inherent in a potential mine, especially on the waste products.	Independent consultants are preparing the impact assessment. Independent consultants are also preparing the tailings facilities and waste treatment plants. Danish scientists have been touring Greenland presenting objective information on uranium mining and responding to queries and concerns. http://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Erhverv-Arbejdsmarked-og-Handel/Uran-oplysning-2014	http://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Erhverv-Arbejdsmarked-og-Handel/Uran-oplysning-2014 A tour in Southern Greenland with scientists among others from DCE and GEUS is scheduled to take place by the end of May and in the beginning of June 2015.	None

I. Stakeholder 9 SPS (COOPERATIVE SHEEPFARMERS ASSOCIATION)

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
9.1	SPS also wants to ensure that sheep farming is not to be hindered. Meaning, the sheep farming industry is not to be damaged by mining-based activities at Kvanefjeld.	We anticipate there will be no negative impact on the environment and the details of this will be explored in the EIA. In addition mine workers will require food, which will be sourced locally as much as possible. The Company is conducting rigorous studies to ensure that there will be no negative impact and these studies will be assessed by independent experts. GME will utilise local resources, services and cooperations where possible.	Please revise section 6 so it is indicate in the ToR that the SIA Report will include a description of a procedure on how sheep farmers will be compensated if the project causes any harm to their business	The following sentence has been added to section 6: "A description of a procedure for how claims for compensation from local farmers, local commercial hunters and fishermen will be addressed"
9.2	There should be an assurance that there will be sustainability for the sheep farmers. (Same as in EIA 11.2)	The impacts – both positive and negative, to sheep farmers will be assessed through the EIA and SIA processes	The Mineral Resources Act aims to ensure that activities under the Act are securely performed as regards, among others, social sustainability. This is regulated in the exploitation licence, different approvals and in the Impact Benefit Agreement.	The following sentence has been added to section 6: "A description of a procedure for how claims for compensation from local farmers, local commercial hunters and fishermen will be addressed"

I. Stakeholder 10 TRANSPARENCY INTERNATIONAL GREENLAND

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
10.1	TIG has examined with interest the documents for the Kvanefjeld Multi-Element Project, ToR for the SIA and EIA. TIG welcomes the ToR presented in pre-hearings as they describe a fundamental change in scenarios compared to the 2011 material. (Same comment in EIA Section)		No comments required.	Section 5.1. has been revised for the benefit of clarifying citizen involvement
10.2	The two ToR are virtually identical up to page 21. It would save the reader time if they are summarised into one document and then separated into SIA and EIA. (Same comment in EIA Section)	The ToR for the SIA and EIA are very similar in some chapters. However, for clarity and ease of reading, it is best to present the same information in each.		Section 3.2 has among others been rephrased for the benefit of clarifying the purpose of the social Impact assessment

10.3	It is not clear whether Scenario 3 will be included in the final ToR for the SIA and EIA. It states that both GME and the Mineral Resources Authority have concluded that there must be three scenarios, but on page 10 of both ToR it states "there will be a need in relation to Scenario 3 for a sensitivity analysis in order to make, on an equal footing with Scenario 1 and Scenario 2, an informed decision as well to assess the socioeconomic and environmental effects." TIG believes that Scenario 3 is significantly different for the civil society, and would therefore before the next round of hearings, wish to clarify whether Scenario 3 is still in play.	While Scenario 3 has been considered, information to date suggests that this Scenario is unlikely to be both economically and logistically feasible. Further information will be provided in the Feasibility Study and assessed in the EIA and SIA. The Feasibility Study will be a part of the license application but is not a public available document.		None
10.4	Both documents highlight the SIA and EIA will be based on a participatory approach, "a high degree of communication will be a significant feature of the entire process." TIG expects that the mandates of both would be a clear description of the citizen involvement.	GME has been conducting regular stakeholder consultation with various departments, organisations and members of the public since 2008. This will continue, along with the formal arrangement of the public hearing period following submission of the EIA and SIA.	The MILT kindly asks that GME in the SIA (not the TOR for the SIA) includes a specific section about public relations (this issue is related to the issue raised under 5.1 above)	Section 5.1. has been revised for the benefit of clarifying citizen involvement.
10.5	SIA page 9: number of villages south of Kvanefjeld were visited (Section 2.2). TIG lacks an explanation as to why there were no villages north of Kvanefjeld visited?	In August 2013 GME completed its settlement tour in southern Greenland visiting all villages except for Qassimiut, Qassiarsuk and Igaliko. The inhabitants of the latter two villages were invited to Narsarsuaq for an information meeting held there.		None
10.6	SIA page 11: TIG would recommend that the first two paragraphs (Section 3.1) were rewritten and appeared	Noted	The MILT advises GME to use the same terminology as used on the	The first two paragraphs in section

	correct. The term, The unity of the Realm, can be used.		homepage of the Prime Minister's Office (Denmark): http://stm.dk/_a_2752.html Further information about the interplay between the authorities in the Realm and the Self-Government can be found in the Act on Greenland Self-Giovernment: http://naalakkersuisut.gl/~/media/Nanoq/Files/Attached%20Files/Engelske-tekster/Act%20on%20Greenland.pdf	3.13.1. has gone through a minor revision: "The Act on Greenland Self-Government was granted to Greenland on June 21, 2009 and was an extension of powers enacted in the Home Rule act of 1979 . Through the Home Rule and Self-Government Acts Greenland has the right to elect its own parliament and government, the latter having authority and administration over the areas mentioned in the Self-Government Act such as education, health, fisheries, environment, climate and mineral resources

				from the 1st of January 2010. Some of the achievements of the Self-Government Act (2009) were the recognition of Kalaallit (Greenlanders) as people, in international law, the opportunity for Greenland to become an independent state, as well as the opportunity to take on the jurisdiction of more areas (such as mineral resources and justice affairs). Greenland is a part of the Danish Realm. The influence of the Danish authorities in Greenland has decreased since 1979 when the

				Home Rule was introduced. With the inception of the Self-Government Act there is the possibility that Greenland will take over the jurisdiction on more areas, however these areas are still under Danish jurisdiction: • Justice affairs, including police, criminal procedures and the courts of law • Defence and National security • Financial sectors and monetary system e.g. the currency used in Greenland is Danish Kroner DKK • Civil right law

				e.g. family and succession, citizenship matters etc. • Foreign affairs
10.7	SIA page 14 and 16: It appears on page 14 (bullet points under Section 4.2) that "the mining rate and associated processing facilities have been reduced from 7.2-10.8 million tonnes per year down to 3.0 million tonnes per year", but Figure 4.4 indicates something quite different.	The 3.0 million tonnes per year is the amount of ore to be mined, while the figures mentioned in figure 4.4 are the amount of products or concentrations after processing.	The figures are quite different but a revision of the text in section 4.2. could clarify the difference for the reader	For clarifying purposes the following sentence in section 4.2 has been deleted: "and associated processing facilities "
10.8	SIA page 20: It is described in Section 5.2, what the so-called "social impacts" can be. The section should be rewritten so it is clear what social factors will be included in the baseline analysis. A useful starting point could be the Public Health Program Inuuneritta II and international conventions.	Noted. Section 6 will be expanded to cover a list of all areas to be assessed in the SIA including public health	When drafting this part of the SIA report please have look on the relevant section in Guidelines for Social Impact Assessments for Mining Projects in Greenland ("Guidelines (2009)"	None

10.9	SIA page 21: TIG is not in possession of specific local knowledge, but we wonder why neither sheep or agriculture is discussed in the scoping phase (Section .5).	Noted. Specific reference will of course be made to the sheep farming and agricultural activities in the area in the EIA and SIA	The GME is kindly asked to involve the farmers when conducting the assessment.	The following two sentences has been added to Section 6: 1) "Potential business opportunities for local farmers, commercial hunters and fishermen" 2) "A description of a procedure for how claims for compensation from local farmers, local commercial hunters and fishermen will be addressed"

10.10	SIA pages 26 and 28: This refers to the SLiCA study and the strategic environmental assessment of the Alcoa aluminium project (Section 7.2). The evidence of the two studies should not be questioned here, but both are built on data material that is 10-12 years old. There are recent data on public health, it is recommended to use those.	Noted		There will be made reference to more recent information than SLiCA when available, such as Bjerregaard, P. & Aidt E.C. Levevilkår, livsstil og helbred. Befolkningsundersøgelse 2005-2009, Statens Institut for Folkesundhed. København, 2010.

I. Stakeholder 11 WWF

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for SIA
11.1	WWF finds the prehearings as a development in the right direction, however considers that the pre-hearing should be postponed until after the elections when there is certainty on the uranium policy.	The public review of the pre hearing had commenced prior to the election being called. GME decided to postpone the re-sponses until after the election to the new parliament.		Section 5.1. has been revised for the benefit of clar-ifying citizen in-volvement in the upcoming SIA pro-cess.
11.2	WWF is basically a non-supporter of the Project due to the uranium component.		Noted	None
11.3	The report must be based on the main issues identi-fied earlier in the process. The issues reflect the res-ervations and concerns the people of Narsaq have about the Project. It is essential that concerns related to the changes of urban life due to outside workforce arriving to the area, concerns about how the use of the natural area will change (for fishing, hunting, gathering plants and berries) are to be taken seriously by both the company and the authorities granting permission for the mine construction and operation.	GME continuously informs the stakeholders about the expected scenarios and the activ-ities involved.	By following the requirements in the law and best international standard in relation to the regu-lation of the project, the Green-land Government takes all con-cerns seriously.	Section 5.1. has been revised for the benefit of clar-ifying citizen in-volvement in the upcoming SIA pro-cess

11.4	The company should not base the SIA autonomously to focus on the short-term sustainability of the Project, such as the number of jobs created during the construction and operation, but also seek to describe the long-term sustainability. How will Narsaq area be changed the day the mine is depleted, shuts down, and the jobs disappear again?	The studies have addressed the initial 33 years of operation. The life of the Kvanefjeld mine Project is expected to go beyond 100 years. At the end of the mine life the Project will leave a skilled, educated workforce to deploy on other industries. The taxes paid by the company over this time will be made available to the Government of Greenland. During this time new mines will likely be discovered and developed to create a sustainable and long term industry.	The Greenland Parliament Act (Mineral Resources Act) aims to ensure that activities under the Act are securely performed as regards, among others, social sustainability. This is both applicable for short-term and long-term sustainability. This is regulated in the exploitation licence, different approvals and in the Impact Benefit Agreement.	None
11.5	Nuclear power presents a long term and serious waste problem. There are also safety issues related to nuclear power.	GME is a mining company and not a nuclear energy supplier. GME will deal with its tailings and waste according to the laws and regulations issued by the Greenland government and the governing international standards as provided by the IAEA. GME will adopt world's best practice from other successful mines around the world which have not resulted in negative environmental impacts.		None
11.6	WWF believes rather than developing uranium-based power generation, fossil fuels should be replaced with renewable energy such as solar, wind and hydropower.	Technology associated with renewable energy sources, such as wind and tide, is improving all the time, but can still only contribute intermittently to a base-load electricity supply.		None

II. Public Hearing Response Related To The ToR For The EIA

II. Stakeholder 1 AVATAQ

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
1.1	Has pleaded with the MLSA to give a true and nuanced approach on industry projects and its impact on health and environment		The material submitted for public consultation is prepared by the applying company and not the MLSA, hence the MLSA is not responsible for the presented material. The pre-consultation provide the opportunity for all interested parties to provide their comments to be included by the applying company.	None
1.2	MLSA still hasn't lived up to the above, especially when it comes to radioactive and toxic elements in close proximity to towns		See comment above	None
1.3	Avataq urges the MLSA to reverse the so called hearing process and instead work on approvals based on the good of the citizens, and not doubtful mining companies		Consultation and information flow and other matters related to involvement of the public will be handled according to the law, including the Mineral Resources Act. This presupposes among other things as a minimum a 35 days pre-consultation phase and a min-	None

			imum eight weeks consultations phase.	

II. Stakeholder 2 GREENPEACE

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
2.1	In general Greenpeace are positive towards developing mines in Greenland, but in a sustainable and the least polluting manner. However, they find that the Kuannersuit project incompatible with such, and therefore urges the Government to reinforce zero – tolerance towards uranium		No comments as it is regarded as a statement.	None
2.2	Due to demonstrations and the political situation and upcoming election the development of Kuannersuit ought to be put on standby until people are heard and proper information is given.		No comments. The Mineral Resources Authority does not find basis for suspending the public pre-consultation due to the political situation and upcoming election.	None
2.3	Urges a referendum in south Greenland, based on former Governments' promise		No comments as it is regarded as a non-EIA issue.	None
2.4	If the project should go ahead, Greenpeace strongly recommends the Government begins dissemination of information, and urge the NGO's to seek sponsors to		The translation is not very precise. The Danish word "Råstoffonden" (The Mineral Resources Fund) has	None

	gain the facts to be able to contribute to the EIA process. Waiting for the 8 week consultation period to do this, will be too late for the gathered information to contribute to the debate.		been translated to “sponsors”. No further comments as it is regarded as a non-EIA issue.	

II. Stakeholder 3 INUIT CIRCUMPOLAR COUNCIL (ICC) GREENLAND

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
3.1	ICC Greenland welcomes the prehearings. This is a step towards involving the stakeholders early in the process.		No comments as it is regarded as a statement.	None
3.2	In principle ICC Greenland is against uranium mining. ICC Greenland recommends the Governments of Greenland and Denmark not to abandon the zero – tolerance of uranium. The lift of the ban showed a split in the population that strengthened the ICC's position on uranium.		No comments as it is regarded as a non-EIA issue.	None
3.3	ICC Greenland is concerned about the long-term storage of tailings (radioactive waste) and the risk of contamination due to proximity to town. The EIA and SIA must offer real alternatives to a higher degree than what has been published in such documents for other mining projects.	The tailings have specific issues to address in terms of radiation that need to be managed in an appropriate manner, this will be addressed in the EIA. Test work is currently underway to evaluate the radioactivity and design a world's best practice storage facility for the tailings.	P. 40 of ToR for the EIA, point 4.2 and 4.3, includes management strategies for waste (e.g. waste rock, tailings and other mine waste) disposal. GME is recommended to include whereever possible real alternatives and develop them in detail in the EIA. The EIA should include: tailings containment preparation (dam stability, liners, water control systems such as spillways, decant towers, alarm system for control of water level); tailings and waste characteristics, not only radioactive	The suggested addition to point 5 p. 41 ", environmental impacts related to tailings, waste rock and other mine wastes disposal" is included in the final version of the ToR. (same answer is speci-

			but also non- radioactive contaminants as well as flotation and processing chemicals that remain with the tailings; tailings and waste preparation, tailings and waste discharge and deposition, tailings consolidation, tailings surface water treatment, decant water treatment, seepage control, tailings and waste rock covers, emergency preparedness and response for the case of e.g. containment failure, cover failure, a program for monitoring and surveillance of tailings facility, and other regulatory requirements. P. 41 of ToR for the EIA point 4.5, includes management practices for mine closure. GME is recommended to include and develop in detail in EIA, decommissioning and rehabilitation practices for long term stabilisation of all mining wastes including also tailings. P. 42 of ToR for the EIA, point 8, includes a program for environmental and effluent monitoring for all mine phases. GME is recommended to develop in detail the environmental and effluent monitoring program in EIA as well as a	fied to 10.2, 10.4, 11,1 and 13.13)

			long term monitoring and surveillance program of the closed facilities. GME is recommended to include in ToR p. 41, point 5, and develop in details in the EIA, environmental impacts related to tailings, waste rock and other mine wastes disposal.	
3.4	ICC Greenland recommends the pre-hearing be postponed until after the upcoming election.		No comments. The Mineral Resources Authority does not find basis for suspending the public pre-consultation due to the political situation and upcoming election.	None

II. Stakeholder 4 KANUKOKA

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
4.1	KANUKOKA finds the pre-hearing a major step forward in involving the citizens earlier in the approvals process for mining projects.		No comments as it is regarded a statement.	None
4.2	p. 17: Refers to the applicable limits of control of wastewater. It is not clear what substances the waste water contains, but as there are in a number of cases no specific Greenlandic limits, the EIA should include an overview of relevant international levels as well as a discussion of what standards should be followed for this project	GME will follow any standards, laws and regulations prepared by the authorities regarding waste water treatment.	Discharge limits for radioactive contaminants should be site specific and established taking into consideration recommendations of expert bodies, notably the International Atomic Energy Agency (IAEA), International Commission on Radiological Protection (ICRP), etc. DCE/GN recommend Greenlandic threshold values, both for radioactive and non-radioactive contaminants. Worldwide such threshold values are often included in the operating licence conditions.	None
4.3	p. 18: The environmental impact of all the proposed disposal options should be examined equally in order to make a decision on a fully informed basis	Potential impacts will be assessed in the EIA	No comments.	None
4.4	p. 23: In the summary of important general issues there is a lack of addressing the consequences of in-	Potential impacts will be assessed in the EIA, including studies completed demon-	On p. 41 of ToR for the EIA, point 5.1, it is included*: impact assess-*	

	creasing greenhouse gas emissions, including the environmental impact of related activities such as electricity production and transport of goods to and from the mine	strating results and how these were reached.	*ment and development of preventive and mitigation methods and measures for gas emissions including greenhouse gases emissions.* Further p. 43 of ToR for the EIA, point 8.3 includes a chapter on calculations of greenhouse gases emissions. Those should be further developed in detail in the EIA.	
4.5	The transport of products from the mine to the international market is an integral part of the whole project. The EIA study should also include an environmental assessment of the transport of finished products from the mine through the Greenlandic waters to the market	The EIA will cover the potential impact in connection with the production in Greenland and the transport of products in Greenland waters. However, the EIA will not cover the transport through international waters to the markets (which will probably change over time).	P. 40 of ToR for the EIA, point 4.3, includes a description of product transport at project site, this includes terrestrial and Greenlandic waters. GME is recommended to develop in detail in the EIA the product transport at project site, this includes terrestrial and Greenlandic waters. Further the transport company must develop and implement an emergency response plan for international transport. P. 41 of ToR for the EIA, point 5.1: GME is recommended to include environmental potential impacts due to transportation of final	The ToR for the EIA will be changed to include the following: Accidential release of radioactive and non-radioactive products as well as regagents for the production in connectiong with shipping in Greenlandic waters is covered in the EIA.

			products.	
4.6	p. 32: The description of the planned studies there is a lack of quantitative information on the proposed testing programs: there is a lack of general information on the number of test stations, sample frequency, quantity duration etc	The MLSA Guidelines for preparing an EIA report for mineral exploitation requires discussion and approval for all work programs before commencing. Approval is also required for baseline sampling which follows a protocol developed by DCE (Sample Collection Manual Version 5). Details of these will be incorporated within the EIA in the form of maps and tables, including sample locations, frequency of sampling, number of samples collected, and number of years sampled. Sampling for the Kvanefjeld Project has been ongoing since 2007 and includes freshwater sampling, various terrestrial locations, coastal sampling, marine species collection, dust sampling, stream level gauging, radiation data collection and climate data collection.	The degree of details that KANUKOKA asks for, is not required in the ToR, but has to be developed in detail in the EIA, which is also clear from p. 32 of ToR for the EIA: 'A detailed proposal including maps with the position of sampling stations and lists of items to be collected will be forwarded to the EARMA shortly. Baseline measurement is ongoing and will continue throughout 2014.'	None
4.7	General comments; Figures in general are too blurry, in many cases not possible or very difficult to read when the material is printed. Signature explanations are not complete. p. 12: the description of the political situation – especially Greenland's relation to the Danish authorities is not correctly formulated. Referral to the proposed formulations from Kommune Kujalleq	Noted; clear and extensive figures and maps will be presented within the EIA Noted; this will be corrected.	It is recommended that GME corrects the terms of reference in accordance with KANUKOKA's comments. It seems correct though to use the term ministry as done in the ToR's. Does 'noted' mean that GME will also correct the information in the ToR? It is recommended that the	Blurry figures are replaced by figures in better quality in the final ToR. The plural error is corrected in the final version of ToR.

	p. 4 Section 1.3 (and more) Workshop plural is work-shopper (in Danish translation) p. 3.4 Title: Departementet for Erhverv og Rastoffer is not a ministry – the same comments apply to similar errors throughout the document	Noted Noted	company explains what 'noted' means and correct in ToR.	The term minis-try used for De-partementet for Erhverv og Rastoffer the is approved by the authorities and therefore not changed in the ToR

II. Stakeholder 5 KNAPK (NATIONAL FISH AND HUNT)

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
5.1	Has together with other NGO's worked for greater involvement of citizens, and therefore finds it gratifying there is a pre-hearing prior to the completion of the EIA and SIA.		No comments as it is re-garded as a statement.	None
5.2	How will KNAPK's input to the hearings become part of the final documents? (same as in SIA 4.2)	Specific suggestions to changes in SIA will be assessed and if relevant incorporated in the final documents. (same as in SIA 4.2)	If relevant public comments are not already addressed in ToR for the EIA, GME is recommended to incorporate all specific relevant suggestions in ToR for EIA.	Agree
5.3	An EIA should be prepared each for the mine and the processing plant.	A common EIA will be prepared for the entire project, but each area of activities will be assessed and described separately.	It is preferable to keep it in one document. This will give a better overview, because they are interconnected and influence one another.	None
5.4	Minimise pollution and make sure that all substances contained in process water discharged to the environment is identified by an independent provider	An independent consultancy group is preparing an assessment of the environmental impact of the treated placement water. All discharges to the environment will be discussed with DCE/GINR and EAMRA and approved before being released to the environment.	It is recommended that the management of associated environmental issues (e.g. not only radiological aspects) should be an integral part of the whole mining project from exploration to closure and beyond (long term surveillance). Pollution prevention and mitigation methods must be site specific de-	None

			veloped and factors such as type of mining operations, ore geochemistry, hydrometallurgical process, volume of production, waste generated, drainage restrictions, climate, regulatory requirements etc. should be considered. Demonstration of the effectiveness of pollution prevention and mitigation methods must be made through effluent and environmental monitoring programs. A monitoring program including effluents and environment should be carried out at the mine site (apart from GME monitoring program) by Greenlandic Authorities in order to ensure that the GME comply with environmental and radiological requirements.	
5.5	Minimising the content of discharged water and dust that can be harmful to the environment, continuous monitoring of this, and compensation if there is damage to the environment must be ensured in the IBA.	Water will be treated and not exceed concentrations not already approved before any discharge to the fiord and will be continuously monitored. A compensation will be negotiated as part of the IBA.	It is recommended that whenever possible, the water recovered from the treatment facilities shall be recycled and only released to the environment when contaminant levels comply with established threshold values and requirements (no harmful effects to the employees at the mine site, members of the public and environment both now and in the future). This rec-	None

			ommendation is also included in ToR for the EIA, p 17. The measures to reduce the dust generation from the mining, milling, tailings facilities and other sources at the mine site and gases generation and emissions from proposed activities must be developed in detail in the EIA. Those are included in Point 5.1, p. 41 of ToR for the EIA. Demonstration of effectiveness of implemented methods for pollution prevention and mitigation methods should be made through effluent and environmental monitoring programs for all phases of the facility life also including a long term surveillance program. Worldwide, uranium mines have among licence conditions, also the condition that the effective dose (radiation dose) received by the members of the public from all mine activities should not exceed 1 mSv/y.	

II. Stakeholder 6 KOMMUNE KUJALLEQ

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
6.1	An important aspect in the establishment of the Kvanefjeld Project is that the project includes the handling of radioactive materials. The challenges of this in relation to training of local labour and local businesses associated with the mine operation has to be explored in great detail in both the SIA as well as the EIA.	The area already has elevated background levels of radioactivity naturally. The operation of a mine in the area will not increase the levels of radioactivity. Internationally applicable and approved procedures will be followed (world's best practices) along with the rules and regulations of Greenland. These will be described in both the EIA and SIA. Prior to commencement of operations there will be extensive training in this area for all Greenlandic and non-Greenlandic workers. GME has identified over 1 billion tonnes of radioactive rocks in the project area which contain elevated concentrations naturally occurring thorium and uranium. Baseline surveys show the presence of these radioactive rocks has provided elevated, yet still safe, radiation levels in the area. GMEL is performing a number of studies which will show the radiation impact on workers, the natural environment and local population	Worldwide, uranium mines have among licence conditions, also the condition that the effective dose received by the members of the public from ***all*** mine activities should not exceed 1 mSv/y. Best practices and standards and other regulatory requirements, all should be implemented by the operator (GME) in order to keep the radiation levels As low As Reasonably Achievable (ALARA). The company is asked to develop in detail the following sentence: 'The area already has elevated background levels of radioactivity naturally. The operation of a mine in the area will not increase the levels of radioactivity.'' In addition to the EIA, GME must prepare and submit for approval to the appropriate authority a Radiation Management Plan (RMP).	

		of developing mining operations. The results of these studies will be presented in the EIA and SIA to be issued to the Government of Greenland later in 2015. Preliminary results are not showing any significantly increased radiation exposure.	The RMP should take into consideration the protection of the health and safety of workers, protection of members of the public and the environment at all mine phases: construction, mining, processing, waste treatment, landfill, transport, security of radiation sources, decommissioning and rehabilitation and long term monitoring and care. The RMP should also include a chapter related to 'Employee education and training'. All employees, contractors and subcontractors shall undergo an appropriate training program (environmental and radiation safety awareness). The training should ensure that all employees, contractors and subcontractors understand and can contribute to the reduction and control of doses. Training programme should enable all employees to understand the risk from exposure to radiation and the methods of controlling doses. Training should, among other things, make workers and employees aware of the simple actions they can take to mini-	

			mize their doses and the doses received by others.	
6.2	There should be a demarcation of mining activities and the impact on sheep farming. For example, a geographical delineation of the extent of sheep farming included in the assessment, and this should include the farming community in Qassiarsuk and Narsarsuaaraq and Eqaluit Ilua (located in the inlet system Sermilik fjord, therefore with regards to 'excess water discharge'). It should also be indicated which areas will no longer be available for agricultural grazing/ farming.	The only farming area to be affected is the Narsap Ilua farm in the vicinity of the project. In the case of industrial activities around the farm, the best solution is to close farming in Narsap Ilua. However a continuous use of fields for hay production is possible for the benefit of other sheep farmers outside Narsap Ilua.	Models for spreading of contaminants should show which farms will be impacted. Those models should be included in the EIA. It could be correct that the only farm to be affected is the one mentioned by GME.	None
6.3	It should be assessed whether the industry throughout the region will generally be affected, for example agricultural products reputation will be reduced. Particularly with regard to the slaughterhouse Neqi A/S, whether its quality and goodwill will be affected, and if the food industry should be moved to another location?	Potential impacts – both positive and negative – will be discussed and assessed through the EIA and SIA process	Potential impacts including also cumulative impacts are included in ToR and shall be further developed in the EIA.	None
6.4	The ToR state that the Company is planning to burn solid waste at an incinerator in the mining area. Kommune Kujalleq is in cooperation with the mining company wishes to conduct a detailed assessment if the solid waste can be burned in the local incinerator where waste heat can be utilised for energy in one or more habitations.	GME is preparing an incinerator for solid waste. The plan to utilize the excess heat can become part of the IBA negotiations.	It is recommended that the waste is burned in a modern waste incinerator that do not generate toxic fumes.	None
6.5	In Section 4.2.4 of the ToR (EIA and SIA) it states that the port facility is to accommodate ships of 32,000	A decision is made to place the port on the peninsula to the west of the town near the	Figures included in the EIA should be updated to show the location of	The current position of the port

	DWT. The stated position of the port in Figure 4.2 should be further studied, as this area is inside the shallow cove of Narsaq Ilua. A more realistic location should be considered outside of the cove, on the bay of the area west of the existing landfill site. Furthermore, the port location should be indicated in Figure 4.3.	existing landfill. Figures in the EIA and SIA will be updated to show the location of the port on the peninsula. The landfill will be cleaned out. The location of the port and the process undertaken to arrive at a preferred location will be further described in the EIA.	the port on the peninsula. The location of the port and the process undertaken to arrive at a preferred location shall be further described in the EIA.	site is presented in an updated figure in the final version of the ToR
6.6	The ToR specify in Section 4.2.6 that hydroelectric power is to be established later, as a diesel plant is to supply the electricity in the beginning. It should be explained why the establishment of a hydropower pant is not happening simultaneously with mining and processing facilities? Where will the power plant be located?	A hydropower plant in the initial stage of the project will not make it economically feasible to extract the products of interest. When the project has reached a positive cash flow and income a hydropower plant will be considered and eventually planned to replace the fossil fuel based power supply. The power plant will be placed near the production area up the valley. A hydropower plant study has been completed by Istak and results will be provided in the Feasibility Study and EIA.	Greenland generally supports hydropower compared to using fossil fuel for power generation. The company is urged to elaborate on the reasons for not building the hydropower plant now. The environmental impacts of hydro power should be included in the EIA.	None
6.7	The ToR describe six alternatives for the Project (three Scenarios and two alternative locations of the plants (East and West) (Sections 2.3 and 4.1). It is not clear from the ToR whether the three scenarios will be treated equally in the two statements, and if all three scenarios will be described fir the East and West locations. The Municipality believes that there should be a description of the consequences of all the alternatives, so that the choice between them can be assessed from a sustainable development and environ-	This is not entirely correct. There are three development scenarios presented in the ToR which will be considered in the EIA and SIA.	It should be noted that the environmental effects of the 3 different scenarios are very different. Scenario 1 will not have a sulphuric acid treatment of minerals and therefore has far less pollution potential.	The three scenarios will be explained better in the final version of the ToR

	mentally holistic approach.			
6.8	Changes have been made in the Project description since 2011 compared to the current status (Section 4.2) but the reasons for the changes are not described in the ToR. A statement should be included in the introduction.	The ToR mention that the three development scenarios were decided on as a result of discussions with the MRA and in consideration of Greenland's Mineral Resources Act.	The description of the environmental impacts of each scenario agreed between GME and MRA is very important for the environmental impact assessment of the project.	None
6.9	Section 4.2, Figure 4.3, it is not clear what the markings on the map addresses and includes. For example, it is unclear what the markings for the following specifically concern; dump at 33 years, pit at 33 years, RSF A, RSF B.	The figures included have been labelled to show the outline of the waste dump, and the outline of the open pit as they will look after 33 years of mining	If there will be a revised ToR GME should make it clear what the markings mean and the figures should be better explained.	Thanks, this will be clarified in a newer version of the figure
6.10	It is mentioned (Section 4.2.3) that the possibilities for the deposit of tailings include; in the valley, in the lake, in the fjord system. However, it is unclear where the actual location for deposit in the 'valley' and the 'fjord system' are located. The environmental impact of each of these options should be evaluated to find the most appropriate place for the disposal of tailings.	A number of locations were identified and assessed for suitability of tailings storage. The preferred option is Taseq. Studies completed to arrive at this conclusion will be presented in the EIA.	In order to give a better understanding of the reasons that led to the choice of preferred tailings location, GME is recommended to include in the EIA all completed studies. Currently, less favoured options for tailings containment are the valley the marine/fjord disposal. For more info please follow the link: http://www-pub.iaea.org/books/IAEABooks/7054/The-Long-Term-Stabilization-	None

			of-Uranium-Mill-Tailings	
6.11	According to the EIA ToR (Section 5.7) the environmental studies only relate to the areas that will be directly affected by the Project. An indication of the possibility of additional studies should be stated, possibly within a larger area if the results on the environmental studies exceed the values calculated.	As part of the EIA, cumulative impacts of the Project will be assessed and presented in the EIA document.	The EIA should consider not only the immediate vicinity of the mine, but also background monitoring locations. The GME answer is about cumulative impacts, but the question is related to the area that has to be investigated. Regarding the levels of contaminants into the environment, it is recommended that if the environmental monitoring results show that the values of contaminants are higher than established threshold values, the environmental monitoring must be extended to a larger area (mapping the extent of the contaminated area), and action(s) should be taken in order to identify and control the contamination source. To avoid such situation the operator must develop an Environmental protection plan, Radiation Management Plan, Environmental end effluent monitoring, tailings monitoring plan, Radioactive waste Manage-	None

			ment Plan. The operator but also the relevant authorities have to develop and implement an Emergency Preparedness and Response Plan.	
6.12	The background studies referred to, such as those in the EIA ToR Section 6.1, should be made available to the public.	The studies proposed, ongoing, and completed, will be made available to the public through the EIA.	All studies performed by GME shall be included in the EIA.	None
6.13	It should be considered whether as a result of the changes in the Project (from 2011) additions should be made to the previous studies (Section 6.2). It is also not clear whether the additional studies will be performed for all scenarios or selected scenarios.	Since the mine company choose a scenario where much of the processing of the ore takes place at the Kvanefjeld the EIA has to assess the potential impact from a chemical plant also. The relevant studies in this context are included in the ToR. GME will describe in detail the Project Area of concern as delineated according to the stakeholders responses.	GME should address this question from Kommune Kujalleq.	None
6.14	Table of contents for the EIA report (Section 6.3); waste management for the entire waste management system (not only tailings and household waste) including the different waste fractions should be assessed in the EIA report and stated in the ToR.	The table of contents for the EIA describes the different waste streams under different headings, and will encompass all waste streams associated with the Project.	P. 40 of ToR for the EIA, point 4.2 and 4.3 include waste management, including waste rock, tailings from physical process and chemical processes, water mine management and other mine waste management. Furthermore, p. 41 of ToR for the EIA, point 4.5 includes post mining	None The authorities finds the table of contents for the EIA described sufficiently for the ToR. Thus, no changes are made in the ToR

			closure, including also here waste management generated during the decommissioning and rehabilitation of the mine. It should be regarded satisfactory for a ToR report and it is recommended that all those should be developed in detail in EIA.	in relation to this question. The table of contents will be developed in details in the EIA
6.15	It is not clear in the EIA ToR how the CO_2 problem of this large scale project is to be treated.	A greenhouse gas assessment will be completed as part of the studies to support the EIA, and discussion and assessment of the potential impacts as a result of the Project will be included in the EIA.	P. 41 of ToR for EIA, point 5.1 includes impact assessment and development of preventive and mitigation measures for gas emissions including greenhouse gases emissions. It should be regarded satisfactory for a ToR report	None
6.16	There is no indication in the EIA ToR how the environmental impact of electricity production (diesel/ hydropower) is to be treated.	A greenhouse gas assessment will be completed as part of the studies to support the EIA, and discussion and assessment of the potential impacts as a result of the Project will be included in the EIA.	The EIA also has to include in detail description the environmental effect from power generation (noise, fumes, dust, diesel spill etc).	In the ToR for the EIA the following will be added: The EIA will include a discussions of the environmental advangages and disadvangages of using hydropower and diesel-fired power

				plant.
6.17	Gert Asmund has identified major issues in Appendix 1 and 2 that should be included in the EIA report.	Noted	Some of the recommendations in Appendix 1 and 2 in the ToR are included by GME in ToR for the EIA.	None
6.18	General correction comments; 1. Figure 2.2: it should be noted that the settlement Qassimiut was not visited, it should be explained why this did not happen 2. Section 3.1: phrase "Previously, Greenland operated under a combined Greenlandic and Danish government, having been granted 'home rule' by Denmark in 1979" is misleading, and should be changed to "Greenland became an integral part of the Danish Kingdom in 1953, afterwards to be named the Homerule government (limited autonomy) in 1979. Furthermore, the phrase "Denmark maintains control of foreign affairs and defence matters" ought to be changed to "Foreign affairs and defence related issues remains in the Realm". 3. Section 3.2; the Large Scale Act should be identified correctly as "Landstingslov no. 25 of 18 December 2012 on building and construction works for large scale projects" thus the year was not specified. 4. Figures 4.1, 4.2, 4.3, 4.5; all elements in the figures should be explained in the text, as this is not	1. Logistically it did not work out on the specific trip made. The planned second trip will include Qassimiut. 2. The terminology used to describe the relationship between Greenland and Denmark will be reviewed and corrected. 3. References to legislation will be correctly identified and correctly translated in the EIA and SIA 4. Figures 4.1 and 4.2 describe the two options that were being assessed at the time the 2011 ToR were developed; these figures are no longer applicable to the Project design layout. Figure 4.3 is well labelled, and translated figures will be included in the EIA and SIA. Figure 4.5 displays the project layout areas relevant to the Alternative Case (scenario 1) where the refinery would not be located at Kvanefjeld.	Figures, acts etc. no longer applicable to the Project design layout should not only be updated in the EIA and SIA, but also in the updated ToR.	1. The changes in dates are corrected in Figure 2.2. 2. and 3. are changed in accordance to the recommendations in the final version of the ToR 4. This is clarified in the final version of ToR. 5. The figures are clarified and updated in the final ToR 6. This is included in the final

	clear. Presume that the small marking in Narsaq and that future roads are marked with yellow? Text in figures and tables should be translated to Greenlandic and Danish. 5. Section 4.2.3; the term "grabjergslageret" needs to be clarified and preferably indicated in Figure 4.1, 4.2 and 4.3 6. Section 9; in the stakeholders "Culture, leisure and prevention management (Narsaq)" is mentioned, which is now disbanded. The management area is divided into Kids and Cultural Affairs (Nanortalik) and the Social Security Administration (Qaqortoq). 7. Section 9; in the stakeholders list "Greenland Tourism and Business Council" is mentioned, which no longer exists, but divided up into two separate companies, respectively. Visit Greenland (Greenland Tourist) and "Greenland Business" 8. Section 9; in the stakeholders list "Savaatillit Peqatigiifiat" is mentioned, but the correct name is "Savaatillit Peqatigiit Suleqatigiissut", the abbreviation SPS, The Cooperative Sheep Farmers Association Link to the World Bank Guidelines regarding NRM does not open. Correct the link.	5. Alternative tailings facility locations are indicated within Figure 4.3. Figures 4.1 and 4.2 are not relevant to the description of the project layout areas with reference to alternative tailings locations. 6. Noted 7. Noted 8. Noted Noted; the link will be corrected.		version of the ToR 7. This is included in the final version of the ToR 8. Thanks, this is included in the final version of the ToR 9. Thanks, the link is corrected in the final version of the ToR
6.19	Kommune Kujalleq wants a detailed plan of the accommodation both in the construction phase and operation phase. What are the social consequences of the accommodation in either Narsaq or further up	The plan for the accommodation in the construction phase is to place it near the mine site. When operation commences the accommodation village for FIFO workers	The EIA is expected to include the environmental impacts associated with accommodation.	None

	the Valley? What will be the accommodation differences between the construction and operations phases (same as in SIA 5.9).	will be placed in the outskirts of Narsaq . Details of accommodation will be provided in the SIA (same as in SIA 5.9).		
6.20	9. Infrastructure, including (renewable) energy, transport by air/ sea, energy and waste management, should be included as options in the EIA (and SIA) as a basis for negotiation between the Government, local authority and the mining company in view of their importance for local community development. It is equally important for the Municipality the modern permanent housing for labour in the Project is established. (same as in SIA 5.16)	9. The necessary feasible infrastructure will be established for the project. During the IBA negotiations further developments in the future on certain areas of the infrastructure will be discussed and recognized. (same as in SIA 5.16)	We recommend that the company includes in ToR, 41, point 5: environmental impacts associated with each infrastructure development .	The recommended point 5 p 41 " : environmental impacts associated with each infrastructure development" is included in the final version of the ToR
6.21	It is mentioned (Section 4.2.3) that the possibilities for the deposit of tailings include; in the valley, in the lake, in the fjord system. However, it is unclear where the actual location for deposit in the 'valley' and the 'fjord system' are located. The environmental impact of each of these options should be evaluated to find the most appropriate place for the disposal of tailings. (same as in SIA 5.28)	A number of locations were identified and assessed for suitability of tailings storage. The preferred option is Taseq. Studies completed to arrive at this conclusion will be presented in the EIA. (same as in SIA 5.28)	Currently, less favoured options for tailings containment are valley or marine/fjord disposal. For more info please follow the link: http://www-pub.iaea.org/books/IAEABooks/7054/The-Long-Term-Stabilization-of-Uranium-Mill-Tailings To give a better understanding of the reasons that led to the choice of preferred tailings location, we recommend GME to include all completed studies in the EIA.	The considered alternatives of the project are all presented in the EIA. None changes are made in the ToR

II. Stakeholder 7 KOMMUNEQARFIK SERMERSOOQ

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
7.1	KS is grateful for the opportunity to respond to the 35 day pre-hearing of the Kuannersuit (Kvanefjeld) project in south Greenland. KS appreciates any initiative that promotes transparency and citizen involvement, and the introduction of a public pre-hearing is a positive step.	GME is the first exploration company to undergo a 35 day pre-hearing and happy to further our presentation of the proposed Project through this forum.	No comments as it is regarded a statement.	None

7.2	It is clear that the purpose of the pre-hearing is primarily to provide a meaningful involvement early in the process. By conducting a pre-hearing prior to the public hearing, allows the company at an early stage in the Project, to make contact with relevant stakeholders and authorities, including the relevant municipalities. In addition, stakeholders can at an early stage make demands for alternative processes for the Project.	No comments	No comments as it is regarded a statement.	None
7.3	KS has reviewed the material, and finds it very difficult to come up with alternative proposals and clarifying questions, as the Project is described in a very superficial level. It has not been possible to obtain the background studies cited in the material or detailed objective assessments of the processes involved in the Project.	All of the project reports are being finalized for the final feasibility report as well as the EIA and the SIA. Therefore it is not possible to extract any information unless completed. Work is ongoing and when completed will be documented in the EIA and SIA. The ToR are primarily intended to provide a preview of the of the EIA and SIA, without providing extensive detail, as this will be provided in the EIA and SIA.	No comments to GME's comments.	None
7.4	In the enclosed response from the DCE reveals information about a planned power station, which uses heavy diesel and dams on the Narsaq River. The information is not found in the submitted material, which shows, that at the present time important information that should have been included in the pre-hearing documents and in that way should contribute to the further process.	Supporting reports to the EIA and SIA will be made available at the time of the public review period. It is not appropriate to make information available to the public before the studies and the resulting reports are complete.	GME is recommended to develop in detail the planned power station in EIA.	None
7.5	Based on general considerations and comparisons	GMEL has been working for a number of	Potential impacts and also cumulative impacts are included in ToR, p.	None

	with the EIA for the nearby Tanbreez Project and report "Preliminary Environmental Impact Assessment for the Kvanefjeld Uranium Mine" published by Riso 1990, the municipality has great concerns about the location of an open pit mine close to the town of Narsaq, that as a minimum, contains the hazardous substances uranium, fluoride, thorium, zinc and lead.	years to design a processing facility and mine that is able to treat ore and contain hazardous substances safely. The details of these designs will be included in the Feasibility Study and EIA once complete.	41 and p. 42 for the EIA and these are recommended to be further developed in detail in EIA.	
7.6	KS is very unsympathetic towards the distance from Narsaq to the mine, is referred to as 10km, the distance in the map data can be measured to 6-7 kilometers. This seems very misleading. If the Project continues as described in the material as an open pit mine, this is likely to represent a major risk to the public in Narsaq, both by direct inhalation of dust from mining activity, as well as a probably contamination of the city's drinking water. Moreover, the spread of dust is likely to result that sheep farming must cease for a considerable area around the mine.	It is approx. 10 km from the town to the proposed production facilities. It is around 6-7 km from the mine site to Narsaq. The only farm to be affected is the sheep farm in Narsap Ilua in the immediate area of mining activities.	P. 41 of ToR for the EIA, point 5 includes impact assessment and development of preventive and mitigation measures e.g. for dust, release of radionuclides from the mine site and impacts on freshwater, groundwater, drinking water. It is expected to be further developed in detail and made available to the members of the public through the EIA.	None
7.7	The area in southern Greenland is often hit by strong foehn winds, which makes is impossible to prevent dust spreading in a large area around the mine. In the hearing documents, it appears that there are plans to only measure dust particles down to 10 microns where DCE recommend that dust is measured down to 2.5 microns. The small dust particles spread further than large particles, and is more harmful. It is worrying that a technique that causes environmental problems to seem less harmful has been chosen.	GME have been conducting ongoing dust monitoring since 2012. The DCE made the recommendation to include baseline sampling of PM2.5 in January 2014. GME have since installed a High Volume Air Sampler and are investigating requirements to include PM2.5 measurements so that this can be included in the assessments in the EIA.	GME is recommended to monitor dust particles of 2.5 microns during the construction and all other mine phases (operation etc).	The dust chapter will be more detailed in the final version of the ToR

7.8	KS urges that the EIA study investigates whether it is at all possible to implement the Project as a closed mine, and is also concerned that this option is not included in the pre-hearing. There are other technologies that should be considered, including in-situ recovery/ leaching. This technique would minimise environmental risk of the Project. It ought to be thoroughly described as an alternative in the final EIA for the Project.	We have investigated a number of development options for the project, and we will be advancing the development option that is a both economically viable and environmentally sustainable. In situ recovery in many places of the world has caused negative outcomes, and GME believes is inappropriate for this resource. The geology of the deposit is not suitable for in-situ leaching. Increased environmental impacts will be felt if it is attempted.	Employed mining methods are site specific and depend on a number of factors such as for example: ore-type, grade, ore-depth, size of deposit etc. It is reasonable to ask the mining company to argue for not using underground mining or in-situ leaching.	None
7.9	In the Risø report of 1990 a very similar project in the same area was examined, and thus it appears that the main concern is the association of fluorinated compounds that can be harmful to humans, trout, and sheep in the area. It is estimated in the report that the elevated fluoride content in the area will continue for about 100 years after mining operations.	Fluoride has been naturally occurring and moving throughout the environment in the Kvanefjeld area for many years with no adverse effects. As a part of the processing of minerals the Project proposes to undertake, water treatment will be performed to remove the fluoride.The removal of fluoride as fluorspar (CaF_2) will be performed. This will reduce the concentration of fluoride in the local environment. GMEL has invested extensively in evaluating methods for dealing safely with fluoride in the operations and closure. Fluoride will be extensively dissolved from the ore during the beneficiation process. The leached fluoride in the water will be contained within the concentrator processing plant as it provides some metallurgical benefits. Any water	GME should provide documentation for this statement: 'Fluoride has been naturally occurring and moving throughout the environment in the Kvanefjeld area for many years with no adverse effects. '' GME should take into consideration that the rocks laying close to the surface have been leached by water during thousands of years and contain less sodium fluoride. Deeper laying rocks, however, can contain up to 1% sodium fluoride, and those rocks will be exposed during mining. This will generate new sources containing sodium	GME is well aware of the seriousnes of an increase of fluoride in the environment dur to the mine project. GME has therefore already taken fluoride into accound when designing the mine which, for example exclude water with high fluoride content to flow into

		released from the concentrator will be treated to remove fluoride. Commercially proven fluoride removal facilities will be designed and installed to perform the water treatment. No increased release of fluoride over the already elevated baseline levels are expected.	fluoride (dust, waste rock, etc) from the proposed mining and milling activities. GME is recommended to develop in detail the environmental impact assessment from those new sources. Environmental threshold values for liquid effluents and airborne particles for non–radioactive contaminants including fluorine should be part of the licence conditions. It is recommended that the fluorine problem is taken very seriously. The mining company should assess in detail the following sources of fluorine: Waste streams from flotation Waste streams from chemical separation Drainage water from the open pit Drainage water from the tailings area Drainage water from the waste rock piles Gases evolved if minerals are	Narsaq valley and the river. The mine design, all water streams and discharges to the environment will be detailed in the EIA based extensive laboratory studies and modelling work.

			treated with sulphuric acid.	
7.10	In the description of the political situation, it is written that the "21st June 2009 Greenland assumed self-determination with the possibility for responsibility for self-government of judicial affairs, policing, and the management of natural resources." This is not correct, as Greenland have not taken legal matter and policing to Greenland.	Noted; the correct description will be investigated and included in the EIA and SIA	No comments	The correct description will be described in the final version of the ToR
7.11	With a project of this size, and with the obvious environmental hazards a process for an assessment should have been started early to assess whether the socio-economic considerations outweigh the risks, with a town near a mine containing several hazardous substances would cause.	GME is the first company to be involved in the process of a public hearing for the Terms of Reference. GME already has an approved Terms of Reference dated July 2011. Stakeholder engagement has been ongoing since prior to 2011 and continues throughout the entire ToR and EIA / SIA process.	No comments	None
7.12	With a project of this size, and with the obvious environmental hazards a process for an assessment should have been started early to assess whether the socio-economic considerations outweigh the risks, with a town near a mine containing several hazardous substances would cause. (same as in SIA 6.7)	GME is the first company to be involved in the process of a public hearing for the Terms of Reference. GME already has an approved Terms of Reference dated July 2011. Stakeholder engagement has been ongoing since prior to 2011 and continues throughout the entire ToR and EIA / SIA process. (same as in SIA 6.7)	No comments	None

II. Stakeholder 8 NAPP (NARSAQ FISH AND HUNT)

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
8.1	We consider it necessary to make a separate EIA for each of the mine and the processing plant.	All of the project reports are being finalized for the final feasibility report as well as the EIA and the SIA. Therefore it is not possible to extract any information unless complet-ed. Work is ongoing and when completed will be documented in the EIA and SIA. The ToR are primarily intended to provide a preview of the of the EIA and SIA, without	It is preferable to keep the EIA in one document. Better overview, because they are interconnected and influence one another.	None

		providing extensive detail, as this will be provided in the EIA and SIA.		
8.2	Important to ensure that potential contamination can be kept to a minimum with regard to fishing and hunting. Therefore, an agreement for compensation should be made prior to commencement of mining in case of contamination affecting fishing or hunting. (same as in SIA 7.2)	Baseline studies will help to describe the existing environment and we welcome your participation throughout the SIA process. IBA negotiations will consider areas such as compensation and also provide baseline information for reference. (same as in SIA 7.2)	Potential impacts and also cumulative impacts are included in p. 41 and p. 42 of ToR for the EIA. GME is recommended to develop in detail in the EIA all potential and cumulative impacts associated with the proposed activities. Pollution prevention and mitigation methods and waste management strategies should be site specific developed, continuously improved and implemented at the mine site. Those methods should be based on experience learned from previous uranium mine projects, public awareness and contribution, regulatory requirements and site and project specific parameters.	None

II. Stakeholder 9 RASMUSSEN, JOHN

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
9.1	Recommends an in-depth and independent information campaign addressing risks inherent in a potential mine, especially on the waste products.	Independent consultants are preparing the impact assessment. Independent consultants are also preparing the tailings facilities and waste treatment plants. Danish scientists have been touring Greenland presenting objective information on uranium mining and responding to queries and concerns. http://naalakkersuisut.gl/da/Naalakkersuisut/Departementer/Erhverv-Arbejdsmarked-og-Handel/Uran-oplysning-2014	No comments.	None

II. Stakeholder 10 REHTMAR-PETERSEN, JAN

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
10.1	During the life of the mine there will be production of approximately 450 million tonnes of tailings which will be deposited in Taseq (RSF A). One should also take into account the return water from the separation plant containing radioactive substances.	It is correct that the tailings from the production include thorium and uranium which will be deposited at the bottom of Lake Taseq. The tailings production rate will be approximately 3 million tonnes per annum. It will take greater than 200 years to produce 450 million tonnes of tailings. The mining licence application production capacity will produce significantly less solid tailings. These tailings are comfortable contained within the tailings area using designs which are proven and conservative.	P. 40 of ToR for the EIA, point 4.2 and 4.3 includes mine waste management, mine waste water management strategies (including also liquid effluents treatment) and water use and disposal. Those shall be further developed in detail in the EIA, and in a Radioactive Waste Management Plan (RWMP). The RWMP should be submitted to the authorities for approval. The company should comment on the "approximately 450 million tonnes of tailings which will be deposited in Taseq (RSF A).	None
10.2	A river runs from Taseq which has a certain volume. Water comes from the mountain slopes and groundwater. In the hurricane season (niggeq) becomes stronger and stronger with every year that passes. According to GME plans, they will eventually build a dam of 62 metres to control the water.	We are aware of the environmental conditions around Taseq. World's Best Practice is being used to design a suitable tailings facility. Details will be provided in the Feasibility Study and the EIA. All points raised will be considered.	P. 40 of ToR for the EIA, point 4.2 and 4.3, includes management strategies for waste (e.g. waste rock, tailings and other mine waste) disposal. GME is recommended to include and develop in detail in the EIA: tailings containment preparation	The suggested addition to point 5 p. 41 ", environmental impacts related to tailings, waste rock and other mine wastes disposal" is in-

			(dam stability, liners, water control systems such as spillways, decant towers, alarm system for control of water level); tailings and waste characteristics, not only radioactive but also non- radioactive contaminants as well as flotation and processing chemicals that remain with the tailings; tailings and waste preparation, tailings and waste discharge and deposition, tailings consolidation, tailings surface water treatment, decant water treatment, seepage control, tailings and waste rock covers, emergency preparedness and response for the case of e.g. containment failure, cover failure, and, a program for monitoring and surveillance of tailings facility and other regulatory requirements. P. 41 of ToR for the EIA point 4.5, includes management practices for mine closure. GME is recommended to include and develop in detail in EIA, decommissioning and rehabilitation practices for long term stabilisation of all mining wastes including also tailings.	cluded in the final version of the ToR. (same answer is specified to 3.3, 10.2, 10.4, 11,1 and 13.13)

			P. 42 of ToR for the EIA, point 8, includes a program for environmental and effluent monitoring for all mine phases. GME is recommended to develop in detail the environmental and effluent monitoring program in the EIA as well as a long term monitoring and surveillance program of the closed facilities. GME is recommended to include in ToR p. 41, point 5, and develop in details in the EIA, environmental impacts related to tailings, waste rock and other mine wastes disposal.	
10.3	How will it be ensured there is no water leakage from Taseq if there should be sources deriving from the lake? How will it be ensured water will not flow over the dam in the future?	The tailings dams will be designed to have zero discharge and leakage. They will effectively be isolated from the environment using a very conservative design. The project plans to recycle water throughout the process for water conservation. The tailings dam walls will be double lined to prevent leakage. The tailings dam walls are designed for a 1 in 10 000 year rain event plus an additional 50% allowance as a	GME should answer more specific to the sentence below: ''The tailings dams will be designed to have zero discharge and leakage. They will effectively be isolated from the environment using a very conservative design.'' The answer should deal with both the situation during operation and the situation after closure. How	None

		safeguard. A short period after the mine closes the water in the tailings dam will so clean that it can be lead round the dam and flow into Narsaq river again. The design of the tailings dam and the water management of the tailings lake will be described in detail in the EIA report. GME is currently performing extensive studies in the chemistry of tailings dam water and their eventual fate in the environment. The studies cover the operations phase, the closure phase and the post closure phase. Extensive field measurements and baseline surveys have been completed in the area to provide an indication of the pre-existing condition of the area hydrology. Laboratory studies have been completed to determine the chemical stability of the tailings stored in the selected locations. These tests are on-going at the moment to ensure that the tailings chemical stability is understood over a long period of time.	will it be ensured water will not flow over the dam in the future? It is recommended that a monitoring program for the tailings facilities and other waste disposal sites should be implemented at the mine site. A long term surveillance of the tailings and other waste disposal sites should be developed and put in place before the closure of the mine. Those are also included in the ToR for the EIA p.40,and 42 points 4.2 and 4.3. and 4.5. It is recommended that the following items are considered in the design of the tailings facility: The level of the water in the tailings facilities should be monitored. Large volumes of water are not recommended (to prevent overflow or dam stability issues). An alarm system of the water level in the tailings. An emergency preparedness and response program. Containment preparation (dam stability, liners, water control structures such as spillways, decant towers, alarm system for con-	

			trol of water level); Tailings and waste characteristics, not only radioactive but also non- radioactive contaminant as well as flotation and processing chemicals that remain with the tailings. Tailings and waste preparation. Tailings and waste discharge and deposition. Tailings consolidation. Tailings surface water treatment. Decant water treatment (water from tailings facilities, breaks in pumping lines, failure of the drainage system). Seepage control. Tailings cover. GME is recommended to develop in detail the closure plan of the mine including the decommissioning and rehabilitation of the tailings facility (e.g. dry cover of the tailings etc). *''A short period after the mine closes the water in the tailings dam will so clean that it can be lead round*	

			the dam and flow into Narsaq river again.'' The statement above must be verified and supported by field and laboratory studies and long term prediction studies. Long term risk assessment of the tailing dams stability, both for Taseq Lake and Chemical Residue Storage Facility (CRSF) should be enclosed as a material support. Long term stability of tailing dams should be engineered designed to at least up to 1000 years or whatever Greenland authorities demand. All the supported material provided by GME should clearly show that the levels of contaminants in the ''water in the tailings dams'' will be "clean'' and comply with established regulatory clearance levels for both radioactive and non – radioactive contaminants for decommissioning and rehabilitation of mine site and facilities including here ground at the mine site, buildings, tailings facilities etc. Furthermore, most probably, for a numbers of years after decommis-	

			sioning and rehabilitation of the mine site and facilities, GME will have to provide clear evidence that the site is chemically, physically and radiologically safely rehabilitated. For a numbers of years after decommissioning and rehabilitation of the mine site and facilities, GME will have to provide clear evidence that the site is chemically, physically and radiologically safely rehabilitated by means monitoring of radioactive and non radioactive contaminants.	
10.4	When the mine is depleted, there will be 500 million tonnes of waste in the dump next to the mine on a lake, and there is a river running from the lake. How will it be ensured that this does not pollute the area?	GME be isolating the tailings from the environment through the use of double linings and conservative wall designs. All water from the tailings dams will be recycled back to the processing plants for re-use. Water treatment is applied to any water for possible release. The mining plan shows that 108 million tonnes of waste rock will be stored in a waste rock pile to the west of the mining operations. The waste rock is really excess rock which does not contain the rock type (Lujavrite), which contains the rare earths	P. 40 of ToR for the EIA, point 4.2 and 4.3, includes management strategies for waste (e.g. waste rock, tailings and other mine waste) disposal. GME is recommended to include and develop in detail in EIA: tailings containment preparation (dam stability, liners, water control systems such as spillways, decant towers, alarm system for control of water level); tailings and waste characteristics, not only radioac-	The suggested addition to point 5 p. 41 “, environmental impacts related to tailings, waste rock and other mine wastes disposal” is included in the final version of the ToR. (same answer is specified to 3.3, 10.2,

		and uranium. The Lujavrite can be considered ore as it contains economic concentrations of potential products. Waste rocks are already exposed at the surface currently in Greenland as they cover the ore. During operations it is planned to produce 101 million tonnes of tailings from the Concentrator and 10.6 million tonnes of tailings from the Refinery. These will be produced over a 37 year mine life. These will be stored in a modern and permanent storage dam which is designed to last for 1000 years. These represent the only tailings which will be produced by the mining operations.	tive but also non- radioactive contaminants as well as flotation and processing chemicals that remain with the tailings; tailings and waste preparation, tailings and waste discharge and deposition, tailings consolidation, tailings surface water treatment, decant water treatment, seepage control, tailings and waste rock covers, emergency preparedness and response for the case of e.g. containment failure, cover failure, and, a program for monitoring and surveillance of tailings facility and other regulatory requirements. P. 41 of ToR for the EIA point 4.5, include management practices for mine closure. GME is recommended to include and develop in detail in the EIA, decommissioning and rehabilitation practices for long term stabilisation of all mining wastes including also tailings. P. 42 of ToR for the EIA, point 8, include a program for environmental and effluent monitoring for all mine phases. GME is recommended to develop in detail the envi-	10.4, 11.1 and 13.13) Remember that the surface area of the waste rock is increased significantly compared with the normal state of the rock. Runoff from this waste rock is not the same as naturally occurring runoff as deeper lying rocks has not been leached by water previously. Keep in mind that the authorise in question 7.9 states that the fluorine problem has to be taken very seriously.

			ronmental and effluent monitoring program in the EIA as well as a long term monitoring and surveillance program of the closed facilities. GME is recommended to include in ToR p. 41, point 5, and develop in details in the EIA, environmental impacts related to tailings, waste rock and other mine wastes disposal.	
10.5	With regards to solid sodium fluoride dust- with some 4-9,000,000 tons of this material floating around and only a gram or two required to potentially kill people, it's a big problem (see Mt Laki Iceland, 1783 example online).	The number quoted of solid sodium fluoride seems excessive. Treatment of the ore and extraction of value elements will ultimately result in a reduction in the amount of sodium fluoride. A volcanic eruption cannot be compared to a mining operation. Mining is controlled. Dust emissions are also controlled. These will be described in the EIA. No sodium fluoride dust is expected to leave the mining area. All mining operations will be controlled with dust prevention strategies employed throughout the mining industry. Virtually all of the fluoride released will be in the concentrator where it is stabilised in water. Once in the water it is recycled around the processing plant.	Environmental threshold values for non – radioactive contaminants, both airborne and liquid effluent should be a part of the operating licence conditions. GME should develop in detail their answer to the question 10.5 : 'With regards to solid sodium fluoride dust- with some 4-9,000,000 tons of this'. GME is recommended to develop in detail and support with results studies in EIA the sentence below: '' No sodium fluoride dust is expected to leave the mining area.''	None

		Water treatment is applied to remove the fluoride prior to any release. The EIA will address the matter in detail. Dust modelling performed by world leading and independent consultants has been performed to examine the impact of dust. The results of this modelling will be included in the EIA. All potential types of dust were included in the modelling.		
10.6	Have GME published their knowledge?	GME is finalizing its application and will be made available for the public to review in 2015. Other than that GME has published several information and knowledge sets through our web site, public info meetings, newsletters etc.	No comments.	None

II. Stakeholder 11 SPS (COOPERTIVE SHEEPFARMERS ASSOCIATION)

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
11.1	In the event that the mine at Kvanefjeld goes ahead, there should be no dumping of remains from the mining/ no tailings.	It is not practical to begin a mining operation such as the one proposed for Kvanefjeld, and not have any discharges/ tailings resulting from the process. The resultant tailings will be securely stored and regularly monitored to ensure no harmful releases occur to the environment.	It seems correct to state as GME does, that the mining project at Kvanefjeld cannot be performed without ore separation and deposition of the valueless part of the ore called tailings. P. 40 of ToR for the EIA, point 4.2 and 4.3, includes management strategies for waste (e.g. waste rock, tailings and other mine waste) disposal. GME is recommended to include and develop in detail in the EIA: tailings containment preparation (dam stability, liners, water control systems such as spillways, decant towers, alarm system for control of water level); tailings and waste characteristics, not only radioactive but also non- radioactive contaminants as well as flotation and processing chemicals that remain with the tailings; tailings and waste preparation, tailings and waste discharge and deposition, tailings consolidation, tailings surface water treatment, decant water	The suggested addition to point 5 p. 41 ", environmental impacts related to tailings, waste rock and other mine wastes disposal" is included in the final version of the ToR. (same answer is specified to 3.3, 10.2, 10,4 and 13.13)

			treatment, seepage control, tailings and waste rock covers, emergency preparedness and response for the case of e.g. containment failure, cover failure, and, a program for monitoring and surveillance of tailings facility and other regulatory requirements. P. 41 of ToR for the EIA point 4.5, includes management practices for mine closure. We recommend GME to include and develop in detail in the EIA, decommissioning and rehabilitation practices for long term stabilisation of all mining wastes including also tailings. P. 42 of ToR for the EIA, point 8, includes a program for environmental and effluent monitoring for all mine phases. GME is recommended to develop in detail the environmental and effluent monitoring program in EIA as well as a long term monitoring and surveillance program of the closed facilities. GME is recommended to include in ToR p. 41, point 5, and develop in	

			details in the EIA, environmental impacts related to tailings, waste rock and other mine wastes disposal.	
11.2	There should be an assurance that there will be sustainability for the sheep farmers. (Same as in SIA 9.2)	The ToR for the EIA (and the SIA) ensures that all potential negative impact from the mine project on sheep farming is analysed and assessed. It is not possible to give a guaranty of the outcome of the assessment before it is done.	GME should develop in detail the sentence below: 'The impacts – both positive and negative, to sheep farmers will be assessed through the EIA and SIA processes'. The environmental impacts should be developed also in detail in EIA. The impacts – both positive and negative - and also cumulative impacts are included in ToR and shall be assessed through the EIA processes. Further, the company has to develop and submit to the appropriate authority: Environmental protection plan, Radiation Management Plan, Waste Radioactive management Plan, Environmental Monitoring Programs. All those plans shall be developed with the aim to protect the workers, public and the environment, both now	None

			and further generations.	
11.3	SPS also wants to ensure that sheep farming is not to be hindered. Meaning, the sheep farming industry is not to be damaged by mining-based activities at Kvanefjeld.	The Kvanefjeld project is not expected to result in any hindering of the present sheep farming (except for the farm in Narsaq valley which closes). For example will dust from the mine activities not disperse to the sheep farms and contaminate the ground and grass. This will be documented carefully in the EIA. In addition mine workers will require food, which will be sourced locally as much as possible. The Company is conducting rigorous studies to ensure that there will be no negative impact and these studies will be assessed by independent experts.	The environmental impacts and also cumulative impacts are included in ToR and must be assessed through the EIA processes.	None

II. Stakeholder 12 TRANSPARENCY INTERNATIONAL GREENLAND

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR

				for EIA
12.1	TIG has examined with interest the documents for the Kvanefjeld Multi-Element Project, ToR for the SIA and EIA. TIG welcomes the ToR presented in pre-hearings as they describe a fundamental change in scenarios compared to the 2011 material.		No comments as it is regarded a statement.	None
12.2	The two ToR are virtually identical up to page 21. It would save the reader time if they are summarised into one document and then separated into SIA and EIA.	The ToR for the SIA and EIA are very similar in some chapters. However, for clarity and ease of reading, it is best to present the same information in each	No comments to GME's response.	None
12.3	It is not clear whether Scenario 3 will be included in the final ToR for the SIA and EIA. It states that both GME and the Mineral Resources Authority have concluded that there must be three scenarios, but on page 10 of both ToR it states "there will be a need in relation to Scenario 3 for a sensitivity analysis in order to make, on an equal footing with Scenario 1 and Scenario 2, an informed decision as well to assess the socioeconomic and environmental effects." TIG believes that Scenario 3 is significantly different for the civil society, and would therefore before the next round of hearings, wish to clarify whether Scenario 3 is still in play.	While Scenario 3 has been considered, information to date suggests that this Scenario is unlikely to be both economically and logistically feasible. Further information will be provided in the Feasibility Study and assessed in the EIA and SIA.	The question of scenario is important in order to develop a detailed environmental work.	It will be made clearer in the ToR that scenario 3 is no longer an option.
12.4	Both documents highlight the SIA and EIA will be based on a participatory approach, "a high degree of communication will be a significant feature of the entire process." TIG expects that the mandates of both would be a clear description of the citizen in-	GME has been conducting regular stakeholder consultation with various departments, organisations and members of the public since 2009. This will continue, along with the formal arrangement of the public	No comments to GME's response.	None

	volvement.	hearing period following submission of the EIA and SIA.		
12.5	EIA page 31: This shows an outline of the additional studies, which are described on pages 32-38. TIG expects the results of these studies will be published as soon as available.	These studies, and others already completed, will be reported and included in the information made available to the public during the EIA process.	No comments to GME's response.	None
12.6	EIA page 39-43: This describes the final assessment report. It is indicated that would include a detailed non-technical project summary in Greenlandic, Danish and English. TIG looks forward to reading this project summary. It is expected that it will be able to meet the NGO coalition demands for information in plain language. It does not specify which language the main report will be written in.	The main documents of the EIA and SIA will be translated to the requirements stipulated by the Greenlandic Authorities.	No comments to GME's response.	None

II. Stakeholder 13 WWF

No.	Questions/remarks	Greenland Minerals & Energy's response	Comments from the Authorities	Changes to ToR for EIA
13.1	WWF finds the prehearings as a development in the right direction, however considers that the pre-hearing should be postponed until after the elections when there is certainty on the uranium policy.	The pre-hearing was launched late august and last for 35 days. The call for an election was decided on the last day of the pre-hearing period. GME considers the pre-hearing formally intact.	No comments. The Mineral Resources Authority does not find basis for postponing the public pre-consultation due to the elections.	None
13.2	WWF is basically a non-supporter of the Project due to the uranium component.	No answer required	No comments at it is a statement and not an EIA issue.	None
13.3	WWF is concerned about the environmental impacts of mining at Kvanefjeld – particularly the spread of dust, disposal of waste rock and tailings, and risks of leaching from the soil in to the water, noise, disturbance and increased ship traffic.	GME is monitoring the background level of dust in order to mitigate the spread of dust while in operation. The character of waste rock is mainly inert non-economic rock type that will be piled as broken rock. The tailings will contain approx. 91 % of the ore of interest which will have undergone a flotation process in which zinc will be extracted. The fluoride in the process water will be extracted by adding calcium producing calcium fluoride (fluorspar), recognized by EU as critical industrial product. The rest of the material will undergo a chemical treatment producing uranium oxide (yellowcake) and a rare earth concentrate. The chemical residue will, after a cleansing treatment, be placed in a separate double lined storage	Environmental impacts including also the cumulative impacts are included in the ToR for the EIA, point 5, p. 41-42. GME is recommended to further developed in detail in the EIA all potential environmental impacts associated with the proposed activities. P. 40-41 of ToR for the EIA include waste management strategies those shall be future developed in the EIA. Apart from the EIA, we recommend GME to develop and submit to authorities for approval the fol-	None

		facility divided by a dam from the flotation residue storage facility. The noise will be contained largely to the mine site and production area where blasting and trucking will occur. It will have a minimum impact to the town of Narsaq. Ship traffic is estimated to increase approximately. two fold from the existing shipping situation carried by Royal Arctic Line.	lowing plans: Radiation management Plan, Radioactive Waste management Plan, Environmental Protection Plan, Environmental and Effluent Monitoring Plan, Closure Plan, Emergency preparedness and Response Plan, Long-term surveillance plan. and other regulatory requirements plans. All should be developed, improved and implemented continuously during the entire life of the mining project.	
13.4	Nuclear power presents a long term and serious waste problem. There are also safety issues related to nuclear power. (same as in SIA 11.5)	GME is a mining company and not a nuclear energy supplier. GME will deal with its tailings and waste according to the laws and regulations issued by the Greenland government and the governing international standards as provided by the IAEA. GME will adopt world's best practice from other successful mines around the world which have not resulted in negative environmental impacts. (same as in SIA 11.5)	No comments at it is a statement.	None
13.5	WWF believes rather than developing uranium-based power generation, fossil fuels should be replaced with renewable energy such as solar, wind and hydropower. (same as in SIA 11.6)	Technology associated with renewable energy sources, such as wind and tide, is improving all the time, but can still only contribute intermittently to a base-load electricity supply.	No comments at it is a statement.	None

		Unlike other base-load energy supplies, uranium emits no greenhouse gases. (same as in SIA 11.6) The Kvanefjeld Project will mine important raw products used for emerging, green technologies and industries. The Kvanefjeld Project will be one of the major sources of these raw materials available outside of China		
13.6	The company has previously announced plans to dispose of large quantities of tailings in a lake, at the risk of contaminating the local environment and Narsaq River.	Tailings will be deposited in Taseq and a small lake to the east of Taseq. However, the outlet of Taseq will be blocked by a high dam which will prevent water from the lake to enter Narsaq valley including the river. Water from Taseq will instead be pumped to the mine area and used in the production The company's new plans reduce the plant's production, hopefully this reduces the amount of tailings to be deposited.	The amount of tailings in this project will be only slightly less than the amount of ore.	None
13.7	The EIA describes a scenario where there is both mechanical treatment of rare earth and uranium bearing ore (concentrator) as well as chemical processing to separate uranium and rare earths (refinery) and finally a last stage of chemical processing to separate the rare earths into pure elements (chemical processing Scenario 3). The authorities have expressed their wish that the (final chemical processing Scenario 3?) is	Product outcome are mentioned under 13.5.. The chemical process will create the uranium oxide and a mixed rare earth product. The major quantity (Lanthanum and Cerium) of the rare earths are being separated in Greenland to produce final saleable products for export. The unseparated rare earths will be exported outside	Here GME describes a project where the rare earth elements are separated in 2 fractions: Lanthanum-Cerium and the rest. The rest is then further separated outside Greenland. In the EIA report this has to be described in much more detail and the releases to the environment and tailings storage facili-	None

	done in Narsaq as this will ensure more jobs locally.	of Greenland. The Kvanefjeld Project will offer very significant job opportunities for Greenlanders.	ties have to be described in details.	
13.8	The chemical processing involves environmentally harmful chemicals, but there is no identification of the environmental impacts and risks of this in Narsaq. Construction of a processing plant and use of large amounts of chemicals increases the complexity of the Project. For each stage of the transport, use, processing and disposal of these chemicals, environmental impacts and risks need to be identified. WWF would like consideration given to the preparation of an independent environmental impact statement describing consequences and alternatives for reprocessing before taking a position on this part of the project.	GME is using independent consultants EIA (same comment earlier) to evaluate environmental, health and safety aspects of the Project. Included in this assessment is transport safety.	No comments.	None
13.9	The EIA should not only describe plans for construction and operation, but also for remediation and restoration of the environment and ongoing monitoring. In particular, long term monitoring for tailings.	The EIA covers the construction, operation, closure and post-closure periods of the project. The EIA will include a conceptual monitoring plan that will cover the same periods. The final monitoring plan will be developed in a cooperation between the mine company and the Greenland authorities. This will include long-term monitoring of the outflow of Lake Taseq.	P. 41 and 42, points 4.5 and 7.3 of ToR include decommissioning and rehabilitation plans of mine, mill, tailings, waste rock and other mine waste. Those must be developed in detail by GME in the EIA. A long term surveillance program for the closed mine should be developed. Usually the mining company have to perform long term surveillance of the mine site for a number of years after the mine is closed in	The coverage of the EIA will be made more clear in the ToR

			order to ensure the long term chemically and physically stability of the closed site and undertake possible new rehabilitation activities in case is necessary followed the monitoring program.	
13.10	The measurement of background dust levels and emissions allows comparison of conditions before the Project to those during construction and operation. Local residents have expressed insecurity about dust from the mine in that it could pose a human health problem. WWF recommends that the authorities make an extraordinary effort to tell people about the measurements now, their results and the measurements that will be part of the construction and operation phase.	The baseline measurements for the existing environment before mining will be included in the environmental assessment. This information will be made publicly available.	The environmental monitoring program for air should include: radionuclides and non-radioactive contaminants in dust, radon thoron and their decay products and gamma levels and other parameters.	None
13.11	A study is needed to clarify the Project's impact on air quality in the area around Narsaq. This information should be communicated to the local residents in an easily understood format.	A study of the background level of dust in Narsaq and Narsaq valley has been running since 2011. A specific study of the dispersal of dust from the mine operations is currently carried out as part of the EIA. This study will be based on wind data from the weather station at Kvanefjeld which has been operated since 2010. The results of the dust dispersal study will be summarized in a non-technical languish in the EIA.	The study that WWF asks for is included on p. 41, point 5.1 and p. 42, point 5.4 of ToR for the EIA. It includes environmental impacts from dust, radon, thoron and their decay products, and non-radioactive contaminants and gases and cumulative impacts. It is correct as stated by WWF that the result of the study shall be communicated to the local residents.	None

13.12	With regards to the environmental impact of the planned disposal of waste products from the mine (waste rock and tailings) WWF considers it reprehensible that is has not been documented which minerals would be leached from the landfill and how these will affect the environment near the landfill.	Information regarding chemical stability will be documented in the EIA.	WWF finds it reprehensible that it has not been documented which minerals would be leached from the landfill and how these will affect the environment near the landfill. One shall note that this hearing is about the ToR. In the EIA report the questions raised by WWF of course has to be developed in detail. This is outlined in the ToR on p. 40, point 4.2 and 4.3 that include the waste management strategies, waste characteristics (leaching, etc.) for both radioactive and non-radioactive contaminants in the solid and liquid waste.	None
13.13	Large quantities of waste rock and tailings containing uranium, thorium, fluorine and heavy metals will be disposed of during the operational period. By depositing in a lake there will be movement of these substances to the water with a risk of contamination of Narsaq River during periods of heavy rainfall or fast melting snow creating overflow from the tailings lake. A study should map the content of waste rock and tailings, how much is released into the water in the	When the tailings ponds at Lake Taseq are constructed the current outlet will be closed and all excess water from the lakes will be used in the production. No water from the tailings ponds will therefore reach Narsaq river. This will all be described in more detail in the EIA report. A report on the tailings dam storage facility	The study that WWF requests should be a mandatory part of the environmental impact assessment. P. 40 of ToR for the EIA, point 4.2 and 4.3, includes management strategies for waste (e.g. waste rock, tailings and other mine	The suggested addition to point 5 p. 41 “, environmental impacts related to tailings, waste rock and other mine wastes disposal” is in-

	lake and whether this is harmful to for example trout. WWF believes that analysis should also be made whether water from the tailings lake is also toxic to the animals in the area, such as foxes and hares.	for the flotation and chemical residue is prepared by an independent consultant. The sort and effects of the residue will be addressed in the EIA report prepared by independent consultants Orbicon.	waste) disposal. GME is recommended to include and develop in detail in the EIA: tailings containment preparation (dam stability, liners, water control systems such as spillways, decant towers, alarm system for control of water level); tailings and waste characteristics, not only radioactive but also non- radioactive contaminants as well as flotation and processing chemicals that remain with the tailings; tailings and waste preparation, tailings and waste discharge and deposition, tailings consolidation, tailings surface water treatment, decant water treatment, seepage control, tailings and waste rock covers, emergency preparedness and response for the case of e.g. containment failure, cover failure, and, a program for monitoring and surveillance of tailings facility and other regulatory requirements. P. 41 of ToR for the EIA point 4.5, includes management practices for mine closure. GME is recommended to include and develop in detail	cluded in the final version of the ToR. (same answer is specified to 3.3, 10.2, 10.4, 11.1 and 13.13)

			in the EIA, decommissioning and rehabilitation practices for long term stabilisation of all mining wastes including also tailings. P. 42 of ToR for the EIA, point 8, includes a program for environmental and effluent monitoring for all mine phases. GME is recommended to develop in detail the environmental and effluent monitoring program in the EIA as well as a long term monitoring and surveillance program of the closed facilities. GME is recommended to include in ToR p. 41, point 5, and develop in details in the EIA, environmental impacts related to tailings, waste rock and other mine wastes disposal.	
13.14	It is crucial that the EIA report illustrates how the company will survey the repository of tailings to ensure no contaminated water flows from the lake into the surrounding streams. In addition, the authorities should attach terms of ongoing monitoring.	The Company agrees that there should be no contamination of the environment. Ongoing monitoring during operations and after closure will be performed.	In agreement with GME and WWF, see p. 40, points 4.2 and 4.3 of ToR for the EIA, which include a waste monitoring program which shall be further developed in the EIA in detail. See also p. 42 of ToR for the EIA, point 8 which include environmental monitoring program,	None

			not only environmental monitoring but also effluents and effects monitoring. All those shall be further developed in detail in the EIA.	
13.15	WWF fully supports the preparation of the Hydrology and water balance study to provide an overview of how contamination can be spread in the event of an accident.	The hydrology and water balance of the project area including Narsaq river has been monitored for several years. The collected data have been summarized in a report which is an important background document for the EIA. The study includes Narsaq River which among other things can be affected by overflow from the tailings lake.	All studies performed by GME including the Hydrology and water balance shall be included in the EIA.	None
13.16	The ToR for the EIA indicates there is intention to prepare a noise study to analyse the prevalence, intensity and frequency of noise from the mine. It is unclear whether the noise study includes both the construction and operation phases, but WWF recommends mapping the extent of both phases in order to get an accurate picture of the impact and best opportunities for remediation.	A noise study will be completed and included in the EIA for a description of the potential impacts. The noise study will assess both the construction and operational phases of the project	The noise study should address both the construction and operational phase of the project and should consider also a noise study for closure phase (e.g. noise from demolition of facilities, if any etc).	This is now specified in the ToR
13.17	The consequences of an oil spill are serious not only for nature, but also for people who live off the resources of the sea. The EIA indicates an intention to study the impacts of a hydrocarbon spill during Project's construction or operation. The study should describe the consequences of both minor and major spills as well as mitigation measures and emergency preparedness	GME will have a specific oil spill response plan suited to the construction, production and remediation plan.	It is recommended that the subchapter 5 of the ToR should include also assessment of environmental impact of oil spill. P. 42, point 7.2 of ToR for the EIA includes an Emergency preparedness and response plan and this	The suggested subchapter is included in the final version of the ToR Oil spill event is now included at

			must also include an oil spill event.	point 7.2
13.18	The Local Use Study paves the way for the company to identify the local use of natural resources in the area. It should be ensured that the study describes recreational use, such as areas used for hiking, camping, berry picking, etc to ensure not only the business use of resources is considered. Finally, a description of the use of nature in terms of tourism if not already identified in previous studies.	A Local Use Study is a requirement for both the SIA and EIA, and is being prepared. This will be a joint effort between Orbicon and Grontmij due to the overlap of information for both social and environmental impacts.	it is recommended that a detailed report about the local use of the area is prepared.	None