

September 2014 Quarterly Report

Thursday 30th October, 2014

Highlights

- Key work programs for Kvanefjeld Feasibility Studies and Mining License Application launched; follows successful rights issue that closed oversubscribed on July 3rd
- Tetra Tech appointed to complete detailed engineering design of process facilities and support infrastructure; work program approaching completion
- Environmental and Social Impact assessments progressing with lead Danish consultants
 Orbicon and Grontmij
- Regulatory Developments: workshop on the transport of uranium hosted by Danish Institute of International Studies in Copenhagen, supported by World Nuclear Transport Institute
- Update on cooperation with China Non-Ferrous Metal Industry's Foreign Engineering and Construction Co. Ltd (NFC); important technical meetings held in Perth, and key visit to Greenland conducted
- Changes to Board of Directors as company focusses on project permitting, and advancing relations with development partners
- EURARE update recent meetings attended in September, with pilot plant operations utilising Kvanefjeld ore set for April 2015







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September Quarter Activities

The September Quarter 2014, has seen GMEL's focus shift to implementing and now working to complete a number of key work programs that form important contributions to the Feasibility Studies on the Kvanefjeld Project. This follows on from a successful underwritten rights issue to raise \$8.9M, that commenced in later part of Q2, and was completed in the early part of Q3, 2014.

Current work programs include detailed engineering design work by Tetra Tech, residue storage facility design by AMEC, Greenland port study by Ramboll, optimal shipping study by Blue Water Shipping, and mine design and scheduling by SRK Consulting.

Environmental and social impact studies are also progressing, with Danish consultants Orbicon and Grontmij. Field data from the project area has continued to be collected across the northern summer months, with input from expert consultants to ensure that all baseline datasets have been rigorously established.

Cooperation between GMEL and NFC has continued to progress, with important visits conducted in August and September to both Perth and Greenland. Both visits were highly productive in advancing technical understanding and forward planning, as well as increasing the familiarisation with Greenland and the Kvanefjeld project area.

Investigations into regulatory aspects associated with uranium production also continued in Q3 with the Danish Institute for International Studies (DIIS), and Danish Shipowners Association hosting a workshop on the transport of radioactive materials and specifically uranium. This followed on from the Uranium – Best Practice workshop coordinated by the DIIS in Greenland in Q2.

GMEL also announced transitionary changes to the company's board of directors in September. Mr Roderick McIllree resigned from the position of Managing Director. Dr John Mair, a long-standing executive director of GMEL has been appointed Managing Director. Chairman Mr Michael Hutchinson has relinquished the role of Chairman but will continue to serve as a non-executive director. Mr. Tony Ho, an independent non-executive director and chairman of the Audit Committee, has been appointed by the board as the new independent chairman of the Company. Tony Ho has stepped down as chairman of the audit committee, to be replaced by Mr Simon Cato.



Update on Feasibility Study Work Programs

Process Plant engineering design is underway with the independent consultant Tetra Tech who is a global engineering services company with extensive cold climate experience. Work has progressed to the point that the Concentrator and Refinery mechanical design is largely complete.

Blue Water Shipping, a highly-regarded Danish Company, has completed a logistics study that has identified an optimal shipping solution for the project.

This solution will use vessels travelling between Greenland and a major European port for the transport of reagents into, and products out of Greenland.

The Feasibility Study design of the port is being completed by the large engineering consulting company Ramboll. Ramboll is a Denmark-based company with offices located globally, including in Greenland. They have recently completed a port site location study, and the port is now being designed in detail to meet Feasibility Study standards. Work here is currently on track to be completed by 31st December, 2014.

Plant residue storage facilities are being designed by AMEC out of their office in Ashford, Kent, England. This office has excellent experience in the design of cold climate tailings dams. Work here is on track and will be completed in December, 2014. No issues regarding tailings storage or radioactive elements have been identified, and are not expected based on the studies performed to date.

Some nearby elevated permanent lakes to the northeast of the plant site have been positively evaluated for hydroelectric power supply. GMEL has engaged a company highly experienced in establishing hydropower in Greenland to perform a study to build a hydropower plant specifically for project requirements. This work is being performed currently by Istak/Verkis of Iceland, and is set for completion in December, 2014. The use of hydropower will be provided as an option in the Mining Licence Application Study. Initial investigations highlight substantial operating cost benefits as a result of utilising hydropower, as well as providing greenhouse-gas free, sustainable energy for the operations.



A geotechnical assessment of the entire project site has been performed by specialist geological consultants 4DG. This will provide suitable locations and design parameters for project facilities and infrastructure to a range of consultants working on the study.

Mine design work and scheduling has commenced with global mining consultants SRK. They will be performing a capital and operating cost estimate for the open pit mining operations. The assaying of previously drilled cores is also nearing completion. These cores are from holes drilled centrally in the Kvanefjeld resource, and are aimed to provide data to establish 'measured' category JORC-code compliant resources. The SRK work will be ongoing into early next year and aims to result in conversion of some mineral resources into mining reserves.

Acid plant designs and cost information have already been received from SNC Lavalin and Uhde Nora and are ready for periphery cost estimation.

All capital costs will be estimated by NFC who signed a Memorandum of Understanding with GMEL in March 2014. NFC has a design and construction division along with ownership of a rare earth separation plant in China (Zujiang Rare Earth Company in Guangdong). The cost estimate will assume modular construction of the processing plants with installation in Greenland. This project construction methodology is likely to result in a reduced capital cost and reduced construction risks compared to full on site construction. This work by NFC is currently on track with costs received for over 3,000 different equipment items. A final feasibility level cost estimate is expected by the end of this year.

Environmental and Social Impact Assessment (EIA and SIA)

The impact assessments form critical components of a mining license application, and will be completed in the coming months. Respected Danish consultants Orbicon and Grontmij continue their roles as lead consultants on the EIA and SIA respectively. The completion of the EIA and SIA culminates several years of extensive baseline studies that stand to provide confidence and rigour to the quality of these key studies and the underlying data sets.

Environmental Impact Assessment

The final phase of the EIA brings together baseline data collected from the Kvanefjeld Project area over the last 7 years by Orbicon and other specialist groups, and determines the potential



impacts on the environment. The EIA will outline management and mitigation strategies for the impacts identified.

GMEL has appointed DTU Nutech to complete the radiation report, with a focus on assessments of (estimated) radiation doses to workers and members of the public as a result of proposed mining activities. This is another important component of the EIA. DTU Nutech is the Danish Centre for Nuclear Technologies, and continues the work in nuclear technologies of the former Risø National Laboratory, which played an integral role in the earlier studies on the Kvanefjeld deposit in the 1960's, 70's and 80's.

DHI, a member of the Danish Advanced Technology Group (GTS institutes), has been appointed to investigate the impact of the project on nearby fjord systems. DHI is a strong and well-respected Danish government authorised technological service provider in the scientific community and in the Danish political landscape.

The team at DHI have a range of specialised scientific and engineering staff with experience working in the Greenland and other arctic environment locations. DHI's experience and knowledge have been sought to ensure a robust solution is developed for mine water discharge management.

Social Impact Assessment

The Grontmij team, based in Denmark, has a deep understanding of the social considerations in Greenland and will finalise the collection of information from social 'focus groups', and validate existing reports to finalise the development of the impact plan, monitoring plan and SIA for the Kvanefjeld Project. Grontmij have worked with GMEL on establishing the baseline studies for the Kvanefjeld SIA since 2010.



NFC – GMEL Cooperation: Towards an Integrated Critical RE Supply Chain

In March 2014, GMEL and NFC signed a Memorandum of Understanding to evaluate and pursue the establishment of global rare earth business partnership. This will be achieved by combining the cost-competitive production of critical rare earth intermediate products from Kvanefjeld with NFC's expertise and capacity in downstream rare earth separation. This business will utilize the Kvanefjeld product as the raw material feedstock for a new separation facility based in Xinfeng, China. The rare earth products would be jointly marketed by GMEL (outside China) and NFC (inside China). Importantly, the strategy provides access to rare earth separation, and a path to market for high-value end products.

Since signing the MoU, both parties have commenced working through substantial information exchange, as a basis to establish a Strategic Cooperation Agreement. Visits have been made to China by senior GMEL personnel to progress the dialogue on the cooperation strategy with NFC, and members of GMEL's technical team have conducted a number of visits to meet with representatives of Zhujiang Rare Earth Co; NFC's rare earth subsidiary.

In August, a delegation of NFC's senior technical rare earth experts visited GMEL's head office in Perth. This visit was aimed to review the technical development of the Kvanefjeld Project and major testwork programs, with an emphasis on understanding the operational cost structure. Visits were conducted to the laboratories where key work metallurgical programs have been conducted, including AMMTEC and SGS. Presentations were made by representatives of both laboratories on the development of the beneficiation circuit (flotation), and the hydrometallurgical circuit. The Perth office of Tetra Tech was also visited, where an update was provided on the Feasibility Study progress.

At the start of September, a second NFC delegation joined senior GMEL personnel for a visit to Greenland. This delegation included the Vice President of NFC, the General Manager for resource development, Chief and Assistant Geologists, and the Chief Engineer for project layouts from NFC's engineering institute NERIN. The Greenland trip included a visit to the capital Nuuk along with a visit to south Greenland in order to understand the Kvanefjeld project geography including mineral resource locations and upside, infrastructure options, and general logistical considerations.

Importantly, the NFC delegation attended meetings with a cross section of key stakeholder groups and representatives that included government ministers, representatives of the Greenland Business Association and the Labour Union, a Greenland law-firm, and the deputy



mayor of the Kujalleq Municipality (South Greenland). These forums provided an excellent opportunity for NFC to introduce their capabilities in EPC contracting globally, their advantageous position in the rare earth industry, and their progress in cooperation with GMEL to Greenlandic stakeholders.

Upon completion of the Tetra Tech engineering design work for Kvanefjeld in November, 2014, NFC will commence work on cost estimations for the Tetra Tech design outputs, with a feasibility-level cost estimate expected by the end of 2014.

Update on the EURARE Program

GMEL attended the EURARE meeting and ERES conference (European rare earth resources) in Greece during September. GMEL presented two papers at the conference regarding the overall Kvanefjeld project development and a technical hydrometallurgical summary. At the EURARE meeting it was decided to perform a concentrator pilot plant treating 30 tonnes of ore at GTK Laboratories in Finland. This work will be mostly funded by the EURARE program and performed in April 2015. Some of the mineral concentrate produced at this pilot plant will be hydrometallurgically treated at a Pilot Plant operated by Outotec, Pori, Finland which will also be funded by EURARE. From this pilot plant a mixed EURARE intermediate product will be produced which is a suitable feed to a rare earth separation plant.

GMEL will be providing project management and technical support to these pilot plant programs as part of the EURARE program. These scaled-up testwork pilot plant operations will be conducted in parallel to the permitting process, and will be of great benefit in advancing the Kvanefjeld feasibility program to bankable status.

Workshop on the Transport of Uranium

In September the Danish Institute for International Studies (DIIS) hosted a one-day workshop on Transport of Uranium which was attended by a wide range of government, academic, and industry participants in Copenhagen. The workshop was facilitated by The World Nuclear Transport Institute (WNTI) and covered all aspects of the international transport of uranium concentrates. The workshop provided an opportunity for participants to become up to date on



the global transport system for class 7 (radioactive) cargoes and to be reassured that the uranium industry has a sophisticated and solid system for managing all transport modes for uranium movements. The transport workshop was a sequel to the successful Uranium - Best Practice workshop, also hosted by DIIS, in Greenland in June as part of the familiarisation process for Greenland and Danish authorities as they prepare the regulations and standards to permit the export of uranium from Greenland in full compliance with all international treaties.



About the Kvanefjeld Project

The Kvanefjeld project is centred on the northern Ilimaussaq Intrusive Complex in southern Greenland. The project includes several large scale multi-element resources including Kvanefjeld, Sørensen and Zone 3. Global mineral resources now stand at **956 Mt** (JORC-code compliant). The deposits are characterised by thick, persistent mineralisation hosted within sub-horizontal lenses that can exceed 200m in true thickness. Highest grades generally occur in the uppermost portions of deposits, with overall low waste-ore ratios. Less than 20% of the prospective area has been evaluated, with billions of tonnes of lujavrite (host-rock to defined resources) awaiting resource definition.

While the resources are extensive, a key advantage to the Kvanefjeld project is the unique rare earth and uranium-bearing minerals. These minerals can be effectively beneficiated into a low-mass, high value concentrate, then leached with conventional acidic solutions under atmospheric conditions to achieve particularly high extraction levels of both heavy rare earths and uranium. This contrasts to the highly refractory minerals that are common in many rare earth deposits.

The Kvanefjeld project area is located adjacent to deep-water fjords that allow for shipping access directly to the project area, year round. An international airport is located 35km away, and a nearby lake system has been positively evaluated for hydroelectric power.

GMEL finalised a comprehensive, multi-year pre-feasibility program in March 2012 that focussed on identifying and evaluating the best possible process flow sheet for the Kvanefjeld project, taking into account economic metrics, environmental considerations, technical and market risk. A feasibility-level Mine and Concentrator Study was released in early 2013 that outlined a staged development strategy with reduced capital costs. The study outcomes are extremely positive and reiterate the potential for Kvanefjeld to become a long-life, cost competitive operation. Kvanefjeld is slated to produce a significant output of critical rare earths (Nd, Pr, Eu, Dy, Tb, Y), with by-production of uranium, zinc, and bulk light rare earths (La, Ce).

Rare earth elements (REEs) are now recognised as being critical to the global manufacturing base of many emerging consumer items and green technologies. Uranium forms an important part of the global base-load energy supply, with demand set to grow in coming years as developing nations expand their energy capacity.

Tenure, Permitting and Project Location

Tenure

Greenland Minerals and Energy Ltd (ABN 85 118 463 004) is a company listed on the Australian Securities Exchange. The Company is conducting exploration of license EL2010/2. The Company controls 100% of EL2010/2 through its Greenlandic subsidiary.

The tenement is classified as being for the exploration of minerals. The project hosts significant multielement mineralisation within the Ilimaussaq Intrusive Complex.

Historically the Kvanefjeld deposit, which comprises just a small portion of the Ilimaussaq Complex, was investigated by the Danish Authorities. The project has received significant past exploration and feasibility evaluation in the form of drilling, geophysics, geochemistry, an exploratory adit and numerous and varying metallurgical test work and technical papers.

Permitting

Greenland Minerals and Energy Limited is permitted to conduct all exploration activities and feasibility studies for the Kvanefjeld REE-uranium project. The company's exploration license is inclusive of all economic components including uranium and REEs. The Company holds the right to apply to exploit the Kvanefjeld project. The approval of an exploitation license is largely dependent on establishing an economically robust, and environmentally and socially acceptable development scenario.

Location

The exploration lease covers an area of 80km² in Nakkaalaaq North on the southwest coast of Greenland. The project is located around 46° 00′W and 60 55′N.

The town of Narsaq is located approximately 8 kilometres to the south west of the license area. Narsaq is connected to Narsarsuaq International Airport by commercial helicopter flights operated by Air Greenland. Local transport between settlements is either by boat or by helicopter.

The Company has office facilities in Narsaq where storage, maintenance, core processing, and exploration activities are managed. This office supports the operational camp located on the Kvanefjeld Plateau above the town where the operational staff are housed.

Access to the Kvanefjeld plateau (at approximately 500m asl) is generally gained by helicopter assistance from the operations base located on the edge of the town of Narsaq. It is possible to access the base of the plateau by vehicle and then up to the plateau by a track.

Other Exploration License Holdings

As announced on 18 May 2011 GMEL had applied for, and was granted license holdings to consolidate its ground position in the Kvanefjeld area. The new license areas occur immediately adjacent to the Ilimaussaq Complex and may be prospective for specialty metal mineralization hosted near the margins of the complex (see Figure 1). GMEL aims to conduct evaluations to assess the potential for mineralization, in conjunction with sterilising key areas that are under assessment for plant and infrastructure locations. The Company is considering a number of possible locations for key infrastructure items, which include areas adjacent to the Kvanefjeld resource, as well as the broad area on the northeastern side of the Ilimaussaq Complex. Stakeholder input and environmental considerations are critically important to the site selection process.

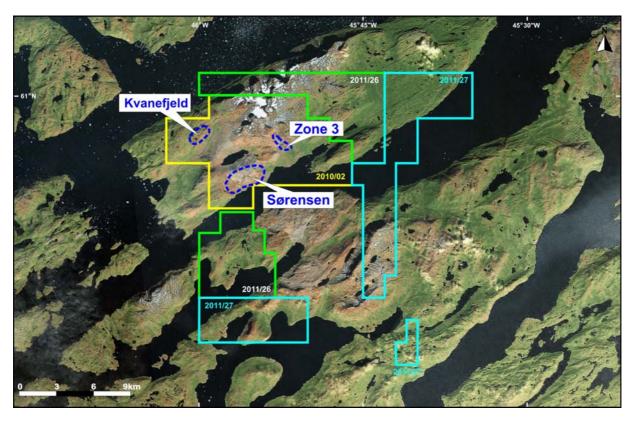


Figure 1. GMEL's license holdings over and adjacent to the Ilimaussaq complex in south Greenland. All licences are held outright by GMEL.

Exploration Licence	Location	Ownership				
EL 2010/02	Southern Greenland	100% held by Greenland Minerals and				
		Energy (Trading) A/S				
EL 2011/26	Southern Greenland	100% held by Greenland Minerals and				
		Energy Limited				
EL 2011/27	Southern Greenland	100% held by Greenland Minerals and				
		Energy Limited				
EL 2013/05	Western Greenland	100% held by Greenland Minerals and				
		Energy Limited				

Capital Structure – As at 30 th September, 2014						
Total Ordinary shares	668,464,377					
Quoted options exercisable at \$0.20	91,986,550					
Quoted options exercisable at \$0.60	25,744,191					
Unquoted options exercisable at \$0.75	4,999,520					
Performance rights (refer to announcement 21/10/11 for terms)	1,000,000					
Employee rights (refer to announcement 4/10/2013 for terms)	9,985,500					

Please visit the company's website at www.ggg.gl where recent news articles, commentary, and company reports can be viewed.

ENDS

Multi-Element Resources Classification, Tonnage and Grade									Contained Metal					
Cut-off	Classification	M tonnes	TREO ²	U ₃ O ₈	LREO	HREO	REO	Y_2O_3	Zn	TREO	HREO	Y_2O_3	U ₃ O ₈	Zn
$(U_3O_8 ppm)^1$		Mt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Mt	Mt	Mt	M lbs	Mt
Kvanefjeld - March	2011													-
150	Indicated	437	10929	274	9626	402	10029	900	2212	4.77	0.18	0.39	263	0.97
150	Inferred	182	9763	216	8630	356	8986	776	2134	1.78	0.06	0.14	86	0.39
150	Grand Total	619	10585	257	9333	389	9721	864	2189	6.55	0.24	0.53	350	1.36
200	Indicated	291	11849	325	10452	419	10871	978	2343	3.45	0.12	0.28	208	0.68
200	Inferred	79	11086	275	9932	343	10275	811	2478	0.88	0.03	0.06	48	0.20
200	Grand Total	370	11686	314	10341	403	10743	942	2372	4.32	0.15	0.35	256	0.88
250	Indicated	231	12429	352	10950	443	11389	1041	2363	2.84	0.10	0.24	178	0.55
250	Inferred	41	12204	324	10929	366	11319	886	2598	0.46	0.02	0.03	29	0.11
250	Grand Total	272	12395	347	10947	431	11378	1017	2398	3.33	0.12	0.27	208	0.65
300	Indicated	177	13013	374	11437	469	11906	1107	2414	2.30	0.08	0.20	146	0.43
300	Inferred	24	13120	362	11763	396	12158	962	2671	0.31	0.01	0.02	19	0.06
300	Grand Total	200	13025	373	11475	460	11935	1090	2444	2.61	0.09	0.22	164	0.49
350	Indicated	111	13735	404	12040	503	12543	1192	2487	1.52	0.06	0.13	98	0.27
350	Inferred	12	13729	403	12239	436	12675	1054	2826	0.16	0.01	0.01	10	0.03
350	Grand Total	122	13735	404	12059	497	12556	1179	2519	1.68	0.06	0.14	108	0.31
Sørensen - March 2	012													
150	Inferred	242	11022	304	9729	398	10127	895	2602	2.67	0.10	0.22	162	0.63
200	Inferred	186	11554	344	10223	399	10622	932	2802	2.15	0.07	0.17	141	0.52
250	Inferred	148	11847	375	10480	407	10887	961	2932	1.75	0.06	0.14	123	0.43
300	Inferred	119	12068	400	10671	414	11084	983	3023	1.44	0.05	0.12	105	0.36
350	Inferred	92	12393	422	10967	422	11389	1004	3080	1.14	0.04	0.09	85	0.28
Zone 3 - May 2012														
150	Inferred	95	11609	300	10242	396	10638	971	2768	1.11	0.04	0.09	63	0.26
200	Inferred	89	11665	310	10276	400	10676	989	2806	1.03	0.04	0.09	60	0.25
250	Inferred	71	11907	330	10471	410	10882	1026	2902	0.84	0.03	0.07	51	0.2
300	Inferred	47	12407	358	10887	433	11319	1087	3008	0.58	0.02	0.05	37	0.14
350	Inferred	24	13048	392	11392	471	11864	1184	3043	0.31	0.01	0.03	21	0.07
Project Total			_ 2											
Cut-off	Classification	M tonnes	TREO ²	U ₃ O ₈	LREO	HREO	REO	Y_2O_3	Zn	TREO	HREO	Y ₂ O ₃	U ₃ O ₈	Zn
(U₃O ₈ ppm) ¹		Mt	ppm	ppm	ppm	ppm	ppm	ppm	ppm	Mt	Mt	Mt	M lbs	Mt
150	Indicated	437	10929	274	9626	402	10029	900	2212	4.77	0.18	0.39	263	0.97
150	Inferred	520	10687	272	9437	383	9820	867	2468	5.55	0.20	0.45	312	1.28
150	Grand Total	956	10798	273	9524	392	9915	882	2351	10.33	0.37	0.84	575	2.25

¹There is greater coverage of assays for uranium than other elements owing to historic spectral assays. U₃O₈ has therefore been used to define the cut-off grades to maximise the confidence in the resource calculations.

²Total Rare Earth Oxide (TREO) refers to the rare earth elements in the lanthanide series plus yttrium.

ABOUT GREENLAND MINERALS AND ENERGY LTD.

Greenland Minerals and Energy Ltd (ASX – GGG) is an exploration and development company focused on developing high-quality mineral projects in Greenland. The Company's flagship project is the Kvanefjeld multi-element deposit (Rare Earth Elements, Uranium, Zinc), that is rapidly emerging as a premier specialty metals project. A comprehensive pre-feasibility study has demonstrated the potential for a large-scale, cost-competitive, multi-element mining operation. Through 2014, the Company is focussed on completing a mining license application in order to commence project permitting. For further information on Greenland Minerals and Energy visit http://www.ggg.gl or contact:

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Greenland Minerals and Energy Ltd will continue to advance the Kvanefjeld project in a manner that is in accord with both Greenlandic Government and local community expectations, and looks forward to being part of continued stakeholder discussions on the social and economic benefits associated with the development of the Kvanefjeld Project.

The information in this report that relates to exploration targets, exploration results, geological interpretations, appropriateness of cut-off grades, and reasonable expectation of potential viability of quoted rare earth element, uranium, and zinc resources is based on information compiled by Mr Jeremy Whybrow. Mr Whybrow is a director of the Company and a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Whybrow has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Whybrow consents to the reporting of this information in the form and context in which it appears.

The geological model and geostatistical estimation for the Kvanefjeld, Sorensen and Zone 3 deposits were prepared by Robin Simpson of SRK Consulting. Mr Simpson is a Member of the Australian Institute of Geoscientists (AIG), and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined by the 2004 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Simpson consents to the reporting of information relating to the geological model and geostatistical estimation in the form and context in which it appears.

This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.