23 May 2011

Kelli Gillard
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Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU
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NIRB File No. 11RN017
NWB File No.: 2BB-MEL0914
KIA File No.: KVRW11F02 and KVCA11Q01

Re: Opportunity to address comments received regarding AEM's "All-Weather Road" project proposal

Dear Ms. Gillard,

Agnico-Eagle Mines Limited (AEM) welcomed the opportunity to provide additional information on its proposed all-weather road between Rankin Inlet and the Meliadine site. This proposed road would service the underground exploration and bulk sampling program that is to run from 2011 to 2013 inclusive.

AEM has already constructed and is managing the All-Weather Private Access Road between Baker Lake and its Meadowbank mine. The experience gained from the Meadowbank road has been used in responding to many of the information requests. AEM foresees both roads being operated and managed in much the same way – there is little reason to do otherwise. One significant difference between the two roads is that the public will have open access to the Meliadine road while the Meadowbank road has controlled access.

AEM's response is attached and is structured as follows:

- Part 1 is a table of mitigation measures proposed by the reviewers with AEM's response opposite. This table is nine pages; and
- Part 2 leads off with a seven page table outlining the various information requests and where AEM's response to each can be found in the next sixty pages.

AEM remains available to provide additional information on the all-weather road should NIRB feel more detail/clarification is required beyond that presented.

Yours sincerely,

John Witteman

Cc. Phyllis Beaulieu, Nunavut Water Board
Luis Manzo, Kivalliq Inuit Association
Jeff Mercer, Indian and Northern Affairs Canada
Christopher Aguirre, Transport Canada

Part 1

Mitigation Measures

Mitigation Measures recommended by Reviewers	AEM Response
Government of Nunavut: Department of Environment	
The Department of Environment has developed a number of environmental guidelines/codes of practice that are intended to assist the public and industry in remaining or coming into compliance with Nunavut's *Environmental Protection Act* .	AEM commits to follow the applicable guidelines developed by the Department of Environment.
Spill Contingency Planning and Reporting Regulations , we recommend the following measures are implemented for overland transportation of bulk fuel: • Speed on winter roads should not exceed: 30 km/hr for fully loaded vehicles; 50 km/hour for empty vehicles. • Trucks should carry at least 10 square metres of polyethylene material (for lining a trench or depression), a spark proof shovel & oil absorbent blankets or squares. • Trucks should carry reliable radio and/or satellite phone communications. • Trucks should carry sufficient response equipment for the safe removal of fuel from an overturned tanker (such as hatch cone covers, hoses etc). • In general, proponents should be fully prepared to deal with spills resulting from vehicle accidents along the road, in a timely and efficient manner.	AEM presently has a Spill Plan titled, "FUEL MANAGEMENT AND SPILL CONTINGENCY PLAN". This plan will be updated as part of the regulatory stage to include the all-weather road and applicable recommendations from DoE.
All chemicals should be stored in a safe and chemically-compatible manner a minimum of 31 horizontal metres from all bodies of water. The proponent should remove unused chemicals for reuse or disposal to an approved site using methods approved by the Land Use Inspector. Hazardous materials stored on-site should be marked so they will be visible under all conditions, in all seasons. This recommendation is intended to prevent possible injuries to camp personnel and/or damage to the containers. Unless otherwise specified by the land use inspector or licence issuing agency, all hazardous materials should be removed from the site upon completion of the activity.	AEM stores its chemical at least 31 metres from all bodies of water and in an appropriate container or building. All surplus chemicals and hazardous waste are to be removed to an accredited southern hazardous waste management facility for recycling, disposal or destruction.

Mitigation Measures recommended by Reviewers	AEM Response
Efforts should include the implementation of a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and disposed of.	AEM has a Waste Management Plan. This plan will be updated as part of the regulatory stage to include the all-weather road and mitigation measures recommended by DoE.
Should the proponent elect to incinerate their waste the following should be observed: • Ensure diligent operation and maintenance of the incineration device and provide appropriate training to the personnel operating and maintaining the incinerator. • Waste wood treated with preservatives such as creosote, pentachlorophenol or heavy metal solutions should not be burned. Additionally, plastics, electrical wire, asbestos and building demolition wastes (except clean wood) are wastes likely to produce dioxins and furans when burned and should be excluded from incineration. Under no circumstance should hazardous wastes be managed through burning or incineration. • In addition, all ash produced by the incineration of waste material should be disposed of properly.	AEM operates an incinerator at the Meliadine site. Wastes are segregated with plastics, treated wood and other incompatible waste not being burned. The ash is removed from the incinerator on a regular basis and disposed of in a landfill.

Mitigation Measures recommended by Reviewers	AEM Response
Populations of caribou are cyclical and they are currently on a downward trend. Every effort should be taken to ensure that caribou and caribou habitat are not disturbed. Air, ground, and general noise disturbances will disrupt caribou behaviour with potential impacts to fitness and survival. • The proponent shall not locate and operate so as to block or cause diversion to migrating caribou. The proponent shall cease activities that may interfere with migration such as sampling, construction, movement of equipment and/or personnel, until the caribou have passed. • During the transportation of equipment, supplies, and personnel the proponent is reminded that wildlife have the right-of-way and will be allowed to pass uninhibited. • During the period of May 1 to July 15 if caribou are observed with calves in the project area, the proponent should suspend all operations, particularly blasting, over flights and airborne geophysics surveys, and vehicles near the project site.	AEM commits to follow the caribou guidelines developed by the Department of Environment. These will be included in the Management Plan for the All-Weather Road that is presently under development.

Mitigation Measures recommended by Reviewers	AEM Response
Inevitably there is always the potential for predator-prey interactions and the field protocol should be in place to avoid wildlife interactions, and to mitigate any predator interactions. Sightings and occurrences, such as wildlife near human activities, close encounters, and attacks, should be recorded. Carnivores may approach humans or disturbances out of curiosity; however, their keen sense of smell can detect food or waste odours from great distances. Potential human-carnivore encounters can result in injury or death to the bear or the humans, all possible efforts to avoid human-carnivore encounters must be made, and negative reinforcement is encouraged. Clean camp standards are essential and deliberate feeding of any wildlife is absolutely prohibited. Mortality resulting from mismanagement during a proponents activity is not an excuse for an emergency kill and can be a significant loss to the nearest community who can request compensation for the loss (Article 6, NLCA; Wildlife Act, 97 (3)). The proponent should contact the nearest Conservation Office: • If a situation occurs where wildlife becomes a nuisance (returning frequently, or unable to deter). • Immediately if you have killed wildlife (either to resolve a conflict or unintentionally). • Immediately if you have injured wildlife and have not been able to relocate or destroy. • Immediately if a human has been attacked or bitten by wildlife. Note: Current policy is for any wildlife that attack humans to be destroyed; only in special circumstances would wildlife not be destroyed. If no further injury or human life is in danger contact the Conservation Officer to report and for further instructions. Also, call a Wildlife Deterrent Specialist, Regional Biologist, or Wildlife Manager for information and advice on measures which should be taken to minimize wildlife-human conflict.	AEM commits to contact the nearest Conservation Officer in the event of problem wildlife or if an animal is accidentally injured or killed on the road. Issues of human - wildlife conflicts will also be referred to a Conservation Officer for advice and/or assistance.

Mitigation Measures recommended by Reviewers	AEM Response
Aircraft activities have been shown to affect wildlife development and reproductive success as well as subject the wildlife to adverse weather conditions and accidental damage or injury. However, by raising flight altitudes, studies have shown that it will alleviate some of the negative effects. Therefore, the DoE recommends that the following protection measures are taken to reduce aircraft disturbance on wildlife. Unless there is a specific requirement for low level flights, aircraft activities should maintain a minimum altitude of 610 meters above ground level in places where there are occurrences of wildlife. In areas where there are observed large concentrations of birds, flight level is restricted to 1,000 meters vertical distance and 1,500 meters horizontal distance from the birds. As a good practice, it is recommended to avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors. Proponents can use high point observation techniques using wildlife observers to scout for wildlife within 20 km (line of sight) before undertaking any airborne geophysical surveys.	After careful consideration, AEM decided to forego building the emergency airstrip and rely on helicopters instead. This is not ideal but should suffice in most instances. Fixed wing aircraft will therefore not be landing at the Meliadine site. AEM avoids low level helicopter flights wherever possible. The only exception is when slinging drills or other loads. In these instances, the helicopter has to fly at a low elevation for safety reasons. This largely occurs in the vicinity of the gold deposits where drilling is ongoing.

Mitigation Measures recommended by Reviewers	AEM Response
Fisheries and Oceans Canada	
To reduce potential impacts to fish and fish habitat DFO is recommending the following mitigation measures be included into your plans: • To protect fish spawning and nursery periods of local fish population, no in-water work should take place from May 1 to July 15. • Sediment and erosion control measures should be implemented prior to work and maintained during the work phase, to prevent entry of sediment into the water or the movement of re-suspended sediment into the river. • Sediment and erosion control measures should be left in place until all disturbed areas have been stabilized. • All disturbed areas should be stabilized and re-vegetated as required upon completion of the work. • Machinery is to arrive on site in a clean condition and is to be maintained free of fluid leaks. • Wash, refuel and serve machinery and store fuel and other materials for the machinery away from the water to prevent deleterious substances from entering the water. • An emergency spill kit should be kept on site in case of fluid leaks or spills from machinery.	AEM commits to following the guidelines specified by Fisheries and Oceans Canada. As well, AEM sent a confirmation letter dates December 23, 2010 to Fisheries and Oceans Canada stating the Operational Statements applicable to constructing and operating the road would be followed. A signed copy of this letter is included in Appendix 3 of the Project Description for the All-Weather Road. (page 66)
Environment Canada	
The proponent shall not deposit, nor permit the deposit of chemicals, sediment, wastes, or fuels associated with the project into any water body. All construction materials; gravel fill, bridge components, and miscellaneous tools as well as debris and sediment shall be located a minimum of 30 m from the high water mark of, and such they do not enter any water body.	AEM will exercise care when working around water to prevent deleterious substances from entering water. The building of the road is proposed for the winter of 2011 - 2012 and any materials found on the ice will be removed directly.

Mitigation Measures recommended by Reviewers	AEM Response
EC recommends that an undisturbed buffer zone of at least 100 m be maintained between any quarrying that may occur and the normal high water mark of any water body and should only take place 1 metre above the summer or high groundwater table. The proponent shall not deposit not permit the deposit of sediment into any water body and appropriate erosion control measures will be implemented, as required, down gradient of any quarry activities.	Quarries are to be located on high ground wherever possible. However, some will be within 100 m of a water body. This cannot be avoided due to the prevalence of water bodies in the area north of Rankin Inlet. Erosion control measures will be employed to ensure no sediment enters down gradient water bodies.
Stream bank disturbances must be minimized and all disturbed areas stabilized upon completion of the project	AEM commits minimizing stream bank disturbances and stabilizing disturbed areas upon completion of building the road. This would occur in the spring -summer of 2012.
Equipment which will be working in-stream or fording the stream shall be clean and inspected for leaks prior to entering the stream channel.	AEM commits to ensures all equipment fording a stream shall be clean and inspected for leaks beforehand.
Abutment construction materials shall be clean and contaminant free; rock/construction materials are not to be gathered from below the high water mark of any water course.	AEM commits to using clean and contaminate free materials for abutments. The materials for the abutments will be extracted from planned quarries.
EC recommends that an Abandonment and Reclamation Plan be prepared for the road. This Plan should communicate the proponent's reclamation objectives and procedures for the area affected by the road and through excavation activities.	AEM will add the reclamation of the road in its A&R Plan for the Meliadine site. The reclamation objectives and procedures will be included for the road and quarries.

Mitigation Measures recommended by Reviewers	AEM Response
Environment Canada: Wildlife and Species at Risk Agnico-Eagle is proposing to build an emergency airstrip between June-August 2011.	After careful consideration, AEM decided to forego building the emergency airstrip and rely on helicopters instead. The road is proposed to be built over the winter of 2011 - 2012, this being outside of the migratory bird nesting season. A monitoring program for wildlife along the road will be developed as part of the road management plan.
EC recommends that food, domestic wastes, and petroleum based chemicals (e.g. Greases, gasoline, glycol-based antifreeze) be made inaccessible to wildlife at all times.	AEM commits to making food, domestic waste and petroleum based chemicals inaccessible to wildlife at all times.

Mitigation Measures recommended by Reviewers	AEM Response
For any Species at Risk that could be encountered or affected by the project, the proponent should note any potential adverse effects of the project to the species, it habitat and/or its residence. All direct, indirect, and cumulative effects should be considered. Monitoring should be undertaken by the proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required.	AEM commits to avoiding any potential adverse effects on any species at risk. Monitoring of peregrine falcons & other species at risk when encountered will be included in the wildlife monitoring program, and at a minimum will include the recording of locations and dates, behaviour or actions of the animal interacting with the Project, and actions taken to avoid contact or disturbance to the species, habitat and/or its residence. Wildlife experts in government and private companies will be consulted when developing mitigation measures. The results of each year's monitoring will be included in an annual report.

Part 2

Information Requests

AEM Reference Number	Information Request made by:	Information Request	AEM's response starts on page:
1	INAC	The Proposal has very little information or analysis to support the proponent's statement that winter roads could not adequately support the 2012 and 2013 underground exploration and bulk-sampling planned by the proponent. INAC suggests that this conclusion would need to be supported by information and analysis of the proponent's needs, the current preferred approach (i.e., an all-weather road) and the available alternatives, including a comparison of the impacts of each option. It is only after such analysis is complete that the need for this project can be understood. This is particularly important in view of this project's obvious links to the proponent's longer-term plans for potential mine development.	1
1	GN	In 2007-2008 the former proponent for this site, Comaplex, utilized a winter road to conduct the same exploration activities. It is therefore unclear to DoE why the current proponent finds it necessary to construct an all-weather, permanent road.	1
2	INAC	*Single-Span Bridges* The proponent has not identified the load capacity of the bridges. INAC requests that the proponent identify the proposed load capacity, anticipated loads, vehicle types and other relevant information.	3
3	INAC	*Road Width* While the alternatives assessment discusses the possibility of the road being 20m wide to accommodate power transmission to the potential future mine site, the proponent does not clearly identify the proposed width of the road. The unnumbered table on p. 13 only identifies the minimum width of the road. The proponent should identify a proposed width, and clarify whether transmission lines from Rankin Inlet to the Meliadine site are part of the current proposal, and identify whether the proposed width is designed to account for the 2012-2013 time horizon, or for future needs, including an electrical transmission system.	4
4	INAC	*Emergency Airstrip* The purpose and planned use of the airstrip should be clearly identified by the proponent. The Proposal does not provide information on frequency of flights or details of the planned usage of the "emergency airstrip". Additionally, the document includes discussion of activities that are clearly not "emergency" in nature. If the proponent plans non-emergency uses, the term "emergency airstrip" should be avoided.	5
5	INAC	*Permafrost* The discussion of impacts to permafrost from rock quarries is limited to a statement that impacts will be different from in granular-material quarries. The proponent should include a proper analysis of the potential impacts.	6
6	INAC	*Terrain* The proponent concludes that "there will be no impact on the terrain from...the road", but there is no discussion or rationale to support or explain this. The proponent should include a proper analysis of the potential impacts.	8

AEM Reference Number	Information Request made by:	Information Request	AEM's response starts on page:
7	INAC	*Potential for Acid Generation/Metal Leaching* INAC identified the following deficiencies in relation to acid generation and metal leaching, and requests that NIRB solicit the missing information or required clarifications from the proponent: i) It is not clear that the assessment of metal leaching is adequate. It appears that the proponent dismisses leach test results obtained through static testing that indicate exceedances of "Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life" as not necessarily reflecting what will actually happen in operation. No field tests are available at this time and it the Proponent appears to suggest that water quality monitoring at the Primary Containment Area can be used to estimate future results. The Proponent does not explain or substantiate of the adequacy of this or explain and how the use of this proxy may affect the certainty of the results. The Proposal states that the proponent will have a better understanding of the potential for metal leaching after future data collection. As a result, INAC is not certain whether the proponent believes that its current understanding of the potential for metal leaching is sufficient for the purposes of impact assessment. If the proponent believes that its current understanding is sufficient at this stage, the proponent should explain and substantiate this conclusion. ii) The Primary Containment Area (PCA) is not described. INAC presumes that the proponent is referring to the containment area associated with the proponent's proposed underground exploration program, however as this is a separate NIRB process, it would be helpful if the proponent clarified what the PCA refers to, especially as it appears to be a crucial element of this section of the Proposal. iii) The proponent states that "Monitoring of the PCA and various water bodies in the immediate vicinity of the PCA will continue in 2011." However the proponent does not identify these water bodies, or state the methodology by which they were or will be selected. The proponent has also not provided a monitoring plan.	10
8	INAC	*Water Quality* The proponent states that they will undertake post-project water monitoring. This statement should be elaborated upon with a description of the nature, duration, and plans for water monitoring, and an explanation of the appropriateness of the planned approach.	17
8	KIA	It states that the ephemeral streams have had limited sampling for water quality. This work needs to be completed before the road is constructed.	17
9	The row was left blank intentionally		
10	The row was left blank intentionally		

AEM Reference Number	Information Request made by:	Information Request	AEM's response starts on page:
11	INAC	*Use of the Road* The proponent anticipates public use of the road. As the Government of Nunavut has legislative authority over public highways, the proponent should indicate what steps it has taken or plans to take in cooperation with the Government of Nunavut's transportation officials to ensure that it undertakes appropriate planning for the development, operation and maintenance of a public highway. For example, design, construction and maintenance standards, traffic management, emergency response, snow clearing and the management of hazards, policing, and by-law and other regulatory enforcement must all be taken into account.	19
12	INAC	*Use of the Road* The Proposal discusses many potential mitigation measures such as a southern gate and potential closing of the road for safety reasons. While it is useful to have an understanding of possible mitigation measures, it is essential that the proponent make clear which of the potential mitigation measures it intends to put into place.	20
13	INAC	*Use of the Road* The document does not describe or analyze the potential for accidents or malfunctions of — or in relation to use of — the road. While the safety of all users of the road is important, this issue is particularly important in view of the proponent's expectation that the general public will not be restricted from using the road. Unrestricted use–mixing mining/industrial users and the general public–may have implications for the likelihood and consequences of an accident or malfunction, and should be accounted for in both planning and assessment. Therefore, the proponent should provide a thorough analysis of the potential for accidents and malfunctions, including identifying potential consequences and conceptual plans for avoidance of accidents and malfunctions, and for response should they occur.	22
14	INAC	*Public Consultation* The proponent's descriptions of consultation sessions do not include any sessions that were open to the general public. The proponent should indicate whether it held any open sessions, describe any such sessions highlighting any concerns raised, and the results, conclusions or follow-up to these sessions.	25
15	INAC	*Residual and Cumulative Effects* The proponent discusses cumulative effects of its project in combination with other mine development activity, but not in combination with any other types of activity. The proponent should broaden its analysis of cumulative effects to take into account other activities, including exploration activities and activities unrelated to the minerals sector.	27

AEM Reference Number	Information Request made by:	Information Request	AEM's response starts on page:
16	INAC	*Reclamation* INAC presumes the proponent's desired participation in the operation and maintenance in the road is limited to the period in which it requires use of the road for its commercial purposes, others, including the Government of Nunavut, the Hamlet of Rankin Inlet, and the Kivalliq Inuit Association may have interests that will survive the proponent's needs. The Proposal should identify likely scenarios for operation and maintenance of the road both during and after its period of usefulness to the Proponent, and assess those scenarios, including the possibility of a need to decommission and reclaim the road should there be no subsequent operator. More specifically, this section describes that 'the road as designed will eventually be part of the Manitoba-Nunavut road to Chesterfield Inlet. As such, the larger part of the road – approximately 17 kilometres would not be reclaimed, and responsibility for it would be assumed by the Government of Nunavut upon closing of the Meliadine site. Given that the 'Manitoba-Nunavut' road is not currently in the Nunavut Environmental Assessment processes, and given that the all-weather road is being constructed to support activities related to the bulk sample program which will end in 2013, the proponent should address reclamation of the 17 km of the proposed all-weather road by way of their reclamation plan, or provide evidence that the Government of Nunavut or the responsible Inuit Organization will assume responsibility for the 17 km of the all-weather road upon closing of the Meliadine site, whether or not the 'Manitoba-Nunavut' road is a reality.	29
17	The row was left blank intentionally		
18	KIA	KIA has always been supportive of a good environmental review taking into account all social aspects of such projects. In the case of AEM, particularly in regard to socio-economic aspects, the KIA has not yet received a response from the proponent...KIA has completed a technical report of the project to be sent to NIRB but the technical report is missing the socio-economic component due to the lack of information from AEM regarding contracts and Inuit employment...	31
19	KIA	The proponent will ensure that the monitoring and management plans submitted include actual details on how ground ice encountered in the proposed granular material pits/quarries will be dealt with.	33
20	KIA	The proponent needs to provide monitoring and management plans for dealing with any issues related to metal leaching potential of the road construction materials, particularly for arsenic and copper which are twice accepted concentration levels in currently available test results.	34
21	KIA	The proponent needs to provide some detail on the use in the road design of the historical and current snowpack data for the immediate area of the Meliadine Project site. This should include a map showing the potential areas of snow build-up. This information will be used for development of monitoring and management plans for dealing with the impacts of snow build-up on the road.	38

AEM Reference Number	Information Request made by:	Information Request	AEM's response starts on page:
22	KIA	The proponent should include descriptions of experience gained with operating the Meadowbank Gold Mine road and how they will be incorporate this into the Meliadine road construction and maintenance programs. In particular the design and maintenance of culverts needs to make use of the information to prevent snow blockages, overflows and washouts at stream crossings.	39
23	KIA	The hydraulic analysis of the Meliadine River bridge crossing should also determine the impact of peak high tides and ice bridging downstream of the bridge during the annual freshette.	42
24	KIA	The proponent will ensure the road design will be "caribou friendly". The design parameters should use the proponents experience with the building and operating the Meadowbank Gold Mine road, as well as, the mining industry's experience building roads in areas such as at the Ekati and Diavik Diamond Mines.	44
25	The row was left blank intentionally		
26	EC	EC noted that a limited number of samples were taken per quarry/borrow site (i.e., on average, 3 samples per site) to determine the respective metal leaching and acid rock drainage potential. EC would like confirmation from the proponent that additional sampling and visual examinations of quarried material will be undertaken during excavation to confirm quarry/borrow materials are suitable for road construction. To that end, EC recommends AEM indoctrinate this practise in their quality control procedures to ensure mineralized or altered materials are not incorporated in the road.	45
27	EC	EC noted that all test borrow sources were found to be relatively low in sulphur (less than 2% S). The problem with this material is that it is low to negligible carbonate neutralizing potential and relies on the "secondary" minerals. Considering the foregoing, EC recommends the proponent ensure the surface topping meets the highest possible quality.	47
28	The row was left blank intentionally		
29	GN	A term of authorization of 18 years has been requested for the proposed exploration. That time frame appears rather lengthy for an exploration project at this stage, especially given the prominence of investor confidence as a reason for advancing this project. The application also makes reference to a future mine site, power lines, power plants, tank farms and other infrastructure. There are suggestions in the application, of a mine and associated infrastructure. This appears to contradict the proposal's assertion that the purpose of this project is to contribute to exploration activities. This leads DoE to believe that this proposal is not for a standalone project, but will contribute to a larger one.	48
30		Furthermore, it is implied that this road will be a key feature in future community infrastructure. The inconsistency of the current application with the activities of the former owner/operator, Comaplex, the proposal's suggestion of the development of a mine, the questions surrounding the term of authorization for this proposal, and the potentially far-reaching ecosystemic and socioeconomic impacts all imply that the scale of this project may be far beyond that expressed in the proposal.	48

AEM Reference Number	Information Request made by:	Information Request	AEM's response starts on page:
31	GN DoE	Based on the above, DoE believes the scale of this proposed project requires further and in-depth review of the anticipated effects on the ecosystemic and socioeconomic impacts. Consequently, we recommend the proposal be subject to 12.4.4(c) of the NLCA. In consideration for the long term implications of this project, the proposal provides insufficient information for DoE to contribute extensive comments.	48
32	GN DoE	A permanent road may have long term implications for wildlife habitat in the region. The proponent is proposing to remove an estimated two million cubic meters of rock and two million cubic meters of granular material from various sources to build the road and right-of-way. The source point of the material and the associated topographic features (eskers, moraines) can never be restored and would otherwise be used by wildlife as habitat for dens, nests, burrows, insect, and predator avoidance. These aggregate sources are not all within the immediate vicinity of the proposed road and right-of-way, which may necessitate tertiary access roads, the impacts of which have not been explored. The construction of the road will damage the vegetation and at least alter the local hydrology, which can affect habitat quality. The proponent has identified the use of local eskers for various uses. Topographic features like eskers are used by wildlife as habitat for dens, nests, burrows, insect, and predator avoidance. These eskers are finite in number and the proponent should limit their use for their activities in an effort to preserve wildlife habitat.	50
33	GN DoE	Sampling of aggregate sources suggests a large percentage (47%) of the tested potential quarries may have significant concentrations of metals like aluminum, copper, and zinc. Therefore, road materials have the potential for metal-leaching, which may have long term systemic effects on the quality of wildlife habitat in the area. It is unlikely that the permanent road would ever be restored to pristine conditions. In fact, doing so may further contribute to habitat destruction. The cumulative impacts associated with long term development may also further contribute to the degradation of wildlife habitat quality.	52
34	GN DoE	The project proposal does not provide a clear indication on the intensity of the road usage by community members. There are significant implications on how the road and right-of-way will contribute to future developments (e.g., power plant, tank farm, power lines) that have long term systemic impacts.	53
35	GN DoE	We are aware that there is a great deal of public support for this project. The concerns being expressed are in reference to scale of this project and its potential contribution to multiple large scale developments. Another concern is with respect to the Iqalugaarjuup Nunanga Territorial Park Master Plan. The Plan is an agreement among Inuit, the community and Government about the management of the Park. The Plan explicitly states the concerns of local people regarding vehicle noise in the vicinity of the Park and its impacts on both wildlife and on the enjoyment of the Park. These are enforceable under 11.(1)(c)(ii) and (iii) of the *Territorial Parks Act* .	55
36	GN DoE	The proposal does not indicate the use of new technologies, but the projects implied in the proposal do indicate the use of new technologies in relation to the potential leaching of metals.	56

AEM Reference Number	Information Request made by:	Information Request	AEM's response starts on page:
37	This row was left blank intentionally		
38	GN ED&T	The Department of Economic Development & Transportation requires clarification on a couple of items found in the proponent's application. First, in the NIRB Part 1 Form, the dates of operation for the road are listed as from 2012 to 2026. It is our understanding that this road is being proposed for the 2011-2014 underground exploration and bulk sample project. The Department therefore requests that the proponent provide clarification on the dates of road operation. It is our expectation that the road would be decommissioned at the end of the 2011-2014 project unless required for additional project activities.	57
39	GN CLEY	We appreciate that AEM hired an archaeological consultant for the 2010 season. The consultant's report submitted to CLEY came to us limited in its reporting to the All-Weather Road. In contrast, the proponent's submission for the current NIRB 11RN017 indicates more potential disturbance than the subject All-Weather road. These additional areas, including emergency airstrip, power lines and areas not covered by the 2010 field assessment. Our recommendation is that there must be more advanced planning on the part of AEM in respect to heritage resources. The clarification our department seeks is for detailed information for all land areas surveyed by the archaeologist, both for the All-Weather road and previous year for file 10EA018, all in relation to developed, planned and activities currently in place. The activities of Aim and their effects on valued economic components, all need to be assessed fully and in respect to the company's explicated stated applications to both NIRB as well as CLEY's permit process.	58
40	The row was left blank intentionally		
41	KIA	It states that the VEC of predatory animals would not be included here as there is a low probability that these would be affected by the road. However, any road development will have the potential for vehicle-caribou collisions causing caribou mortality. This could cause an increase in predatory animals, in particular wolves. Therefore, the collection of data on wolves should be included as part of the baseline study of the road.	60

AEM Reference: Information Request # 1

Made By: **Indian and Northern Affairs Canada**
Government of Nunavut, Department of the Environment

The Proposal has very little information or analysis to support the proponent's statement that winter roads could not adequately support the 2012 and 2013 underground exploration and bulk-sampling planned by the proponent.

INAC suggests that this conclusion would need to be supported by information and analysis of the proponent's needs, the current preferred approach (i.e., an all-weather road) and the available alternatives, including a comparison of the impacts of each option. It is only after such analysis is complete that the need for this project can be understood. This is particularly important in view of this project's obvious links to the proponent's longer-term plans for potential mine development.

In 2007-2008 the former proponent for this site, Comaplex, utilized a winter road to conduct the same exploration activities. It is therefore unclear to DoE why the current proponent finds it necessary to construct an all-weather, permanent road.

AEM's Response to Information request:

The Meliadine exploration program, which will take place from 2011 to 2013, has two major components:

1) an underground exploration and bulk sampling program to better define the geological and processing characteristics of the ore; and
2) a surface drilling program to delineate resources and reserves. To achieve its objectives, this component will run year round.

These two components will provide essential information for the Meliadine Gold Mine project[1]. So far this year, only surface drilling has started.

Presently AEM is reliant on a winter road to resupply the Meliadine site with fuel and other supplies. For 2011, approximately half of the loads delivered over the winter road were fuel. With the winter road now closed for the year, a total of 2.5 million litres of diesel and 250,000 of Jet A were delivered. Total fuel storage capacity at the site is 1.8 million litres. Even with this storage capacity and based on estimated fuel consumption, AEM was concerned that the site may run short of fuel before the winter road re-opens in 2012. These concerns have since been confirmed by measuring the actual fuel

[1] The Project Description for the mine was submitted to the Nunavut Planning Commission and the Nunavut Impact Review Board in April 2011.

consumption of the drills and the camp. Without a road link to the site, 1.8 million litres of fuel will have to be delivered by helicopter to continue activities from September 2011 to January 2012, this being a time when the winter road is not available.

For 2012 and 2013, fuel requirements for the underground program, continued surface exploration drilling and camp operations are expected to grow to approximately 9 million litres each year. Not enough fuel storage exists on site to hold this quantity of fuel nor can it be delivered over the winter road[2].

AEM explored the alternative of building additional fuel storage at site but it suffered from several drawbacks. Additional on-site fuel storage could be built for short-term use but would need to be reclaimed at the end of the underground[3]. Additionally, six new fuel-storage tanks were recently added to the Rankin Inlet tank farm, with a cumulative storage capacity of 16,308,000 litres, effectively doubling that storage capacity. This exceeds the current fuel usage requirements for Rankin Inlet, and has allowed AEM to rent storage space in the new tanks.

In the end it was concluded that the feasibility of the underground exploration and bulk sample program in 2012 – 2013 was in doubt without year-round fuel delivery from that stored in Rankin Inlet. This is only possible with an all-weather road and why AEM applied to amend its water licence for the same.

[2] An average of 80,000 litres a day can be delivered to the Meliadine site from Rankin Inlet over the winter road given the number of reliable vehicles found in Rankin Inlet that can deliver fuel to the site.
[3] Any new tanks may not be usable in a future mine scenario since the final location of the infrastructure will only be known following the completion the feasibility study.

Information Request # 2

Made By: Indian and Northern Affairs Canada

Single-Span Bridges

The proponent has not identified the load capacity of the bridges. INAC requests that the proponent identify the proposed load capacity, anticipated loads, vehicle types and other relevant information.

AEM's Response to Information Request:

The bridges design for the three (3) bridges to be installed on the All-Weather Road is based on Canadian Highway Code where the design is CSA, S6-06, CL-625. For design stress loads of two 18m long vehicles of GVW (gross vehicle weight) of 62,500 kg are considered travelling simultaneously on a bridge. The loading is factored by 40% dynamic allowance and another 60% safety factor. The ultimate capacity is around 280,000 kg.

Vehicles that will use the road will include but not be limited to pick-up trucks, ATVs, skidoos, cube vans, buses, fuel trucks, tractor trailers, snow plows and graders.

AEM Reference: Information Request # 3

Made By: Indian and Northern Affairs Canada

While the alternatives assessment discusses the possibility of the road being 20m wide to accommodate power transmission to the potential future mine site, the proponent does not clearly identify the proposed width of the road. The unnumbered table on p. 13 only identifies the minimum width of the road. The proponent should identify a proposed width, and clarify whether transmission lines from Rankin Inlet to the Meliadine site are part of the current proposal, and identify whether the proposed width is designed to account for the 2012-2013 time horizon, or for future needs, including an electrical transmission system.

AEM's Response to Information Request:

The road will be 8.0 metres wide for use for the advanced exploration activities that are planned for the period 2012 – 2013. Should the underground exploration and bulk sample be successful and a mine subsequently be developed, the width of the road will not change. Continued use of the road for that purpose will be the subject of environmental assessment review of the full mine project.

It is within the context of the environmental assessment of the mine that the alternative of a power line between Rankin Inlet and the Meliadine site will be addressed. There is no power line from Rankin Inlet contemplated for the underground exploration and bulk sample program which is the object of the current proposal.

Information Request # 4

Made by: Indian and Northern Affairs Canada

Emergency Airstrip

The purpose and planned use of the airstrip should be clearly identified by the proponent. The Proposal does not provide information on frequency of flights or details of the planned usage of the "emergency airstrip". Additionally, the document includes discussion of activities that are clearly not "emergency" in nature. If the proponent plans non-emergency uses, the term "emergency airstrip" should be avoided.

AEM's Response to Information Request:

After careful consideration, AEM has decided not to build the emergency airstrip. An airstrip would have been ideal for safety purposes but it is felt that helicopters will suffice until the road is completed.

AEM Reference: Information Request #5

Made By: Indian and Northern Affairs Canada

Section 3.2 Physical Environment

(a) Permafrost

The discussion of impacts to permafrost from rock quarries is limited to a statement that impacts will be different from in granular-material quarries. The proponent should include a proper analysis of the potential impacts.

AEM's Response to Comment:

The discussion in the Project Description report (AEM 2010)[4] states the following with respect to impact and mitigation of permafrost in granular material quarries and rock quarries:

"*Granular construction material is to come largely from glaciofluvial deposits and weathered bedrock deposits located in well-drained areas. The removal of granular material causes a shift in the active layer of earth. These types of granular deposits have been selected because they are largely free of ground ice, thereby minimizing possible thaw settlement. The melting of ground ice can result in erosion, slumping of side slopes and an altered landscape that extends beyond the quarry. Should this happen, the area will be monitored and if necessary, stabilized, by covering the affected land with 1.0 to 1.5 metres of waste rock or other granular material. This mitigation effort will allow the permafrost to move up into the material covering the area, and stop any remaining ground ice from melting.*

Rock quarries will also cause a change in the active layer of earth, but without the same consequences that are possible in granular-material quarries."

The potential impacts to permafrost in the rock quarries will be similar to those for granular material quarries. The permafrost active layer, which is the thin (typically 1.5 m to 2 m deep) surface layer within permafrost terrain that experiences annual freeze and thaw, will migrate downward over time into the base of the quarries until equilibrium is re- established. The depth to which the active layer will develop in the quarry bases will depend to a large degree on whether the quarries remain drained (dry) or become flooded, but may be on the order of 1.5 m to potentially several metres. Since the rock quarries are expected to be relatively shallow localized excavations into bedrock, the ground stability challenges associated with permafrost degradation in soils, such as thaw settlement, slumping of side slopes, and erosion, are not anticipated. Nevertheless, the exposed rock will be subjected to annual freeze thaw cycles, and some spalling or loosening of rock material should be expected. The degree to which this

[4] AEM 2010, Agnico-Eagle Mines Ltd. "Project Description All Weather Road in Support of the Underground Program", January 2011.

will occur will depend largely on the rock type, rock mass quality, and structure within the individual quarries. Since the rock between Meliadine and Rankin Inlet is generally strong, annual freeze-thaw is not expected to pose significant operational challenges within the quarries. Any loosening of materials can be mitigated by operational efforts, such as machine scaling of loose materials.

AEM Reference: Information Request #6

Made By: Indian and Northern Affairs Canada

Section 3.2 Physical Environment
(b) Terrain
The proponent concludes that "there will be no impact on the terrain from...the road", but there is no discussion or rationale to support or explain this. The proponent should include a proper analysis of the potential impacts.

AEM's Response to Information Request:

Terrain was considered in the feasibility level design of the road alignment (Golder 2011)[5]. The road will be constructed by placing granular or rock material directly onto frozen ground, primarily during the winter months. Disturbance to the terrain will be minimized during construction, operation and reclamation where possible by implementing construction methods (e.g., winter construction to the extent practicable) and maintenance procedures that consider the final landform and environmental permitting criteria.

The potential impacts on the physical terrain due to the construction, operation, and reclamation of the road will include processes associated with permafrost degradation that are common to construction practices in the north, and which may include thaw-induced settlement. Typically, thaw-induced settlement can be associated with construction across poorly drained, ice-rich soils. This will be mitigated by appropriate road design, the use of appropriate construction materials, and the use of appropriate construction practices. The construction methods and trafficking on road construction materials may initially result in some degree of permafrost degradation along the road alignment until a sufficient thickness of road cross section is developed to insulate the underlying permafrost. The road thickness is designed so that once the road has been completed, permafrost will aggrade, or rise, back into the road fill materials so that the permafrost active layer (the layer of annual freeze and thaw) will be maintained within the coarse, free draining road base materials. This will limit the degree to which thaw-induced settlement may occur. Furthermore, the road alignment has been selected to avoid, where possible, the placement of fill materials across areas of poorly drained thaw-susceptible soils. Therefore, it is anticipated that the majority of potential terrain impacts on the surficial soils and bedrock along the access road route will occur at the quarries, culverts locations and bridge crossings.

The road construction will require granular soil and coarse rock materials for construction. These materials will be quarried from a series of locations along the proposed route. Impact and mitigation

[5] Golder 2011, Golder Associates Ltd., Report on All Weather Access Road Meliadine Gold Project Feasibility Level Design, Golder Document Number 085 Ver. 0 Rev. 1, January 20, 2011.

strategies for these quarries are discussed in responses to Information Requests #5 and #19. The primary impact will be re-equilibration of the permafrost active layer in the local areas of the quarries. The presence of ground ice in the soil quarries could potentially result in thaw-settlement, and thaw-induced displacements. However, the soil quarries will be sited to avoid fine grained materials which are unsuitable for construction purposes, and so will minimize the potential for such occurrences. The presence of ground ice in the rock materials of the rock quarries is not anticipated; however, annual freeze-thaw processes (physical weathering) of the rock may occur but will not pose operational challenges for the quarries.

At closure, the road will be scarified, allowing the native plant community to establish itself on the (former) road surface. Progressive reclamation of the quarries will lead to plants re-establishing themselves on disturbed areas. The quarries will be closed where possible with gently sloping walls and positive drainage. Loose rock will be pulled to the floors of the quarries and the entrances blocked with large boulders. The Rock quarries will remain open and may fill with water should they not have positive drainage. It is planned to develop rock quarries in non-acid generating materials, and so water quality within the end-use rock quarries is not anticipated to be problematic.

AEM Reference: Information Request #7

Comment made by Interested Party: Indian and Northern Affairs Canada

Potential for Acid Generation/Metal Leaching
INAC identified the following deficiencies in relation to acid generation and metal leaching, and requests that NIRB solicit the missing information or required clarifications from the proponent:

i) It is not clear that the assessment of metal leaching is adequate. It appears that the proponent dismisses leach test results obtained through static testing that indicate exceedances of "Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life" as not necessarily reflecting what will actually happen in operation. No field tests are available at this time and it the Proponent appears to suggest that water quality monitoring at the Primary Containment Area can be used to estimate future results. The Proponent does not explain or substantiate of the adequacy of this or explain and how the use of this proxy may affect the certainty of the results. The Proposal states that the proponent will have a better understanding of the potential for metal leaching after future data collection. As a result, INAC is not certain whether the proponent believes that its current understanding of the potential for metal leaching is sufficient for the purposes of impact assessment. If the proponent believes that its current understanding is sufficient at this stage, the proponent should explain and substantiate this conclusion.

ii) The Primary Containment Area (PCA) is not described. INAC presumes that the proponent is referring to the containment area associated with the proponent's proposed underground exploration program, however as this is a separate NIRB process, it would be helpful if the proponent clarified what the PCA refers to, especially as it appears to be a crucial element of this section of the Proposal.

The proponent states that "Monitoring of the PCA and various water bodies in the immediate vicinity of the PCA will continue in 2011." However the proponent does not identify these water bodies, or state the methodology by which they were or will be selected. The proponent has also not provided a monitoring plan.

AEM's Response to Information Request:

Part i)
The evaluation of the potential of the geologic material to leach metals to the receiving environment was completed using a static (one-time) Shake Flask Extraction (SFE) test following the standard method proposed in MEND (2009). This method is meant to extract all possible releasable chemicals from the material by inducing intimate contact of water with particles in a sustained agitated environment (24

hours of agitation in water). These are substantially more aggressive conditions than those anticipated in the field, where the total surface area of exposed particles will be lower (larger field crush size) and water contact time and volumes are anticipated to be much smaller given the dry climate (average annual precipitation of about 305 mm, nearly half of which is snowfall). Therefore, the SFE test concentrations are considered representative of a maximum charge of chemicals that can be released from the geologic material. The charge is likely to be much smaller in the field given the difference in leaching conditions. In addition, the charge released from the geologic material will come from a comparatively small source area (the road) relative to the catchment area being drained. Therefore, the total chemical charge from the road exposure is expected to be low and have minimal effect on receiving water quality.

In addition to the above, and particular in relation to aluminum returning elevated concentrations in SFE leachates, the road contact water quality is expected to have substantially lower concentrations than the SFE leachate. The elevated SFE aluminum concentrations are considered to be an artefact of testing; specifically, from resuspended fine colloidal particulates passing through the laboratory filter and reporting to the leachate solution as a fully dissolved species. The SFE leachate pH should preclude these concentrations on basic chemical principles. This has been demonstrated by geochemical modelling on similar SFE solutions from mine waste rock where aluminum concentrations were found to be significantly lower in the aqueous solution under geochemical equilibrium conditions where aluminum oxide is allowed to precipitate. This discrepancy is frequently encountered and well documented (Nordstrom, 2009; Thorbjornsen and Myers, 2007). Additional SFE and testing planned for quarry and borrow source materials will utilize a finer filter.

Owing to potential discrepancies between SFE test results and actual conditions, AEM used available historic water quality data and geochemical data from the Primary Containment Area (PCA) as an analogue for estimating the likely effects of chemical loading to receiving water bodies along the road alignment. The rockfill pads located adjacent to the PCA are constructed of similar rock (see Part ii response below) that has been exposed to precipitation and runoff for an extended period of time, and as such, the PCA water quality and geochemical data are considered to be representative of potential leaching conditions along the access road. The use of an analogue is accepted best practise in geochemical characterization and site verification. It is worth noting that similar or higher CCME exceedances in SFE tests of waste rock from the pads have not translated into elevated metal concentrations in nearby receiving water bodies based on the available water quality data sampling data.

Part ii)

In 2007 – 2008, the previous owner of the Meliadine Gold Project carried out an initial underground exploration and bulk sample program up to a depth of 120 metres below surface. This resulted in the following quantities of material being brought to surface:

	tonnes	cubic meters	*SG
Overburden Portal	25,890	12,945	2
Waste Rock Portal	17,609	6,289	2.8
Waste Rock Decline	82,328	29,403	2.8
Ore	25,521	8,710	2.93
Total Waste Rock & Ore	125,458	44,402	

* - SG - specific gravity

The waste rock brought to surface in 2007 - 2008 was used to build 1.5 to 2 metre thick pads surrounding the PCA, and to improve roads.

Plate 1 shows the Primary Containment Area, its drainage basin and the direction of water flow. The area of the drainage basin is 14.2 hectares. The average yield is approximately 100 mm resulting in an estimated annual runoff volume of 14,400 m^3 per year. Ice can be seen in Plate 1 against the operations pad and the road between the two pads. The pads are sloped to drain into the PCA. The rock type used in building the pads and the roads is a greywacke/siltstone. This material, along with other types of waste rock, underwent static (geochemical) testing by Golder Associates.

The greywacke/siltstone is presently the only waste rock exposed to the local environment and it serves as a field test of the quality of leachate that can be expected from this type of rock. Golder[6] in its static test report speaks to the variability of the leachate from static tests of greywacke/siltstone, with that on surface having lower leached metals than the same rock elsewhere. However, Golder indicated in its geochemistry report, "*Short term leach test results do not necessarily imply non compliance of mine waste rock contact water quality, but rather, underline the propensity of the waste rock to release arsenic and some aluminum at concentrations that warrant mine waste management planning to minimize potential negative environmental effects*". The presence of the waste rock on the surface and the cautionary note in Golder's geochemistry report resulted in AEM comparing the trace metals

[6] Golder Associates, *Static Test Results For Waste Rock And Tailings, Meliadine Gold Project, Nunavut, Canada*, May 2010

measured in the leachate from static testing to the water quality measured in the PCA and water bodies downstream.

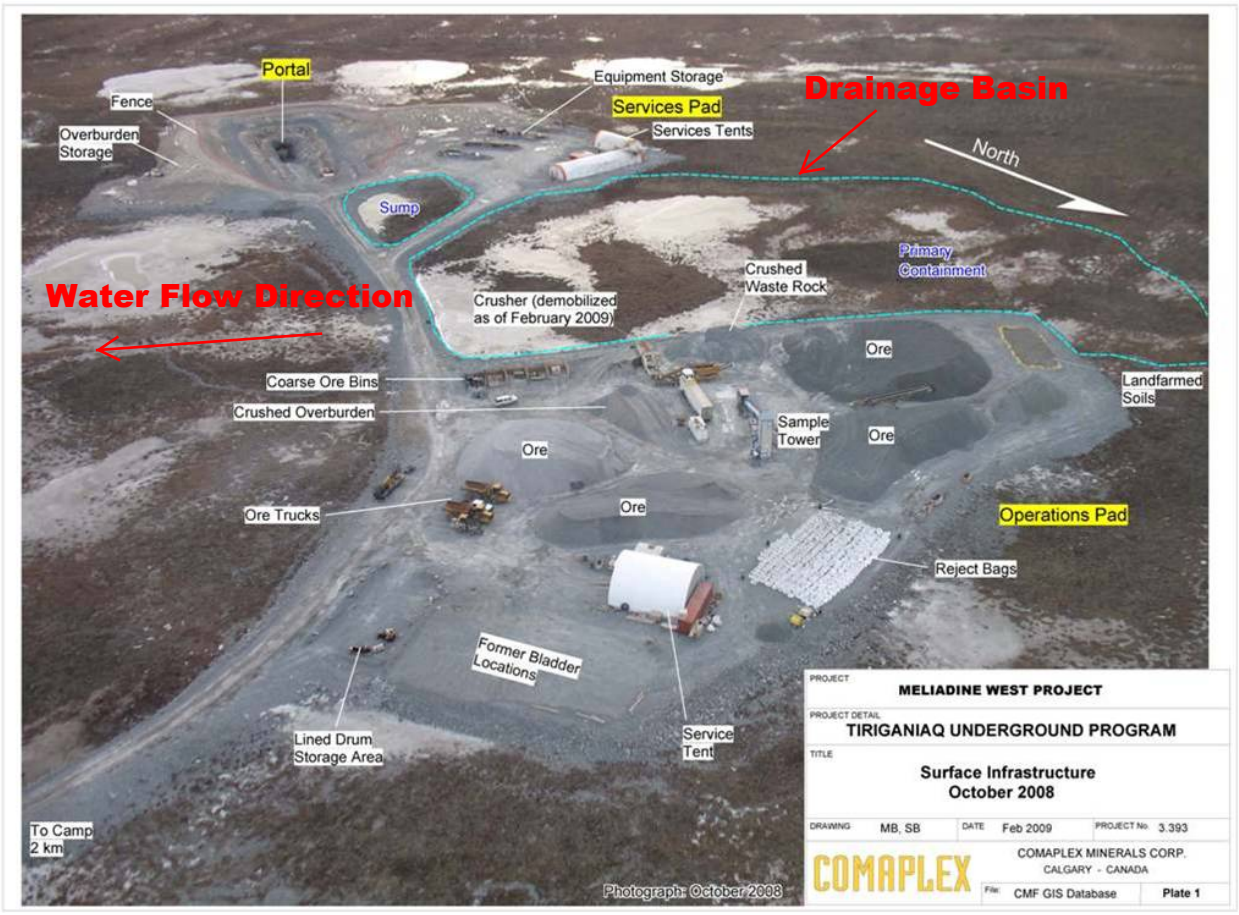

Figure 1 shows the water sampling location in the PCA and water bodies that are monitored downstream. The direction of flow from the PCA is into Lake A54 followed by Lakes A38 and A8, all of which are monitored. A parallel path from Lake A15, Lake A13, Lake A9 to Lake 8 is also sampled but receives no water from the PCA or the pads.

Figure 2 shows all sampling locations for the Meliadine Gold Project that are monitored monthly from June to October. Water samples are monitored for major ions, nutrients, trace metals, and field parameters – pH and temperature. Additionally, samples collected around the Meliadine camp are also monitored for oil & grease, faecal coliforms and BOD. Some of the monitoring is mandated by AEM's Water Licence 2BB-MEL0914 while the remaining locations arise from the commercial lease AEM holds with the KIA. The analytical results from all monitoring are presented in AEM's monthly reports to the Nunavut Water Board and annual reports to the Nunavut Water Board, Kivalliq Inuit Association and Nunavut Impact Review Board.

Sampling required by Water Licence 2BB-MEL0914 is self evident. The monitoring arising from Kivalliq Inuit Association's commercial lease measures both the impact of the waste rock pads and diamond drilling on the Tiriganiaq Gold Deposit. Sampling locations B1-2 and B6-7 on Figure 2 are located in another drainage basin where the proposed Tailings Impoundment Area could be located. Data from these two locations serve as baseline.

AEM is planning to further expand its monitoring program to include the collection of baseline data at all water crossings along the proposed all-weather road followed by continued monitoring of representative sites into the future. This monitoring will serve to document the impact of the road on the surrounding aquatic environment. (See Information Request # 20 for more detailed information on the proposed monitoring plan.)

In summary, AEM is committed to two types of monitoring. The first is regulatory and baseline monitoring in the receiving environment that is currently underway. The second is intended to develop a better understanding of the geochemistry of road building materials and waste rock. Specifically, AEM is adding a number of field cells holding various types of waste rock and ore to its geochemistry program. These will be exposed to natural climatic conditions with any leachate resulting from melted snow or rain being collected and analysed for trace metals and other parameters. Finally, a large bulk sample is presently being tested in a laboratory. The results of this monitoring effort will be compiled to develop a better understanding potential for metal leaching from waste rock under natural climatic conditions. The results will serve in part to compare what is seen in static and kinetic tests to that being observed in the field, something that is being done presently in comparing the water quality in the Primary Containment Area and lakes downstream to the results of static testing.

Literature Cited

Nordstrom, 2009. *Pitfalls and Limitations of Mineral Equilibrium Assumptions for Geochemical Modeling of Water-Rock Interactions at Mine Sites*. Paper presented at Securing the Future and 8th ICARD, June 23-26, 2009, Skelleftea, Sweden.

Thorbjornsen K and Myers J. 2007. *Identifying Metals Contamination in Groundwater Using Geochemical Correlation Evaluation*. Environmental Forensics 8: 25-35.

Proposed Primary
Containment Area : 2.9 Ha
Capacity: 21,000 m3 to 67.6 m El
Contours are water depth (m)

Area draining to
Primary Containment - 14.2 Ha
Average Yield - 100 mm,
Estimated Runoff Volume - 14,400 m3

Expanded Operations Pad (Total 3.2 Ha)
Elevation 68 m (0.5 to 1.8 m thick),
sloped into containment

Proposed Waste
Rock Stockpiles (8 m)

Existing
Operations Pad

Proposed Ore
Stockpile (4 m)

Sump

Existing
Contractors
Pad

Portal

Ventilation Raise

Proposed: 5 Additional
TYPE 4 Magazines

10 Existing
TYPE 4 Magazines

Proposed
Bulk Sampling

NOTE What one sees here is all underground, it is not on surface.

Existing Underground
Workings

Proposed Underground
Workings (see Figure 3)

A37 Sub basin
Area - 121.6 Ha

Permitted
Fuel Retention
Berm and Bladders

Existing Bulk
Fuel Facility
11 x 50,000 l
Enviro Tanks

Receiving Environment
Lake A8

A58 A17 A57 A55 A56 A16 A15 A14 A13 A12 A54 A11 A10 A39 A38 A9 A37 A35

6,989,200 m N
6,988,800 m N
6,988,400 m N
539,600 m E
540,000 m E
540,400 m E
540,800 m E
541,200 m E

0 100 200 300
Meters

Scale: 1:6,000

Legend

- Stream - flow direction indicated
- Drainage Basin Boundary
- Water sampling location

PROJECT	**MELIADINE GOLD PROJECT**
PROJECT DETAIL	TIRIGANIAQ UNDERGROUND PROGRAM
TITLE	**Proposed Surface Infrastructure and Subsurface Development**
DRAWING	TM, SB
DATE	Feb 2010
PROJECT No.	3.393
	COMAPLEX MINERALS CORP. CALGARY - CANADA
File:	CMF GIS Database
	Figure 1