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 ጥቅም 10-11, 2016  
 ክብረባርቃሽ, ወደ



**Kivalliq Inuit Association**

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$Cd \rightarrow \sigma^{\pm}$

- This presentation accompanies our submission to the Nunavut Water Board on December 17, 2015
  - "R151217\_J150077\_Meliadine WL A Public Hearing Technical Submission"
  - That submission documents our concerns and resolutions as of the submission date
- Our review was comprised of 27 separate information requests and technical comments







## Resolutions

[illegible]

- We have worked with the proponent to resolve issues raised by the KIA

- At the conclusion of the pre-hearing technical meetings, 22 of our issues had been fully resolved and 3 issues were resolved pending our review of documents AEM was required to submit prior to the Public Hearings

- Resolutions prior to and during the Pre-Hearing Conference resulting in commitments are documented in the Pre- Hearing Conference Report and in our final written submission

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- [illegible]

## RESOLVED UPON REVIEW OF AEM'S SUBMISSIONS

[illegible]

Three Issues

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## KIA-WL-01: Segregation of Overburden

[illegible]

## KIA-WL-01: Segregation of Overburden

[illegible]











## Resolution

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- [illegible]

[illegible]





## KIA-WL-07: Mixing Zone Water Quality Monitoring

●We have worked to resolve this issue with AEM through:

- Our submission of a technical memorandum
- Technical discussions via teleconference
- Review of a technical memorandum submitted by AEM

●We present our proposed resolutions as two separate issues and requests

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## KIA-WL-07: Mixing Zone Water Quality Monitoring

### (1) Issue

- AEM has proposed 5 sites in the near-field exposure area as part of the Aquatic Effects Monitoring Program, but no sites are proposed to triangulate effluent from the diffuser

●AEM has indicated

- The plume will be characterized through a delineation study required through the Environmental Effect Monitoring (EEM) component of the Metal Mining Effluent Regulations (MMER)

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## KIA-WL-07: Mixing Zone Water Quality Monitoring

### (1) Issue

- The focus of MMER and the associated Plume Delineation Study is ensuring that the effluent is not toxic to aquatic life
- The focus of our concern is to ensure the integrity of the receiving environment is maintained and the predictions presented in the Environmental Impact Statement are validated
- Concerns with relying on the EEM Plume Delineation study are:
  - Wind, flow and other mixing zone dynamics which vary over time limits its capacity to characterize the mixing zone and assimilative capacity of Meliadine Lake under all conditions
  - It may not provide sufficient data to compare the plume's behaviour with predictions from the Environmental Impact Statement

(2)  $\Delta \Gamma_L^{\text{CD}} \approx 5b$

- [illegible]

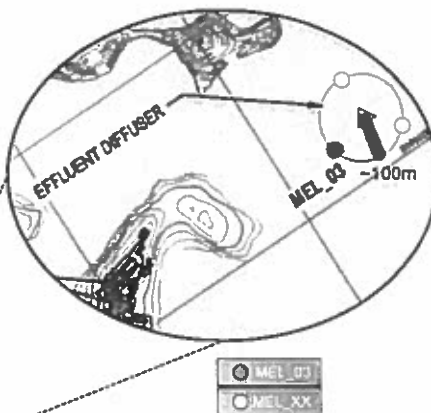
## KIA-WL-07: Mixing Zone Water Quality Monitoring

- We requested that AEM allocate 3 of the near-field exposure area sites around the diffuser to triangulate the predicted mixing zone boundary 100 m from the diffuser
  - i.e. sites at 120°, 240° and 360°, 100m from the center of the diffuser
  - Samples should be collected from the highest point of conductivity as determined by a water column profile

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## Site Locations



## KIA-WL-07: Mixing Zone Water Quality Monitoring

- AEM has committed in their December 21, 2015 memo to:
  - Collect water quality data from three triangulated stations at approximately 100 m from the diffuser during the period of discharge for two years once discharge starts
- This commitment addresses the majority of our concern but does not include sampling frequency
- AEM has confirmed in an email on January 20, 2016 that *"The three "diffuser" stations will be sampled on the same schedule as the AEMP [(Aquatic Effects Monitoring Program)] stations for the two year target program, sampling during the under-ice period will be done only if ice conditions are safe."*
  - The AEMP frequency is once under ice (when safe) and then monthly during the discharge period
  - This frequency and duration is sufficient to triangulate the plume under varying environmental conditions
- This issue is now resolved

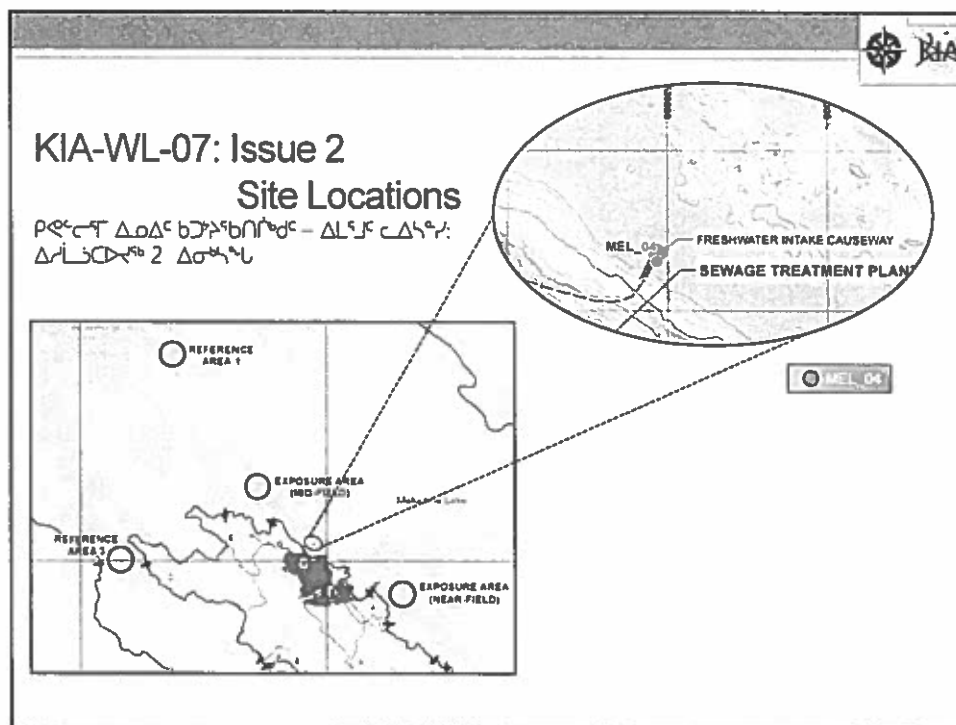
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KIA

## KIA-WL-07: Mixing Zone Water Quality Monitoring

(2) Issue	(2) ልዩነቶች
<ul style="list-style-type: none"> <li>• The KIA is also concerned with tracking the effect of the effluent downstream of the diffuser in Baker Lake</li> <li>• There is a significant proportion of Meliadine Lake that may be influenced by effluent but has no associated AEMP water quality stations               <ul style="list-style-type: none"> <li>• MEL_04 is the only station in the "narrows" of Meliadine Lake</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• የፍሬዝ ወንዝ ልዩነቶች በጋራ የሚገኝ ሲሆን የፍሬዝ ወንዝ ልዩነቶች በጋራ የሚገኝ ሲሆን የፍሬዝ ወንዝ ልዩነቶች በጋራ የሚገኝ ሲሆን</li> <li>• ለፍሬዝ ወንዝ ልዩነቶች ልዩነቶች ሲሆን የፍሬዝ ወንዝ ልዩነቶች ሲሆን የፍሬዝ ወንዝ ልዩነቶች ሲሆን</li> <li>– MEL-04 ልዩነቶች ሲሆን የፍሬዝ ወንዝ ልዩነቶች ሲሆን</li> </ul>















## SECURITY

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## Security Amount

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- The Kivalliq Inuit Association, Indigenous and Northern Affairs Canada, and AEM have agreed without prejudice to a security estimate of \$49,554,667
  - This amount is sufficient to complete the required reclamation as outlined in the AEM Closure and Reclamation Plan



## Security Management Agreement

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- The Kivalliq Inuit Association and Indigenous and Northern Affairs Canada are working to finalize a Security Management Agreement which will avoid double bonding for the proponent
- The current draft agreement supports a 50:50 split in the security to be held equally by the Kivalliq Inuit Association and Indigenous and Northern Affairs Canada


## Security Management Agreement

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- AEM will provide evidence to the Nunavut Water Board of the security amounts paid to KIA and Indigenous and Northern Affairs Canada
  - The security will be reviewed and adjusted periodically, to take into account material changes to the project or risk of environmental damage
  - If the Security Agreement is terminated, not less than 90 days' notice will be given to the Nunavut Water Board






# QUESTIONS?

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Kivalliq Inuit Association

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