

## **Appendix E:      Requests for Information**

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## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-014</b>			
ISSUE DATE (YY/MM/DD)	December 16, 2010			
PRIORITY	H	<b>X</b>	M	L
REQ'D RESPONSE DATE	December 18, 2010			

### Hope Bay Mining Project

Subject:	North Dam SRK Engineered Drawings	Project Zone/Area:	Hope Bay / Doris North
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	Doris North - North Dam
Attention:	Kevin Mather/Doug Fielding cc. SRK Engineering	Discipline:	Civil

AFE:		Specification Number:	
Related Drawings:	North Dam IFC Drawings	Related Documents:	
	<i>Multiple drawings</i>		

Related WBS Code	n/a	WBS Code Description:	
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### Information Request/Description of Issue/Approval Required:

Nuna requires additional information and clarification on several points on the North Dam, Doris North Project IFC Drawings.

- Information: Provide a cubic meter quantity for both the 'core material' and 'transition material' required for the thermistor cluster protection berms on the shell of the dam. SRK Dwg No. DN-ND-09 thru DN-ND-15.
- Clarification: Clarify dam 'surfacing material size' and thicknesses required. May be a discrepancy between SRK Dwg No. DN-ND-02 and DN-ND-08.

### Proposed Corrective Action:

Nuna requests EPCM/SRK clarification on the abovementioned points to allow for accurate budget planning and quantification.

Originator: **KEVIN OAKES**

Print:

Sign:

December 16, 2010

Date:

Cost Impact:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	\$
Detailed Estimate attached:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Schedule Impact:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	# Number of Days
Source for Communication:	<input type="checkbox"/> Owner Change <input type="checkbox"/> Vendor Change	<input checked="" type="checkbox"/> Clarification/Info <input type="checkbox"/> Designer Change
		<input type="checkbox"/> Constructor Change <input type="checkbox"/> Other

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### Response

☐ Corrective Action Approved

☐ Correct as Follows:

- Inside the Dam [cable corridors] – Core Material = 241.7 m3 / Transition Material = 1030.0 m3  
On the Dam Shell [buttress] – Core Material = 21.9 m3 / 146.8 m3
- Both drawings have errors. On DN-ND-02 the Dam crest elevation is correct at 37 m.  
The road fill thickness is 0.15 m so the top of road elevation should be 37.65m.  
On drawing DN-ND-08 the note should read 15cm [or 0.15m] surfacing material (Dam Surfacing Elevation 37.65m)

Responsible Newmont Representative:

Print:

Sign:

December 17, 2010

Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-015</b>				
ISSUE DATE (YY/MM/DD)	December 18, 2010				
PRIORITY	H		M	X	L
REQ'D RESPONSE DATE					

### Hope Bay Mining Project

Subject:	North Dam Spillway / Access Road	Project Zone/Area:	Hope Bay / Doris North
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	Doris North - North Dam Site
Attention:	Doug Fielding cc. SRK Engineering	Discipline:	Civil

A/E:		Specification Number:	
Related Drawings:	North Dam IFC Drawings Package	Related Documents:	
	SRK Dwg No. DN-ND-01 and DN-ND-02		

Related WBS Code	n/a	WBS Code Description:	

### Information Request/Description of Issue/Approval Required:

Referencing the North Dam, Doris North Project IFC Drawings. The North Dam Access Road will be constructed as part of the North Dam work package and will provide access to the dam site during construction and to temperature read-out and settlement monitoring locations once completed. This alignment traverses the proposed spillway (yet to be designed). Nuna requires clarification on whether this access road will need to be removed in part or whole as part of the North Dam works, or if it will remain as shown on the North Dam IFC drawings until such time that the spillway is designed and any culvert structures are defined, if required.

### Proposed Corrective Action:

Nuna requests EPCM/SRK clarification on the abovementioned point to allow for accurate budget planning and scheduling.

Originator: KEVIN OAKES

Print:

Sign:

December 18, 2010

Date:

Cost Impact:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	\$
Detailed Estimate attached:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Schedule Impact:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	#
Source for Communication:	<input type="checkbox"/> Owner Change <input type="checkbox"/> Vendor Change	<input checked="" type="checkbox"/> Clarification/Info <input type="checkbox"/> Designer Change
		<input type="checkbox"/> Constructor Change <input type="checkbox"/> Other

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### Response

☐ Corrective Action Approved

☐ Correct as Follows:

The North Dam access Road will be required for the construction and operation of the North Dam. The Spillway will only be required for closure and decommissioning of the North Dam once the Tailings Facility Area is no longer required. No culverts or crossings will be required for the North Dam Access Road as it will be removed by the construction of the Spillway as part of the closure activities.

Responsible Newmont Representative:

Print:

Sign:

December 20, 2010

Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-020</b>			
ISSUE DATE (YY/MM/DD)	January 1, 2011			
PRIORITY	H		M	X
REQ'D RESPONSE DATE	January 8, 2011			

Hope Bay Mining Project

Subject:	Inspection clarification	Project Zone/Area:	Doris North
Company:	Nuna Logistics Limited	Station/Location:	North Dam
Attention:	JDS Mining	Discipline:	Mechanical

AFE:		Specification Number:	Technical Specs. Rev. D
Related Drawings:	HB+T-CIV-OND-0024 Rev 0	Related Documents:	
	HB+T-CIV-OND-0047 Rev 0		

Related WBS Code	C1DB2025	WBS Code Description:	North Dam Construction
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**Information Request/Description of Issue/Approval Required:**

Upon review of the "Issued for Construction" Technical Specification Revision "D" issued from SRK Engineering. I require clarification on the statement on page 60 section 8.1.3.7 that states "All welds shall meet ASME boiler and pressure codes" Due to the fact that there are many ASME codes with different welding criteria could SRK refer to the specific ASME code they wish Nuna to inspect to.

**Proposed Corrective Action:**

Specify code to be used.

Originator: Bradford Watkin Nuna QA/QC Manager

Print:

Sign:

Date:

Cost Impact:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	\$ Pending Inspection requirements.	Summary Estimate
Detailed Estimate attached:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Schedule Impact:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	#	Number of Days
Source for Communication:	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info	<input type="checkbox"/> Constructor Change
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change	<input type="checkbox"/> Other

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**Response**

☐ Corrective Action Approved

☐ Correct as Follows:

I CONTACTED JOHN JANDINE [ARCTIC FOUNDATIONS] AND HE PROVIDED ME WITH SECTIONS FROM THEIR QC MANUAL WHICH ADDRESSES THESE QUESTIONS. TWO PAGES FROM THE MANUAL ARE ATTACHED.

Responsible Engineer:

LOWELL WADE

L. Wade.

JAN 5, 2011

Print:

Sign:

Date:

**9. WELDING AND BRAZING CONTROL****9.1 RESPONSIBILITIES**

- 9.1.1 All welding and brazing on a project is performed in full accordance with ASME Section IX and the applicable codes detailed in Section (i.).
- 9.1.2 All welding is intended to be sub-contracted, therefore the QCM will review each job specification to ensure that applicable certified welding or brazing procedures are followed and that qualified welders are employed
- 9.1.3 The QCM will ensure that all welders have a current license for each process and position used.
- 9.1.4 Weld Procedure Specifications, Procedure Qualification Records and Operator Reports will be the responsibility of the subcontracted company who will submit these to the DOL for acceptance.
- 9.1.5 All welded repairs shall have the method and technique prepared in advance by the Retained Engineer for approval by the AI prior to start of work
- 9.1.6 After acceptance, the procedure will be controlled by the QCM.
- 9.1.7 The sub-contracted company shall maintain a Welder/Brazer Log for the project showing:
- a) The processes to which the welder/brazer is qualified;
  - b) The passing date of the welder/brazer qualification test;
  - c) The position and material for which a welder/brazer is qualified;
  - d) That electrode ovens are employed for low hydrogen filler electrodes

## **9. WELDING AND BRAZING CONTROL**

### **9.1 RESPONSIBILITIES**

- 9.1.1 All welding and brazing on a project is performed in full accordance with ASME Section IX requirements and to the applicable Code. E.g. ASME Section VIII Div 1, B31.1, B31.9, CSA B51 and Manitoba Steam and Pressure Vessel Act and Regulations.
- 9.1.2 The QCM will review each job specification to ensure that applicable certified welding or brazing procedures and qualified welders are employed.
- 9.1.3 The QCM will ensure that all welders have a current license for each process and position used issued by the DOL.
- 9.1.4 Weld Procedure Specifications, Procedure Qualification Records and Operator Reports will be developed and certified by the Retained Engineer who will submit these to the DOL for acceptance.
- 9.1.5 All welded repairs shall have the method and technique prepared in advance by the Retained Engineer for approval by the AI prior to start of work.
- 9.1.6 After acceptance, the procedure will be controlled by the QCM.
- 9.1.7 The QCM shall maintain a Welder/Brazer Log for the project showing:
  - a) The processes to which the welder/brazer is qualified;
  - b) The passing date of the welder/brazer qualification test;
  - c) The position and material for which a welder/brazer is qualified;
  - d) That electrode ovens are employed for low hydrogen filler electrodes
- 9.1.8 The QCM shall be responsible for the quality of all production welds including visual examination of all completed welds.
- 9.1.9 The QCM shall ensure that each welder identifies the completed joints with his symbol stamp.
- 9.1.10 The QCM shall be responsible for ordering all welding and brazing materials in accordance with the correct SFA specifications and AWS designations.
- 9.1.11 The QCM shall be responsible for storage of all consumables are stored in a warm, clean and dry area in accordance with the manufacturer's recommendation.

## **9.2 Welding and Brazing Materials**

- 9.2.1 All welding and Brazing consumables shall be purchased under the direction of the QCM and shall be ordered and received with correct SFA specifications and AWS designation.
- 9.2.2 All welding and brazing consumables shall be stored in a warm, dry area, separated from the manufacturing area until required.
- 9.2.3 Controlled hydrogen electrodes shall be stored in a heated oven (at 250 F minimum) after a sealed container has been opened.
- 9.2.4 Controlled hydrogen electrodes taken from the oven shall be taken in small quantities so as to limit welding of 4 hours maximum. Any surplus electrodes shall not be returned to the oven or used on the code fabrication.

## **9.3 Welding and Brazing Requirements**

- 9.3.1 Each welder shall identify the joints completed with his/her identification symbol. If this is impracticable, the welder or QCM may prepare a weld map indicating the location of each welded joint with the welder's identification symbol attached. The weld map should be kept by the QCM in the project file.
- 9.3.2 Tack welds, which are incorporated into the final welds are subject to the same quality requirements as the final welds and must be performed by certified welders in accordance with registered procedures.

## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-022</b>
ISSUE DATE (YY/MM/DD)	January 26, 2011
PRIORITY	H <input type="checkbox"/> M <input checked="" type="checkbox"/> X <input type="checkbox"/> L <input type="checkbox"/>
REQ'D RESPONSE DATE	

**Hope Bay Mining Project**

Subject:	Vertical Thermistor Backfill Material	Project Zone/Area:	Doris North
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	North Dam
Attention:	Doug Fielding/Jerry Graham	Discipline:	Civil

AFE:		Specification Number:	9.2.1 (4)
Related Drawings:	SRK North Dam IFC Drawing Package	Related Documents:	

Related WBS Code		WBS Code Description:	

**Information Request/Description of Issue/Approval Required:**

As per section 9.2.1 (4) of the Technical Specifications Rev. D it states that the Thermistors pipes are to be backfilled with sand, the North Dam construction drawings state that frozen core material is to be used.

**Proposed Corrective Action:**

Nuna proposes the use of the 1/16" - minus fines material for the backfill of the Vertical Thermistors. These fines are currently being produced onsite as part of the frozen core material crushing program.

Originator:	<i>Mike Price</i>	<i>[Signature]</i>	<i>Jan 26 / 2011</i>
	Print:	Sign:	Date:

Cost Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	Scope definition will impact the 2011 Nuna Construction Budget
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	Detailed estimate will be prepared following IFC revision
Schedule Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Source for Communication	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info	<input type="checkbox"/> Constructor Change
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change	<input type="checkbox"/> Other

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☐ Corrective Action Approved

☐ Correct as Follows:

Response:			
<p>A slurry made from water and 1/16th-minus material should be used as back fill for the Vertical Ground Temperature Cable bore holes as well as the Thermosyphon Radiator Piles. This change has been made on the Revision 1 Issued for Construction Drawings for the Doris North - North Dam issued February 4th, 2011 to Document Control.</p>			
Responsible Newmont Representative:	Lowell Wade	<i>[Signature]</i>	February 4, 2011
	Print:	Sign:	Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-025</b>			
ISSUE DATE (YY/MM/DD)	January 27, 2011			
PRIORITY	H	M	L	
REQ'D RESPONSE DATE	February 3, 2011			

### Hope Bay Mining Project

Subject:	North Dam Thermosyphons	Project Zone/Area:	Doris North/Hope Bay
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	North Dam
Attention:	Doug Fielding/Jerry Graham	Discipline:	Mechanical

A/E:		Specification Number:	SRK Technical Specifications Rev. D
Related Drawings:	HB+T-CIV-CIV-OND-0047 Rev 0	Related Documents:	

Related WBS Code	C1DB2025	WBS Code Description:	Doris North-North Dam Construction

### Information Request/Description of Issue/Approval Required:

According to SRK Technical specification Revision "D" page 60 Section 8.1.3 no. 3 the Thermosyphons are to be constructed with A53B pipe. Nuna and our sub-contractor would like to use A106-B instead. This is a superior grade of seamless steel where as A53B is seamed. Also, A106-B is more readily available to our sub-contractor.

### Proposed Corrective Action:

Utilize A-106-B piping in the construction of the Thermosyphons maintaining the correct schedule thickness.

Originator: Bradford Watkin QA/QC Manager

Print:

Sign:

Date:

Cost Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Schedule Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Source for Communication	<input type="checkbox"/> Owner Change	<input type="checkbox"/> Clarification/Info
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change
		<input checked="" type="checkbox"/> Constructor Change
		<input type="checkbox"/> Other

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☐ Corrective Action Approved

☐ Correct as Follows:

### Response:

Since A106-B is a superior grade of stainless steel, is seamless, and is more readily available; this would be the preferable grade of pipe to use in the construction of the thermosyphons

Responsible Newmont Representative:

Lowell Wade

Print:

Sign:

January 27, 2011

Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-026</b>
ISSUE DATE (YY/MM/DD)	February 4, 2011
PRIORITY	H <input type="checkbox"/> M <input checked="" type="checkbox"/> X <input type="checkbox"/> L <input type="checkbox"/>
REQ'D RESPONSE DATE	February 18, 2011

### Hope Bay Mining Project

Subject:	Bentonite Powder Specifications	Project Zone/Area:	Doris North / North Dam
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	
Attention:	Doug Fielding/Jerry Graham cc. SRK	Discipline:	Civil

AFE:		Specification Number:	6.2.4 (5)
Related Drawings:	SRK Dwg No. DN-ND-05	Related Documents:	SRK Technical Specifications Rev D

Related WBS Code	n/a	WBS Code Description:	n/a

### Information Request/Description of Issue/Approval Required:

Nuna would like confirmation on whether or not PDS 3/8" Bentonite Plug (see attached technical data sheet) would be a suitable substitute for the Bentonite powder specified in SRK technical specifications Rev D page 37 section 6.2.4 no. 5. There is currently a supply of PDS 3/8" Bentonite Plug on site.

### Proposed Corrective Action:

Utilize the PDS 3/8" Bentonite Plug for treating the seams of the GCL linear associated with the construction of the North Dam. Eliminating the need to ship more material to site.

Originator: Mike Price

Print:

Sign:

Feb 4/2011

Date:

Cost Impact	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Savings realized if materials on site can be utilized
Detailed Estimate attached	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Schedule Impact	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Source for Communication	<input type="checkbox"/> Owner Change <input type="checkbox"/> Clarification/Info <input checked="" type="checkbox"/> Constructor Change	
	<input type="checkbox"/> Vendor Change <input type="checkbox"/> Designer Change <input type="checkbox"/> Other	

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☐ Corrective Action Approved

☐ Correct as Follows:

### Response:

Bentonite chips cannot be used. Section 6.4.2 Paragraph 2 mentions each overlap should be treated with powdered bentonite...comprised of the same bentonite as used in the manufacture of the GCL. The bentonite shall be applied at the minimum rate of 0.4 kg/m of seam. Paragraph 2 does mention using Bentonite paste but it is realized under cold conditions this is impractical.

Responsible Newmont Representative:

Lowell Wade

Print:

Sign:

February 4, 2011

Date:

**TECHNICAL DATA SHEET**

Environmental Grout &amp; Sealant

# PDSCo PLUG

PURE WESTERN BENTONITE CHIPS

**DESCRIPTION**

**PDSCo Plug** is western sodium bentonite chips. It is available in both 3/8" and 3/4" chips;

**APPLICATION**

**PDSCo Plug** is primarily used for sealing wells, borehole, and monitoring well construction. **PDSCo Plug** can be poured in the hole dry, no mixing required. Upon hydration forms a flexible gel-like mass which fills formation voids and prevents surface contaminants from reaching subsurface groundwater.

**USAGE CHART**

Hole Diameter	2.5"	3.5"	4"	4.5"	5"	5.5	6"	6.5"	8"	10"
Lbs/Ft	2.5#	5#	6.75#	8.5#	10.75#	12.5#	15.5#	20.5#	28#	41#
Ft of Seal/Bag	20	10	7.5	5.75	5	5	3.25	2.5	1.75	1.25

**NOTE:** These are dry weights and volumes. In use, the swelling of the pellets will increase the length of the seal (depending on hole condition).

**PACKAGING**

Available in 50 lb polyethylene bags.

**TYPICAL CHEMICAL ANALYSIS**

SiO <sub>2</sub>	52.70	-	54.80	%
Al <sub>2</sub> O <sub>3</sub>	18.70	-	19.60	%
Fe <sub>2</sub> O <sub>3</sub>	3.97	-	4.13	%
CaO	0.68	-	1.55	%
MgO	2.71	-	2.72	%
Na <sub>2</sub> O	2.72	-	3.69	%
K <sub>2</sub> O	0.58	-	0.60	%
TiO <sub>2</sub>	0.32	-	0.34	%

**SPECIFICATION**

<u>PROPERTY</u>	<u>TYPICAL ANALYSIS</u>
Moisture	8 - 15 %
pH	7.9 - 8.6 %
Volumetric Swell	8 - 15 %



P.O. Box 507 El Dorado, AR 71731 USA . Tel: (870) 863-5707 . (800) 243-7455 . Fax: (870) 863-0603  
[www.pdscoinc.com](http://www.pdscoinc.com) . e-mail: [sales@pdscoinc.com](mailto:sales@pdscoinc.com)

## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-027</b>
ISSUE DATE (YY/MM/DD)	February 9, 2011
PRIORITY	H <input type="checkbox"/> M <input checked="" type="checkbox"/> X <input type="checkbox"/> L <input type="checkbox"/>
REQ'D RESPONSE DATE	February 14, 2011

### Hope Bay Mining Project

Subject:	North Dam 3D Models	Project Zone/Area:	Doris North
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	North Dam
Attention:	Doug Fielding/Jerry Graham cc SRK	Discipline:	Civil

AFE:		Specification Number:	
Related Drawings:	SRK North Dam Autocad Drawings	Related Documents:	

Related WBS Code		WBS Code Description:	

### Information Request/Description of Issue/Approval Required:

Nuna is requesting the 3D models (AutoCAD 3D faces) of the components of the North Dam to provide QC and prepare as-built drawings for the North Dam.

### Proposed Corrective Action:

SRK provides Nuna with the 3D models of the components of the North Dam.

Originator: GARY SODHI

Print:

Sign:

9-Feb-2011

Date:

Cost Impact	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Detailed Estimate attached	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Schedule Impact	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Source for Communication	<input type="checkbox"/> Owner Change <input checked="" type="checkbox"/> Clarification/Info <input type="checkbox"/> Constructor Change <input type="checkbox"/> Vendor Change <input type="checkbox"/> Designer Change <input type="checkbox"/> Other

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☐ Corrective Action Approved

☐ Correct as Follows:

### Response:

The e-transmitted ACAD files for the Doris North - North Dam Issued for Construction Drawings have been posted on SRK's SharePoint website along with the PDF files. These can be found under:

"Information for Stantec" / "Issued for Construction\_20101203" for Rev 0  
 "Information for Stantec" / "Issued for Construction\_20110121" for Rev 0  
 "Information for Stantec" / "Issued for Construction\_20110204" for Rev 1  
 "Information for Document Control" / "Issued for Construction\_20110209" for Rev 2

The 3D model of the North Dam in ACAD  
 The 3D model of the Instrumentation in ACAD

Responsible Newmont Representative:

Lowell Wade

Print:

Sign:

February 9, 2011

Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>JDS-RFI-001</b>			
ISSUE DATE (YY/MM/DD)	February 18, 2011			
PRIORITY	H		M	L
REQ'D RESPONSE DATE	March 4, 2011			

### Hope Bay Mining Project

Subject:	GCL – Powdered Bentonite	Project Zone/Area:	Doris North
Company:	SRK Consulting (Canada) Inc.	Station/Location:	North Dam
Attention:	Lowell Wade	Discipline:	Civil

AFE:		Specification Number:	Rev. "E" Section 6.4.2
Related Drawings:	SRK North Dam IFC Drawing Package	Related Documents:	GCL Lapping and Joining
			Clause 6.4.2_(2.)

Related WBS Code		WBS Code Description:	

### Information Request/Description of Issue/Approval Required:

Technical Specifications Revision "E" Section 6.4.2 GCL Lapping and Joining Clause 2. Each overlap should be treated with powdered bentonite comprised of the same bentonite as used in the manufacture of the GCL. **The bentonite shall be applied at the minimum rate of 0.4 kg/m of seam.**

*Please confirm that the application rate required when placing powdered bentonite comprised of the same bentonite used in the manufacture of the GCL shall be at the minimum rate of 0.4 kg/m of seam. This is consistent with the manufacturer's installation guidelines.*

### Proposed Corrective Action:

Originator: Mark Valeriotte (JDS Energy & Mining Inc.)

February 18, 2011

Print:

Sign:

Date:

Cost Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	Scope definition will impact the 2011 Nuna Construction Budget
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	Detailed estimate will be prepared following IFC revision
Schedule Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Source for Communication	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info	<input type="checkbox"/> Constructor Change
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change	<input type="checkbox"/> Other

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☐ Corrective Action Approved

☐ Correct as Follows:

### Response:

Technical Specification, Revision E, Section 6.4.2 states the application rate of powdered bentonite for overlapping GCL panels should be 0.4 kg/m of seam. To ensure this application rate is achieved and or exceeded the powdered bentonite is applied over a measured length. It is then swept up and weighed. Likewise, a mark can be placed on the GCL liner where a new bag was opened and measure the length that bag covers to determine the application rate. Past experience has indicated 1 to 2 bags of powdered bentonite are required per roll of GCL. It should be noted the powdered bentonite quantity listed on drawing DN-ND-05 is a volume [163m x 0.5m x 0.1m = 8.15m<sup>3</sup>] which would greatly exceed the 0.4 kg/m. Based on the volume listed on the drawing 14 bags of bentonite would be required per roll of GCL.

Responsible Newmont Representative:

Print:

Sign:

Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>JDS-RFI-002</b>			
ISSUE DATE (YY/MM/DD)	February 18, 2011			
PRIORITY	H	M	L	
REQ'D RESPONSE DATE	March 11, 2011			

### Hope Bay Mining Project

Subject:	Turnaround	Project Zone/Area:	Doris North
Company:	SRK Consulting (Canada) Inc.	Station/Location:	North Dam
Attention:	Lowell Wade	Discipline:	Civil

AFE:		Specification Number:	Technical Specifications Rev. "E"
Related Drawings:	SRK North Dam IFC Drawing Package	Related Documents:	SRK DWG NO: DN-ND-08

Related WBS Code		WBS Code Description:	

### Information Request/Description of Issue/Approval Required:

What is the history associated with the turnaround at the southwest end of the dam? Was SRK instructed by others to design and/or include a turnaround?

There should only be a select few who need or should have authorized access to the dam. Therefore, if one must drive a pick-up truck on the crest of the dam they could make a three point turn on the 13 m crest width at the southeast end of the dam. There may be a need to place some fill within the turnaround area at the southeast end of the dam for construction related activities. If fill is placed a minimum thickness will be maintained to ensure the integrity of permafrost.

If for some reason the turnaround is needed at a future date for dam maintenance it could be constructed at that time.

### Proposed Corrective Action:

Eliminate the turnaround as shown on the IFC drawings.

Originator: Mark Valeriote (JDS Energy & Mining Inc.)

February 18, 2011

Print:

Sign:

Date:

Cost Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	Scope definition will impact (deduct) the 2011 Nuna Construction Budget
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Schedule Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	
Source for Communication	<input checked="" type="checkbox"/> Owner Change	<input type="checkbox"/> Clarification/Info	<input type="checkbox"/> Constructor Change
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change	<input type="checkbox"/> Other

**Note: RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense**

☐ Corrective Action Approved

☐ Correct as Follows:

### Response:

The turn-a-round at the southwest end of the dam was designed to allow maintenance vehicles to reverse direction without jeopardizing the instrumentation that line the upstream and downstream crests of the dam caused by a 3-point turn. The turn-a-round would also provide construction vehicles a safe place to turn (without making a 3-point turn) during the final phases of dam construction when snow is no longer on the tundra. SRK sees no problem with the proposed request to place some fill within the turn-around footprint for dam construction activities provided: the minimum 1 m fill thickness is maintained to ensure the integrity of the permafrost; the appropriate vehicle design grades and turning radius's are met; and the appropriate safety protocols [barricades, signs, spotters] are implemented.

Responsible Newmont Representative:

Print:

Sign:

Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>JDS-RFI-003</b>
ISSUE DATE (YY/MM/DD)	February 19, 2011
PRIORITY	H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/>
REQ'D RESPONSE DATE	February 23, 2011

### Hope Bay Mining Project

Subject:	Additional Excavation of Surface Ice	Project Zone/Area:	Doris North
Company:	SRK Consulting (Canada) Inc.	Station/Location:	North Dam
Attention:	John Kurylo / Maritz Rykaart	Discipline:	Civil

AFE:		Specification Number:	Technical Specifications Rev. "E"
Related Drawings:	SRK North Dam IFC Drawing Package	Related Documents:	SRK Memo Dated Feb. 18, 2011
			North Dam Additional Excavation
			Of Massive Surface Ice

Related WBS Code		WBS Code Description:	

### Information Request/Description of Issue/Approval Required:

The SRK memo dated February 18, 2011 (copy attached) regarding the removal of surface ice and subsequent backfill notes that "core material or out of spec core material (i.e. core reject) is a suitable fill material".

Technical Specifications Revision "E" Section 2 Clearing and Stripping outlines the requirements related to the removal of snow and ice on natural ground surface. The memo does acknowledge that the surface ice is directly related to the natural outflow from Tails Lake. Nowhere in the specifications is there any reference to material requirements to backfill where snow or ice is removed. Once the ice is removed the surface conditions are no different had the ice not formed at this location, or the adjacent area. The material placed once the ice is removed should be that required as a function of the zone that it falls within.

### Proposed Corrective Action:

Use transition material to fill the area where the ice is removed.

Originator: Mark Valeriot (JDS Energy & Mining Inc.)

February 19, 2011

Print:

Sign:

Date:

Cost Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes		
Schedule Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes		
Source for Communication	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info	<input type="checkbox"/> Constructor Change	
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change	<input type="checkbox"/> Other	

**Note:** RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense

☐ Corrective Action Approved

☐ Correct as Follows:

### Response:

The surface ice observed upstream and downstream of the key trench, in proximity of the peat zone, is the result of the natural outflow from Tails Lake to Doris Lake. Based on site observations, this surface ice is situated on top of the original ground. Using transition material to fill in the area with the surface ice has been removed is acceptable.

Responsible Newmont Representative:

Lowell Wade

Print:

Sign:

February 23, 2011

Date:

## REQUEST FOR INFORMATION

RFI NUMBER	<b>JDS-RFI-004</b>
ISSUE DATE (YY/MM/DD)	February 20, 2011
PRIORITY	H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/>
REQ'D RESPONSE DATE	February 22, 2011

Hope Bay Mining Project

Subject:	Quality Assurance Test Results	Project Zone/Area:	Doris North
Company:	SRK Consulting (Canada) Inc.	Station/Location:	North Dam
Attention:	Lowell Wade	Discipline:	Civil

AFE:		Specification Number:	Technical Specifications Rev. "E"
Related Drawings:	SRK North Dam IFC Drawing Package	Related Documents:	Section 1.1.11 Quality Assurance Clause 3.

Related WBS Code		WBS Code Description:	

**Information Request/Description of Issue/Approval Required:**

Technical Specifications Revision "E" Section 1.1.11 Quality Assurance

Clause 3. "All QA or other test data, collected by the Engineer, shall be made available to the EPCM Manager and Contractor on request."

**Proposed Corrective Action:**

Please ensure that all QA or other test data (and reports) be made available to the EPCM and the Contractor in a timely manner. Should the Engineer feel it necessary to make the initial submission as a "draft" this will be understood. In most instances the "draft" test results (moisture contents, particle size distribution analysis, laboratory compaction characteristics of soil using standard effort, density of soil in place by nuclear methods, bulk density, core degree of saturation, freeze back temperature and time, etc.) should be made available within 24 hours from the time of sampling/testing.

Originator: Mark Valeriotte (JDS Energy & Mining Inc.)

February 20, 2011

Print:

Sign:

Date:

Cost Impact	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Detailed Estimate attached	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Schedule Impact	<input type="checkbox"/> No	<input type="checkbox"/> Yes
Source for Communication	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change
		<input type="checkbox"/> Constructor Change
		<input checked="" type="checkbox"/> Other

Note: RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense

☐ Corrective Action Approved

☐ Correct as Follows:

**Response:**

Please find attached all the QA test results to date. SRK will be implementing measures, including sample tracking in the daily report, to make sure QA results including "draft" results are provided to the EPCM Manager and Contractor in a timely manner.

Responsible Newmont Representative:

Print:

Sign:

Date:

## Moisture Content Determination and Sample Description

[illegible]

### Moisture Content Determination and Sample Description

Date Sampled: Jan 25, 2011		Date Tested: February 14, 2011		
By: John Kurylo		By: Garry Dang-Vuu		
Hole No.	Sample No.	Depth (M)	Sample Description	M/C
<b>P2</b>	8.01	0 - 0.5m	Sand, trace gravel, silt, damp, brown.	10.8%
	8.02	0.5 - 1.0m	Sand & Gravel (12.5mm max) trace silt, damp, brown.	6.4%
	8.03	1.0 - 1.5m	Sand, trace gravel, damp, brown.	16.2%
	8.04	1.5 - 2.0m	Sand, trace gravel, damp, light brown.	25.0%
	8.05	2.0 - 3.0m	Sand, wet, brown.	20.5%
	8.06	3.0 - 4.0m	Sand, wet, brown.	24.1%
	8.07	4.0 - 5.0m	Sand, wet, brown.	22.4%
	8.08	5.0 - 6.0m	Sand, trace gravel, brown.	18.8%
	8.09	6.0 - 7.0m	Sand, trace gravel, silt, wet, brown.	18.1%
	8.10	7.0 - 8.0m	Sand, trace gravel, wet, brown.	18.2%
<i>Note : Drill depths based on visual observations and driller estimations of run lengths.</i>				

## Moisture Content Determination and Sample Description

[illegible]

### Moisture Content Determination and Sample Description

Date Sampled: Jan 24, 2011		Date Tested: Feb 5, 2011		
By: John Kurylo		By: Jeff Orr		
Hole No.	Sample No.	Depth (M)	Sample Description	M/C
<b>P4</b>	6.01	0.0-0.5	Peatmoss, water, dark brown; some ice and snow from surface incorporated at start of drilling.	715.5%
	6.02	0.5-1.0	Peatmoss, clay, trace sand, wet, brown.	65.8%
	6.03	1.0-1.5	Peatmoss, clay, water, trace sand, grey.	81.0%
	6.04	1.5-2.0	Peatmoss, clay, water, trace sand, grey.	104.3%
	6.05	2.0-3.0	Peatmoss, clay, water, trace sand, grey.	105.6%
	6.06	3.0-4.0	Clay, peatmoss, water, trace sand, grey.	170.7%
	6.07	4.0-5.0	Clay, sandy, wet, grey.	32.1%
	6.08	5.0-6.0	Sand, some clay, wet, grey.	21.2%
	6.09	6.0-7.0	Sand, damp, grey.	19.2%
	6.1	7.0-7.7	Sand, damp, grey.	16.0%
<i>Note : Drill depths based on visual observations and driller estimations of run lengths.</i>				

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

### Moisture Content Determination and Sample Description

Date Sampled: Jan 25, 2011		Date Tested: February 15, 2011		
By: John Kurylo		By: Garry Dang-Vuu		
Hole No.	Sample No.	Depth (M)	Sample Description	M/C
<b>P13</b>	11.01	0 - 0.5m	Sand, some clay, trace silt, brown.	15.8%
	11.02	0.5 - 1.0m	Clay, some sand, trace silt, grey.	32.5%
	11.03	1.0 - 1.5m	Clay, trace sand, silt, wet, grey.	34.5%
	11.04	1.5 - 2.0m	Clay, some sand, saturated, brown.	54.6%
	11.05	2.0 - 3.0m	Clay, some sand, trace silt, saturated, dark brown.	82.9%
	11.06	3.0 - 4.0m	Clay, some sand, trace silt, wet, mottled dark grey/ brown.	34.3%
	11.07	4.0 - 5.0m	Clay, some sand, trace silt, wet, mottled grey/ brown.	35.0%
	11.08	5.0 - 6.0m	Clay, some sand, trace silt, wet, mottled grey/ brown.	34.3%
	11.09	6.0 - 7.0m	Clay, sandy, trace silt, wet, dark grey.	35.8%
	11.10	7.0 - 8.0m	Sand, trace silt, saturated, brown.	16.1%
<i>Note : Drill depths based on visual observations and driller estimations of run lengths.</i>				

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

### Moisture Content Determination and Sample Description

Date Sampled: Jan 27, 2011		Date Tested: Feb 4, 2011		
By: John Kurylo		By: Jeff Orr		
Hole No.	Sample No.	Depth (M)	Sample Description	M/C
<b>P19</b>	21.01	0 - 0.5	Sand, trace clay, trace organics, damp, brown.	14.7%
	21.02	0.5 - 1.0	Sand, trace clay, trace organics, wet, brown.	20.3%
	21.03	1.0 - 1.5	sand, water, clay, brown/grey.	84.3%
	21.04	1.5 - 2.0	Clay, water, some sand, rock pieces, grey.	58.0%
	21.05	2.0 - 3.0	Clay, trace sand, wet, grey.	37.8%
	21.06	3.0 - 4.0	Clay, trace sand, wet, grey.	45.2%
	21.07	4.0 - 5.0	Clay, trace sand, wet, grey.	49.8%
	21.08	5.0 - 6.0	Clay, rock pieces, damp, grey.	13.5%
	21.09	6.0 - 7.0	Rock pieces, trace clay, dry, grey.	3.5%
	21.10	7.0 - 8.0	Rock pieces, dry, grey.	1.3%
<i>Note : Drill depths based on visual observations and driller estimations of run lengths.</i>				

## Moisture Content Determination and Sample Description

[illegible]

## Moisture Content Determination and Sample Description

[illegible]

### Moisture Content Determination and Sample Description

Date Sampled: Jan 26, 2011		Date Tested: Feb 1, 2011		
By: John Kurylo		By: Jeff Orr		
Hole No.	Sample No.	Depth (M)	Sample Description	M/C
<b>P22</b>	16.01	0 - 0.5	Peatmoss, water, brown. Some ice and snow from start of borehole drilling expected to have been present.	1126.8%
	16.02	0.5 - 1.0	Peatmoss, water, brown	346.1%
	16.03	1.0 - 1.5	Peatmoss, water, brown	180.1%
	16.04	1.5 - 2.0	Peatmoss, water, brown	309.2%
	16.05	2.0 - 3.0	Peatmoss, water, brown	75.0%
	16.06	3.0 - 4.0	Peatmoss with clay, water, trace sand, brown-grey	55.9%
	16.07	4.0 - 5.0	Clay, Tr.sand, wet, grey	50.4%
	16.08	5.0 - 6.0	Clay, Tr.sand, wet, grey	61.1%
	16.09	6.0 - 7.0	Sand & Clay, wet, grey	30.8%
	16.10	7.0 - 8.0	Sand, trace clay, wet, grey	23.6%
	16.11	8.0 - 9.0	Sand, rock pieces, wet, grey	15.4%
	16.12	9.0 - 10.0	Sand, fine grained, damp, dry	16.1%
<i>Note : Drill depths based on visual observations and driller estimations of run lengths.</i>				

### Moisture Content Determination and Sample Description

Date Sampled: Jan 26, 2011		Date Tested: Feb 1, 2011		
By: John Kurylo		By: Jeff Orr		
Hole No.	Sample No.	Depth (M)	Sample Description	M/C
<b>P23</b>	15.01	0 - 0.5	Peatmoss, wet, brown; some ice and snow incorporated at start of drilling.	491.7%
	15.02	0.5 - 1.0	Peatmoss, wet, brown.	320.9%
	15.03	1.0 - 1.5	Peatmoss, some sand, wet, brown.	74.5%
	15.04	1.5 - 2.0	Peatmoss, trace sand, wet, brown.	173.0%
	15.05	2.0 - 3.0	Peatmoss, trace sand, wet, brown.	119.4%
	15.06	3.0 - 4.0	Peatmoss, wet, brown-black.	242.6%
	15.07	4.0 - 5.0	Peatmoss with clay, trace sand, wet, grey.	61.7%
	15.08	5.0 - 6.0	Peatmoss, clay, sand, wet, grey.	36.7%
	15.09	6.0 - 7.0	Clay, sand, trace organic's, grey.	23.4%
	15.10	7.0 - 8.0	Sand, some clay, brown.	20.6%
<i>Note : Drill depths based on visual observations and driller estimations of run lengths.</i>				

### Moisture Content Determination and Sample Description

Date Sampled: Jan 28, 2011		Date Tested: Feb 2, 2011		
By: John Kurylo		By: Jeff Orr		
Hole No.	Sample No.	Depth (M)	Sample Description	M/C
<b>P24</b>	23.01	0 - 0.5	Rock pieces, trace sand, trace organics, brown.	9.2%
	23.02	0.5 - 1.0	Rock pieces, trace sand, trace clay, brown.	8.7%
	23.03	1.0 - 1.5	Rock pieces, trace sand, trace clay, wet, brown.	16.7%
	23.04	1.5 - 2.0	Sand, water, grey	54.9%
	23.05	2.0 - 2.5	Sand, rock pieces, water, grey.	16.8%
	23.06	2.5 - 3.5	Rock pieces, moist, grey.	13.7%
	23.07	3.5 - 4.5	Rock pieces, dry, grey.	0.6%
	23.08	4.5 - 5.5	Rock pieces, dry, grey.	1.0%
	23.09	5.5 - 6.5	Rock pieces, dry, grey.	1.3%
	23.10	6.5 - 7.5	Rock pieces, dry, grey.	0.5%
<i>Note : Drill depths based on visual observations and driller estimations of run lengths.</i>				

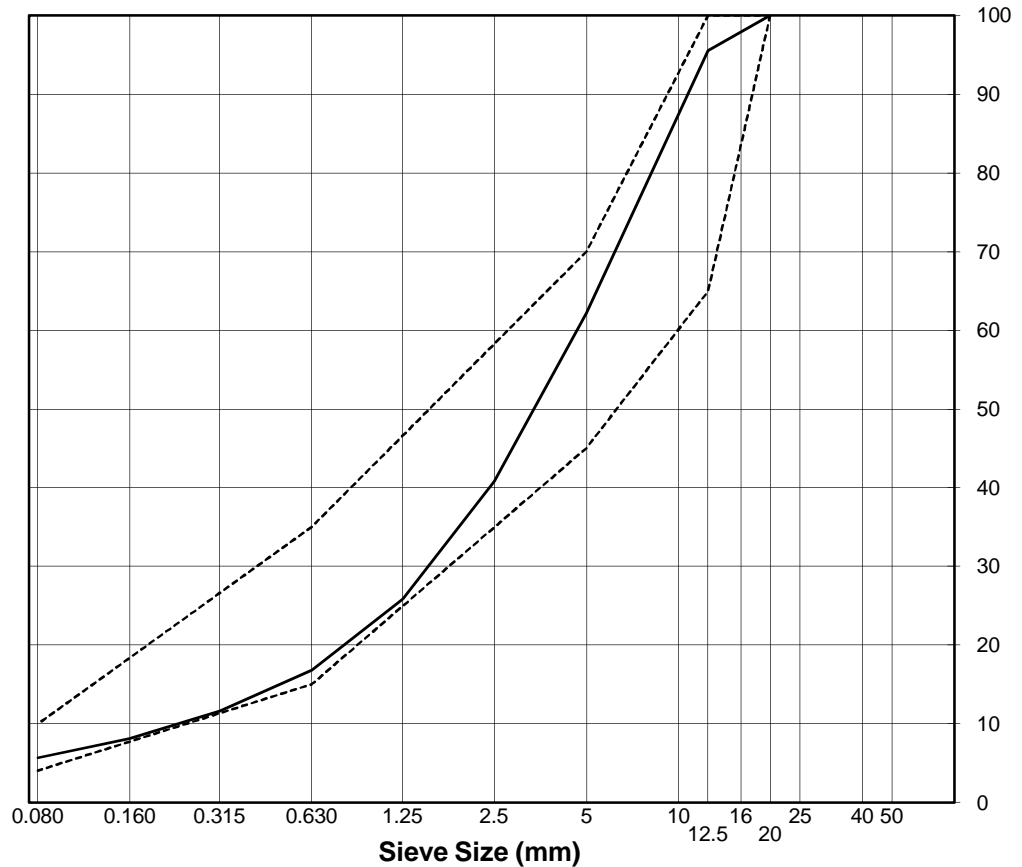
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Stockpile, 35mN of Frozen Core Plant.  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 01  
Date Received: February 15, 2011  
Sampled by: GDV  
Date Tested: February 16, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 2.1%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	96
5	62
2.5	41
1.25	26
0.630	17
0.315	12
0.160	8
0.080	5.6



Remarks: \_\_\_\_\_

Reviewed By: DRAFT

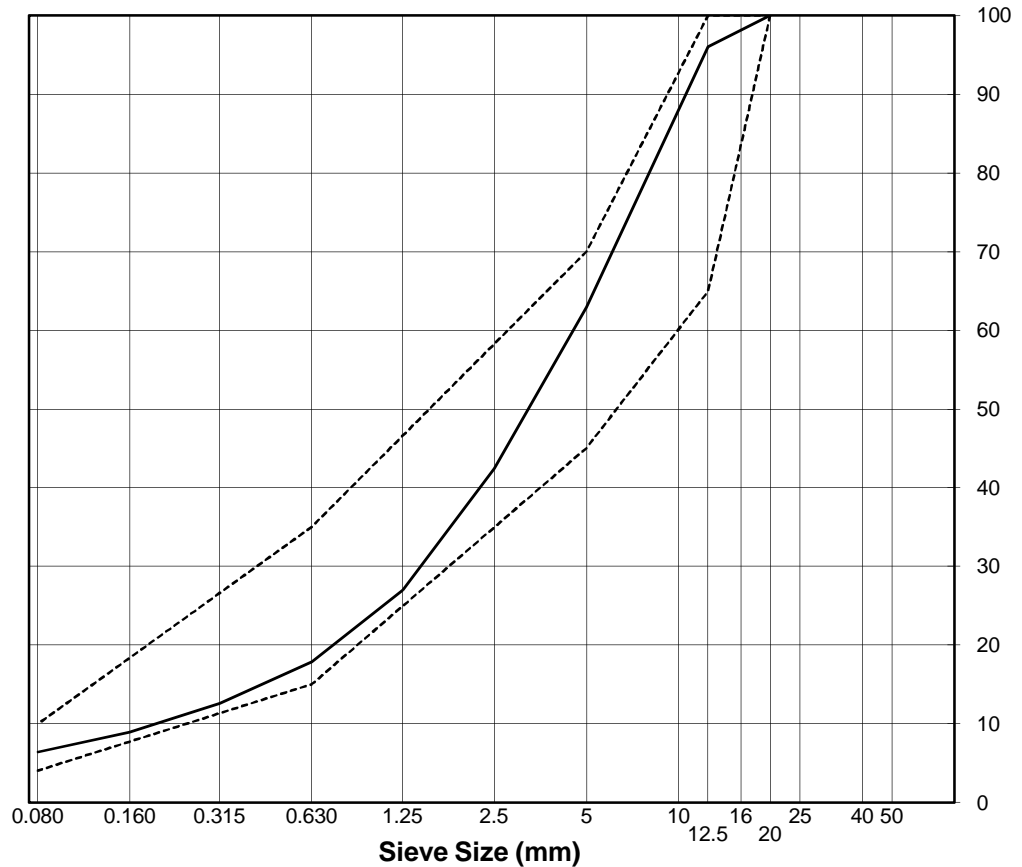
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Quarry 2, BELT sample.  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 02  
Date Received: February 19, 2011  
Sampled by: GDV  
Date Tested: February 19, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 1.2%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	96
5	63
2.5	42
1.25	27
0.630	18
0.315	13
0.160	9
0.080	6.4



Remarks: \_\_\_\_\_

Reviewed By: DRAFT

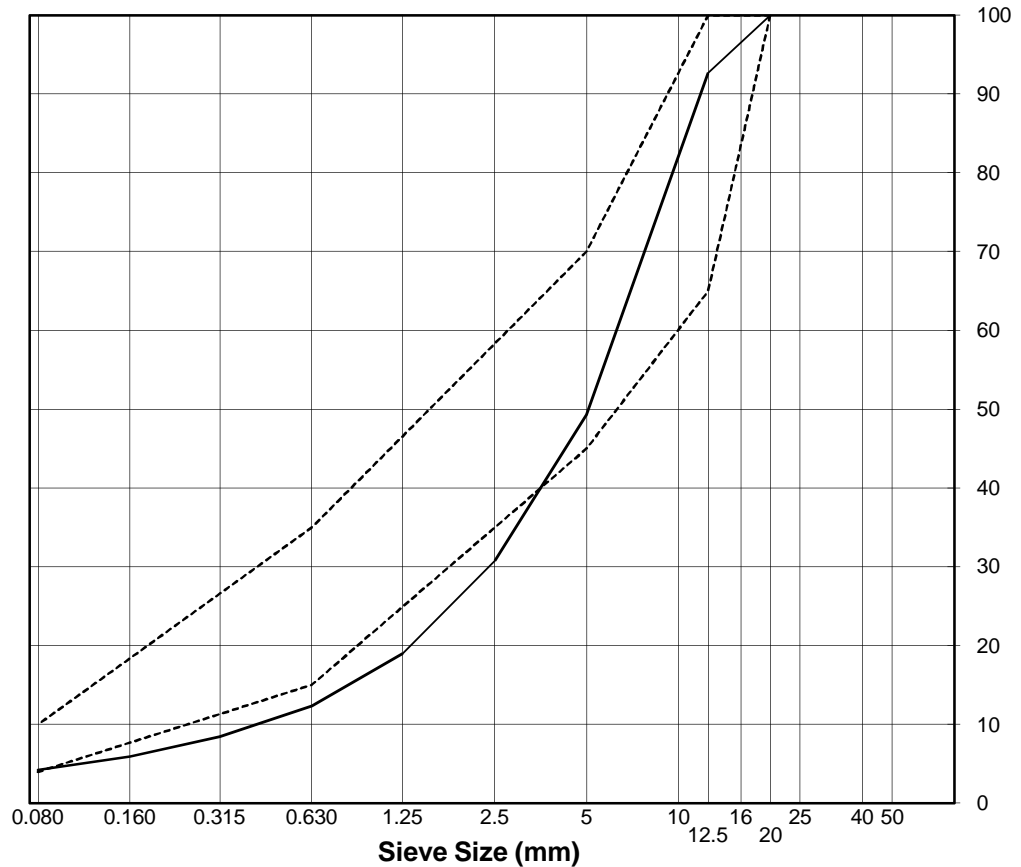
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Quarry 2, BELT sample.  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 03  
Date Received: February 19, 2011  
Sampled by: QC  
Date Tested: February 19, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 1.9%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	93
5	49
2.5	31
1.25	19
0.630	12
0.315	8
0.160	6
0.080	4.2



**Remarks:** This particle size analysis represents the Core blend, prior to saturation.

Sample taken by QC, time unknown.

Reviewed By: DRAFT

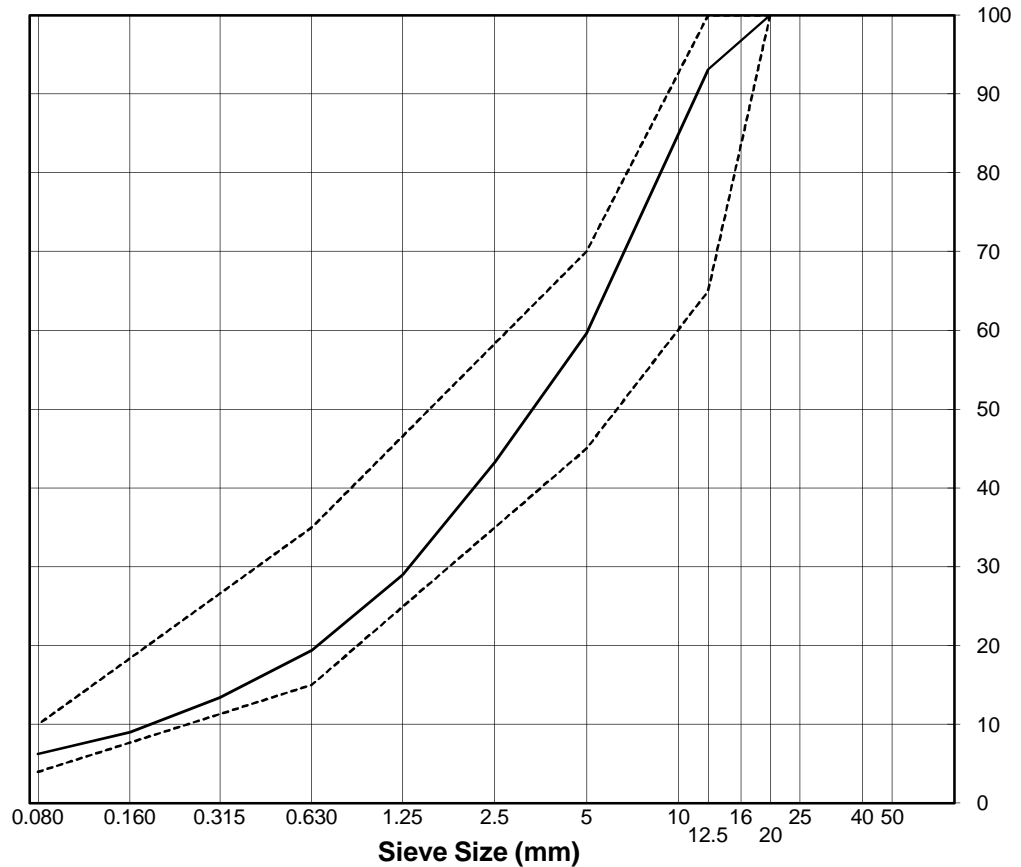
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Quarry 2, BELT sample.  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 04  
Date Received: February 20, 2011  
Sampled by: GDV  
Date Tested: February 20, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 1.6%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	93
5	60
2.5	43
1.25	29
0.630	19
0.315	13
0.160	9
0.080	6.2



Remarks: This particle size analysis represents the Core blend, prior to saturation.

Sample taken 0230 Hrs.

Reviewed By: DRAFT

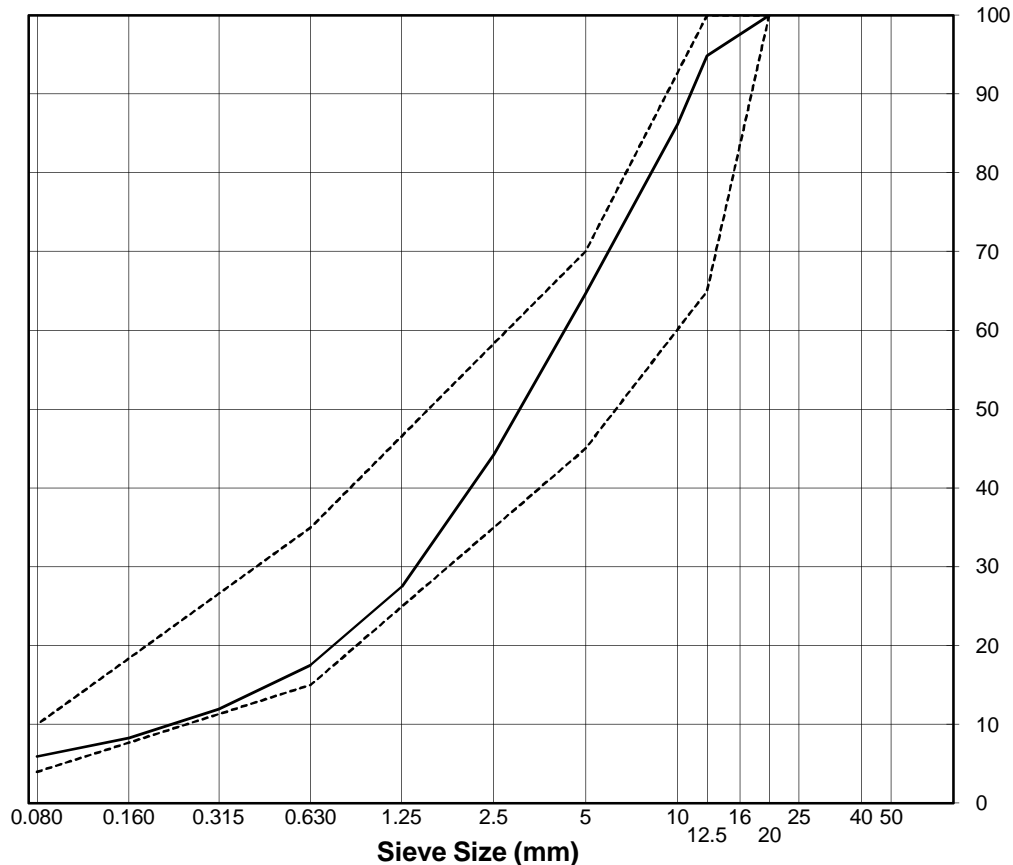
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Quarry 2, BELT sample.  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 05  
Date Received: February 20, 2011  
Sampled by: GDV  
Date Tested: February 20, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 1.8%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	95
10.0	86
5	65
2.5	44
1.25	27
0.630	18
0.315	12
0.160	8
0.080	5.9



**Remarks:** This particle size analysis represents the Core blend, prior to saturation.

Sample taken 0500 Hrs.

Reviewed By: DRAFT

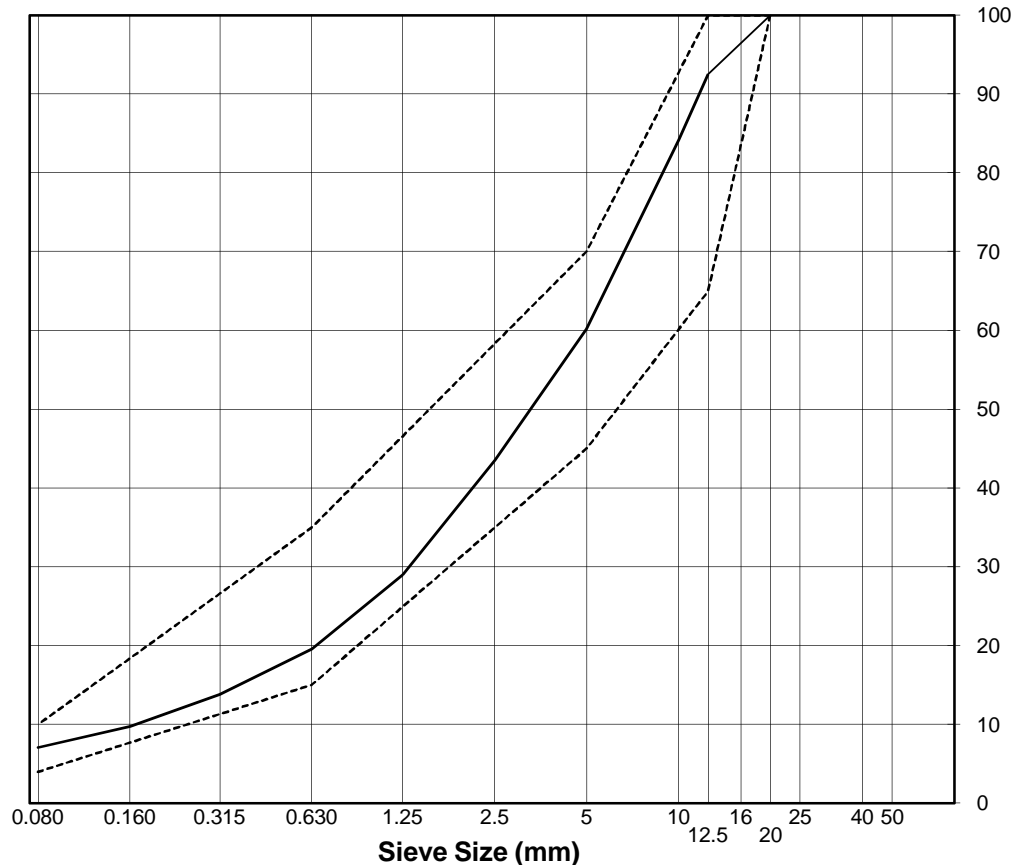
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Quarry 2, BELT sample.  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 06  
Date Received: February 20, 2011  
Sampled by: QC  
Date Tested: February 20, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 4.1%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	93
10.0	84
5	60
2.5	44
1.25	29
0.630	20
0.315	14
0.160	10
0.080	7.0



Remarks: This particle size analysis represents the Core blend, prior to saturation.

Sample taken 1100 Hrs.

Reviewed By: DRAFT

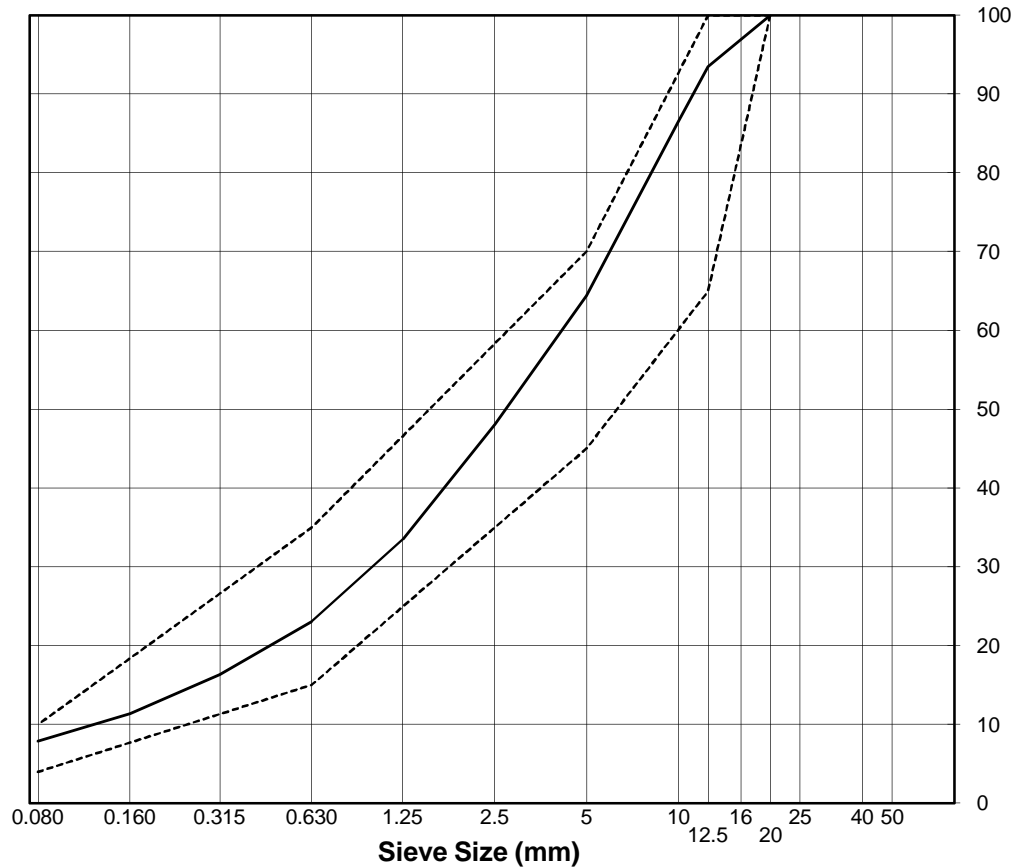
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Quarry 2, BELT sample.  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 07  
Date Received: February 20, 2011  
Sampled by: QC  
Date Tested: February 20, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 3.3%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	93
10.0	87
5	64
2.5	48
1.25	33
0.630	23
0.315	16
0.160	11
0.080	7.8



Remarks: This particle size analysis represents the Core blend, prior to saturation.

Sample taken 1700 Hrs.

Reviewed By: DRAFT

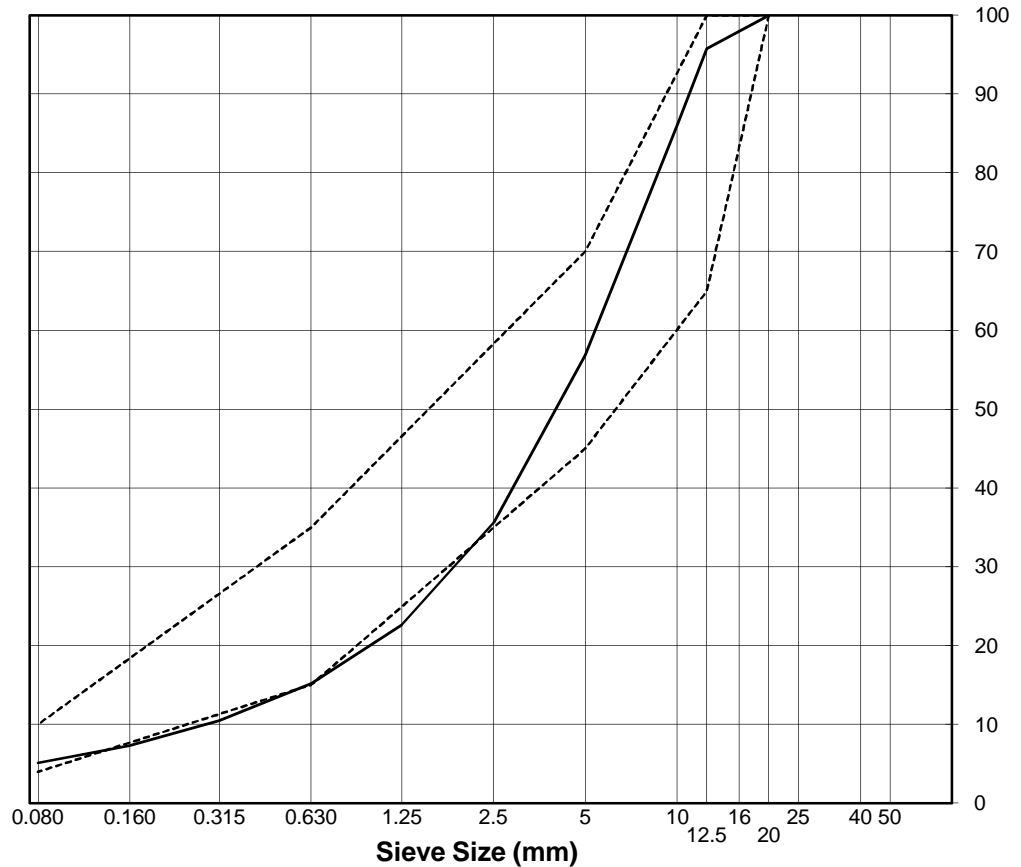
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: E14101112  
Project: Doris North - North Dam  
Client: SRK Consulting  
Attention: Lowell Wade  
Email: HopeBay@SRK.com  
Description: Sand & Gravel (20mm max, crush), trace silt, grey.  
Source: Quarry 2  
Supplier: Crusher  
Sample Location: Quarry 2, STOCKPILE sample  
Specification: SRK Consulting Specification Revision E Core Material

Sample No.: Core 08  
Date Received: February 21, 2011  
Sampled by: GDV  
Date Tested: February 21, 2011  
Tested by: GDV Office: On-site lab  
Moisture Content (as received): 2.4%  
No. Crushed Faces: Two (2) or Three (3)  
By Particle Mass: \_\_\_\_\_

Sieve Size	Percent Passing
20	100
12.5	96
10.0	86
5	57
2.5	36
1.25	23
0.630	15
0.315	10
0.160	7
0.080	5.1



Remarks: This particle size analysis represents the Core blend, prior to saturation.

Sample taken 0100 Hrs.

Reviewed By: DRAFT

## Moisture Content Determination and Sample Description

[illegible]

# REQUEST FOR INFORMATION

RFI NUMBER	<b>JDS-RFI-005</b>
ISSUE DATE (YY/MM/DD)	February 23, 2011
PRIORITY	H <input type="checkbox"/> M <input type="checkbox"/> L <input type="checkbox"/>
REQ'D RESPONSE DATE	March 2, 2011

## Hope Bay Mining Project

Subject:	Ground Temperature Cable Extensions	Project Zone/Area:	Doris North
Company:	SRK Consulting (Canada) Inc.	Station/Location:	North Dam
Attention:	Lowell Wade	Discipline:	Civil

AFE:		Specification Number:	Technical Specifications Rev. "E"
Related Drawings:	SRK North Dam IFC Drawing Package	Related Documents:	Section 9 Instrumentation

Related WBS Code		WBS Code Description:	

## Information Request/Description of Issue/Approval Required:

Please assess the implications of routing the ground temperature cables leads from the vertical cables installed in the base of the key trench, and the lower and middle layer horizontal cables along the downstream side of the core and then run through a common suite location (i.e. Sta. 0+40, 0+60, 0+85, 0+130, and 1+75) along with the upper layer of horizontal cables. The cable leads will be protected during construction in a similar manner as when the leads run up the downstream wall of the key trench.

Please assess the materials and dimensions that illustrates the cross section (Dwg. DN-ND-09) in which the cable extensions will be buried in the horizontal plane to extend to the downstream slope of the dam.

## Proposed Corrective Action:

Route cable extensions from ground temperature cables in and beneath the core along the downstream side of the core and extend through a common suite location (i.e. Sta. 0+40, 0+60, 0+85, 0+130, and 1+75) along with the upper layer of horizontal cables. Please refer to the sketch attached.

Reduce x, y, z dimensions of 20 mm and transition material zone within which the cables extensions will be placed.

Originator: Mark Valeriote (JDS Energy & Mining Inc.)

February 23, 2011

Print:

Sign:

Date:

Cost Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Schedule Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Source for Communication	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change
		<input type="checkbox"/> Constructor Change
		<input checked="" type="checkbox"/> Other

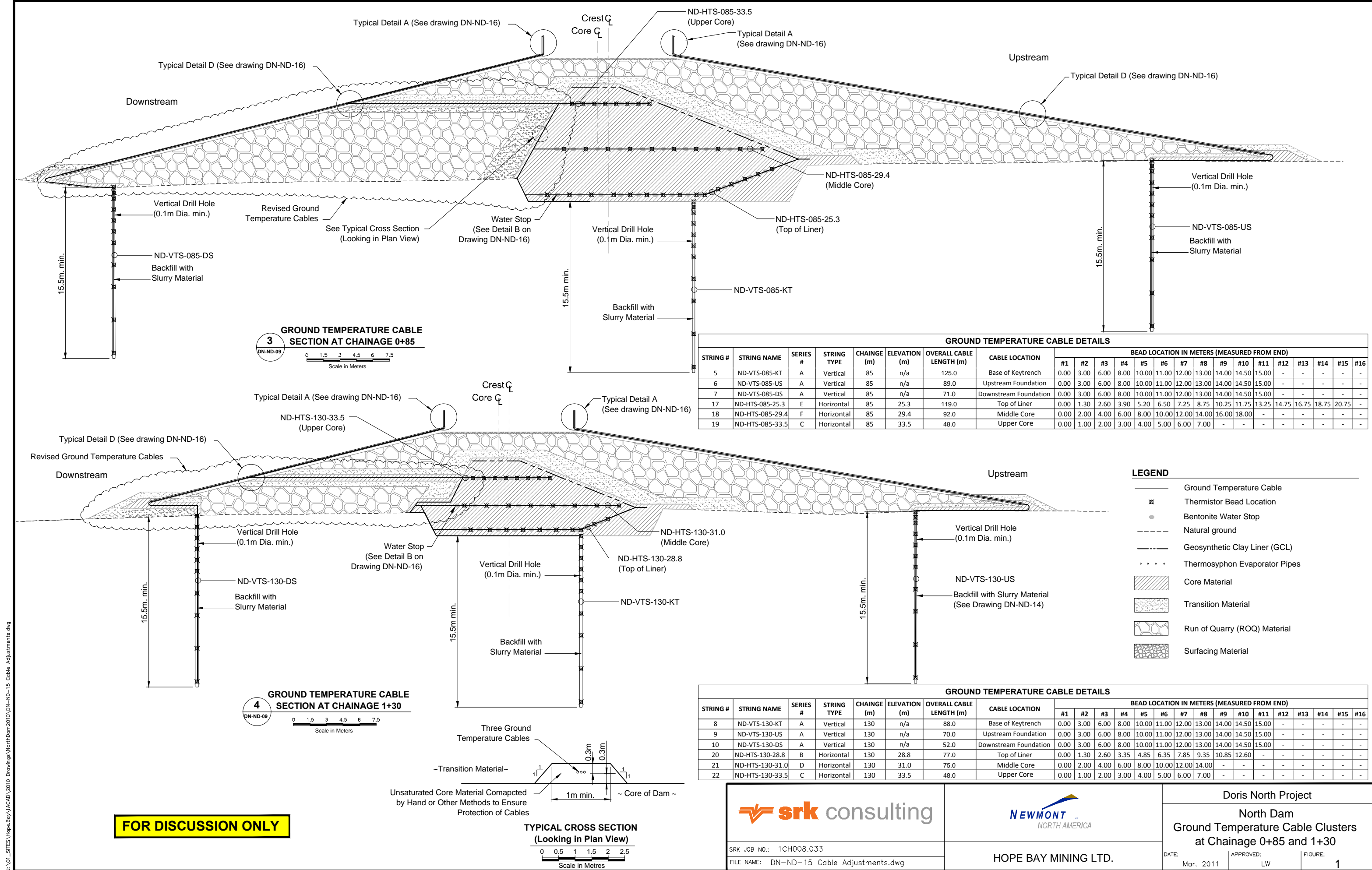
Note: RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense

☐ Corrective Action Approved

☐ Correct as Follows:

Response:			
SRK does not see an issue with the re-routing if the ground temperature cables as proposed. RST [the supplier of the ground temperature cables] confirmed the increased number of bends will not be an issue as the cable is constructed of multi-strand copper wire. Care should be taken so cable is installed with smooth bends. As the new cable routing will be along the outer edge of the Dam's core the cables will have to be protected from the ROQ shell by placing unsaturated compacted core material around the cables as the ROQ shell is being constructed. This is shown in the attached figure.			
Responsible Newmont Representative:	Lowell Wade	Sign:	March 29, 2011
	Print:		Date:

J:\01\_SITES\Hope Bay\ACAD\2010 Drawings\North Dam\2010\DN-ND-15 Cable Adjustments.dwg



# REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-039</b>				
ISSUE DATE (YY/MM/DD)	April 2, 2011				
PRIORITY	H	<b>X</b>	M		L
REQ'D RESPONSE DATE	<b>April 2, 2011 AM</b>				

Hope Bay Mining Project

Subject:	North Dam – Reduced Annulus	Project Zone/Area:	Doris North / Doris
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	North Dam
Attention:	Mark Valeriote cc SRK	Discipline:	Civil

AFE:		Specification Number:	
Related Drawings:	North Dam SRK Dwg No. DN-ND-27	Related Documents:	

Related WBS Code	n/a	WBS Code Description:	n/a

Information Request/Description of Issue/Approval Required:
To reduce further operational delays due to expediting an 8.5" drill bit to site to drill the holes at the vertical support pile locations at the North Dam, Nuna proposes using the 6.5" drill bit currently available on site.
Proposed Corrective Action:
Nuna proposes to drill a 6.5" hole for the piles and reduce the annulus from 50mm to 25mm on either side. It is understood from discussions on this yesterday, April 1 <sup>st</sup> , between the EPCM, Nuna and SRK that the reduction in annulus would then require the overall pile embedment length to be increased from 6.0m to 7.0m. All other engineered drawing details remain the same.
Originator: KEVIN OAKES
<i>Print:</i> <i>Sign:</i> <i>Date:</i>

Cost Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Schedule Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Source for Communication	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change
		<input type="checkbox"/> Constructor Change
		<input type="checkbox"/> Other
<p>Note: RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense</p>		

☐ Corrective Action Approved ☐ Correct as Follows:

Response:
Please see next page for response.
Responsible Newmont Representative: John Kurylo (SRK)
<i>Print:</i> <i>Sign:</i> <i>Date:</i>

Response:

Summary details for the onsite April 1<sup>st</sup> radiator pile discussions are documented in SRK daily report #80.

- **Background:** As outlined in SRK's technical specifications: A minimum 4" (102 mm) nominal Schedule 80 pipe is recommended. The pile installation holes shall be drilled to a diameter at least 100 mm larger than the outside diameter of the pipe. Further the drawing shows the annulus as being 50mm (on either side or surrounding the pile).
- As of April 1<sup>st</sup> only a 6 ½" drill bit was on site.

To assist in reduce further operational delays SRK indicated that with pile fabrication modifications and an increased pile embedment depth a 25mm rather than a 50mm annulus (on both sides of the pile) would be acceptable for the North Dam radiator piles. Details on pile embedment and required fabrication modifications, for use with a 25mm annulus, are presented below:

1. The embedment depth for a pile utilizing a 25mm annulus would be required to be 7m.
2. Additional slot cuts (4-6) would be required to be cut into the extended pile section and an additional rebar ring would be required on the piles.
3. As the measured dimension of the pile pipe, rebar ring and rebar centralizer was measured in the field to be ~6 ½" some of the existing centralizers (rebar) on the existing piles are expected to be cut.
  - This will ensure that piles will be able to be more readily installed (i.e. without excessive banging).
4. Ideally an 'x' of rebar would be welded over the bottom of the piles, as was done at Culvert #1, to better ensure a strong basal bond of the adfreeze piles.
5. The piles would be extended above ground to ensure that a minimum stick-up of 1.5m above the elevation of the levelling course/ thermosyphon bedding grade is maintained.
  - The base of the long C-channels would be a minimum of 0.5m (min) above the highest levelling course elevation to assist in reducing the moment arm and increase lateral support for the piles.

Base on field survey information of the WSW thermosyphon trench excavation and the measured length of the previously fabricated piles, the piles are expected to be required to be extended by 2 to 3m in length.

- Final pile lengths are a minimum of 9.5m at the highest point and a maximum of 10.5m at the lowest point (based on neat lines).
- It is recommended that to account for any potential over drilling and to assist with easy welding the c-channels and cross bracing that an additional 0.5m allowance be added onto the piles. Therefore pile lengths are expected to be in the range of 10m minimum to 11m maximum (or extensions are expected to range from 2 to 3m).

➔ Additional notes and draft sketches are attached for additional information.

Responsible Newmont Representative:

JOHN KURIO

Print:

Sign:

APRIL 2<sup>nd</sup> / 11

Date:



Note: Radiator supports are separated by 0.5m.

SURVEYED ELS. (In Field 2011.03.31)

PILE	Excavation EL
PILE-S1	34.56
PILE-S2	34.23
PILE-S3	33.85
PILE-S4	33.85
PILE-S5	34.23
PILE-S6	34.62

lowest elev.

+ mid.

\* Highest elev.

$\Delta$  high-low elev = 0.77m  
 $\Delta$  mid-low elev = 0.38m

PILE DIMENSION NOTES:

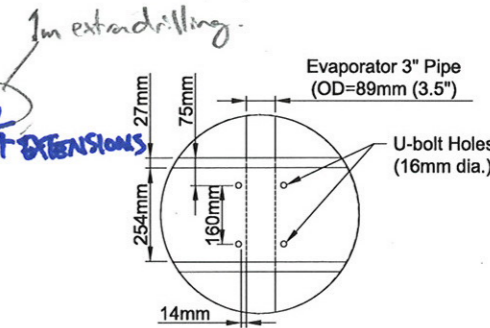
OD PIPE = 4.5"

DIAMETER OF PIPE + RING + CENTRALIZER = ~6.5"

ID	NORTHING	EASTING
Pile-S-1	7559093.30	434293.91
Pile-S-2	7559096.98	434294.32
Pile-S-3	7559100.62	434294.73
Pile-S-4	7559100.67	434294.23
Pile-S-5	7559097.03	434293.82
Pile-S-6	7559093.36	434293.42
Pile-N-1	7559220.76	434409.71
Pile-N-2	7559222.80	434412.75
Pile-N-3	7559224.84	434415.79
Pile-N-4	7559225.27	434415.51
Pile-N-5	7559223.23	434412.46
Pile-N-6	7559221.18	434409.42

Item	Unit	Quantity
Drilling	m	78
Piles	m	96
Slurry	m <sup>3</sup>	1.20
C-Channel (Pile Cross Bracing)	m	62.4
U-Bolts	no.	144
Thermosyphon Radiator Assembly	no.	12

# BY WSW TRENCH  
IN FIELD MEASURE (On 2011.03.31)  
4 Piles at ~7.7m  
2 Piles at ~8m  
WILL NEED EXTENSIONS.  
~21' x 3 = 63' of extra  
pipe expected to be available  
on site (to be confirmed)



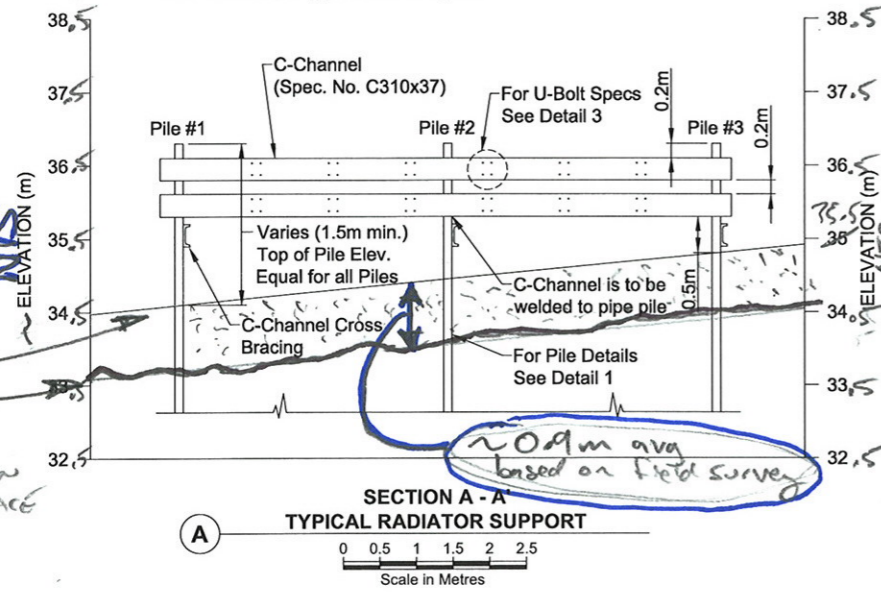
DETAIL 3  
U-BOLT SPACING  
Scale in Millimetres

North Dam Footprint

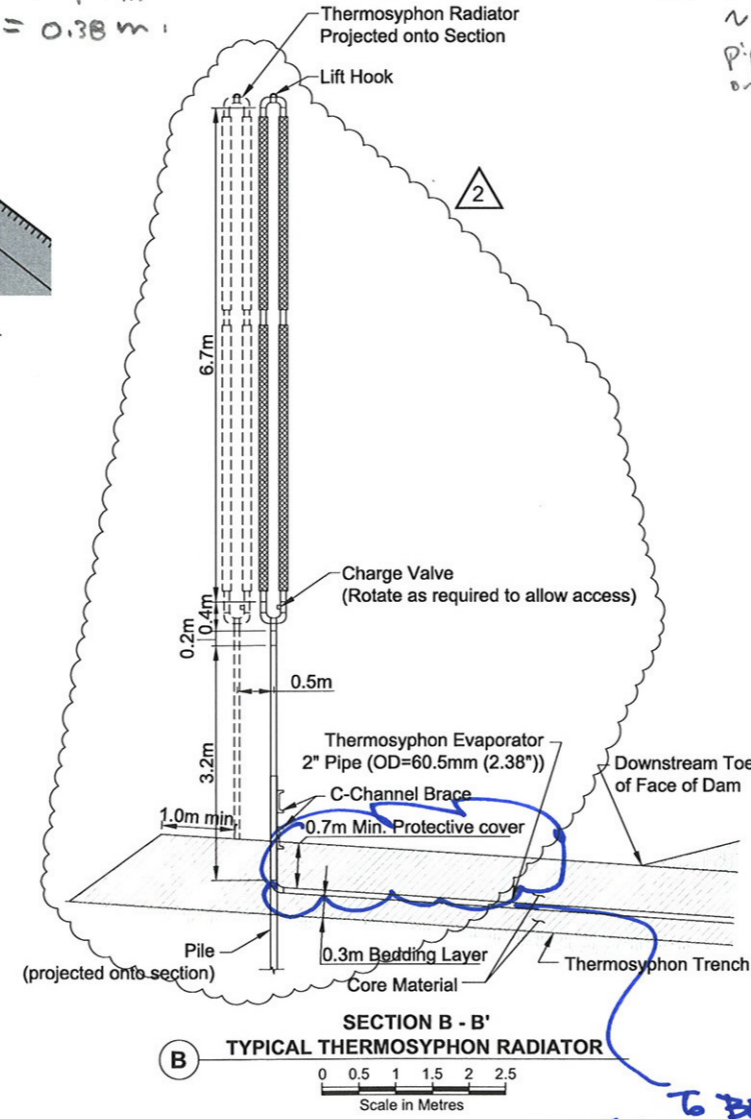
Thermosyphon Evaporator Pipes

PLAN VIEW WSW  
NORTH THERMOSYPHON RADIATORS  
Scale in Metres

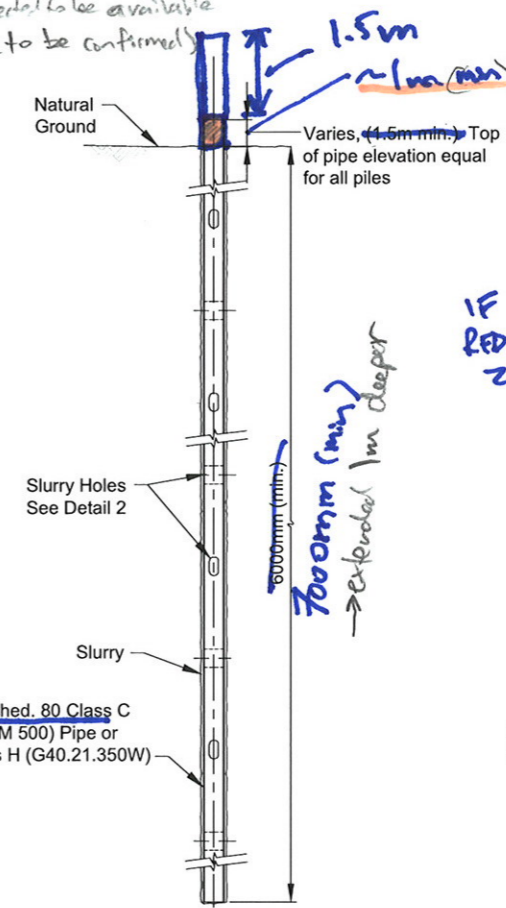
Note: Thermosyphon radiators not shown, see Section B for typical radiator layout.



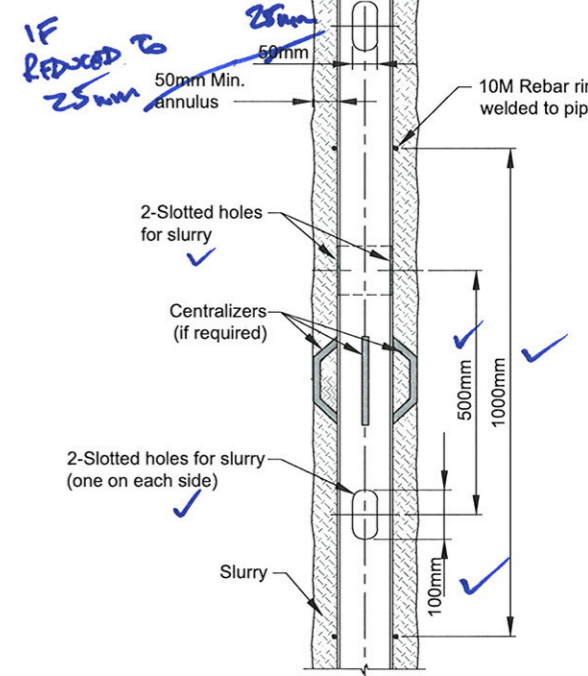
SECTION A - A  
TYPICAL RADIATOR SUPPORT  
Scale in Metres



SECTION B - B'  
TYPICAL THERMOSYPHON RADIATOR  
Scale in Metres



DETAIL 1  
TYPICAL STEEL PILE DETAIL  
Scale in Millimetres



DETAIL 2  
REBAR AND GROUT HOLES  
Scale in Millimetres

DRAWING NO.		DRAWING TITLE		DRAWING NO.		DRAWING TITLE		NO.		DESCRIPTION		CHK'D		APP'D		DATE		PROFESSIONAL ENGINEER'S STAMP		FILE NAME: DN-ND-0027.dwg		SRK JOB NO.: 1CH008.027		SRK DWG NO.: DN-ND-27		SHEET 28 OF 29		REVISION NO. 2	

DRAWING NO.		DRAWING TITLE		DRAWING NO.		DRAWING TITLE		NO.		DESCRIPTION		CHK'D		APP'D		DATE		PROFESSIONAL ENGINEER'S STAMP		FILE NAME: DN-ND-0027.dwg		SRK JOB NO.: 1CH008.027		SRK DWG NO.: DN-ND-27		SHEET 28 OF 29		REVISION NO. 2	

Original Drawings Stamped and Signed by Engineer		SRK Consulting Engineers and Scientists		NEWMONT NORTH AMERICA		HOPE BAY MINING LTD.		Doris North Project		DRAWING TITLE: North Dam Thermosyphon Details		DRAFT SKETCHES/NOTES		HB+T-CIV-CIV-OND-0047		SHEET 28 OF 29		REVISION NO. 2	

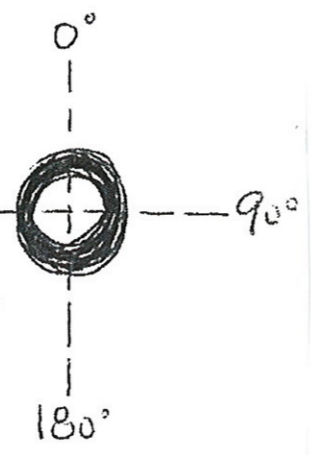
JRK

# ~ WHAT HAS BEEN FABRICATED ON SITE (AS OF APRIL 14, 2011)

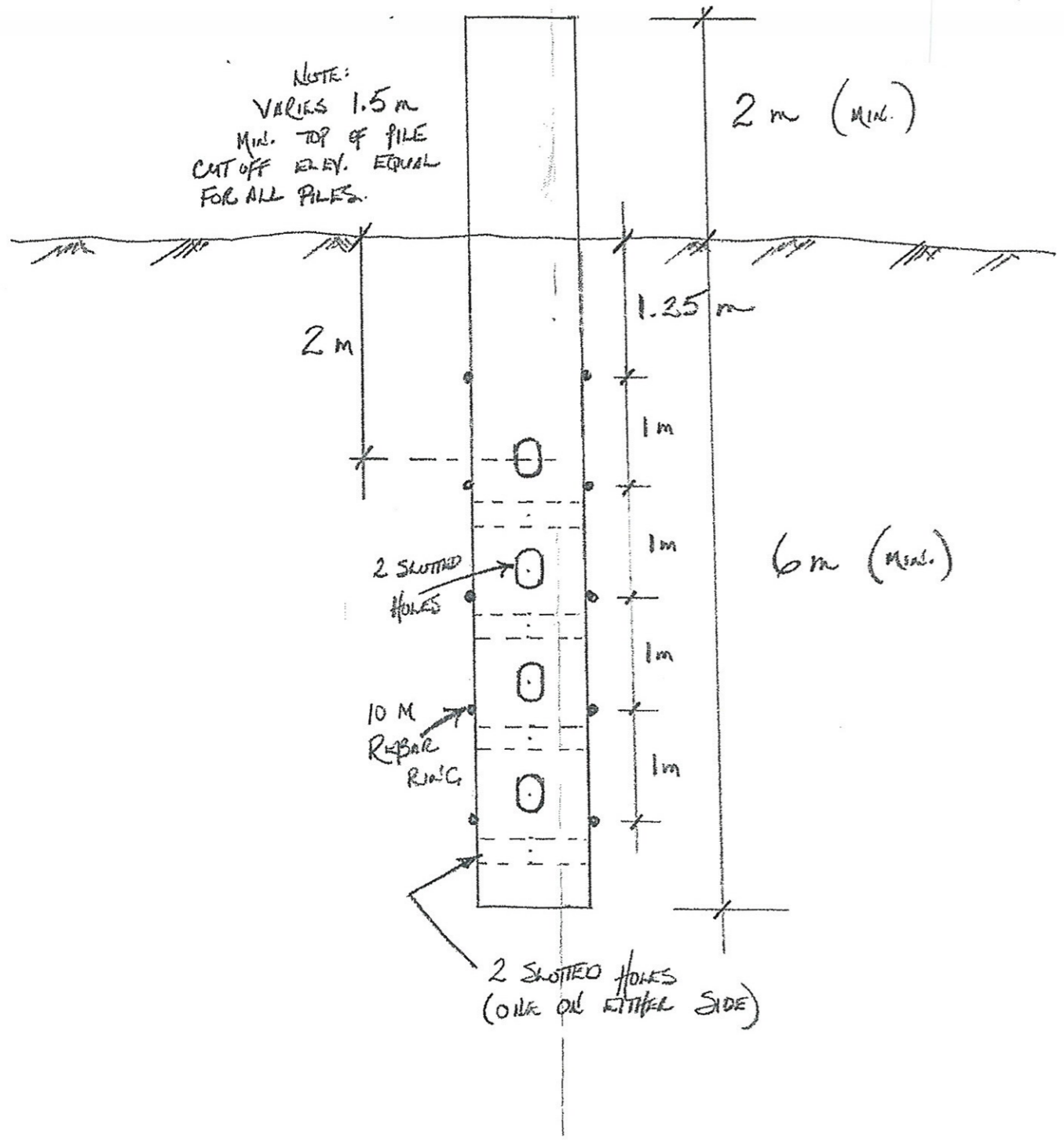
NOT TO SCALE

CENTRALIZERS/LUGS ON EACH PILE @:

- EQ. @ 1 m @ 45° ORIENTATION 270°
- @ 2 m @ 135° ~||~
- @ 3 m @ 225° ~||~
- @ 4 m @ 315° ~||~

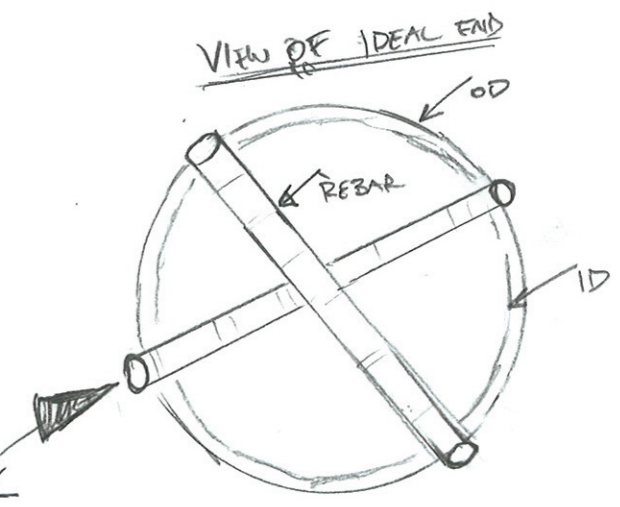
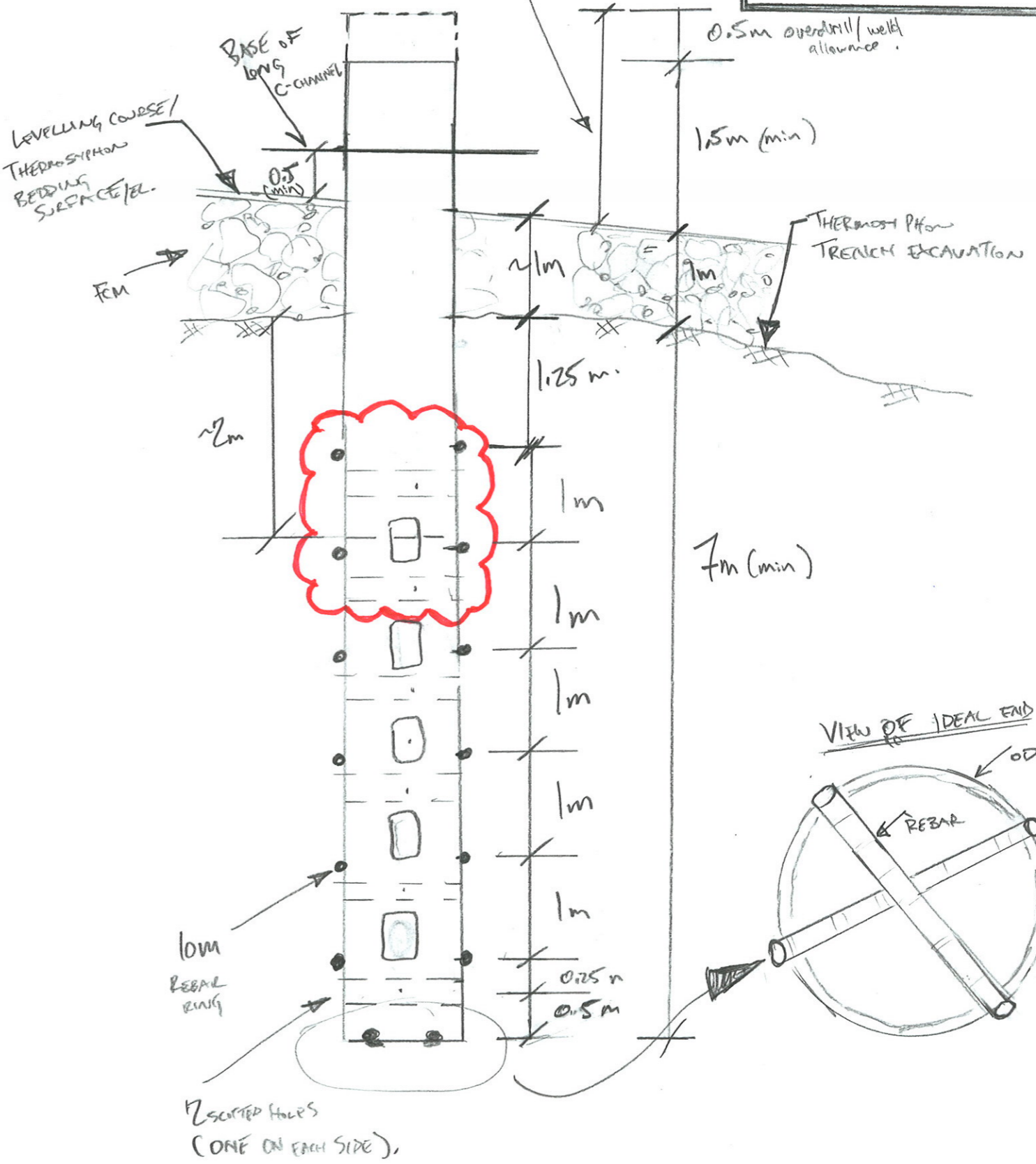
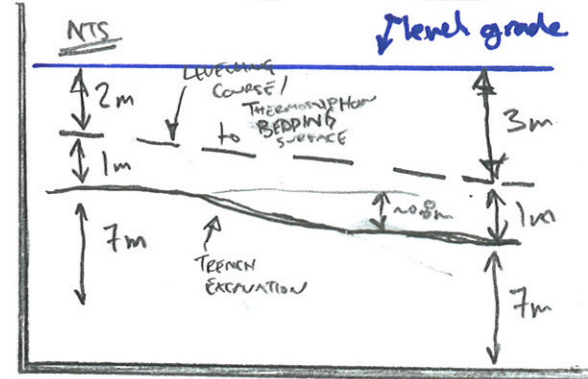


NOTE:  
VARIES 1.5 m  
MIN. TOP OF PILE  
CUT OFF ELEV. EQUAL  
FOR ALL PILES.



# ~ WHAT WOULD BE REQUIRED FOR

NOT TO SCALE



## REQUEST FOR INFORMATION

RFI NUMBER	<b>NL-RFI-054</b>				
ISSUE DATE (YY/MM/DD)	July 19, 2011				
PRIORITY	H		M		L X
REQ'D RESPONSE DATE	August 2, 2011				

Hope Bay Mining Project

Subject:	North Dam Survey Monuments	Project Zone/Area:	North Dam
Company:	Nuna Logistics Ltd. (Nuna)	Station/Location:	North Dam
Attention:	Calvin Goldschmidt	Discipline:	Civil

A/E:		Specification Number:	
Related Drawings:	DN-ND-16 (HB+T-CIV-CIV-OND-0036)	Related Documents:	

Related WBS Code		WBS Code Description:	North Dam

**Information Request/Description of Issue/Approval Required:**

As per SRK Drawing DN-ND-16 Section E - Survey Monitoring Point Detail, there is a required base plate measuring 500mm x 500mm x 10mm.

There currently is not a supply of 10mm steel plate available onsite.

**Proposed Corrective Action:**

Nuna is proposing the use of 6mm steel plate which is currently onsite and available for use. Please confirm the acceptance of this.

Originator: Mike Price July 19, 2011

Print:

Sign:

Date:

Cost Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	Per description above.
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Schedule Impact	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	
Source for Communication	<input type="checkbox"/> Owner Change	<input type="checkbox"/> Clarification/Info	<input checked="" type="checkbox"/> Constructor Change
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change	<input type="checkbox"/> Other

**Note: RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense**

☐ Corrective Action Approved ☐ Correct as Follows:

**Response:**

The minimum thickness of steel base plate required for the survey monuments is 10 mm. If only 6mm thick steel plate is available on-site to fabricate the survey monuments, two base plates will have to be welded together to make sure this minimum dimension met. The two base plates would have to be appropriately welded together to prevent separation.

Responsible Newmont Representative: Lowell Wade July 20, 2011  
 Print: Sign: Date:

# REQUEST FOR INFORMATION

RFI NUMBER	<b>JDS-RFI-080</b>				
ISSUE DATE (YY/MM/DD)	2012/01/22				
PRIORITY	H	<input checked="" type="checkbox"/> X	M		L
REQ'D RESPONSE DATE	2012/02/09				

## Hope Bay Mining Project

Subject:	GCL Cover Material	Project Zone/Area:	Doris North
Company:	SRK Consulting (Canada) Inc.	Station/Location:	North Dam
Attention:	Maritz Rykaart / Lowell Wade	Discipline:	Civil

AFE:		Specification Number:	Technical Specifications Rev. "G"
Related Drawings:	SRK North Dam IFC Drawing Package	Related Documents:	Section 5.2.7 Core Material
	SRK Drawing No: DN-ND-02		Section 6.4.3 GCL Cover

Related WBS Code	3DJA2025	WBS Code Description:	North Dam Construction

## Information Request/Description of Issue/Approval Required:

SRK Drawing No: DN-ND-02 (refer to attachment) shows 0.3 m of cover material placed above the upper panel of GCL. The cover material is illustrated as being "core material". The cover material refers to the material upstream and on top of the upper GCL placed on the upstream slope and over the crest of the frozen core material. Technical Specifications Revision "G" Section 5.2.7 Core Material, Table 5.4 (refer to attachment) provides the particle size distribution limits. Technical Specifications Revision "G" Section 6.4.3 GCL Cover (refer to attachment) outlines the parameters with placing cover material. Technical Specifications Revision "G" Section 6.4.3 GCL Cover specifies the material must be compacted to a maximum of 90% of the maximum dry density (ASTM D698) to prevent damage to the GCL.

It is our intent to use granular material that was processed between mid-January up until the beginning of March 2011. This material meets the particle size distribution limits noted above.

## Proposed Corrective Action:

It is our intent to use granular material that was processed as frozen core material prior to March 2011. This material meets the particle size distribution limits outlined in Technical Specifications Revision "G" Section 5.2.7 Core Material, Table 5.4.

Originator: Mark Valeriote (JDS Energy & Mining Inc.)

2012/01/22

Print:

Sign:

Date:

Cost Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Schedule Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Source for Communication	<input type="checkbox"/> Owner Change	<input checked="" type="checkbox"/> Clarification/Info
	<input type="checkbox"/> Vendor Change	<input type="checkbox"/> Designer Change
		<input type="checkbox"/> Constructor Change
		<input type="checkbox"/> Other

Note: RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense

☐ Corrective Action Approved


☐ Correct as Follows:

## Response:

The proposal of placing granular material, processed as frozen core material prior to March 2011, over the GCL is acceptable. As mentioned above all the lines and grades shown on the IFC Drawings and the appropriate sections of Technical Specifications Rev. G are to be maintained.

Responsible Newmont Representative:

Lowell Wade



January 23, 2012

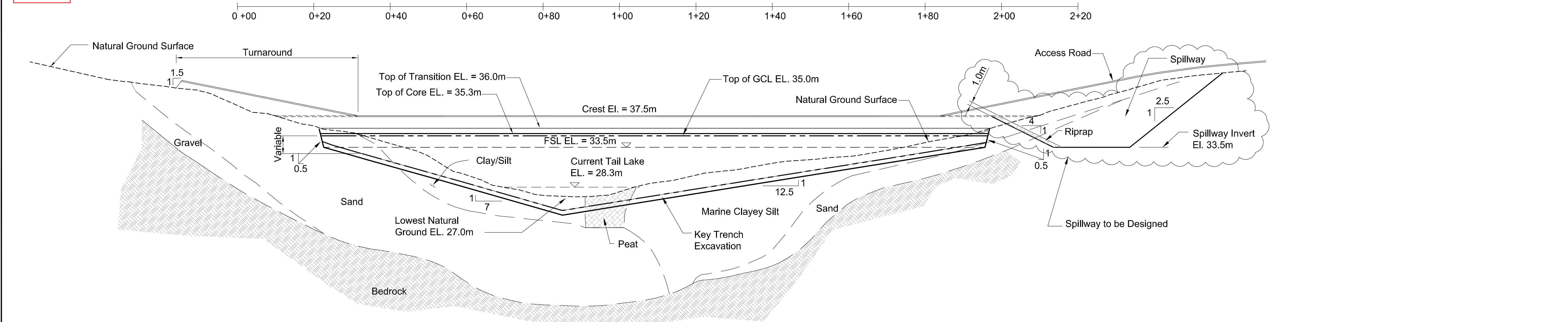
Print:

Sign:

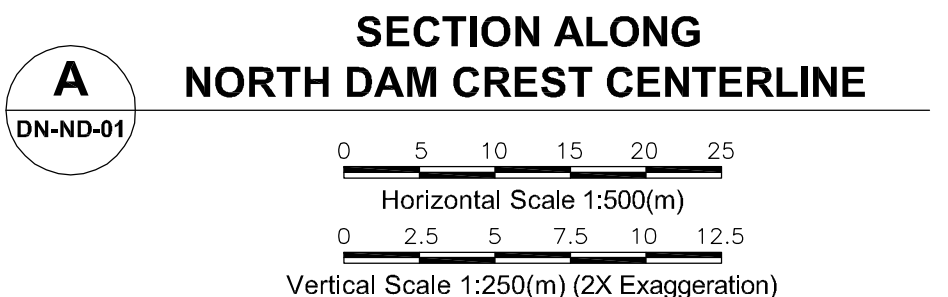
Date:

### **6.4.3 GCL Cover**

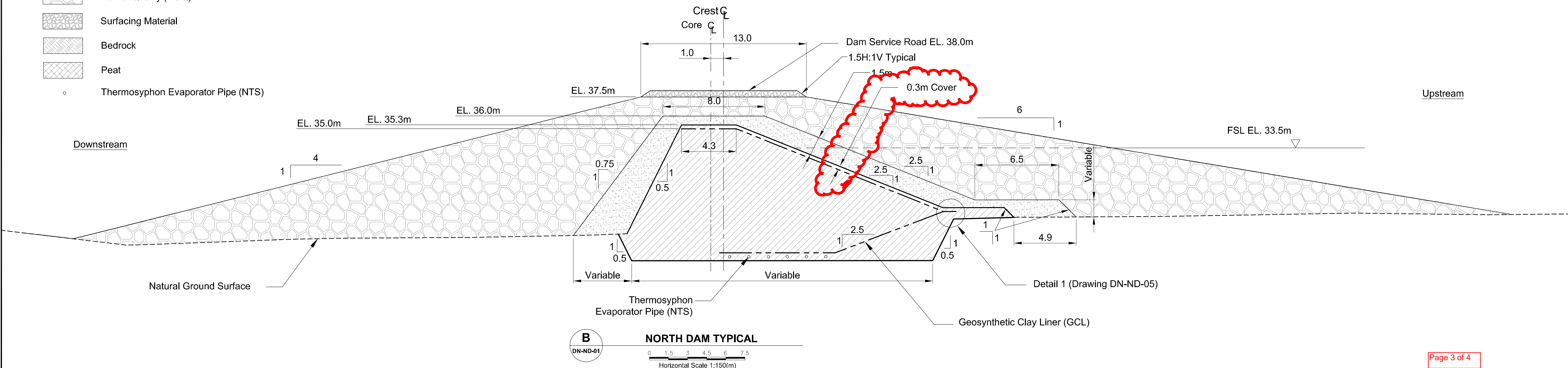
1. The cover material refers to the material upstream and on top of the upper GCL placed on the upstream slope and over the crest of the frozen Core material.
2. The cover material shall be placed in such a manner that it is pushed across the seams from the overlap roll to the underlap roll. Care must be taken to not push aggregate between the seam overlap. Equipment shall push the cover material ahead of the equipment, and never travel directly on the GCL.
3. The cover material shall comprise Core material as specified in Section 5.
4. Uncovered edges of GCL panels shall be protected with a waterproof sheet adequately secured with ballast, if the GCL installation sequence is delayed for a period in excess of 12 hours or the edges remain exposed for a period in excess of 12 hours.
5. The cover material shall be placed with the minimum thickness of 300 mm over the GCL.
6. The cover material shall be placed with low ground pressure equipment. Care should be taken to avoid damaging the GCL by not making sharp turns or pivots with equipment as well as sudden starts or stops.
7. A minimum thickness of 500 mm to 900 mm of cover, as determined by the Engineer, shall be kept between heavy equipment and the GCL at all times, except during final-grading. Heavy vehicles should not be driven directly on the GCL until the proper thickness of cover has been placed.
8. The first fill of Cover material over the GCL shall be compacted to a maximum of 90% of the maximum dry density (ASTM D698) or as specified by the Engineer to prevent damage to the GCL. Subsequent lifts, if required, of the Cover material over the GCL shall be compacted to 95% of the maximum dry density (ASTM D698). Moisture conditioning may be required to achieve the specified level of compaction.
9. The cover material should be pushed up-slope to minimize tension on the GCL when covering GCL on sloped areas.
10. Precautions shall be taken to prevent damage to the GCL by restricting the use of heavy equipment over the GCL.



- LEGEND**
- Natural Ground
  - - - - - Geosynthetic Clay Liner (GCL)
  - Stratigraphic Boundary
  - Core Material
  - Transition Material
  - Run of Quarry (ROQ)
  - Surfacing Material
  - Bedrock
  - Peat
  - Thermosyphon Evaporator Pipe (NTS)



- NOTES**
- The subsurface geology has been extrapolated from a series of geotechnical investigations consisting of drill holes, auger holes and shallow test pits. Bedrock contact and geological unit contacts are therefore likely to vary somewhat during final excavation. The Engineer will inspect all excavations and approve the foundation conditions.



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**Table 5.4: Core material particle size distribution limits**

<b>Particle Size (mm)</b>	<b>% Passing</b>
20.0	100
12.5	65-100
5.0	45-70
0.63	15-35
0.08	4-10

# REQUEST FOR INFORMATION

RFI NUMBER	JDS-RFI-006
ISSUE DATE (YY/MM/DD)	February 9, 2012
PRIORITY	H X M L
REQ'D RESPONSE DATE	February 14, 2012

## Hope Bay Mining Project

Subject:	North Dam – Frozen Core Construction	Project Zone/Area:	Doris North Project
Company:	SRK Consulting (Canada) Inc.	Station/Location:	North Dam Sta. 0+70 to Sta. 1+20
Attention:	Lowell Wade	Discipline:	Civil

AFE:		Specification Number:	
Related Drawings:	SRK DWG. NO: DN-ND-02	Related Documents:	
	Sketch attached.		

Related WBS Code		WBS Code Description:	
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## Information Request/Description of Issue/Approval Required:

### Proposed Corrective Action:

It is our intent to construct the frozen core to El. 29.8 m in controlled lifts that meets the compaction and saturation criteria. This construction methodology will fill the wedge between the design core lines along the upstream side of the core superstructure and the previously constructed fillet extension between Sta. 0+70 and Sta. 1+20. The upper GCL panels will overlap the lower GCL panels by the required 1.0 m on the horizontal plane of the fillet extension at El. 29.8 m. The upper GCL panels will extend on the horizontal plane at El. 29.8 m to the point where they meet the 2.5H:1V upstream slope of the frozen core where they will then continue as per the IFC drawings. The minimum GCL cover (0.3 m) dimension and subsequent minimum cover of transition material will be maintained.

Originator: Mark Valeriote

Print:

Sign:

Feb. 8, 2012

Date:

Cost Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Detailed Estimate attached	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Schedule Impact	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Source for Communication	<input checked="" type="checkbox"/> Owner Change	<input type="checkbox"/> Clarification/Info
	<input type="checkbox"/> Vendor Change	<input checked="" type="checkbox"/> Designer Change
		<input type="checkbox"/> Constructor Change
		<input type="checkbox"/> Other

Note: RFI's are not authorized change documents and cannot be used to direct a change in contract requirements. If Newmont's response on the RFI has cost and/or schedule effect, it is the contractor's responsibility to immediately advise Newmont. Work undertaken without Newmont written authorization is at the contractor's risk and expense

☐ Corrective Action Approved

☐ Correct as Follows:

### Response:

The proposal to place additional FCM in the fillet expansion area to El. 29.8 m in controlled lifts that meet saturation, compaction and freezeback criteria is acceptable to SRK. Based on recent conversations (see SRK daily #18 and 27) and volume assessment it is noted that filling in this wedge between the IFC core design lines and the 2011 fillet extension will provide constructability and liner installation related benefits. A 1m overlap for the upper and lower GCL liner layers is acceptable. The quality of the lower GCL liner and the required extent of liner repairs on the fillet will be assessed in the field, after the liner is exposed. The minimum cover of core material over the GCL and subsequent minimum cover of transition fill, as noted above, should meet the design intent of the IFC's. For reference additional notes are presented on the attached figures.

Responsible Newmont Representative:

Lowell Wade

Print:



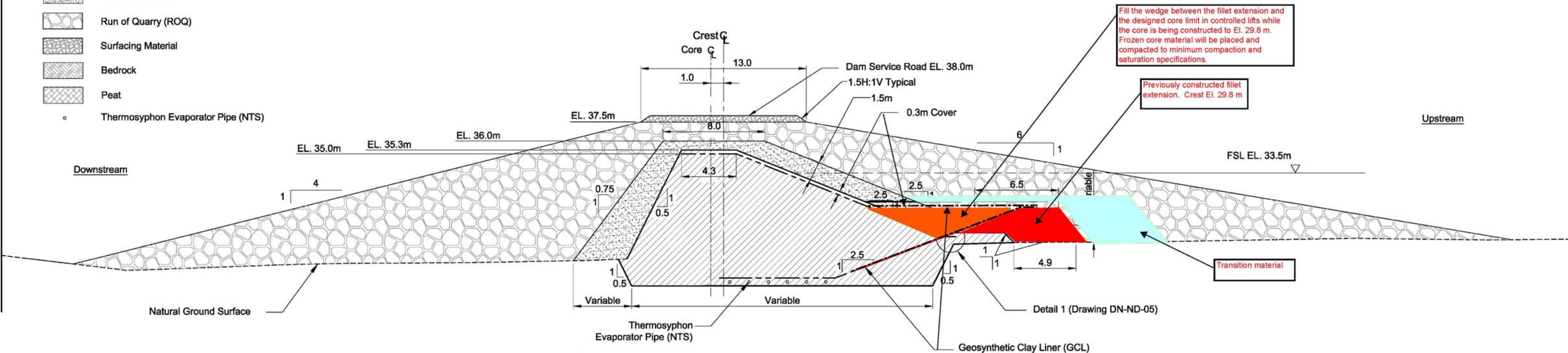
Sign:

February 10, 2012

Date:

LEGEND

- Natural Ground
- Geosynthetic Clay Liner (GCL)
- Stratigraphic Boundary
- Core Material
- Transition Material
- Run of Quarry (ROQ)
- Surfacing Material
- Bedrock
- Peat
- Thermosyphon Evaporator Pipe (NTS)



• Figure– Notes from onsite discussions about North Dam GCL liner tie-in

Project No. **1CH008.058**

Site **HORE BA-1-FIELD**

Prepared by **SRK**

Date **2012/01/23**

Approved by

Date

**SRK Consulting**

Engineers and Scientists

Subject **N. DAM CONSTRUCTION - GCL Tie-in Discussions** Sheet **1** of **1**

**ORIGINAL CORE DESIGN (TYPICAL SECTION NEAR +0+85)**

Labels: FCM, GCL, NTS, 0.5, 2.5, 1:2.5, MIN 0.3m COVER, FILLET, ORIGINAL UPPER/LOWER GCL TIE-IN SEE DETAIL 1 ON DN-MD-05.

**2011 CORE CONSTRUCTION**

Labels: IFC CORE, TWO LIFTS OF FCM OVER GCL LINER, GCL LEFT UNCOVERED/EXPOSED, VERTICALLY EXAGGERATED, EXTENDED FILLET ZONE FOR CONTINGENCY 2011 CLOSE-OUT, FILLET, FCM, NTS, GCL INSTALLED IN 2011.

**PROPOSED GCL TIE-IN**

Labels: FCM, GCL, NTS, AS PER IFC, MIN 0.3m, UNERT TIE-IN, SIMILAR TO DETAIL 1 ON DN-MD-05, GCL MEET BACK UP WITH IFC GCL LINE/LIMIT.

**NOTE:**

→ AN ASSESSMENT OF CONSTRUCTABILITY & TRADE OFF INVESTIGATION WILL BE COMPLETED ON SITE. THIS WOULD BE COMPLETED TO DETERMINE IF IT WOULD BE EASIER TO CONSTRUCT & SAVE TIME & COST IF FILLET EXTENSION BROUGHT STRAIGHT HORIZONTALLY BACK TO IFC LINES RATHER THEN BACK DOWN TO IFC LINES AT 2.5H:1V.

**VS.**

Two small diagrams showing different tie-in configurations, both labeled NTS.

This assessment has now been completed. As outlined in this RFI the preferred option will be to fill in the wedge that would remain between the 2011 fillet zone construction and the IFC design core limits (i.e. this area will be slightly overbuilt)

SRK

Daily\_Report#18\_20120123

23-Jan-2012