

## **REQUEST FOR INFORMATION**

			RFI NUN	MBER	NL-RFI-039		
			ISSUE D	ATE (YY/MM/DD)	April 2, 2011		
			PRIORIT		H X M L		
			REQ'D R	ESPONSE DATE	April 2, 2011 AM		
Hope Bay Mining Project	<del>_</del>						
Subject:	North Dam – Reduced Annulus		Project Zone/Area:		Doris North / Doris		
Company:	Nuna Logistics Ltd. (Nuna)		Station/Locat	ion:	North Dam		
Attention:	Mark Valeriote cc SRK		Discipline:		Civil		
	•		•				
AFE:			Specification				
Related Drawings:	North Dam SRK Dwg No	K Dwg No. DN-ND-27		ments:			
D-I-+- J M/DC C- J-	Τ,	WDC C- 1-	Di-ti	1 ,			
Related WBS Code	n/a	WBS Code	Description:	n/a			
Information Request/Dos	scription of Issue/Approval	Required:					
		·	o sito to drill th	a halos at the vertica	I support pile locations at the North		
	ng the 6.5" drill bit currentl		.o site to drill til	e noies at the vertica	i support plie locations at the North		
Dam, rana proposes asi	.6 0.0	, aramazie en sicei					
Proposed Corrective Acti	on:						
		reduce the annulus f	from 50mm to 2	5mm on either side.	It is understood from discussions		
on this yesterday, April 1	<sup>st</sup> , between the EPCM, Nun	a and SRK that the r	eduction in ann	ulus would then requ	uire the overall pile embedment		
length to be increased fro	om 6.0m to 7.0m. All other	r engineered drawin	ig details remaii	n the same.			
Originator: KI	EVIN OAKES						
	Print:		Sign:		Date:		
Cost Impact	No ☐ Yes						
Detailed Estimate attach							
Schedule Impact	No Yes						
Source for Communication			Clarification/Info	o $\square$ Cor	structor Change		
	Vendor Chang	=	Designer Change		•		
Note: RFI's are not autho		<del></del>	0 0	_	ments. If Newmont's response on		
			_		Work undertaken without		
Newmont written author	ization is at the contractor	's risk and expense					
Corrective Action Ap	proved Cor	rect as Follows:					
Response:							
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Please see next pa	ige ioi response.						
Responsible Newmont Re	epresentative: Jo	hn Kurylo (SRK)					
	-p. 200110011101	Print:		Sign:	Date:		

## Response:

Summary details for the onsite April 1st 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 1st 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:

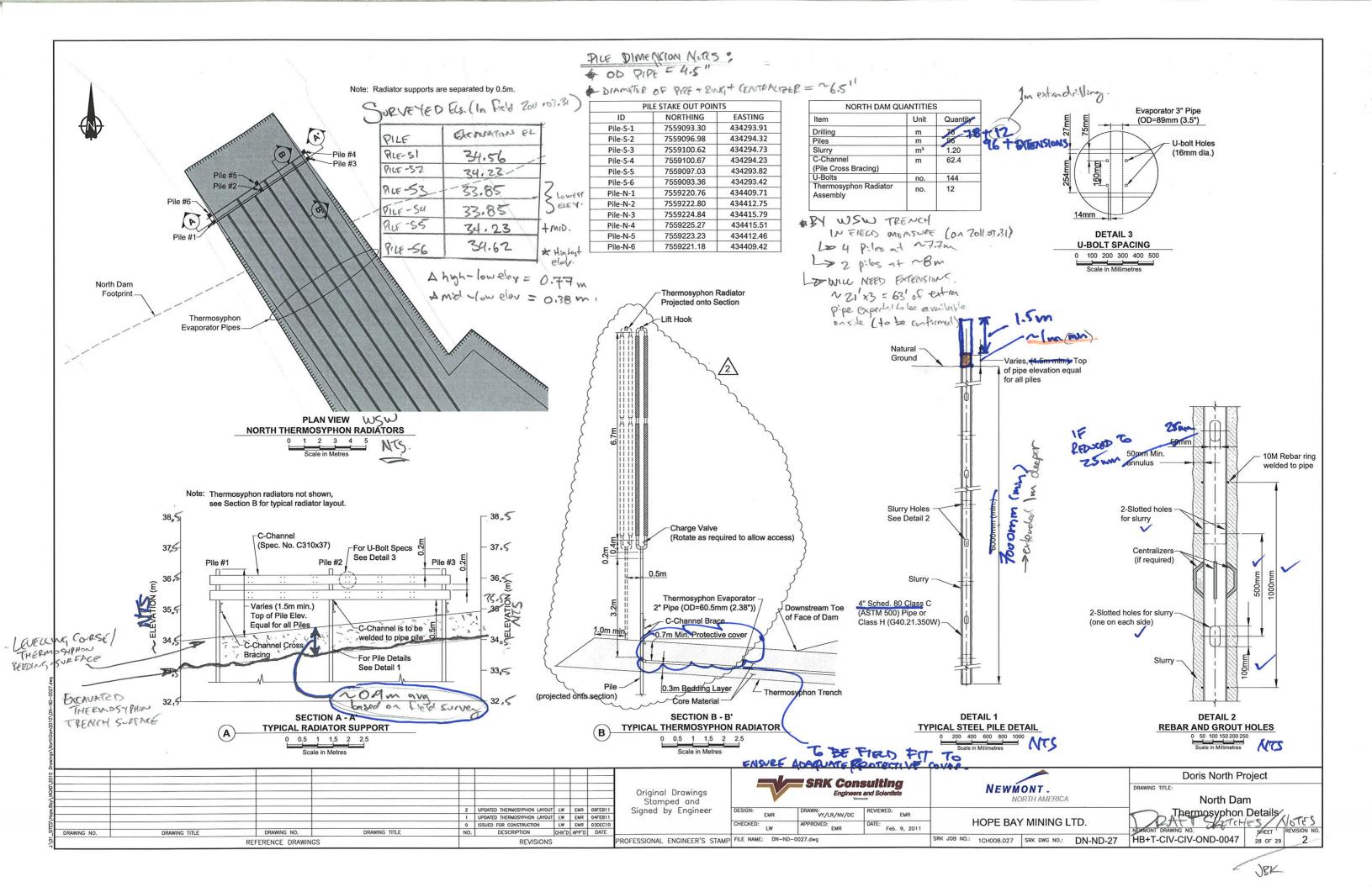
- 1. The embedment depth for a pile utilizing a 25mm annulus would be required to be 7m.
- 2. Additional slot cuts (4-6) would be required to be cut into the extended pile section and an additional rebar ring would be required on the piles.
- 3. As the measured dimension of the pile pipe, rebar ring and rebar centralizer was measured in the field to be  $\sim 6 \frac{1}{2}$ " 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.
  - o 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.

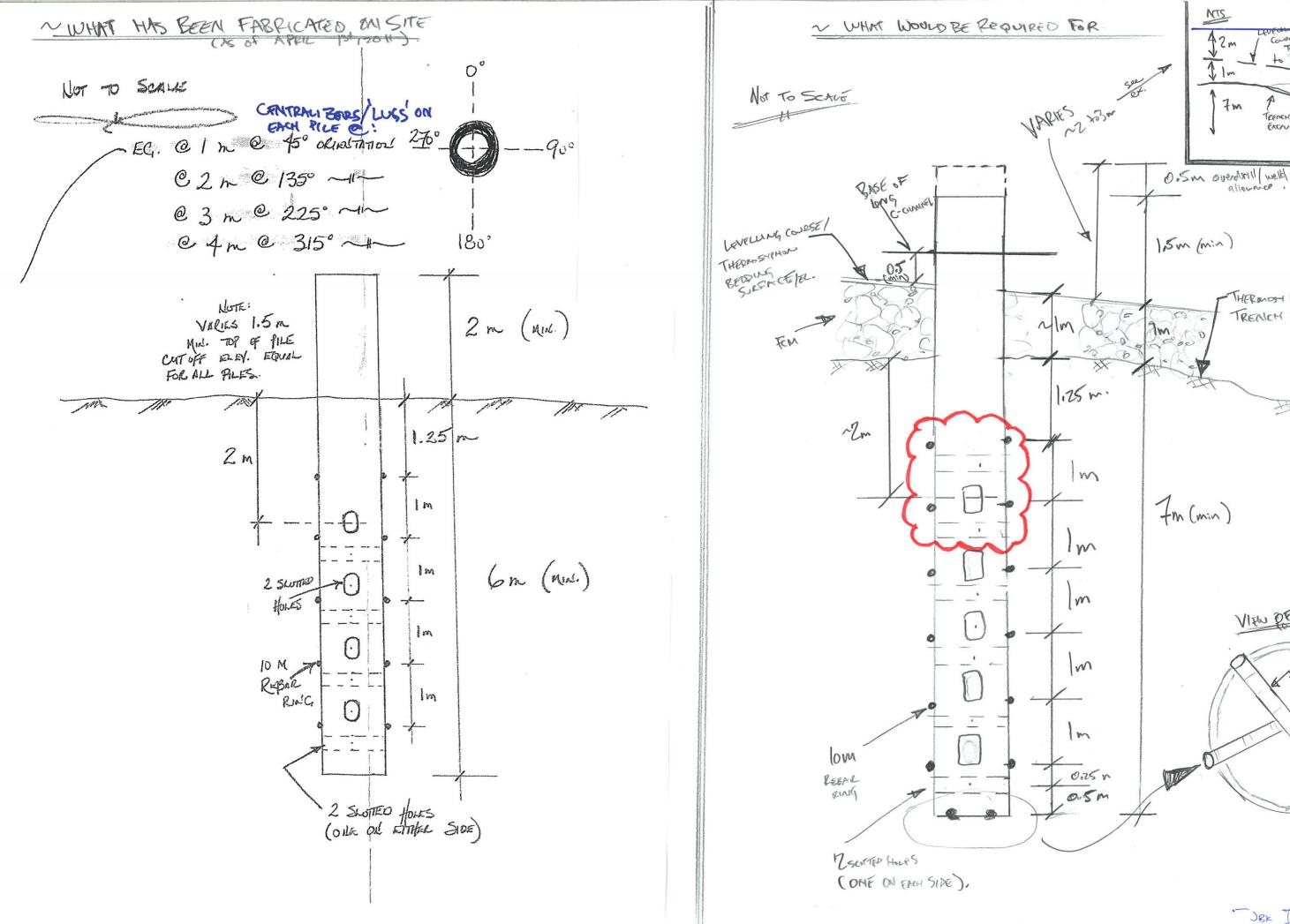
Base on field survey information of the WSW thermosyphon trench excavation and the measured length of the previously fabricated piles, the piles are expected to be required to be extended by 2 to 3m in length.

- o 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).

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Responsible Newmont Representative:	DOHN LUBICO	In furn to	ARRIL 2nd /1
	Print:	Sign:	Date:





- JBK DRAFT NOTES

VIEW OF IDEAL FAIL

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TRENCH EXCAVATION

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TRENCH EXCAUATION