

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving Public Works and Government  
Services Canada/Réception des soumissions Travaux  
publics et Services gouvernementaux Canada**  
**800 Burrard Street, 12th floor**  
**800,rue Burrard, 12e étage**  
**Vancouver**  
**British Columbia**  
**V6Z 2V8**  
**Bid Fax: (604) 775-9381**

**SOLICITATION AMENDMENT**  
**MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address**  
**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
**Public Works and Government Services Canada -**  
**Pacific Region**  
**800 Burrard Street, 12th floor**  
**800, rue Burrard, 12e étage**  
**Vancouver**  
**British C**  
**V6Z 2V8**

<b>Title - Sujet</b> Concassage, transport et mise en dé	
<b>Solicitation No. - N° de l'invitation</b> E0276-132176/A	<b>Amendment No. - N° modif.</b> 003
<b>Client Reference No. - N° de référence du client</b>	<b>Date</b> 2013-02-05
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWY-004-6901	
<b>File No. - N° de dossier</b> PWY-2-35240 (004)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2013-02-11</b>	<b>Time Zone</b> Fuseau horaire Pacific Standard Time PST
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Mestry, Ruth (PWY)	<b>Buyer Id - Id de l'acheteur</b> pwy004
<b>Telephone No. - N° de téléphone</b> (604) 775-9385 ( )	<b>FAX No. - N° de FAX</b> (604) 775-6633
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> PWGSC - km509.3 Alaska Highway, BC	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

Solicitation No. - N° de l'invitation

E0276-132176/A

Amd. No. - N° de la modif.

003

Buyer ID - Id de l'acheteur

pw004

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

PWY-2-35240

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## **EXTENTION OF TIME**

**REQUISITION NUMBER: E0276-132176/A**

**Alaska Highway, B.C., Km 509.3  
Gravel Crushing, Hauling & Stockpiling**

**Notice is hereby given that the time for the reception of tenders previously due at 2:00 PM (PST) - 07 February 2013 is extended to 2:00 PM (PST) - 11 February 2013.**

Solicitation No. - N° de l'invitation

E0276-132176/A

Amd. No. - N° de la modif.

003

Buyer ID - Id de l'acheteur

pw004

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

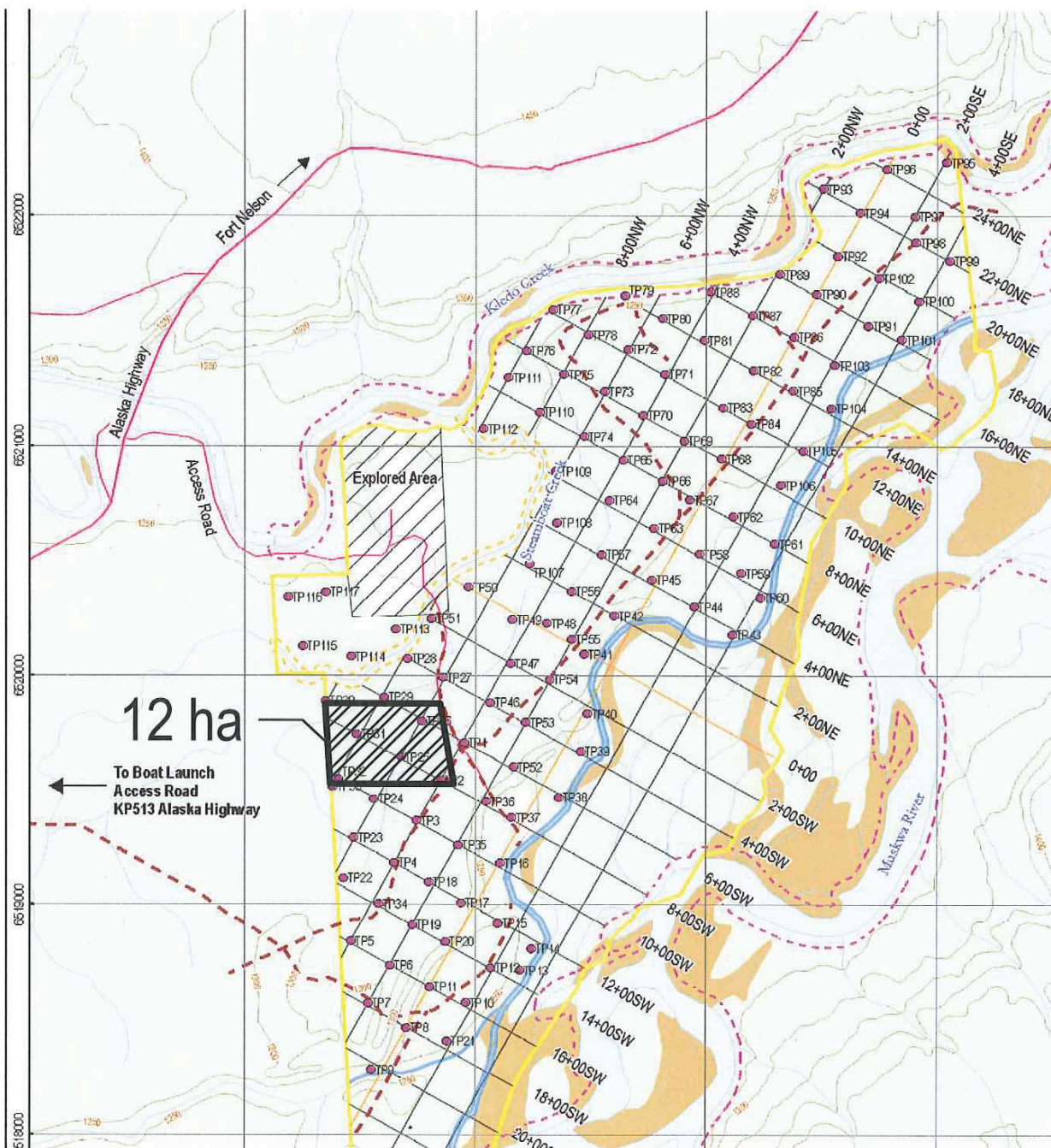
CCC No./N° CCC - FMS No/ N° VME


PWY-2-35240

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**The following changes/clarifications in the tender documents are effective immediately.  
This addendum will form part of the contract documents.**

Attached is the missing drawing from Addendum No. 1.



project title		titre du projet		drawing title		titre du dessin	
Clearing Gravel Pits km 509.3 and km 568.9 and R.O.W. km 555-571 Alaska Highway, BC				Kledo Creek Pit Clearing Areas			
	Public Works and Government Services Canada	Travaux publics et Services gouvernementaux Canada	designed by AHP	drawn by AHP	scale NOT TO SCALE	echelle	date January 2010
	REAL PROPERTY SERVICES Pacific Region		approved by AHP		project no. R.017173.013		
			PWGSC Project Manager	Administrateur de Projets TPSGC	sheet	feuille	
			Ron Iverson		08		

GRANULAR EVALUATION		CLIENT: PWGSC		TESTPIT NO: V33101023-TP02		
Kledo Creek Source		EXCAVATOR: CAT 322B		PROJECT NO: V33101023		
North of Fort Nelson, BC		6519545N; 471849E; Zone 10				
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB SAMPLE <input type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> BULK <input type="checkbox"/> CRREL CORE <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> GRAB CORE						
BACKFILL TYPE <input checked="" type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND						
Depth (m)	LITHOLOGICAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND ICE DESCRIPTION AND COMMENTS	<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Bulk Density (kg/m³) 500 1000 1500 2000 </div> <div> <input type="checkbox"/> PLASTIC M.C.   <input type="checkbox"/> LIQUID 20 40 60 80 </div> </div> <div style="display: flex; justify-content: space-between;"> <div> <input checked="" type="checkbox"/> CLAY (%) 20 40 60 80 </div> <div> <input type="checkbox"/> SILT (%) 20 40 60 80 </div> <div> <input type="checkbox"/> SAND (%) 20 40 60 80 </div> <div> <input type="checkbox"/> GRAVEL (%) 20 40 60 80 </div> </div>	Depth (ft)
0	LFH 0 to 4 cm SILT - organics, damp, loose, dark brown					0
	SAND - medium grained, poorly graded, damp, dark brown					
1			1			
	COBBLE and GRAVEL - bouldery (~20%), some sand (~15-20%), trace silt, rounded	<input checked="" type="checkbox"/>	4			5
2			3			
3			2			10
4						
	END OF TEST PIT 4.25 m - excessive sloughing - standing water					15
5						
6						20
6.5						21

**EBA Engineering Consultants Ltd.**

LOGGED BY: T. Takeda  
REVIEWED BY: JTD  
DRAWING NO:

COMPLETION DEPTH: 4.25m  
COMPLETE: 6/4/2009  
Page 1 of 1



## SIEVE ANALYSIS REPORT

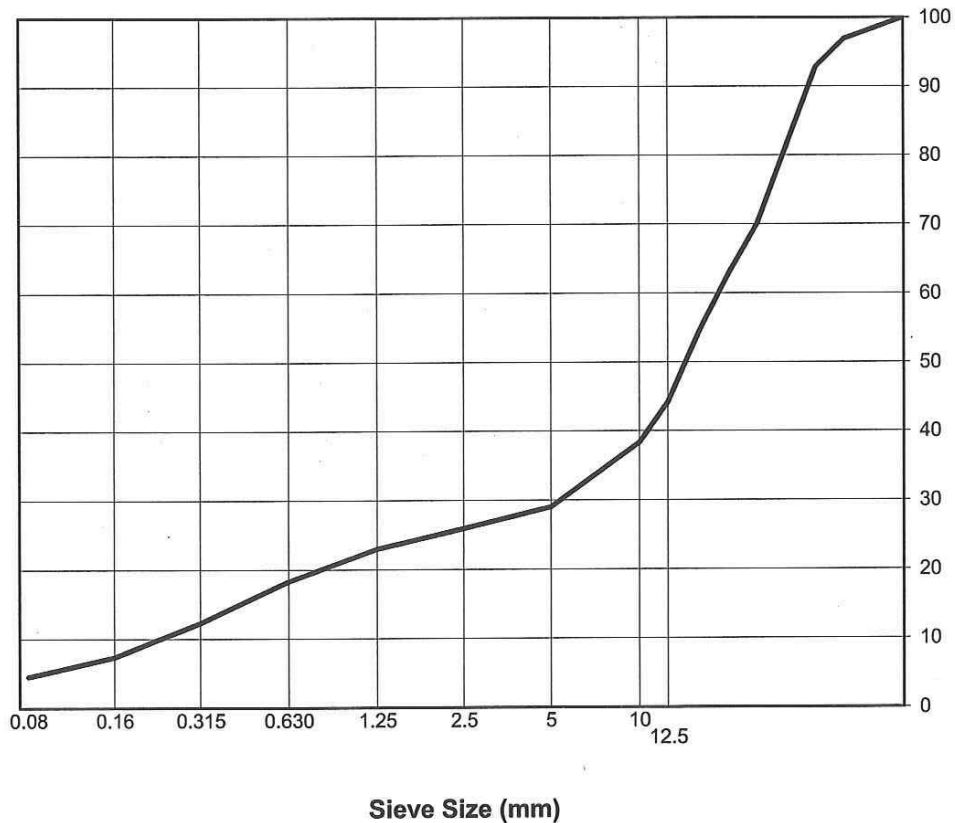
Washed Sieve: ASTM C136 and C117

Project No.: V33101023  
Project: Call #3 - Geo.Inv.at Alaska Hwy km 509  
Client: Public Works & Govt. Services Canada  
Attention: John Gerolamy  
Email: john.Gerolamy@gwgsc-tpsgc.gc.ca  
Description: GRAVEL - sandy, trace silt  
Source: Kledo Pit  
Sample Location: Depth: 1.2m - 1.8m

Sample No.: TP 2 - 4  
Date Sampled: June 4, 2009  
Sampled by: \_\_\_\_\_  
Date Tested: July 1, 2009  
Tested by: MC Office: Edmonton  
Moisture Content: 4.1%  
No. Crushed Faces Two (2) or Three (3)  
Crushed Faces \_\_\_\_\_

Supplier: \_\_\_\_\_

Sieve Size	Percent Passing
80	100
50	97
40	93
25	70
20	63
16	55
12.5	44
10	38
5	29
2.5	26
1.25	23
0.63	18
0.315	12
0.16	7
0.08	4.5



### Remarks:

Granular Subsurface Investigation

Reviewed By: \_\_\_\_\_ P.Eng

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA. The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.

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GRANULAR EVALUATION		CLIENT: PWGSC		TESTPIT NO: V33101023-TP25	
Kledo Creek Source		EXCAVATOR: CAT 322B		PROJECT NO: V33101023	
North of Fort Nelson, BC		6519645N; 471675E; Zone 10			
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB SAMPLE <input checked="" type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> BULK <input type="checkbox"/> CRREL CORE <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> GRAB CORE					
BACKFILL TYPE <input type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND					

Depth (m)	LITHOLOGICAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND ICE DESCRIPTION AND COMMENTS	<input type="checkbox"/> Bulk Density (kg/m³) 500 1000 1500 2000 PLASTIC M.C. LIQUID 20 40 60 80	◆ CLAY (%) ◆ 20 40 60 80 ● SILT (%) ● 20 40 60 80 ▲ SAND (%) ▲ 20 40 60 80 ■ GRAVEL (%) ■ 20 40 60 80	Depth (ft)
0	LFH 0 to 5 cm SILT - organics, damp, loose, dark brown SAND - trace silt, fine grained, poorly graded, damp, loose, dark brown		1				0
1	GRAVEL - sandy, some cobbles, trace boulders, trace silt; sand is medium grained, grey-brown		2				3
2			3				6
3			4				9
4	END OF TEST PIT @ 4.0 m - excessive sloughing - standing water						13
5							16
6							19
6.5							21



**EBA Engineering Consultants Ltd.**

LOGGED BY: T. Takeda

REVIEWED BY: JTD

DRAWING NO:

COMPLETION DEPTH: 4m

COMPLETE: 6/11/2009

Page 1 of 1

## SIEVE ANALYSIS REPORT

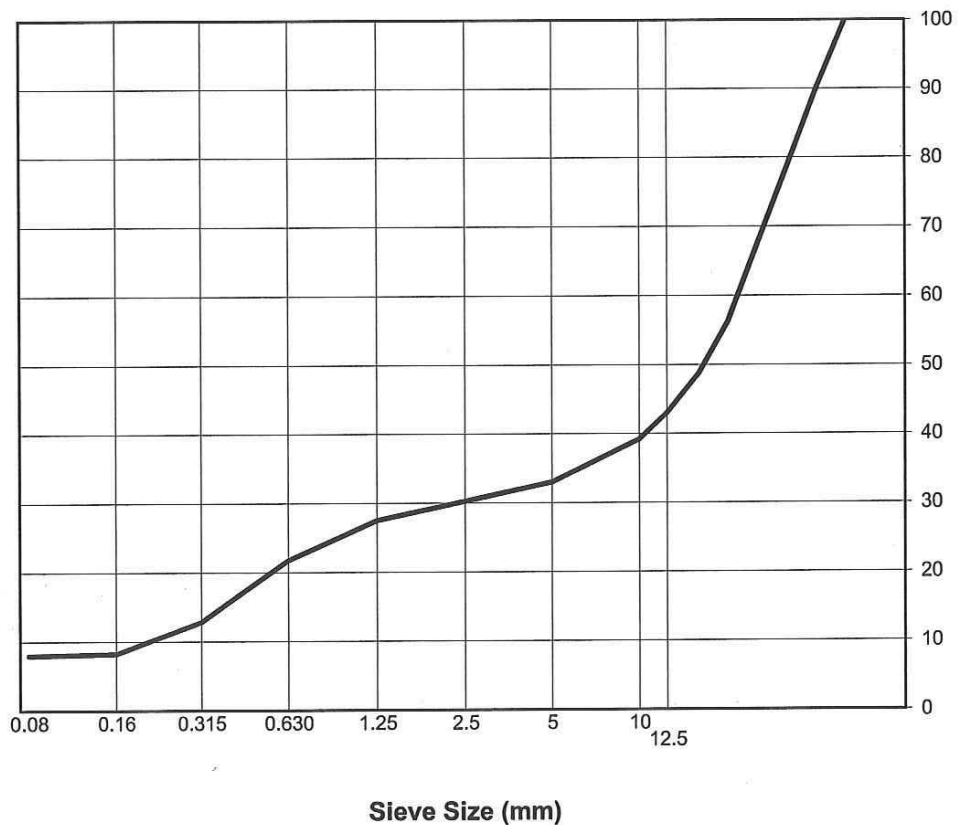
Washed Sieve: ASTM C136 and C117

Project No.: V33101023  
Project: PWGSC SO Call#3-Geo.Inv.at Alaska H  
Client: Public Works & Govt. Services Canada  
Attention: John Gerolamy  
Email: john.Gerolamy@gwgsc-tpsgc.gc.ca  
Description: GRAVEL - sandy, trace silt  
Source: Kledo Pit  
Sample Location: Depth: 1.5m - 2.0m

Sample No.: TP 25 - 2  
Date Sampled: June 11, 2009  
Sampled by:  
Date Tested: July 28, 2009  
Tested by: MC Office: Edmonton  
Moisture Content: 3.4%  
No. Crushed Faces Two (2) or Three (3)  
Crushed Faces

Supplier:

Sieve Size	Percent Passing
50	100
40	90
25	67
20	56
16	49
12.5	43
10	39
5	33
2.5	30
1.25	28
0.63	22
0.315	13
0.16	8
0.08	8.0



Remarks:

Granular Subsurface Investigation

Reviewed By: \_\_\_\_\_ P.Eng

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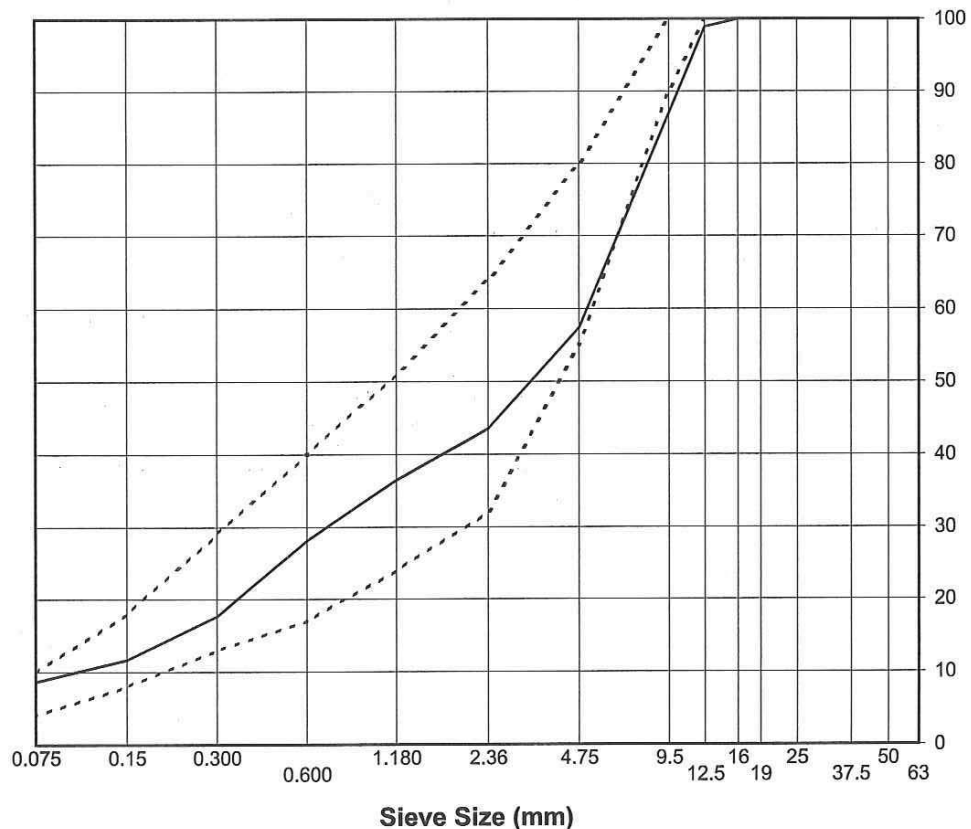
## SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: V33101023  
Project: Call #3 - Geo.Inv.at Alaska Hwy km 509  
Client: Public Works & Govt. Services Canada  
Attention: John Gerolamy  
Email: john.Gerolamy@gwgsc-tpsgc.gc.ca  
Description: Sand & Gravel (12.5mm Max Crushed)  
Source: Kledo Pit  
Supplier:  
Sample Location: Depth: 1.5-2.0m

Sample No.: TP 25-2  
Date Sampled: June 11, 2009  
Sampled by:  
Date Tested: August 5, 2009  
Moisture Content (as received): 3.0%  
Two Crushed Faces 50%  
Coarse Fine  
Relative Density (OD) 2.59 N/T  
Relative Density (SSD) 2.62 N/T  
Apparent Relative Density 2.68 N/T  
Absorption 1.3% N/T

Sieve Size	Percent Passing
16	100
12.5	99
9.5	87
4.75	57
2.36	43
1.18	36
0.600	28
0.300	18
0.150	12
0.075	8.7



Remarks: Table 02741-8 Coarse Aggregate Grading Requirements

Test Pit sample laboratory crushed to passing 12.5 mm. Plasticity (ATT 54): Non-Plastic Medium.

Tested by: SB Office: Edmonton Reviewed By: P.Eng

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GRANULAR EVALUATION		CLIENT: PWGSC		TESTPIT NO: V33101023-TP26		
Kledo Creek Source		EXCAVATOR: CAT 322B		PROJECT NO: V33101023		
North of Fort Nelson, BC		6519802N; 471768E; Zone 10				
SAMPLE TYPE <input type="checkbox"/> GRAB SAMPLE <input type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> BULK <input type="checkbox"/> CRREL CORE <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> GRAB CORE						
BACKFILL TYPE <input type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND						
Depth (m)	LITHOLOGICAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND ICE DESCRIPTION AND COMMENTS	<div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Bulk Density(kg/m³) 500 1000 1500 2000 </div> <div> <input type="checkbox"/> CLAY (%) 20 40 60 80  <input type="checkbox"/> SILT (%) 20 40 60 80  <input checked="" type="checkbox"/> SAND (%) 20 40 60 80  <input checked="" type="checkbox"/> GRAVEL (%) 20 40 60 80 </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> <input type="checkbox"/> PLASTIC M.C.   LIQUID 20 40 60 80 </div> </div>	Depth (ft)
0	LFH 0 to 4 cm SILT - organics, damp, loose, dark brown SAND - trace silt, fine grained, poorly graded, damp, loose, dark brown		1			
1	GRAVEL - sandy, some cobbles, trace boulders, trace silt, rounded, medium grained, grey brown		2			
2	SAND (~40%) and GRAVEL (~40%) - some cobbles (~15%), trace boulders		3 4			
3			5			
4			6			
5	END OF TEST PIT @ 4.5 m - excessive sloughing - standing water					
6						
6.5						

**EBA Engineering Consultants Ltd.**

LOGGED BY: T. Takeda  
REVIEWED BY: JTD  
DRAWING NO:

COMPLETION DEPTH: 4.5m  
COMPLETE: 6/11/2009  
Page 1 of 1

## SIEVE ANALYSIS REPORT

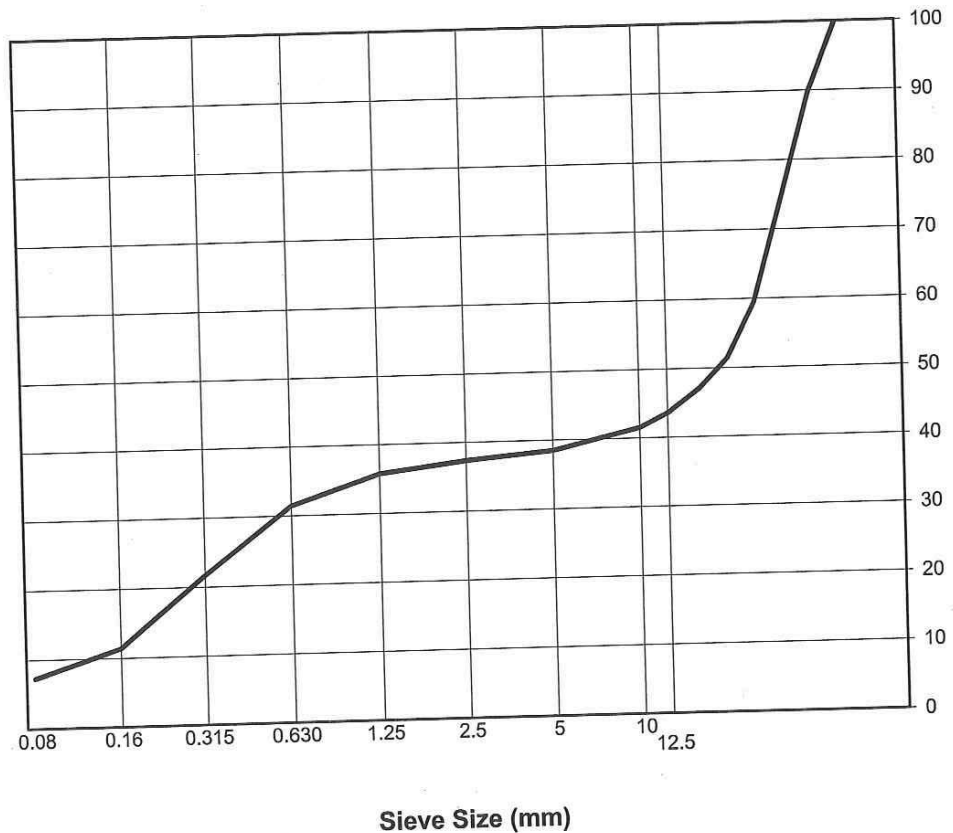
Washed Sieve: ASTM C136 and C117

Project No.: V33101023  
Project: PWGSC SO Call#3-Geo.Inv.at Alaska H  
Client: Public Works & Govt. Services Canada  
Attention: John Gerolamy  
Email: john.Gerolamy@gwgsc-tpsgc.gc.ca  
Description: GRAVEL - sandy, trace silt  
Source: Kledo Pit  
Sample Location: Depth: 1.6m - 2.2m

Sample No.: TP 26 - 3  
Date Sampled: June 11, 2009  
Sampled by: \_\_\_\_\_  
Date Tested: July 28, 2009  
Tested by: MC Office: Edmonton  
Moisture Content: 5.2%  
No. Crushed Faces Two (2) or Three (3)  
Crushed Faces \_\_\_\_\_

Supplier: \_\_\_\_\_

Sieve Size	Percent Passing
50	100
40	90
25	59
20	51
16	47
12.5	44
10	42
5	39
2.5	37
1.25	36
0.63	31
0.315	22
0.16	11
0.08	7.3



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

Granular Subsurface Investigation

Reviewed By: \_\_\_\_\_ P.Eng

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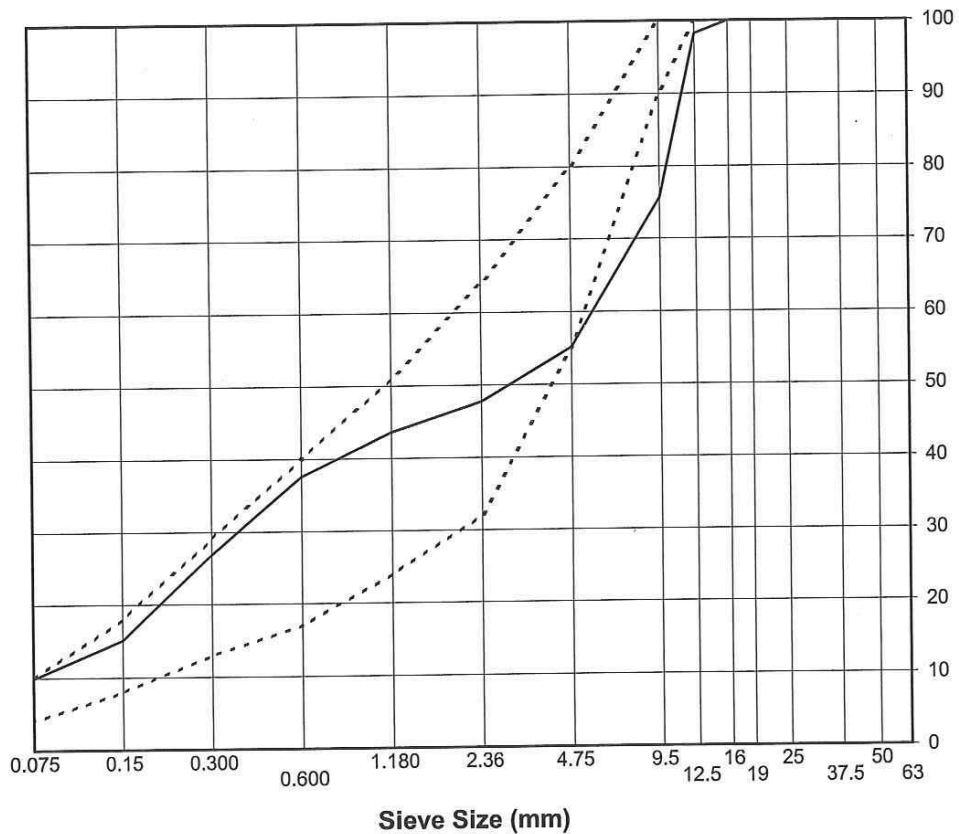
# SIEVE ANALYSIS REPORT

Washed Sieve: ASTM C136 and C117

Project No.: V33101023  
 Project: Call #3 - Geo.Inv.at Alaska Hwy km 509  
 Client: Public Works & Govt. Services Canada  
 Attention: John Gerolamy  
 Email: john.Gerolamy@gwgsc-tpsgc.gc.ca  
 Description: Sand & Gravel (12.5mm Max Crushed)  
 Source: Kledo Pit  
 Supplier: \_\_\_\_\_  
 Sample Location: Depth: 1.6-2.2m

Sample No.: TP 26-3  
 Date Sampled: June 11, 2009  
 Sampled by: \_\_\_\_\_  
 Date Tested: August 5, 2009  
 Moisture Content (as received): 3.9%  
 Two Crushed Faces 50%  
 Coarse Fine  
 Relative Density (OD) 2.59 N/T  
 Relative Density (SSD) 2.62 N/T  
 Apparent Relative Density 2.68 N/T  
 Absorption 1.2% N/T

Sieve Size	Percent Passing
16	100
12.5	98
9.5	76
4.75	55
2.36	48
1.18	44
0.600	38
0.300	27
0.150	15
0.075	9.9



Remarks: Table 02741-8 Coarse Aggregate Grading Requirements  
 Test Pit sample laboratory crushed to passing 12.5 mm. Plasticity (ATT 54): Non-Plastic Friable.

Tested by: SB Office: Edmonton Reviewed By: \_\_\_\_\_ P.Eng

Data presented hereon is for the sole use of the stipulated client. EBA is not responsible, nor can be held liable, for use made of this report by any other party, with or without the knowledge of EBA. The testing services reported herein have been performed by an EBA technician to recognized industry standards, unless otherwise noted. No other warranty is made. These data do not include or represent any interpretation or opinion of specification compliance or material suitability. Should engineering interpretation be required, EBA will provide it upon written request.



GRANULAR EVALUATION		CLIENT: PWGSC	TESTPIT NO: V33101023-TP29
Kledo Creek Source		EXCAVATOR: CAT 322B	PROJECT NO: V33101023
North of Fort Nelson, BC		6519906N; 471602E; Zone 10	
SAMPLE TYPE	<input type="checkbox"/> GRAB SAMPLE <input checked="" type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> BULK	<input type="checkbox"/> CRREL CORE <input type="checkbox"/> GROUT <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> DRILL CUTTINGS	<input type="checkbox"/> GRAB CORE <input type="checkbox"/> SAND
BACKFILL TYPE	<input type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH		

Depth (m)	LITHOLOGICAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND ICE DESCRIPTION AND COMMENTS	<input type="checkbox"/> Bulk Density(kg/m³) 500 1000 1500 2000 PLASTIC M.C. LIQUID 20 40 60 80	◆ CLAY (%) ◆ 20 40 60 80 ● SILT (%) ● 20 40 60 80 ▲ SAND (%) ▲ 20 40 60 80 ■ GRAVEL (%) ■ 20 40 60 80	Depth (ft)
0	LFH 0 to 5 cm						0
	SILT - organics, damp, loose, dark brown to black						
	SAND - trace organics, rounded, damp, loose, dark brown		1				
1							
	GRAVEL - sandy, trace cobbles, trace boulders, trace silt, rounded		2				
2							
3			3				
4			4				
4.2	END OF TEST PIT @ 4.2 m - excessive sloughing - standing water						
5							
6							
6.5							

 <b>EBA Engineering Consultants Ltd.</b>	LOGGED BY: T. Takeda	COMPLETION DEPTH: 4.2m
	REVIEWED BY: JTD	COMPLETE: 6/12/2009
	DRAWING NO:	Page 1 of 1

GRANULAR EVALUATION		CLIENT: PWGSC		TESTPIT NO: V33101023-TP30		
Kledo Creek Source		EXCAVATOR: CAT 322B		PROJECT NO: V33101023		
North of Fort Nelson, BC		6519890N; 471348E; Zone 10				
SAMPLE TYPE <input checked="" type="checkbox"/> GRAB SAMPLE <input type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> BULK <input type="checkbox"/> CRREL CORE <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> GRAB CORE						
BACKFILL TYPE <input checked="" type="checkbox"/> BENTONITE <input checked="" type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND						
Depth (m)	LITHOLOGICAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND ICE DESCRIPTION AND COMMENTS	<input type="checkbox"/> Bulk Density(kg/m³) <input type="checkbox"/> 500 1000 1500 2000	<input type="checkbox"/> Bulk Density(kg/m³) <input type="checkbox"/> 500 1000 1500 2000
					PLASTIC M.C. LIQUID 20 40 60 80	CLAY (%) 20 40 60 80
0	LFH 0 to 5 cm SILT - organics, damp, loose, dark brown		1			
1	GRAVEL - sandy, some cobbles, trace boulders, rounded; sand is medium grained, poorly graded, damp, loose, grey brown		2			
			3			
2			4			
3	END OF TEST PIT @ 2.7 m - excessive sloughing - standing water					
4						
5						
6						
6.5						



**EBA Engineering Consultants Ltd.**

LOGGED BY: T. Takeda

REVIEWED BY: JTD

DRAWING NO:

COMPLETION DEPTH: 2.7m

COMPLETE: 6/12/2009

Page 1 of 1

## SIEVE ANALYSIS REPORT

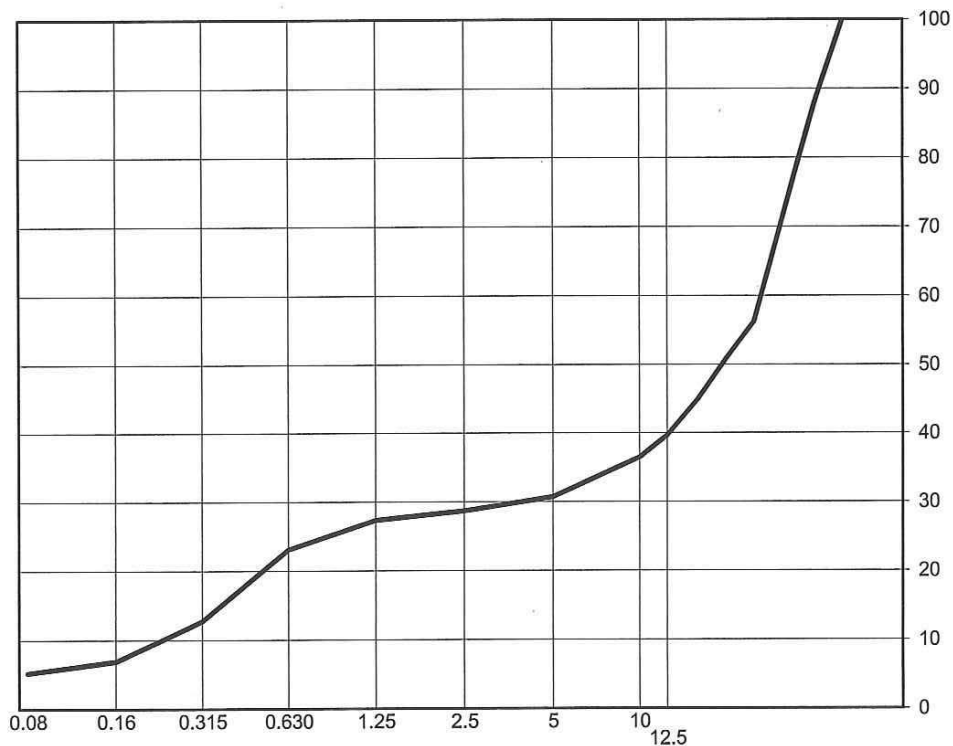
Washed Sieve: ASTM C136 and C117

Project No.: V33101023  
Project: Call #3 - Geo.Inv.at Alaska Hwy km 509  
Client: Public Works & Govt. Services Canada  
Attention: John Gerolamy  
Email: john.Gerolamy@gwgsc-tpsgc.gc.ca  
Description: GRAVEL - sandy, trace silt  
Source: Kledo Pit  
Sample Location: Depth: 1.0-1.5m

Sample No.: TP 30-3  
Date Sampled: June 12, 2009  
Sampled by:  
Date Tested: July 27, 2009  
Tested by: SB Office: Edmonton  
Moisture Content: 3.9%  
No. Crushed Faces Two (2) or Three (3)  
Crushed Faces

Supplier:

Sieve Size	Percent Passing
50	100
40	88
25	56
20	51
16	45
12.5	40
10	36
5	31
2.5	29
1.25	27
0.63	23
0.315	13
0.16	7
0.08	5.2



Sieve Size (mm)

### Remarks:

Granular Subsurface Investigation

Reviewed By: \_\_\_\_\_ P.Eng

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# SIEVE ANALYSIS REPORT

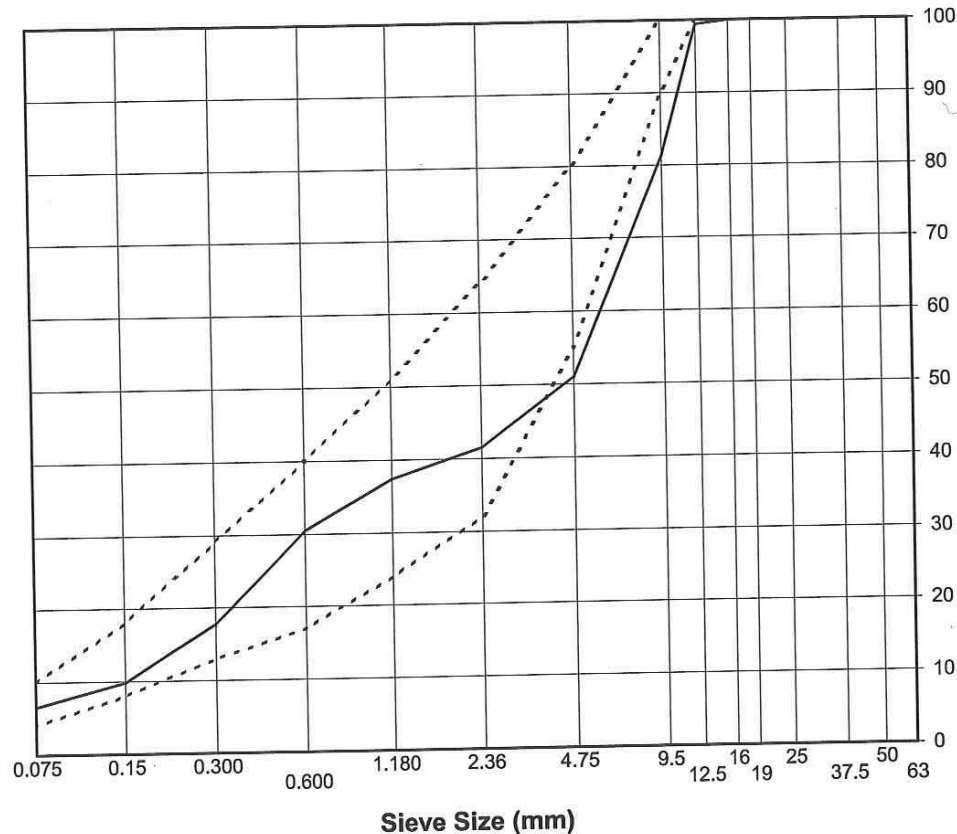
Washed Sieve: ASTM C136 and C117

Project No.: V33101023  
 Project: Call #3 - Geo.Inv.at Alaska Hwy km 509  
 Client: Public Works & Govt. Services Canada  
 Attention: John Gerolamy  
 Email: john.Gerolamy@gwgsc-tpsgc.gc.ca  
 Description: Sand & Gravel (12.5mm Max Crushed)  
 Source: Kledo Pit  
 Supplier:  
 Sample Location: Depth: 1.0-1.5m

Sample No.: TP 30-2  
 Date Sampled: June 12, 2009  
 Sampled by:  
 Date Tested: August 5, 2009  
 Moisture Content (as received): 3.6%  
 Two Crushed Faces 50%  

	Coarse	Fine
Relative Density (OD)	2.59	N/T
Relative Density (SSD)	2.62	N/T
Apparent Relative Density	2.68	N/T
Absorption	130.0%	N/T

Sieve Size	Percent Passing
16	100
12.5	99
9.5	81
4.75	51
2.36	42
1.18	37
0.600	30
0.300	18
0.150	10
0.075	6.6



Remarks: Table 02741-8 Coarse Aggregate Grading Requirements  
 Test Pit sample laboratory crushed to passing 12.5 mm. Plasticity (ATT 54): Non-Plastic Friable.

Tested by: SB Office: Edmonton Reviewed By: P.Eng

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GRANULAR EVALUATION		CLIENT: PWGSC		TESTPIT NO: V33101023-TP31			
Kledo Creek Source		EXCAVATOR: CAT 322B		PROJECT NO: V33101023			
North of Fort Nelson, BC		6919745N; 471483E; Zone 10					
SAMPLE TYPE <input type="checkbox"/> GRAB SAMPLE <input checked="" type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> BULK <input type="checkbox"/> CRREL CORE <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> GRAB CORE							
BACKFILL TYPE <input type="checkbox"/> BENTONITE <input checked="" type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND							
Depth (m)	LITHOLOGICAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND ICE DESCRIPTION AND COMMENTS	<input type="checkbox"/> Bulk Density (kg/m³) 500 1000 1500 2000 PLASTIC M.C. LIQUID 20 40 60 80 20 40 60 80	◆ CLAY (%) ◆ 20 40 60 80 ● SILT (%) ● 20 40 60 80 ▲ SAND (%) ▲ 20 40 60 80 ■ GRAVEL (%) ■ 20 40 60 80	Depth (ft)
0	LFH 0 to 5 cm SILT - organics, damp, loose, dark brown						0
	SAND - silty, fine grained, poorly graded damp, loose, dark brown		1				
1	GRAVEL - some sand, some cobbles, trace boulders, trace silt, rounded		2				5
2	- sand is medium grained		3				
3			4				15
4			5				20
5	END OF TEST PIT @ 5.0 m - excessive sloughing - standing water						21



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LOGGED BY: T. Takeda

REVIEWED BY: JTD

DRAWING NO:

COMPLETION DEPTH: 5m

COMPLETE: 6/12/2009

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GRANULAR EVALUATION		CLIENT: PWGSC		TESTPIT NO: V33101023-TP32	
Kledo Creek Source		EXCAVATOR: CAT 322B		PROJECT NO: V33101023	
North of Fort Nelson, BC		6519550N; 471401E; Zone 10			
SAMPLE TYPE		<input type="checkbox"/> GRAB SAMPLE <input checked="" type="checkbox"/> NO RECOVERY <input checked="" type="checkbox"/> BULK <input type="checkbox"/> CRREL CORE <input type="checkbox"/> SHELBY TUBE <input type="checkbox"/> GRAB CORE			
BACKFILL TYPE		<input type="checkbox"/> BENTONITE <input type="checkbox"/> PEA GRAVEL <input type="checkbox"/> SLOUGH <input type="checkbox"/> GROUT <input type="checkbox"/> DRILL CUTTINGS <input type="checkbox"/> SAND			

Depth (m)	LITHOLOGICAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	GROUND ICE DESCRIPTION AND COMMENTS	Bulk Density(kg/m³) 500 1000 1500 2000 PLASTIC M.C. LIQUID 20 40 60 80	CLAY (%) 20 40 60 80 SILT (%) 20 40 60 80 SAND (%) 20 40 60 80 GRAVEL (%) 20 40 60 80	Depth (ft)
0	LFH 0 to 4 cm SILT - damp, loose, dark brown		1				0
1	SAND and GRAVEL - some cobbles, trace boulders, trace silt, rounded		2				3
2							6
3	END OF TEST PIT @ 2.5 m - excessive sloughing - standing water						9
4							12
5							15
6							18
6.5							21

<b>EBA Engineering Consultants Ltd.</b>	LOGGED BY: T. Takeda	COMPLETION DEPTH: 2.5m
	REVIEWED BY: JTD	COMPLETE: 6/12/2009
	DRAWING NO:	Page 1 of 1