

GEOTECHNICAL STABILITY EXHIBIT

This geotechnical stability exhibit is applicable to all neighboring structures within 200' of the affected area and is provided to satisfy Rule 3.3.12 (b).

There are no buildings or any structures outside the permit area which could be affected by the excavation. A minimum 20-foot setback will be maintained from the property boundary line to all new excavations. Mining and reclamation will create slopes no steeper than 3H:1V in cobbly material.

From Table 2.5 in the SME Mining Reference Handbook¹, the slope material is best classified as sand and gravel, mixed grain size. This material has an internal angle of friction of approximately 45 degrees and no cohesion.

The Factor of Safety (FOS) for sand and gravel with a (3H:1V) 18.4 degree slope in loose sand material with an assumed internal angle of friction of 45 degrees can be approximated by ignoring the cohesion component of the stability and simply evaluating the internal angle of friction as follows:

$$\text{FOS} = \frac{\text{Tangent of Internal Angle of Friction}}{\text{Tangent of Actual Angle of Failure Surface}}$$

$$\text{FOS} = \frac{\tan 45^\circ}{\tan 18.4^\circ} = \frac{1}{0.3326} = 3.0$$

¹ Original source: Houk and Bray 1977

1. Conclusion

The factor of safety is 3.0, well above the minimum of 1.5 for permanent conditions. No offsite impact from mining operations will occur from slope failure based on this analysis.





Map E-1 Baseline Conditions
London Mill Cobble
Advantage Excavating

DRMS Permit Number: N/A

Mine Entry Location: Latitude: 39.26813
State: CO County: Park
Section: 13 Township: 9S
Major Watershed: Mosquito Creek
Map Scale: 1"=50'

MSHA ID: N/A

Longitude: -106.05435
Nearest Town: Alma (<0.5 miles)
Range: 78W PM: 6th
0 50 100

Datum: NAD 83 Projection: CO Central
Survey Date: N/A
Imagery Date: 07/25/20

Date: 07/27/20
Date: ----
Date: ----

File Name: E:\Work\Dropbox (GLA)\Park County Mines\London Mill Cobble\AutoCAD\London Mill Cobble 3D 210115.dwg

Greg Lewicki And Associates

3375 W Powers Circle
Littleton, CO 80123

Phone (303)-346-5196
E-Mail - info@lewicki.biz

LEGEND

BUILDINGS AND RELATED STRUCTURES

Building

BASELINE CONTOURS

Index

Approximate of indefinite

Intermediate

Approximate of indefinite

Supplementary

LAND SURVEYS

Public Land Survey System

Range or Township line

No elevation, permanent monument

Range or Township labels

Section line

Section numbers

Mining claim or property boundary

Mining claim or property monument

BASELINE MINES AND CAVES

Mine Dump

ROADS AND RELATED FEATURES

Light duty road, gravel

Unimproved road

RIVERS, LAKES, SHORELINES, AND CANALS

Perennial stream/ditch

Perennial river

Intermittent stream/ditch

Intermittent river

Perennial lake/pond

Intermittent lake/pond

Dry lake/pond

Drainage Basin

Flood Plain

VEGETATION

Woodland

Trees

WETLANDS (USFWS National Wetland Inventory)

Freshwater Emergent

TRANSMISSION LINES AND PIPELINES

Power transmission line, pole, tower

MINING FEATURES

DRMS Permit Boundary

200' Offset of DRMS Permit Boundary

STRUCTURES WITHIN 200'			
#	Owner	Structure	Owner Address
1	Park County	Looney Lane	1246 CR 16 P.O. Box 147 Fairplay, CO 80440
2	Xcel Energy	Powerline Easement	1800 Larimer Street, Suite 1100, Denver CO 80202
3	Steve Todd Nilson	Building	405 W 115th Ave #5 Northglenn, CO 80234
4	Leach Jean Ann Trust DTD 11-20-2002	Building	PO Box 2768 Ketchum, ID 83340
5	Michael M Kyes	Building	PO Box 156 Alma, CO 80420

LANDOWNERS WITHIN 200'		
#	Owner	Owner Address
1	Michael M Kyes	PO Box 156 Alma, CO 80420
2	Leach Jean Ann Trust DTD 11-20-2002	PO Box 2768 Ketchum, ID 83340
3	Red Canoe Holdings	11123 W Ohio Pl Lakewood, CO 80226
4	Brown Family Trust DTD 10/20/09	PO Box 1683 Fairplay, CO 80440
5	Leach Jean Ann Trust DTD 11-20-2002	PO Box 2768 Ketchum, ID 83340
6	David L Todd	1675 Scott Blvd, Apt 422 Santa Clara, CA 95050
7	Steve Todd Nilson	405 W 115th Ave #5 Northglenn, CO 80234

Drainage Basin Information

Basin

Area

Composite Curve Number

100YR 24-HR RUNOFF

Basin 1 = 0.5 ac-ft

Basin 2 = 0.2 ac-ft

PERMIT CORNERS		
	Lat	Long
1	39.26922	-106.0545
2	39.26831	-106.0545
3	39.26817	-106.0531
4	39.26842	-106.0530
5	39.26806	-106.0515
6	39.26922	-106.0515

U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER
9414 7118 9956 4019 1361 96

RETURN RECEIPT TRACKING NUMBER
9490 9118 9956 4019 1361 45

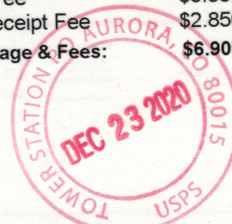
FEES

Postage per piece	\$0.500
Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

Suite 1100
Xcel Energy
1800 Larimer St Fl 1600
Denver CO 80202-1408

Postmark
Here



U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER
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RETURN RECEIPT TRACKING NUMBER
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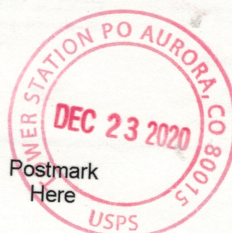
FEES

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Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

1246 CR 16
Park County Public Works
PO Box 147
Fairplay CO 80440-0147

Postmark
Here



U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER
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RETURN RECEIPT TRACKING NUMBER
9490 9118 9956 4019 7737 53

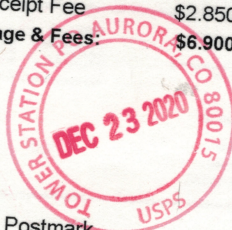
FEES

Postage per piece	\$0.500
Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

Steve Todd Nilson
5
405 W 115th Ave
Northglenn CO 80234-3097

Postmark
Here



U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER
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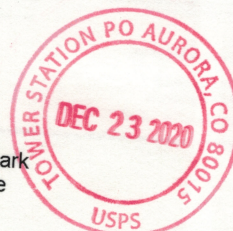
FEES

Postage per piece	\$0.500
Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

David L. Todd
1675 Scott Blvd Apt 422
Santa Clara CA 95050-4188

Postmark
Here



U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER

9414 7118 9956 4019 2514 17

RETURN RECEIPT TRACKING NUMBER

9490 9118 9956 4019 2514 59

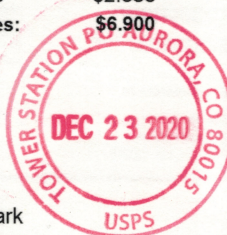
FEES

Postage per piece	\$0.500
Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

Red Canoe Holdings
11123 W Ohio Pl
Lakewood CO 80226-3872

Postmark
Here



U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER

9414 7118 9956 4019 2785 68

RETURN RECEIPT TRACKING NUMBER

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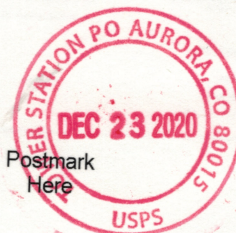
FEES

Postage per piece	\$0.500
Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

Leach Jean Ann Trust DTD
PO Box 2768
Ketchum ID 83340-2761

Postmark
Here



U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER

9414 7118 9956 4019 3354 52

RETURN RECEIPT TRACKING NUMBER

9490 9118 9956 4019 3354 63

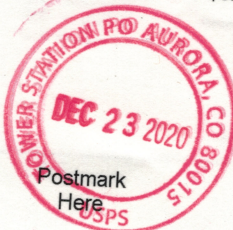
FEES

Postage per piece	\$0.500
Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

Michael M Kyes
PO Box 156
Alma CO 80420-0156

Postmark
Here



U.S. Postal Service
Certified Mail Receipt

OUTBOUND TRACKING NUMBER

9414 7118 9956 4019 5531 39

RETURN RECEIPT TRACKING NUMBER

9490 9118 9956 4019 5531 71

FEES

Postage per piece	\$0.500
Certified Fee	\$3.550
Return Receipt Fee	\$2.850
Total Postage & Fees:	\$6.900

ARTICLE ADDRESS TO:

Brown Family Trust DTD
PO Box 1683
Fairplay CO 80440-1683

Postmark
Here



SENDER: COMPLETE THIS SECTION

COMPLETE THIS SECTION ON DELIVERY

- Ensure items 1, 2, and 3 are completed.
- Attach this card to the back of the mailpiece, or on the front if space permits.

A. Signature: (☐ Addressee or ☐ Agent)

X

B. Received By: (Printed Name)

C. Date of Delivery

1. Article Addressed to:

1246 CR 16
Park County Public Works
PO Box 147
Fairplay CO 80440-0147



9490 9118 9956 4019 7648 98

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail®2. Article Number (Transfer from service label)
9414 7118 9956 4019 7648 01

PS Form 3811 Facsimile, July 2015 (SDC 3030)

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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- Ensure items 1, 2, and 3 are completed.
- Attach this card to the back of the mailpiece, or on the front if space permits.

A. Signature: (☐ Addressee or ☐ Agent)

X

B. Received By: (Printed Name)

C. Date of Delivery

1. Article Addressed to:

Steve Todd Nilson
5
405 W 115th Ave
Northglenn CO 80234-3097



9490 9118 9956 4019 7737 53

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail®2. Article Number (Transfer from service label)
9414 7118 9956 4019 7737 11

PS Form 3811 Facsimile, July 2015 (SDC 3930)

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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A. Signature: (☐ Addressee or ☐ Agent)

X

B. Received By: (Printed Name)

C. Date of Delivery

1. Article Addressed to:

Leach Jean Ann Trust DTD
PO Box 2768
Ketchum ID 83340-2761



9490 9118 9956 4019 2785 24

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail®2. Article Number (Transfer from service label)
9414 7118 9956 4019 2785 68

SENDER: COMPLETE THIS SECTION

- Ensure items 1, 2, and 3 are completed.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

David L. Todd
1675 Scott Blvd Apt 422
Santa Clara CA 95050-4188



9490 9118 9956 4019 5008 92

2. Article Number (Transfer from service label)
9414 7118 9956 4019 5008 05

PS Form 3811

COMPLETE THIS SECTION

COMPLETE THIS SECTION ON DELIVERY

A. Signature: (☐ Addressee or ☐ Agent)

X David 19 DV

B. Received By: (Printed Name)

Todd

C. Date of Delivery

12-30-20

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail®

PS Form 3811

COMPLETE THIS SECTION

COMPLETE THIS SECTION ON DELIVERY

A. Signature: (☐ Addressee or ☐ Agent)

X DENVER CO 80

B. Received By: (Printed Name)

23 DEC 30 2020

12/30

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail®

- Ensure items 1, 2, and 3 are completed.

■ Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Suite 1100
Xcel Energy
1800 Larimer St Fl 1600
Denver CO 80202-1408



9490 9118 9956 4019 1361 45

2. Article Number (Transfer from service label)
9414 7118 9956 4019 1361 96

PS Form 3811 Facsimile, July 2015 (SDC 3930)

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Michael M Kyes
PO Box 156
Alma CO 80420-0156



9490 9118 9956 4019 3354 63

2. Article Number (Transfer from service label)
9414 7118 9956 4019 3354 52

PS Form 3811 Facsimile, July 2015 (SDC 3930)

COMPLETE THIS SECTION ON DELIVERY

A. Signature: (☐ Addressee or ☐ Agent)

X Michael M Kyes DENVER CO

B. Received By: (Printed Name)

23 DEC 2020

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

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Red Canoe Holdings
11123 W Ohio Pl
Lakewood CO 80226-3872

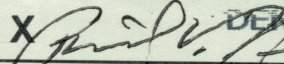


9490 9118 9956 4019 2514 59

2. Article Number (Transfer from service label)

9414 7118 9956 4019 2514 17

COMPLETE THIS SECTION ON DELIVERY

A. Signature: (☐ Addressee or ☐ Agent)X  DENVER CO 80

B. Received By: (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail®



London Mill Cobble Adequacy Response

Ben Langenfeld <benl@lewicki.biz>

Thu, Jan 21, 2021 at 4:33 PM

To: "Russell - DNR, Elliott" <elliott.russell@state.co.us>

Cc: Dustin Ballard <dustin.advantagex@gmail.com>

Elliott

Attached are items to address your bullet points:

- A geotechnical stability exhibit applicable to all neighboring structures.
- A copy of Map E-1 showing mister Kyes structure as well as corrected lat/long for the permit corners. I checked these coordinates in Google Earth and they come in right.
- A copy of all the certified mailing receipts and return receipts for neighbor notices.

If you want FedEx'd hard copies of any of this, just say the word.

Ben Langenfeld, P.E.

Greg Lewicki and Associates

benl@lewicki.biz

Office: (720) 842-5321

Cell: (303) 960-5613

From: Russell - DNR, Elliott <elliott.russell@state.co.us>

Sent: Thursday, January 21, 2021 3:30 PM

To: Ben Langenfeld <benl@lewicki.biz>

Cc: Dustin Ballard <dustin.advantagex@gmail.com>

Subject: Re: London Mill Cobble Adequacy Response

Gentlemen, please see the attached extension request approval for your records.

Elliott Russell

Environmental Protection Specialist

Minerals Regulatory Program



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

I am working remotely and can be reached at 303.903.4456

P 303.866.3567 x8132 | F 303.832.8106 | C 303.903.4456

1313 Sherman Street, Room 215, Denver, CO 80203

Elliott.Russell@state.co.us | www.colorado.gov/drms

On Thu, Jan 21, 2021 at 12:48 PM Russell - DNR, Elliott <elliott.russell@state.co.us> wrote:

Thanks Ben,

As discussed on the phone, can you provide the following:

- Electronic copies of the proof of notices for adjacent landowners (Item #2) or confirmation these will be in the hard copy you mailed.
- An electronic copy of a new revised Map E-1 showing the location of the cabin owned by Michael M Kyes northwest of the northwest permit boundary corner and include it on the E-1 structure table if it is within 200 feet of the permit boundary.
- An electronic copy of a new revised Map E-1 correcting the lat/long coordinate table as there appears to be an error with these coordinates (as you had mentioned this may have been due to a DMS and DD conversion).
- An electronic copy of an engineering evaluation for the off-site structures in accordance with Rule 6.3.12(b). Please identify each structure that is covered by the evaluation.

Please let me know if you have any questions.

Thanks,

Elliott Russell

Environmental Protection Specialist

Minerals Regulatory Program



I am working remotely and can be reached at 303.903.4456

P 303.866.3567 x8132 | F 303.832.8106 | C 303.903.4456

[1313 Sherman Street, Room 215, Denver, CO 80203](#)

Elliott.Russell@state.co.us | www.colorado.gov/drms

On Wed, Jan 20, 2021 at 10:04 AM Ben Langenfeld <benl@lewicki.biz> wrote:

Elliott

Attached is a digital copy of the London Mill Cobble Adequacy Response. It includes an extension request for the decision date until January 31. This is to facilitate getting a receipt back from Park County that the adequacy response is added to the public copy.

A hard copy is headed to downtown.

Ben Langenfeld, P.E.


Greg Lewicki and Associates

benl@lewicki.biz


Office: (720) 842-5321

Cell: (303) 960-5613

 **LMC GEOTECHNICAL STABILITY EXHIBIT.pdf**
227K

 **London Mill Cobble C3D 210115-Map E-1 Baseline Conditions.pdf**
2773K

 **Neighbor Notice Certified Receipts 01052021.pdf**
7161K

 **Neighbor Notice Return Receipts01212021.pdf**
8396K