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

1313 Sherman Street, Room 215
Denver, CO 80203

November 15, 2016

Mr. Alex Schatz
Brannan Sand and Gravel Company, L.L.C.
2500 E. Brannon Way
Denver, CO 80229

Re: Brannan Sand and Gravel Company, L.L.C.; Valley's Edge Resource;
File No. M-2016-030; 112c Permit Application Second Adequacy Review

Mr. Schatz:

The Division of Reclamation, Mining and Safety (Division/DRMS) has reviewed the content of the Brannan Sand and Gravel Company, L.L.C. 112c permit application adequacy response received on November 8, 2016 for the Valley's Edge Resource, File No. M-2016-030 and submits the following comments. The Division is required to make an approval or denial decision no later than November 24, 2016 therefore; a response to the following adequacy review concerns should be submitted to the Division as soon as possible.

1.6 Public Notice

1. As required by Rule 1.6.2(e), please submit proof of the notice to all owners of record of surface and mineral rights of the affected land and the owners of record of all land surface within 200 feet of the boundary of the affected land including all easement holders located on the affected land and within 200 feet of the boundary of the affected land. Proof of notice may be return receipts of a Certified Mailing or by proof of personal service.

   The Division did not receive proof of notice for the following owners of record:
   a. Zoya Bandwidth
   b. Hunt Brothers Properties, Inc. (if within 200 feet of the affected land boundary)
   c. The owners of the gas lines along Weld County Road 6
   d. Weld County Public Work for Weld County Road 6
   e. The owner of gas line easement #1678646 located in the northwest corner of the proposed mine site

Please provide the Division will proof of notice and allow 20 days from the date of notice for the land and structure owners to submit comments to the Division as required by Rule 1.6.2(f).

6.4.3 Exhibit C – Pre-mining and Mining Plan Maps of Affected Lands

2. Please update Exhibit C-1 map to show the owner's name, type of structures, and location of all significant, valuable, and permanent man-made structures contained on the area of affected land and within two hundred (200) feet of the affected land pursuant to Rule 6.4.3(g) for the following structures:
    a. County Road 6
    b. The owners of the gas lines along County Road 6
    c. The owner of gas line easement #1678646 located in the northwest corner of the proposed mine site

3. Please update Exhibit C-1 map to indicate Brannan Sand and Gravel Company, L.L.C. as the owner of the proposed mine site (APN R6247086).

6.4.12 Exhibit L - Reclamation Costs

4. The Division will set the required financial warranty at $873,550.00 upon approval of the permit application.

6.4.18 Exhibit R - Proof of Filing with County Clerk and Recorder

5. Please provided an affidavit or receipt indicating the date on which the revised application information required to address this adequacy letter was placed with the Weld County Clerk and Recorder for public review, pursuant to Subparagraph 1.6.2(1)(c).

6.4.19 Exhibit S - Permanent Man-made Structures

6. As required by the Division's Geotechnical Stability Exhibit policy, the Applicant must attempt to obtain structure agreements with all property, including easement holders, and structure owners within two hundred feet of the affected land. The Division will not consider an engineering evaluation as part of the permit application until all appropriate attempts to obtain agreements have been exhausted and documentation of the attempts are provided to the Division.

    Applicant stated they complied with Rule 6.4.19 by contacting structure owners with an offer to compensate the owner in case of damage. The Division did not receive proof of providing structure agreements to the following structure owners:

    a. Hunt Brothers Properties, Inc. (if within 200 feet of the affected land boundary)
    b. The owners of the gas lines along County Road 6
    c. The owner of gas line easement #1678646 located in the northwest corner of the proposed mine site

d. Kerr-McGee Anadarko, 1099 18th St, #1800, Denver, CO 80202

Please provide proof of the attempted structure agreements with the structure owners listed above to the Division.

6.5 Geotechnical Analysis

7. The Division's engineering staff reviewed the slope stability analysis from Applegate Group, Inc. dated November 8, 2016. The Division duplicated the analysis with Clover Technology's Galena software for verification purposes. The factor of safety produced by Galena (1.32) is lower than the factor of safety produced by the Applicant's calculation (1.35). However, the factor of safety is greater than the required factor of safety of 1.3. Therefore, the accuracy of the Applicant's analysis is confirmed. A copy of the Galena model is attached.

Please be advised the Valley's Edge Resource application may be deemed inadequate, and the application may be denied on November 24, 2016, unless the above mentioned adequacy review items are addressed to the satisfaction of the Division. If more time is needed to complete the reply, the Division can grant an extension to the decision date. This will be done upon receipt of a written waiver of the Applicant's right to a decision by November 24, 2016 and request for additional time. This must be received no later than the deadline date.

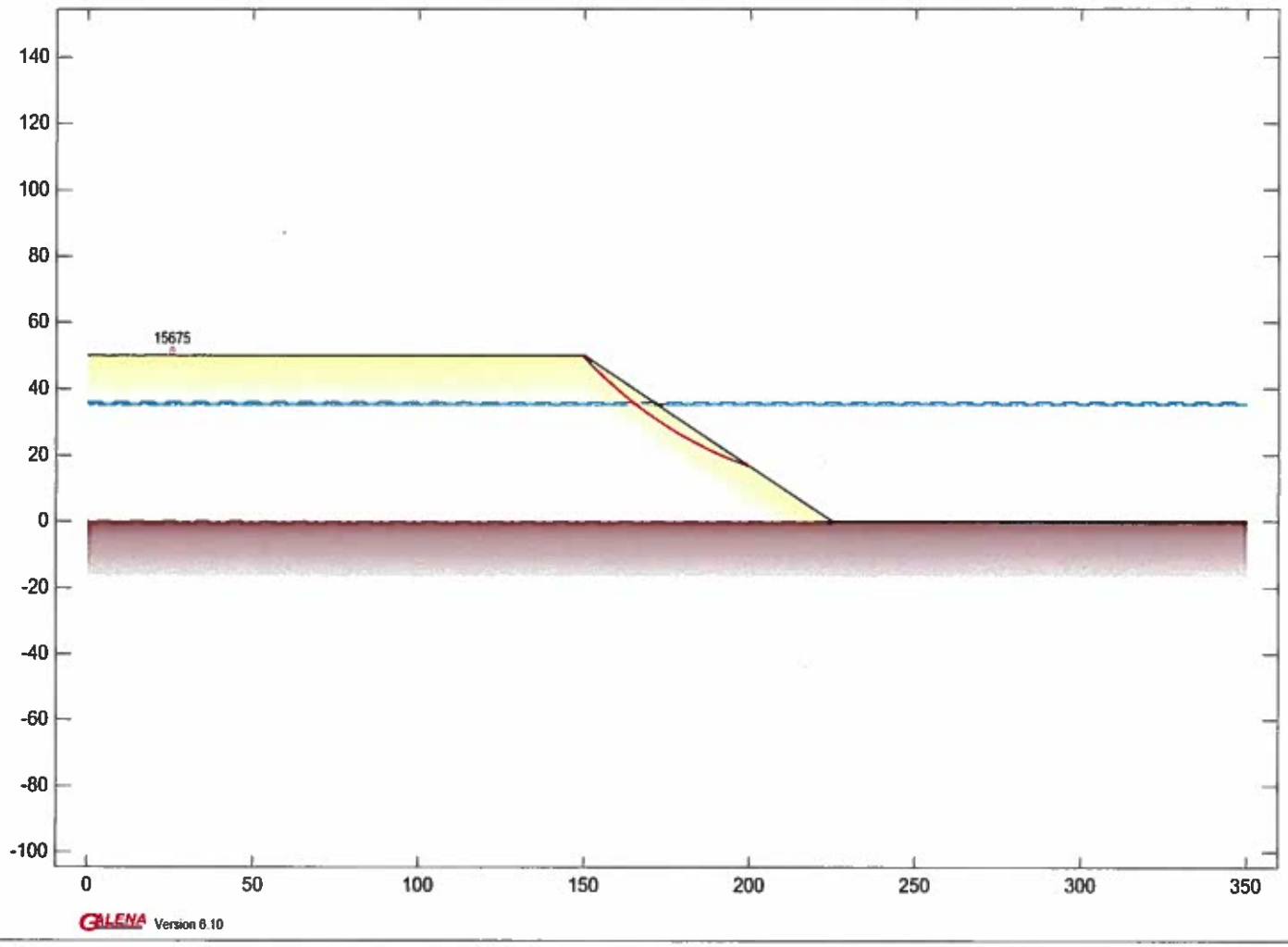
If you have any questions, please contact me at peter.hays@state.co.us or (303) 866-3567 Ext. 8124.

Sincerely,

Peter S. Hays
Environmental Protection Specialist

Enclosure – Galena Slope Stability Verification Analysis

Ec: Wally Erickson; Division of Reclamation, Mining & Safety
Tom Hatton; Applegate Group



Material Keys

Sand and Gravel

Bedrock

Analysis 1

Single Stability Analysis

Method: Bishop Simplified

Surface: Circular

Results

Factor of Safety: 1.32

Edited: 14 Nov 2016 *Processed:*14 Nov 2016

Project Valley's Edge
Mine Slope

File: C:\Users\psh\My Projects\ZZ Stability Analysis - Galena\Valleys Edge.gmf

US Dept of Interior - Office of Surface Mining

Project: Valley's Edge
File: C:\Users\psh\My Projects\ZZ Stability Analysis - Galena\Valleys Edge.gmf Processed: 14 Nov 2016 15:05:25

DATA: Analysis 1 - Mine Slope

Material Properties (2 materials)

Material: 1 (Mohr-Coulomb Isotropic) - Sand and Gravel

Cohesion	Phi	UnitWeight	Ru
0.00	42.0	130.00	Auto

Material: 2 (Mohr-Coulomb Isotropic) - Bedrock

Cohesion	Phi	UnitWeight	Ru
500.00	22.0	124.00	Auto

Water Properties

Unit weight of water: 62.430 Unit weight of water/medium above ground: 62.430

Material Profiles (2 profiles)

Profile: 1 (2 points) Material beneath: 1 - Sand and Gravel
0.00 50.00 350.00 50.00
Profile: 2 (2 points) Material beneath: 2 - Bedrock
0.00 0.00 350.00 0.00

Slope Surface (4 points)

0.00 50.00 150.00 50.00 225.00 0.00 350.00 0.00

Phreatic Surface (2 points)

0.00 36.00 350.00 36.00

Failure Surface

Circular surface defined by: XL,XR,R
Intersects: XL: 149.49 YL: 50.00 XR: 200.00 YR: 16.67
Centre: XC: 241.55 YC: 134.56 Radius: R: 125.00

Distributed Loads (1 load)

Load	X-Left	Pressure	X-Right	Pressure
1	25.00	15675.0	26.00	15675.0

RESULTS: Analysis 1 - Mine Slope

Bishop Simplified Method of Analysis - Circular Failure Surface

Factor of Safety: 1.32

Slice Geometry and Properties (40 slices)

Slice	X-S	Base							PoreWater	Normal	Test
X-Left	Area	Angle	Width	Length	Matl	Cohesion	Phi	Weight	Force	Stress	Factor
1	149.49	0.14	46.7	0.51	0.74	1	0.00	42.0	17.94	0.00	20.38	0.84
2	150.00	0.60	46.7	0.85	1.24	1	0.00	42.0	78.11	0.00	53.35	0.84
3	150.85	0.88	46.7	0.85	1.24	1	0.00	42.0	114.99	0.00	78.55	0.84
4	151.70	1.59	45.2	1.13	1.61	1	0.00	42.0	206.68	0.00	107.98	0.84
5	152.83	2.03	45.2	1.13	1.61	1	0.00	42.0	263.59	0.00	137.71	0.84
6	153.96	2.50	43.7	1.16	1.61	1	0.00	42.0	325.01	0.00	169.02	0.84
7	155.12	2.89	43.7	1.16	1.61	1	0.00	42.0	376.00	0.00	195.53	0.84
8	156.29	3.34	42.3	1.19	1.61	1	0.00	42.0	433.55	0.00	224.59	0.83
9	157.48	3.68	42.3	1.19	1.61	1	0.00	42.0	478.18	0.00	247.71	0.83
10	158.67	4.08	40.8	1.22	1.61	1	0.00	42.0	530.96	0.00	274.16	0.83
11	159.88	4.38	40.8	1.22	1.61	1	0.00	42.0	568.82	0.00	293.71	0.83
12	161.10	4.74	39.3	1.24	1.61	1	0.00	42.0	615.94	0.00	317.23	0.83
13	162.35	4.97	39.3	1.24	1.61	1	0.00	42.0	646.62	0.00	333.03	0.83
14	163.59	4.53	37.8	1.09	1.38	1	0.00	42.0	588.44	0.00	352.45	0.83
15	164.68	6.22	37.8	1.45	1.84	1	0.00	42.0	809.23	64.59	376.55	0.83
16	166.13	5.72	36.4	1.30	1.61	1	0.00	42.0	743.78	161.04	415.42	0.83
17	167.43	5.84	36.4	1.30	1.61	1	0.00	42.0	759.00	256.83	443.18	0.83
18	168.72	5.21	34.9	1.14	1.39	1	0.00	42.0	676.79	297.52	471.46	0.83
19	169.86	5.25	34.9	1.14	1.39	1	0.00	42.0	682.00	366.41	490.57	0.83
20	171.00	1.67	34.9	0.36	0.44	1	0.00	42.0	216.95	130.33	508.24	0.83
21	171.36	6.22	33.4	1.34	1.61	1	0.00	42.0	808.08	534.02	547.54	0.83
22	172.70	6.20	33.4	1.34	1.61	1	0.00	42.0	806.50	622.99	602.43	0.83
23	174.05	6.26	31.9	1.36	1.61	1	0.00	42.0	813.91	710.21	658.80	0.83
24	175.41	6.18	31.9	1.36	1.61	1	0.00	42.0	803.48	795.68	709.15	0.83
25	176.78	6.16	30.5	1.39	1.61	1	0.00	42.0	801.03	879.36	760.83	0.83
26	178.16	6.01	30.5	1.39	1.61	1	0.00	42.0	781.49	961.29	806.53	0.83
27	179.55	5.91	29.0	1.41	1.61	1	0.00	42.0	768.67	1041.39	853.34	0.83
28	180.95	5.69	29.0	1.41	1.61	1	0.00	42.0	739.76	1119.69	894.28	0.83
29	182.36	5.51	27.5	1.43	1.61	1	0.00	42.0	716.15	1196.17	936.03	0.83

30	183.79	5.21	27.5	1.43	1.61	1	0.00	42.0	677.65	1270.81	972.09	0.83
31	185.21	4.95	26.0	1.45	1.61	1	0.00	42.0	642.85	1343.59	1008.59	0.83
32	186.66	4.57	26.0	1.45	1.61	1	0.00	42.0	594.57	1414.54	1039.67	0.83
33	188.10	4.22	24.6	1.46	1.61	1	0.00	42.0	548.29	1483.58	1070.73	0.84
34	189.57	3.77	24.6	1.46	1.61	1	0.00	42.0	490.05	1550.75	1096.73	0.84
35	191.03	3.32	23.1	1.48	1.61	1	0.00	42.0	432.04	1616.03	1122.17	0.84
36	192.51	2.80	23.1	1.48	1.61	1	0.00	42.0	363.70	1679.41	1142.99	0.84
37	193.99	2.26	21.6	1.50	1.61	1	0.00	42.0	293.77	1740.85	1162.61	0.85
38	195.48	1.66	21.6	1.50	1.61	1	0.00	42.0	215.22	1800.38	1178.14	0.85
39	196.98	1.03	20.2	1.51	1.61	1	0.00	42.0	133.26	1857.94	1191.76	0.85
40	198.49	0.34	20.2	1.51	1.61	1	0.00	42.0	44.42	1913.56	1201.91	0.85
	X-S Area:	158.52	Path Length:		61.12		X-S Weight:		20607.46			