State of Utah
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Executive Director

DIVISION OF RADIATION CONTROL
Dane L. Finerfrock
Director

August 18, 2008

Mr. Harold R. Roberts
Executive Vice President – US Operations
Denison Mines (USA) Corp. (DUSA)
1050 17th Street, Ste. 950
Denver, CO 80225

Dear Mr. Roberts:

SUBJECT: July 29, 2008 DRC Letter Regarding White Mesa Uranium Mill Cell 4A Operation; July 31, 2008 DUSA Email Regarding 252 Photos on C.D. (received August 1, 2008), Showing Work Completed on Cell 4A Sand Bag Placement; August 7, 2008 DRC Email, Subject: Sandbag Adjustments (Partial Response to Submitted C.D. Photographs). **Request for Information**

As we mentioned earlier in the subject DRC email, our concern with some of the sandbag placement on the slimes drains system in Cell 4A is due to the sensitivity of the slimes drain system to plugging by fine tailings material. The slimes drain collection system on the bottom of Cell 4A includes "strip-drains" acting as ribs, connecting to a backbone "header" of drain pipe covered with drain rock and enveloped by geotextile materials.

As you are aware, the sand bags should act as filters to protect: 1) The strip-drains that feed the slimes drain header, and 2) The outer margin of the slimes drain header from plugging. Thus, special attention and effort to place the bags according to the approved plans and the agreed configurations are critical in order to maximize performance of the slimes drain system. As you are aware, there are three areas which need sandbags: on strip-drains, on the headers above the strip-drains and along the sides of the gravel header.

As discussed in our email of August 7, 2008, some of the subject photographs of sandbags on the strip-drains show sandbag coverage which departs from the original design. Some additional effort will be needed for bag placement to conform to the approved plans. Also, in our telephone discussions and mutual correspondence we defined the use of additional sandbags to be placed on the header above the projection of the strip-drain lines (i.e. at the junction between the strip-drains and the slimes drain header), as well as along the sides of the slimes drain header at the outer margin of the geotextile.

Along the sides of the slimes drain header, woven geotextile is specified to prevent intrusion of tailings fines into the header collection pipe and gravel filter around the pipe, as well as the escape of drain rock from the geotextile envelope. This line of additional sand bags on both sides of the header collection system will also partially cover the junction areas, where the strip-drains merge with the header pipe, thereby ensuring hydraulic continuity with the collection pipe network.

We have received your August 11, 2008 submittal wherein you acknowledge the sandbag problem, and explain that efforts have begun to correct it. As promised in our August 7, 2008 email, this letter represents detailed comments regarding the previous sandbag photographs.

The most common problems fall into five categories, as follows:

1. The tails (sewn end) of some bags are not positioned downward, which would allow the bag to drape over the margin of the strip drain. This is the most common error. If the bag tails are not positioned downward, the tail area usually exposes the strip-drain. E.g., picture 1336 shows the two bags immediately to the right of the labeled bag both with one of their tails incorrectly positioned. Many of the other pictures show bag tails with this, some are referenced below.[i]

2. Gaps at the tied or opening end of the bag. E.g. picture 1313 shows a gap on the right side of the bag just right of the labeled bag. Other photos which show the opening end of bags with gaps are referenced below.[ii]

3. Bags which are elevated on other bags. E.g. picture 1321 shows an elevated bag two bags to the right of the labeled bag. Other elevated bag photos are referenced below.[iii]

4. Not enough bags on the slimes drain header, to cover the projected strip-drain areas as provided in the DRC letter of July 29, 2008 with the attached DRC drawing dated July 25, 2008. E.g. see picture 1262.

5. Missing sandbags on the outer margin of the slimes drain header to ballast the edge of the geotextile. Documentation on this item needs to be completed. E.g. see picture 1262. Photograph 0816 (sent by DUSA email of July 31, 2008) is a fading perspective photo of part of the sandbag efforts on the header. Additional photos are needed to document completion on this item.

We request that DUSA:

A. Consider these comments as typical items for adjusting and adding sandbags as necessary to cover the strip-drains and the slimes drain header appropriately.

B. Address these items by taking appropriate actions with the sandbags, and photo document these efforts for the entire slimes drain system in Cell 4A, by use of an adequate number of representative photographs for each of the strip-drain lines as well as photos showing sandbag completion on the margins of the slimes drain header, and submit such for approval.

C. As discussed in our letter of July 29, 2008, we request this submittal be certified as completed, by a registered professional engineer licensed to practice in the State of Utah.

We have also given further consideration to the July 2, 2008 email from GeoSyntec, wherein it was reported that the effect of these sandbag problems would increase the time needed to de-water Cell 4A tailings from 5.5 to 6.4 years (see attached email and spread sheet). This claim is based on the assumption that none of the sand bag problems in question causes complete blockage of longitudinal flow down the axis of either the strip-drains, or the collection header piping.

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[i] Photos 1256, 1268, 1277, 1280, 1282, 1284, 1288, 1290, 1292, 1296, 1300, 1315, 1321, 1323, 1330, 1336, 1338, 1345, 1347, 1354, 1361, 1365, 1373,1388,1375,1378,1380,1381,1393,1399,1407,1411,1417,1438,1452,1463,1473,1475,1487,1499,1507 & 1509.

[ii] Photos 1290, 1303, 1384, 1405, 1479, 1485, 1495, & 1507.

[iii] Photos 1330, 1342, 1425, 1432, 1436, 1461, & 1475.

After review of these arguments, we are willing to accept the increased tailings de-watering time projected in the above GeoSyntec submittal as part of the approved design basis for Cell 4A. However, it is now apparent that the slimes drain performance standard currently stipulated in the Ground Water Discharge Permit is in need of revision to make it consistent with the July 2, 2008 GeoSyntec submittal. Accordingly, we propose Part I.D.6 (c) of the permit to be revised was follows:

> c) Slimes Drain Monthly and Annual Average Recovery Head Criteria – after the Permittee initiates pumping conditions in the slimes drain layer in Cell 4A, the Permittee will provide: 1) continuous declining fluid heads in the slimes drain layer, in a manner equivalent to the requirements found in Part I.D.3(b), and 2) a maximum static head of 1.0 feet in the tailings (as measured from the lowest point of upper flexible membrane liner) in 6.4 years or less.

We request you review the above comments, and submit the requested information. If you have any questions, please contact Mr. David Rupp.

Sincerely,

Loren B. Morton, P.G., Manager
Geotechnical Services Section

LBM:DAR:dr

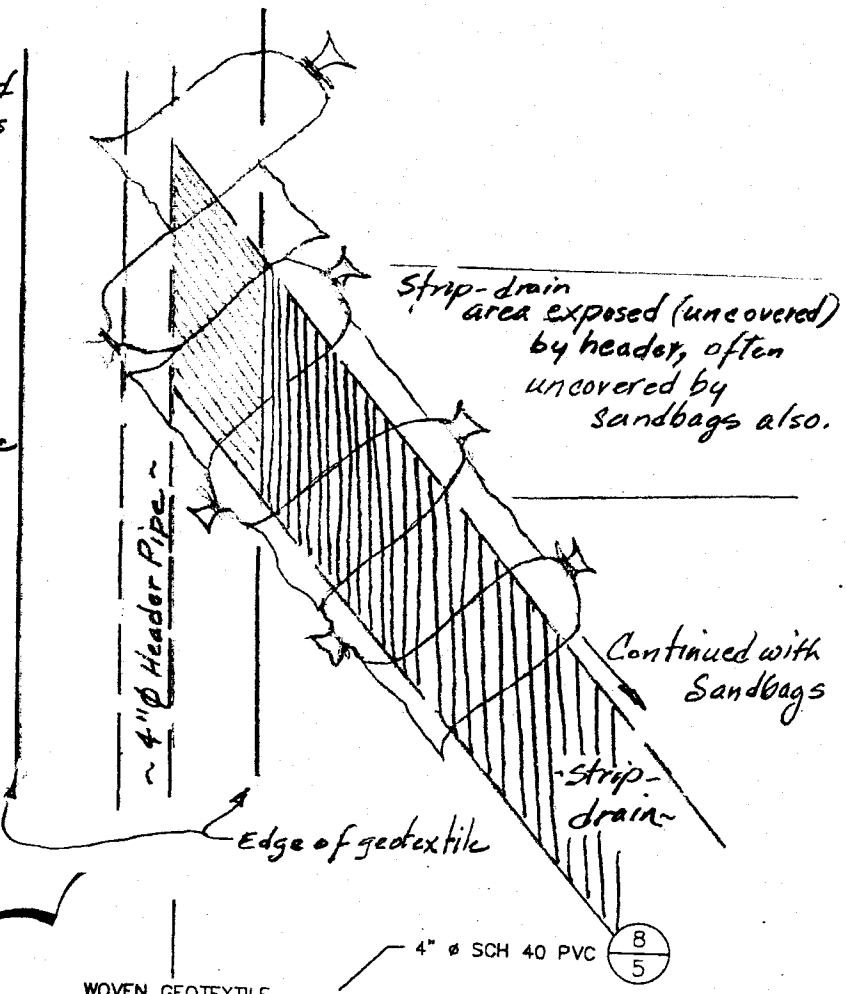
Attachments: DRC drawing dated July 25, 2008
July 2, 2008 GeoSyntec Email

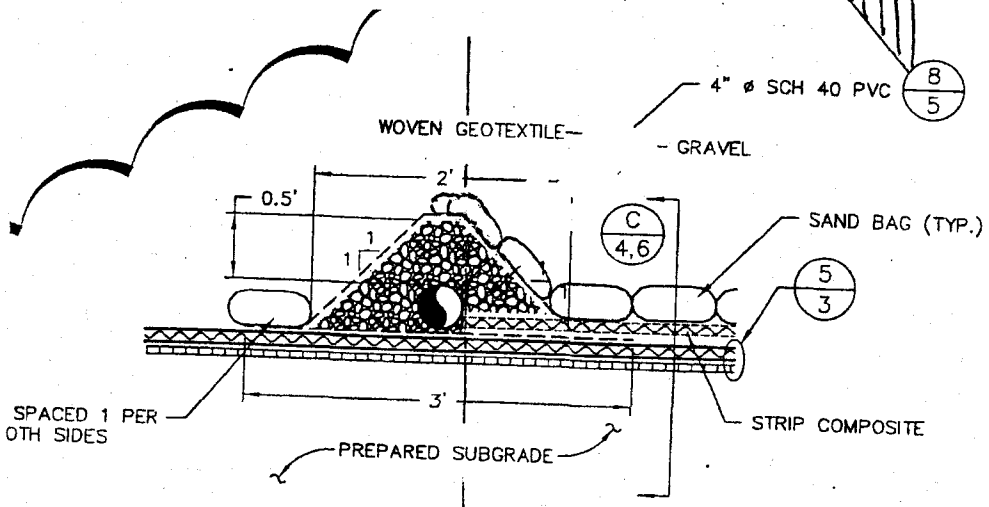
Cc: Mr. Ron Hochstein, President, DUSA

F:\drupp\DUSA\4A\Op Appr\Dtld.Cmts.Sandbag Placement 8-18-08.doc

strip-drain Area currently to be covered by sandbags for filter as req'd by specs.

strip-drain area to be covered by sand-bags and header envelope





B/4,6 SECTION
SLIMES DRAIN HEADER
SCALE: 1" = 1'

Enclosure

Dave Rupp - RE: DUSA Cell 4A Construction: Two Items noted.

From: <GCorcoran@Geosyntec.com>
To: <DRUPP@utah.gov>, <hroberts@denisonmines.com>, <Ssnyder@denisonmines.com>
Date: 7/2/2008 5:42 PM
Subject: RE: DUSA Cell 4A Construction: Two Items noted.
CC: <JCox@Geosyntec.com>, <LMORTON@utah.gov>
Attachments: Slimes Drain Drainage.070208.pdf

Dave,

I have revised the calculations presented in the Analysis of Slimes Drain included in the Cell 4A Interrogatories. The original calculation was based on an area for flow to pass into the strip composite of 14 inches per foot of length (12 inches across the top and two sides at 1 inch each). This calculation, using the maximum liquid depth resulted in a drainage time of approximately 5.5 years.

The sand bag coverage issue likely only impacts a discreet amount of the sides of the strip composite (probably much less than 10%). However, taking a conservative approach, I assumed that all two inches of the sides of the entire strip composite is not available for flow. Incorporating the 12 inches per foot of length flow area into the maximum liquid level model calculation results in a drainage time of approximately 6.4 years (see attached), an increase of approximately 0.9 years. Given that the relationship is linear, one can interpolate between 5.5 and 6.4 years to estimate the impact of the percentage of strip composite sides that are not covered by sand bags. If this value is 10%, one can estimate that the drainage time would be approximately 5.6 years (0.9 years x 10% + 5.5 years).

We believe that this minor change meets the design intent.

Please let us know if you have additional comments, and confirm that this addresses your concerns.

Regards,

Greg

From: Dave Rupp [mailto:DRUPP@utah.gov]
Sent: Wednesday, July 02, 2008 1:54 PM
To: hroberts@denisonmines.com; Ssnyder@denisonmines.com; Greg Corcoran
Cc: Jim Cox; Jephory McMichen; Loren Morton
Subject: RE: DUSA Cell 4A Construction: Two Items noted.

Greg,

Thanks for your response. As I view section C-5 of the drawings, the sandbags drape over the both edges of the strip-drain, and preclude access to the edge and top of the strip-drain by the tailings. This will be a criterion we will use in inspecting for conformance to the existing plans.

The first photograph DRC sent on 6-25-08 regarding this problem shows six openings through the

TABLE 3
White Mesa Mill
Cell 4A Slimes Drain
Maximum Liquid Depth

Permeability (cm/sec)	Permeability (ft/min)	Drainage Path Length (ft.)	Thickness (VF)	Q (cfm/ft)	Volume of Liquid (CF/ft)	Time to Dewater (min/VF/ft)	Time to Dewater (days/VF/ft)	Total Flow Rate (gpm)	Volume Removed (gal)	Pipe Limitation (days)
3.31E-04	6.51E-04	46.3	39	5.49E-04	11	20,049	13.92	113.07	2,266,966	0.18
3.31E-04	6.51E-04	45.8	38	5.40E-04	11	20,354	14.13	111.38	2,266,966	
3.31E-04	6.51E-04	45.4	37	5.31E-04	11	20,722	14.39	109.40	2,266,966	
3.31E-04	6.51E-04	45.0	36	5.21E-04	11	21,110	14.66	107.39	2,266,966	
3.31E-04	6.51E-04	44.6	35	5.11E-04	11	21,520	14.94	105.34	2,266,966	
3.31E-04	6.51E-04	44.2	34	5.01E-04	11	21,954	15.25	103.26	2,266,966	
3.31E-04	6.51E-04	43.8	33	4.91E-04	11	22,415	15.57	101.14	2,266,966	
3.31E-04	6.51E-04	43.5	32	4.79E-04	11	22,957	15.94	98.75	2,266,966	
3.31E-04	6.51E-04	43.2	31	4.67E-04	11	23,534	16.34	96.33	2,266,966	
3.31E-04	6.51E-04	43.0	30	4.54E-04	11	24,206	16.81	93.65	2,266,966	
3.31E-04	6.51E-04	42.8	29	4.41E-04	11	24,924	17.31	90.96	2,266,966	
3.31E-04	6.51E-04	42.6	28	4.28E-04	11	25,694	17.84	88.23	2,266,966	
3.31E-04	6.51E-04	42.4	27	4.15E-04	11	26,520	18.42	85.48	2,266,966	
3.31E-04	6.51E-04	42.3	26	4.00E-04	11	27,475	19.08	82.51	2,266,966	
3.31E-04	6.51E-04	42.2	25	3.86E-04	11	28,507	19.80	79.52	2,266,966	
3.31E-04	6.51E-04	42.1	24	3.71E-04	11	29,624	20.57	76.52	2,266,966	
3.31E-04	6.51E-04	42.1	23	3.56E-04	11	30,912	21.47	73.34	2,266,966	
3.31E-04	6.51E-04	42.1	22	3.40E-04	11	32,317	22.44	70.15	2,266,966	
3.31E-04	6.51E-04	42.1	21	3.25E-04	11	33,856	23.51	66.96	2,266,966	
3.31E-04	6.51E-04	42.2	20	3.09E-04	11	35,633	24.75	63.62	2,266,966	
3.31E-04	6.51E-04	42.3	19	2.93E-04	11	37,598	26.11	60.30	2,266,966	
3.31E-04	6.51E-04	42.5	18	2.76E-04	11	39,874	27.69	56.85	2,266,966	
3.31E-04	6.51E-04	42.6	17	2.60E-04	11	42,319	29.39	53.57	2,266,966	
3.31E-04	6.51E-04	42.8	16	2.43E-04	11	45,175	31.37	50.18	2,266,966	
3.31E-04	6.51E-04	43.1	15	2.27E-04	11	48,524	33.70	46.72	2,266,966	
3.31E-04	6.51E-04	43.3	14	2.11E-04	11	52,231	36.27	43.40	2,266,966	
3.31E-04	6.51E-04	43.6	13	1.94E-04	11	56,639	39.33	40.02	2,266,966	
3.31E-04	6.51E-04	44.0	12	1.78E-04	11	61,922	43.00	36.61	2,266,966	
3.31E-04	6.51E-04	44.3	11	1.62E-04	11	68,012	47.23	33.33	2,266,966	
3.31E-04	6.51E-04	44.7	10	1.46E-04	11	75,488	52.42	30.03	2,266,966	
3.31E-04	6.51E-04	45.1	9	1.30E-04	11	84,626	58.77	26.79	2,266,966	
3.31E-04	6.51E-04	45.6	8	1.14E-04	11	96,260	66.85	23.55	2,266,966	
3.31E-04	6.51E-04	46.0	7	9.91E-05	11	110,977	77.07	20.43	2,266,966	
3.31E-04	6.51E-04	46.5	6	8.40E-05	11	130,880	90.89	17.32	2,266,966	
3.31E-04	6.51E-04	47.1	5	6.91E-05	11	159,083	110.47	14.25	2,266,966	
3.31E-04	6.51E-04	47.6	4	5.47E-05	11	200,964	139.56	11.28	2,266,966	
3.31E-04	6.51E-04	48.2	3	4.05E-05	11	271,330	188.42	8.36	2,266,966	
3.31E-04	6.51E-04	48.8	2	2.67E-05	11	412,062	286.15	5.50	2,266,966	
3.31E-04	6.51E-04	49.4	1	1.32E-05	11	834,256	579.34	2.72	2,266,966	
						days	2,321.18		88,411,655	0.18
						years	6.36			

Average Soil Porosity	0.22	
Geomean Soil Permeability	3.31E-04	cm/sec
Distance Between Drains	50	ft
Thickness of Unit	1	ft
Maximum Depth	39	ft
Length of Strip Drain	27,550	ft