



State of Utah

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DRC - 2011-001232



January 20, 2011

Certified Mail  
(Return Receipt Requested)

Mr. Harold R. Roberts  
Vice President, US Operadons  
Denison Mines (USA) Corp (DUSA)  
1050 17<sup>th</sup> Street, Suite 950  
Denver, CO 80265

Dear Mr. Roberts:

**SUBJECT:** November 30, 2010 DUSA *Cell 4B Construction Quality Assurance [CQA] Report*; DRC Email dated December 14, 2010, Regarding GWDP Part I.H.11; December 21, 2010 GeoSyntec Letter, Response to Construction Deficiencies; DRC Letters dated December 9, 2010, November 24, 2010, and November 15, 2010, Concerning Cell 4B Construction Inspections; Review of Cell 4B Construction and Request for Information

We received the subject November 30, 2010 DUSA *Cell 4B Construction Quality Assurance [CQA] Report*. We have reviewed the subject report and items above, and have the following comments and requests:

1. The Construction Drawings. The originally dated November 2009 Construction Drawings are mentioned in the report, paragraph 3.2. Several design change notifications (DCN) are provided in Appendix B. It appears that revisions of the original drawings, except for sheets 1 and 6 are included in the subject CQA Report. Please provide for these missing drawing sheets 1 and 6, as revised for construction, in the report.
2. The Slimes Drain Header.
  - a. As discussed last month by telephone, please provide one or more photographs, demonstrating that the along the slimes drain header in the SE corner of the cell, that the slimes drain header is ballasted continuously on both sides, as requested in the subject DRC Email dated December 14, 2010.
  - b. In the subject GeoSyntec letter of December 21, 2010, photographs nos. 1 and 2 show there are two separate sand bag lines crossing over the woven geotextile, which covers the slimes drain header. Also photograph no. 34 in Appendix A of the subject CQA Report

\* All photographs need to be dated, and have descriptive labels, identification of location, and background of the surroundings (to reference the location).

show sandbags crossing over the woven geotextile covering the slimes drain access pipe. It appears these bags may have been placed to ballast woven geotextile joints without sewing such joints. According to the subject CQA Plan paragraph 11.7 and the CQA Report, paragraph 6.6.3.3, the woven geotextile is to be sewn at all joints. Please provide photographs\* to demonstrate that these locations, including examples of the other woven geotextile joints, have been sewn in accordance with these specifications.

3. Strip Drains.

- a. Page 7 of the subject CQA Report discusses design change notification (DCN) -006. It states, "This design change modifies the specificadons to allow the placement of additional sand bags parallel and adjacent to the existing sand bags if the underlying strip composite is visible." In contrast, the subject GeoSyntec letter of December 21, 2010, page 3, the fifth paragraph, the first sentence contains a phrase which states, "...sand bags are no longer placed along the sides of...bags, which have been rearranged to comply with coverage and thickness requirements..." It appears the intent of this statement may be to cancel DCN-006, i.e. perhaps now there is no parallel and adjacent sand bags to strip-drains installed on the project. However, this statement in the letter may be interpreted in more than one way. Therefore, verbiage in the current CQA Report, regarding DCN-006 need to be clarified as to the preservation of any parallel sand bag placements adjacent to strip drain lines.
- b. As mentioned in a telephone conversation with you last month, we request a drawing or manufacturer's catalog cuts, etc., showing the engineer's approved method, used during this construction, to change the direction of the slimes strip drains.
  - (1). There are several locations shown on the original plans requiring the direction of the strip-drains to change. Please demonstrate the method used with example photographs\* of such use.
  - (2). Numerous photographs of the strip-drain lines in Appendix M of the CQA Report as well as some surveyed strip-drain lines in Appendix K demonstrate strip-drain lines locations where the strip slimes drains have been turned from their original course to "short-cut intersect" the slimes drain header perpendicularly. Please demonstrate the method used at these locations with example photographs\* of such use as well.
- c. Specific Strip Drains. As you are aware, there have been several concerns raised regarding sand bags covering the strip drains. These concerns are mentioned in the subject DRC letters referenced at the beginning of this letter. DRC letter dated December 9, 2010 states that, "each individual line of strip-drain and sandbag cover will be reviewed, corrected as needed, and separately documented by GeoSyntec. Further, that an individual record for each strip-drain will be made by GeoSyntec in the as-built report [the CQA Report], or as an addendum thereto. This element will be critical to obtain final DRC approval of the strip-drain/sand bag system."

In the construction inspection chronology, DUSA conveyed the subject CQA Report to DRC via letter dated November 30, 2010. That date is the same date as a DRC

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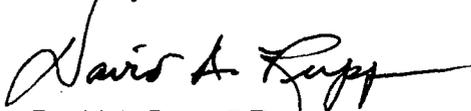
construction inspection, summarized by our mentioned letter dated December 9, 2010. That letter stated some general concerns regarding the strip drain sand bag placement. The subject GeoSyntec response letter of December 21, 2010 was written to address these DRC concerns. However, the GeoSyntec letter, in general, was not specific to individual strip drains, per the intent of the DRC letter of December 9, 2010. In our telephone conversation last month, you mentioned that DUSA has strived to correctly reorient errant sand bag installation work.

The CQA Report, Appendix M, provides photographs pertaining to each strip drain. After review of such, we request the following:

- (1). Photographs\* of reworked strip-drains 31 and 51, demonstrating no "piggy-backing" or "fallen dominoes" type stacking of those bags.
  - (2). Photographs\* of reworked strip-drains 15, 16, 17, 18, 19, 20, 21, 22, and 23 demonstrating the following:
    - (a). The bags have been reoriented properly.
    - (b). That if any parallel bags (per DCN-006) are used, the parallel bags are not piggy-backed or fallen domino stacked onto the strip-drain sand bags. Our previous comment in paragraph 3a above, discusses some concerns with respect to DCN-006.
4. We are unaware if a fence has been installed or contemplated to be installed surround the Cell 4B site. A fence surrounding wastewater ponds is a requirement of UAC R317-3-10.8, which states, "Fencing. The lagoon area shall be enclosed with not less than 6 feet high chain link fence to prevent entering of livestock and to discourage trespassing. Fencing must not obstruct vehicle traffic on top of the dikes. A vehicle access gate of sufficient width to accommodate all maintenance equipment shall be provided. All access gates shall be provided with locks." We anticipate that contingent use of Cell 4B may be authorized, if a fence is installed in a reasonable period of time.

Please review the above comments, and respond in writing, supplying the requested documentation, including photographs,\* and needed adjustments, as an addendum to the CQA Report. The addendum must be certified by a Utah-licensed Professional Engineer. Please include an electronic copy of the requested information. DUSA's response time on this letter is left to DUSA's discretion, in as much as the approval of Cell 4B CQA Report (As-Built Report) is a requirement of the Ground Water Discharge Permit, Part I.H.9, for DRC authorization for use of Cell 4B. If you have questions on the above, please contact me.

Sincerely,



David A. Rupp, P.E.  
Geotechnical Services Section

DAR:LBM:dr

Cc: Mr. Greg Corcoran, GeoSyntec Consultants

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