STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

Dowe Flats Mine / M1993-041 / TR-4 / Adequacy Review #3 - Bond Estimate

Robin Bay <rbay@habitatmanagementinc.com> Mon, May 4, 2020 at 1:15 PM
To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>
Cc: Cita Cisse <cita.cisse@cemex.com>, Uwe Lubjuhn <uwe.lubjuhn@cemex.com>, Scott A Harcus <scotta.harcus@cemex.com>

Amy,

I have attached CEMEX's response to your Adequacy Review #3 of TR#4 to the Dowe Flats Permit.

Please let us know if we need to submit another extension request to allow you time to review before the current decision date.

Thank you,

Robin

Robin Forest Bay

Sr. Environmental Scientist

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Habitat Management
Environmental & Natural Resource Services

Dowe Flats (M-1993-041) TR #4 Adequacy Response No.3.pdf
100K

May 1, 2020

Ms. Amy Eschberger
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, Colorado 80203

RE: Dowe Flats Quarry, Permit No. M-1993-041, Technical Revision #4, Adequacy Review No. 2 Response

Ms. Eschberger:

On April 23rd, 2020, CEMEX received your Adequacy Review No. 3 in response to our April 21st submittal of the Adequacy Review No. 2 to Technical Revision #4 (TR-04) to the Dowe Flats Permit (M-1993-041). Your Adequacy Review No. 3 included your calculations for the financial warranty for the site. We were surprised by how much higher your bond estimate was compared to what we had calculated and respectfully request that you revisit three items in the bond estimate.

1) In your bond estimate calculations, you used several different factors to account for swell volumes of excavated materials. We had used bank cubic yards (BCY) instead of loose cubic yards (LCY) because the productivity and unit cost values we used for our estimate were using Wyoming's standardized method. We do not object the use of a swell factor in the estimates; however, because much of the material being moved is stockpiled, most of the swell has already occurred. Thus, we would expect the actual swell factor to be closer to 5% on stockpiled overburden and not more than 10% on stockpiled topsoil. Our many years of field experience with handling stockpiles of overburden and topsoil support these swell factors.

2) Both seed mixtures used in your bond estimate were not consistent with the reclamation plan. The grassland seed mixture has two seeding rates shown. The first column is for drill seeding and the second column is for broadcasting. The reclamation plan states that most areas will be drill seeded, and your equipment costs included drill application; however, the price for the seed mixture was based on the broadcast rates.

   Additionally, the wetland seed mixture has only three species in it. The other four species shown on that page of the reclamation plan are shown with a planting rate in stems/acres. These were from the old (pre-AM-01) reclamation plan which included wetland planting in addition to seeding. When the planting was removed from the plan, the planting rate was not removed from the table. We understand that most suppliers do not have cattail seed, so you had to make a substitution, but this seed mixture should be around $500/acre not $5,000/acre.

3) The seeding failure rate of 30% is much higher than expected. The most common rate found in a review of seeding specifications is 10% which is the value we used in our estimate. CEMEX has been conducting interim vegetation monitoring on the previously completed reclamation at the Dowe Flats Quarry in most years since 2011 and comparing the data to a nearby reference area inside the permit boundary but outside the affected area. In six of the eight years of monitoring, the average desirable vegetation cover of the reclamation area samples is equivalent to or greater than the reference area (Figure 1). The vegetation cover also persists well after the first few years of growth (Figure 2). Given the success of reclamation efforts to date, we believe that the 10% failure rate in our initial calculations was more appropriate.

Figure 1: Average Reclamation and Reference Area Vegetation Cover (2011-2019)

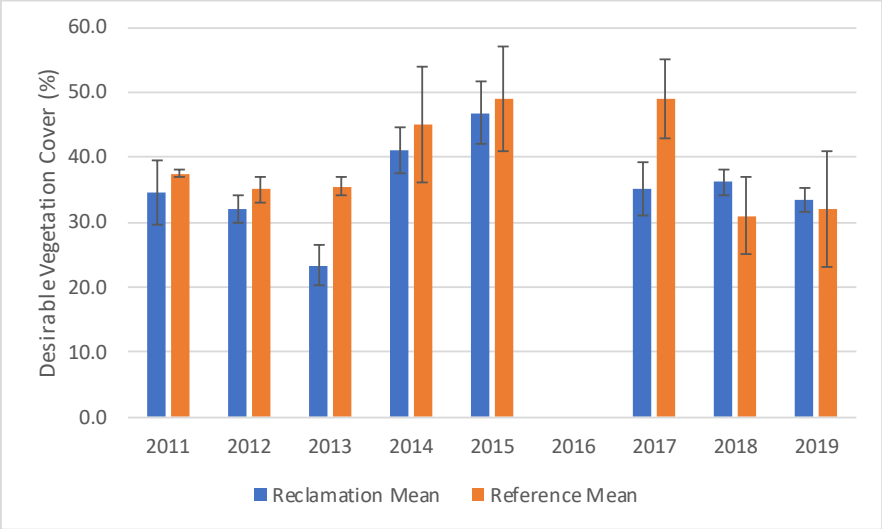
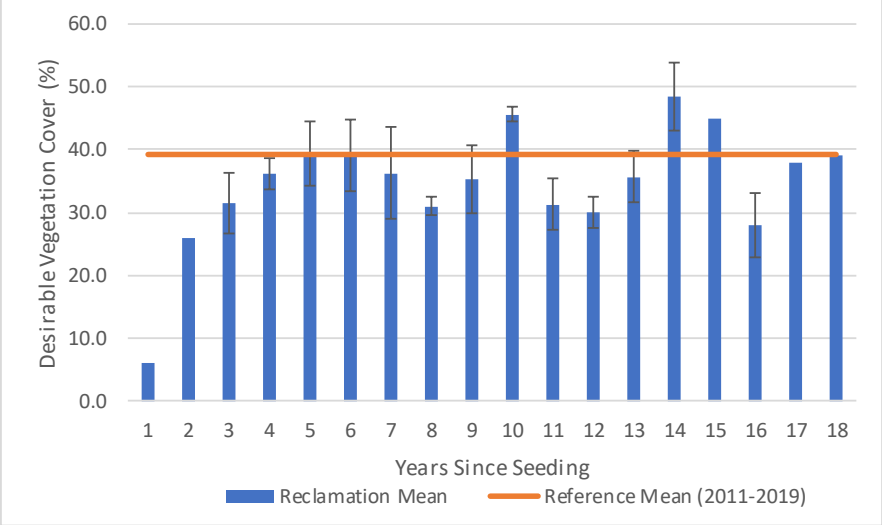


Figure 2: Average Reclamation Vegetation Cover by Years Since Seeding



Please contact me if you need additional information at 720-207-8492 or cita.cisse@cemex.com.

Sincerely,

Cita Cisse
Quarry Manager, Lyons Plant Operations

Cc: Scott Harcus, Environmental Manager, Lyons Plant Operations
Dr. Uwe Lubjuhn, Plant Manager, Lyons Plant Operations
Robin Bay, Sr. Environmental Scientist, Habitat Management, Inc.