EnviroMINE Inc.
Environmental and Mine Permitting Services

October 29, 2012

Mr. Gary Rudholm
Senior Planner
Santa Clara County
70 West Hedding Street
San Jose, CA 95110

RE: Response to September 28, 2012 PMC comment letter on the July 2012 Financial Assurance Cost Estimate (FACE) for the Hanson Permanente Quarry

Mr. Rudholm:

In response to a comment letter drafted by PMC dated September 28, 2012 we are providing a revised Financial Assurance Cost Estimate (FACE) as well as this cover letter that details how comments were addressed in the revised FACE. In addition to incorporating comments made by PMC into the revised FACE, increases in labor rates and changes in site conditions were considered in the revision of the FACE. The October 2012 FACE is a complete document that reflects current costs and site conditions.

1) *The FACE doesn't provide a description of the backfill conveyor system with sufficient detail to identify all of the necessary components and therefore the cost estimate can't be verified. Additional discussion of conveyor system for backfilling North Quarry is needed on the conveyor operations and what components are included.*

Response: A detailed list of the components encompassed in the conveyor system has been provided in Attachment 1 of the FACE.

a) *The FACE refers on page 8 to an itemized cost estimate by Aggregate Machinery Specialist (AMS), which is supposed to be in Attachment 1. However, no Attachment 1 is included with the 2012 FACE. I assume that this attachment is the same list as provided in the December 15, 2011, FACE as Attachment 2. However, the 2011 AMS estimate states that the prices are valid only to the second quarter of 2012, which suggests that the equipment estimate should be updated. We recommend that a current AMS estimate for the conveyor system be attached to the 2012 FACE.*

Response: An updated cost estimate for the conveyor equipment was obtained from Aggregate Machinery Specialists and is included as Attachment 1. Prices in the attached quote are valid until July 1, 2013.

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b) *The conveyor equipment costs listed in the table on page 9 of the 2012 FACE give a $6,916,140 lump sum for the 42-inch conveyor system. The cost estimate by AMS has a number of different options, additional parts, and qualifiers. The lump sum estimate doesn't provide sufficient detail to evaluate this part of the FACE. For example, the AMS estimate indicates that sales tax is not included in the bid, a cost that may exceed $500,000 (depending on where the tax is collected). We recommend that a more detailed cost estimate be included in the FACE, either in the text or as an attachment. This analysis should link the final lump sum for the conveyor system to specific cost components within the AMS estimate*.

Response: A summary of the total costs for the conveyor system was added to the final page of the Aggregate Machinery Specialist quote that is included in the FACE as Attachment 1. The lump sum cost for the conveyor system totaled $8,091,000. This value was used in the FACE for calculating backfilling costs in Section 2.2.1. The total cost of the conveyor system includes sales tax calculated at 8.25% of the quoted cost.

2) *The table in Section 2.2.3 on page 11 indicates that a total of 220 hours each are allotted for a loader and operator for placing 63,000 tons of organic material into a hopper in the WMSA, where it is then carried by the backfill conveyor system and placed in the upper 25 to 50 feet of North Quarry backfill. These 220 hours occur over the final three years of backfilling, approximately 73 hours per year, or 1.4 hours per week. In Section 2.2.1, the cost estimate for the North Quarry backfilling doesn't include a loader and operator, except for setting up and moving the conveyor system. Thus, it doesn't appear that the time allotted to feeding the organic material onto the conveyor is in addition to other loader time already accounted for in the North Quarry backfill costs. Because the intent is to evenly mix the organic material with the backfill, it appears that the time dedicated to this task is insufficient to ensure proper mixing. We recommend that the FACE include additional discussion as to how the desired even mixing of organic material with the backfill will be achieved and how the proposed 220 hours are adequate for this task. The FACE should then be adjusted to cover the costs of this task.*

Response: The volume of material required to complete backfilling the North Quarry at the elevations where organic material is to be mixed in with the backfill is approximately 5,000,000 cubic yards (CY). Given the assumed production rate of 1,380 CY per hour for the backfilling operation, it would take approximately 190 days to complete backfilling this area. Previously in the FACE, a duration of three years was utilized for completion of backfilling where organic material was recommended. After analyzing the approved mine plan and completing a volume calculation for the North Quarry backfilling at elevations between 935 and 990 AMSL, it was determined that backfilling this area could be accomplished in much less time than three years. The FACE has been revised to include additional hours for a smaller loader to add organic material into the backfill material. The loader will work for a total of three hours per day, one hour at a time over 190 days as backfilling is completed. Utilizing the loader one hour at a time three times per day will allow for the addition of organic material to the backfill.

3) *FACE Section 2.2.4, starting on page 11, discusses the costs for placing a non-limestone cap over the WMSA, EMSA, and North Quarry areas. The FACE states that this cap will use approximately 710,000 cubic yards of existing waste rock. The placement of non-limestone cover on the EMSA and the North Quarry will be done using mining haul trucks. The cost estimate appears to assume that the job efficiency for this hauling will be 100%. For example, in the EMSA the total time per load (loading plus two-way travel) is given as 11.7 minutes (7.6 min. + 4.1 min. = 11.7 minutes per load) and the number of loads per hour as 5.1. This calculation assumes 100% job efficiency (60 min. / 11.7 min./trip = 5.1 loads per hour). The Caterpillar Handbook recommends that a job efficiency of 83% or 50 minutes per hour be assumed for day work and 75% or 45 minutes per hour for night work. Assuming the work is done only during the day, the number of loads per hour drops to approximately 4.3, resulting in a total time for the EMSA of approximately 390 hours, rather than the 327 stated. Thus, if the Caterpillar recommended job efficiency is assumed, costs for hauling will increase, perhaps by 20% (1/0.83). We recommend that the FACE be reviewed to determine whether the job efficiency assumption for placing the non-limestone materials is valid, and the FACE be adjusted as necessary. Similarly, this job efficiency issue should be specified and made part of the costs for* the other components of the 2012 FACE.

Response: Costs for capping the site with non-limestone material and distribution of growth medium were adjusted to account for an 83% efficiency rate for heavy equipment. Accounting for 83% efficiency increased the number of hours required to complete the tasks and increased the overall cost of reclamation.

4) *Although the final plan for restoring the Permanente Creek area is still subject to approval by the San Francisco Bay Regional Water Quality Control Board, as well as by other agencies, an estimate can be made for the 2012 FACE assuming the plan proposed by Lehigh is accepted. FACE Sections 2.2.5, 2.2.9, portions of 2.1 (on page 6), and a portion of 2.2.8 refer to costs associated with the restoration of Permanente Creek (PCRA). The FACE descriptions of the creek restoration work, and presumably the costs, appear to omit some of the tasks listed in the RPA (see RPA pages 84 through 100). For example, for PCRA subareas 2 and 3, the RPA indicates that as part of the soil treatment for revegetation, a winched sheepsfoot will track walk portions of the slope. The FACE doesn't appear to list this equipment or allocate time to perform the slope preparation work. For PCRA subarea 6, the RPA states that sheet piles may need to be repaired or new ones installed, with no costs for this work in the FACE. In addition, because the PCRA costs are scattered throughout the FACE, it is difficult to evaluate the cost estimate for this task. We recommend that the FACE provide a more detailed accounting of the PCRA work by subarea task. This detailed PCRA accounting could be attached to the FACE, but should provide a clear linkage to the main text of the FACE where the PCRA quantities and associated costs are given.*

Response: All costs for reclamation activity in the PCRA have been condensed into Section 2.3. Costs previously distributed throughout the document were extracted and compiled into Section 2.3. In the July 2012 FACE costs for compacting slopes with a winched sheepsfoot were included on Page 18 in Section 2.3. These costs are now found in Section 2.3.5 on Page 17.

5) *FACE Section 2.2.10 lists the geotechnical oversight costs and provides for a final report at the end of the five years of backfilling. The number of hours listed for the 2012 FACE has been reduced to 5,500 hours from the 2011 estimate of 20,800 hours, or 20 hours per week for backfill oversight. The new time estimate also includes approximately 300 hours for professional oversight of the non-limestone caps, creek restoration grading, and general geotechnical management over the entire five years of reclamation effort. The North Quarry backfill work is proposed for two shifts per day; thus, the 20 hours of grading oversight is approximately quarter time. If the 300 hours of professional geologist and/or professional civil engineer oversight are spread out evenly, approximately 60 hours will be dedicated for each of the five years. Because the geotechnical oversight is listed separately, the FACE suggests this oversight isn't considered part of general project supervision. The 300 hours for other geotechnical oversight appear to be inadequate for the level of work that needs to be done, as well as the likely need for ongoing general geotechnical oversight. We recommend that the County evaluate whether the proposed grading and professional geologist/civil engineer oversight is adequate and that FACE costs be adjusted as necessary. In addition, the hourly rate on page 17 for geotechnical monitoring is $100.00 per hour. This rate appears to be low for a licensed professional geologist or civil engineer consultant in the Bay Area, particularly given the specific qualifications needed to perform this oversight. We recommend that the County determine if the billing rate for a professional geologist/civil engineer is consistent with the rates paid by the County in other professional contracts and that the FACE costs be adjusted as necessary.*

Response: The total number of hours for geotechnical monitoring was increased slightly to account for additional backfilling required over the previous FACE. In addition to increasing the hours of field monitoring, a geotechnical professional at $150 per hour was added to provide oversight for the field technician. A ratio of one hour of supervision for every 20 hours worked by the field technician was used.

6) *Section 2.3 describes the revegetation tasks and associated costs. On page 19 of the FACE, reference is made to Attachment 3 for seed quotes from two vendors. However, these quotes are not attached to my copy of the FACE. The prices given for the seed mixes and revegetation work are generally the same as in the 2011 FACE, except for the east-facing bench planting. We recommend that current quotes from the revegetation vendors be attached to the FACE and the FACE costs be adjusted as necessary.* Also, note that the 2012 FACE doesn't refer to or include an Attachment 2.

Response: Updated costs for seed mixes and hydroseeding were obtained from Freedlund Hydroseeding and Pacific Coast Seed. Detailed quotes can be found as Attachments 4, 5 and 6 in the FACE. Costs in the FACE have been adjusted to reflect current prices for revegetation materials and labor.

7) The FACE doesn't clearly provide costs for removing the material in the Surge Pile. The RPA on page 42 states that this material will be hauled to the Rock Plant or transported off site. However, the Rock Plant costs are only for equipment removal and don't include any costs for disposing of excess materials from the Rock Plant. Thus, moving materials from the Surge Pile to the Rock Plant doesn't eliminate the costs for removing this material. While the actual volume of the Surge Pile will vary, the current pile, based on contours in the Chang and Associates plate 10 of 13 (December 12, 2011), gives an approximate reclamation cut volume of 200,000 cubic yards. This volume is similar to the non-limestone caps, for which the FACE estimates several hundred hours to be necessary for each area capped. We recommend that the FACE be revised to include the costs of removing and disposing of the material in the Surge Pile as well as the Rock Plant.

Response: The Surge Pile is a stockpile consisting of crushed mined rock that will be sold as aggregate. This material is not intended for disposal but for processing and sale at the Rock Plant. The creation and management of product stockpiles is part of the surface mining operation, and based on the State Mining and Geology Board's Financial Assurance Guidelines, the costs of completing mining operations are not included in the financial assurance cost estimate.

In addition to incorporating comments made by PMC into the revised FACE, changes in site conditions and labor rates were incorporated into the revised document. Specifically, increases in prevailing wages and additional volume of backfill required to complete reclamation due to continued excavation of the North Quarry added further costs to the FACE.

In closing, we believe we have adequately and completely responded to your comments in the above letter. If we can help you to resolve any lingering issues, please contact me at your earliest convenience.

Sincerely,
EnviroMINE, Inc.

Warren R. Coalson
President