



# STATE MINING AND GEOLOGY BOARD

## EXECUTIVE OFFICER'S REPORT

For Meeting Date: September 8, 2011

**Agenda Item No. 8: Approval of an Interim Financial Assurance Amount for the Richmond (Chevron) Quarry (CA Mine ID #91-07-0006), Dutra Materials (Operator), Aaron Johnson (Agent), City of Richmond.**

**INTRODUCTION:** The State Mining and Geology Board (SMGB) serves as the lead agency for the City of Richmond pursuant to the Surface Mining and Reclamation Act of 1975 (SMARA, Public Resources Code (PRC) Section 2710, et seq.). SMARA requires that each surface mining operation maintain a financial assurance in an amount adequate to reclaim, in accordance with the requirements of an approved reclamation plan, the land disturbed by the mining operation at the conclusion of mining activities. SMARA lead agencies are required to annually review the financial assurance amounts for each surface mining operation, and adjust the amount, as necessary, to account for new land disturbed, inflation, or land reclaimed. In any event, the lead agency must ensure that the approved amount is adequate to reclaim the mine site according to the reclamation plan requirements (PRC Sections 2770 and 2773.1, and California Code of Regulations (CCR) Section 3804).

**STATUTORY AND REGULATORY AUTHORITY:** Financial assurance cost estimate adjustment requirements are discussed under SMARA, and within the SMGB's regulations and guidelines. Lead agencies are required to assure that financial assurances for reclamation are sufficient pursuant to Division 2, Chapter 9, Article 5 of PRC Section 2770(d) which states:

*"The lead agency's review of reclamation plans submitted pursuant to subdivision (b) or of financial assurances pursuant to subdivision (c) is limited to whether the plan or the financial assurances substantially meet the applicable requirements of Sections 2772, 2773, and 2773.1, and the lead agency surface mining ordinance adopted pursuant to subdivision (a) of Section 2774, but, in any event, the lead agency shall require that financial assurances for reclamation be sufficient to perform reclamation of lands remaining disturbed. Reclamation plans or financial assurances determined to substantially meet these requirements shall be approved by the lead agency for purposes of this chapter. Reclamation plans or financial assurances determined not to substantially meet these requirements shall be returned to the operator within 60 days. Reclamation plans or financial assurances determined not to substantially meet these requirements shall be returned to the operator within 60 days. The operator has 60 days to revise the plan or financial assurances to address identified deficiencies, at which time the revised plan or financial assurances shall be returned to the lead agency for review and approval."*



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In addition, PRC Section 2773.1(a) states:

*“...Lead agencies shall require financial assurances of each surface mining operation to ensure reclamation is performed in accordance with the surface mining operation's approved reclamation plan, as follows:  
(3) The amount of financial assurances required of a surface mining operation for any one year shall be adjusted annually to account for new lands disturbed by surface mining operations, inflation, and reclamation of lands accomplished in accordance with the approved reclamation plan.”*

Furthermore, the SMGB's regulations pursuant to Article 11 of CCR Section 3804, Calculation of Financial Assurance Amount, states:

*“(a) The Financial Assurance Amount shall be calculated as prescribed in Public Resources Code Section 2773.1 and based on:  
(1) an analysis of the physical activities and materials necessary to implement the approved reclamation plan;  
(2) the lead agency's unit costs, or costs for third party contracting, for each of these activities, if applicable;  
(3) the number of units of each of these activities, if applicable;  
(4) a contingency amount not to exceed 10% of the reclamation costs.  
(b) The calculated amount should not include the cost of completing mining of the site.  
(c) In order for the lead agency or the Department of Conservation to determine what annual adjustments, if any, are appropriate to the Financial Assurance Amount, the operator shall annually submit to the lead agency a revision of the written calculation required under Section 3804(a).”*

In regards to cut slopes, and final highwalls and quarry faces, performance standards provided in the SMGB's regulations under CCR Section 3704(f) state:

*“Cut slopes, including final highwalls and quarry faces, shall have a minimum slope stability factor of safety that is suitable for the proposed end use and conform with the surrounding topography and/or approved end use.”*

**BACKGROUND:** The Richmond (Chevron) Quarry is located in the City of Richmond, and encompasses approximately 126 acres. The site is characterized by a flat quarry floor, a hide wall constructed from fill material, and quarry cut slopes with vertical dimensions of up to approximately 350 feet.

Surface mining operations include a processing and recycling plant, significant volumes of imported stockpiles of landscape and construction debris, and imported concrete and asphalt material and soil, which is reprocessed on site and recycled. A chronology of past administrative and enforcement actions set forth by the SMGB is summarized below in Table 1.

**TABLE 1**  
**CHRONOLOGY OF ADMINISTRATIVE AND ENFORCEMENT ACTIONS**

<b>Date</b>	<b>Action</b>
November 17, 2004	SMARA mine inspection performed by SMGB.
October 24, 2005	SMARA mine inspection performed by SMGB.
December 12, 2005	Notice of Violation issued by SMGB.
March 14, 2006	Order to Comply issued by SMGB.
September 14, 2006	Administrative Penalty of \$10,000 issued by SMGB.
November 9, 2006	Additional Administrative Penalty of \$90,000 issued by SMGB.
December 28, 2006	SMARA mine inspection performed by SMGB.
February 8, 2007	Administrative Penalty of \$90,000 deferred by SMGB.
June 17, 2007	SMGB forwarded matter to Geohazards Committee, prior to considering action on the proposed reclamation plan and financial assurance amount.
September 7, 2007	Geohazards Committee commenced discussions.
December 6, 2007	SMARA mine inspection performed by SMGB.
January 9, 2008	Geohazards Committee continued discussions and held meetings on January 9, March 9, May 8 and July 10, 2008.
October 16, 2008	SMARA mine inspection performed by SMGB.
February 5, 2009	SMGB approved interim financial assurance of \$1.7 million.
July 9, 2009	SMGB moves to accept proposed Alternative 5 and directs operator to provide amended Reclamation Plan and revised financial assurance cost estimate.
November 9, 2009	Amendment to Reclamation Plan incorporating Alternative 5 received by SMGB.
December 22, 2009	SMARA mine inspection performed by SMGB.
February 11, 2010	After review by OMR and SMGB staff, SMGB moves to reject Amendment to Reclamation Plan, and directs operator to prepare an amended reclamation plan consistent with SMARA standards that describes how slopes will be reclaimed to stable conditions, and to adjust the financial assurance, as appropriate.
March 15, 2010	Operator petitions Superior Court for Writ of Mandate directing SMGB to vacate February 11, 2010 decision to reject Amended Reclamation Plan.

An inspection of the Richmond (Chevron) Quarry surface mining operation was performed on December 17, 2010. Observations made at time of inspection indicate a total disturbed area of approximately 43.76 acres. This total includes approximately 15.6 acres for the quarry cut slope, 27.9 acres for the quarry floor and approximately 0.26 acres of mining-related disturbance (e.g. unstable slope features) extending beyond the footprint of the approved reclamation plan. Approximately 20 acres addressed within the 1981 Reclamation Plan were deemed reclaimed (including the western hide wall and portions of the quarry floor), and approximately 63 acres were deemed not subject to reclamation (including surrounding hills and pre-SMARA disturbance areas).

The following violations, originally noted in 2005, were ongoing at time of inspection:

- The west-southwest facing quarry cut slope shows evidence of failure and is considered to be unstable.
- Mining-related activities (slope instability features) are beyond the footprint of the approved reclamation plan.

The following corrective measures are noted:

- The operator should develop an Amended Reclamation Plan that includes a strategy for stabilization of the failed quarry cut slope.
- Slope stability monitoring on the west-southwest facing cut slope should continue until a stabilization strategy is implemented. Such slope stability monitoring should continue to be performed by a California licensed geotechnical engineer and/or certified engineering geologist.
- Until an Amended Reclamation Plan is approved, revegetation success monitoring should remain ongoing in order to ensure that criteria set forth in the currently approved 1981 Reclamation Plan continue to be met.

Finally, the following recommendation was offered following the December 17, 2010 inspection:

- The financial assurance amount should be adjusted, as appropriate, to reflect stabilization of the quarry cut slope, reclamation of all remaining mining-related disturbance-including reclamation of remaining portions of the quarry floor, potential additional revegetation efforts, monitoring requirements, and current labor, fuel, and equipment rates.

On April 29, 2011, the Operator provided a revised financial assurance cost estimate for reclamation of the Richmond (Chevron) Quarry surface mining operation excluding costs for slope mitigation. This recently revised cost estimate has been adjusted to reflect current site conditions (again, not including costs for cut slope mitigation) and current equipment, labor and fuel rates, and is in the amount of \$799,303.28. This recently adjusted financial assurance cost estimate is summarized below in Table 2:

**TABLE 2**

**FINANCIAL ASSURANCE COST ESTIMATE (FACE) ADJUSTMENT  
NOT INCLUDING SLOPE MITIGATION:**

I.	Primary Reclamation Activities	\$ 352,140.32
II.	Revegetation	\$ -0.00-
III.	Plant Structures and Equipment Removal	\$ 28,314.17
IV.	Miscellaneous Costs	\$ -0.00-
V.	Monitoring	\$ 211,520.00
	<b>Total Direct Cost</b>	<b>\$ 591,974.49</b>
VI.	Supervision/Overhead/Contingencies	
	a. Supervision (5% of total less Monitoring)	\$ 19,022.72
	b. Profit/Overhead (10.2% of total less Monitoring)	\$ 38,806.36
	c. Contingencies (7% of total)	\$ 41,438.21
	d. Mobilization (1.0% of total less Monitoring)	\$ 3,804.54
	<b>Total Indirect Cost</b>	<b>\$ 103,071.84</b>
	<b>Total Direct and Indirect Costs</b>	<b>\$ 695,046.33</b>
	Lead Agency administrative cost (15%)	\$ 104,256.95
	<b>Total Estimated Cost for Reclamation</b>	<b>\$ 799,303.28</b>
	<b>Total Estimated Cost for Reclamation</b> (Rounded to Nearest Dollar)	<b>\$ 799,303.00</b>

With regards to slope mitigation, a summary of estimated costs per proposed reclamation alternative of the unstable cut slope as presented in ENGEO's November 24, 2008 "Analysis of Slope Mitigation Alternatives" is as follows:

Alternative 1 – Imported Fill Buttress	\$20,441,250
Alternative 2 – Ridge Cut\Fill Buttress Balanced on Site	\$2,481,125
Alternative 3 – Cut\Fill Buttress Balanced on Site with Retained Slope	\$7,590,000
Alternative 4 – Structural Slope Stabilization	\$19,780,000
Alternative 5 – End Use Restrictions/Setback/Monitoring/Maintenance	\$550,000

The interim financial assurance mechanism currently on file with the SMGB is in the amount of \$1,700,000.00. As noted above, this interim financial assurance amount was approved by SMGB on February 5, 2009. Such amount was based on an approximate cost of \$1,200,000.00 for reclamation of portions of the site other than the cut slope, plus an approximate cost of \$500,000.00 for slope mitigation. The site remains subject to a financial assurance, and based on a review of site conditions and submitted documents, SMGB staff considers the revised financial assurance cost estimate in the amount of \$799,303.28 to be adequate to conduct and complete reclamation of the mined lands, excluding slope mitigation, in accordance with the approved 1981 reclamation plan. In addition, SMGB staff considers the lowest estimated cost for active slope mitigation of \$2,481,125.00 (Alternative 2 as presented by ENGE0's November 2008 analysis) to be adequate for the purposes of setting an appropriate interim financial assurance amount.

In summary, assuming the lowest and most recent (2008) estimated cost for reclamation of the unstable cut slope in accordance with SMARA and the SMGB's regulations, and considering the recently revised cost estimate for reclamation of the remainder of the Richmond (Chevron) Quarry mine site, a total interim financial assurance amount is on the order of \$3,280,428.38.

**CONSIDERATIONS BEFORE THE SMGB:** The SMGB may take the following actions:

1. Approve as adequate an adjusted interim financial assurance amount of \$3,280,428.00;

[or]

2. Modify the proposed interim financial assurance amount, and then approve as adequate;

[or]

3. Defer approval of an adjusted interim financial assurance amount at this time.

**EXECUTIVE OFFICER'S RECOMMENDATION:** SMGB staff consider the proposed adjusted interim financial assurance amount of \$3,280,428.00 to be adequate to reclaim the site in accordance with the approved reclamation plan, and lacking further information at this time, to be adequate to reclaim the unstable quarry cut slopes per the minimum requirements of SMARA and the SMGB's regulations. The Executive Officer recommends that the SMGB approve an adjusted interim financial assurance amount for the Richmond (Chevron) Quarry of \$3,280,428.00.



**SUGGESTED MOTION LANGUAGE:**

To approve the recommended Interim Financial Assurance Amount:

*Mr. Chairman, in light of the information before the State Mining and Geology Board today, I move that the SMGB approve the adjusted interim financial assurance amount of \$3,280,428.00 for the Richmond (Chevron) Quarry surface mining operation, CA Mine ID #91-07-0006, located in the City of Richmond, as adequate to reclaim the site in accordance with the approved reclamation plan, and as adequate in meeting the minimum requirements of SMARA and the SMGB's regulations.*

Respectfully submitted:

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Stephen M. Testa  
Executive Officer

**Exhibit A: 2010 SMARA Annual Inspection Report**

**Exhibit B: April 28, 2011 Financial Assurance Cost Estimate**

**Exhibit C: November 24, 2008 Analysis of Slope Mitigation  
Alternatives by ENGEO, Inc.**

