

SURFACE MINING INSPECTION REPORT

(See reverse side of each form page for completion instructions)

I. Mine Name (As Shown on Approved Reclamation Plan) Permanente Quarry	Inspection Date: 9/4 & 9/5, 2014	CA MINE ID# 91- 43-0004
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II. Mine Operator Lehigh Hanson, Inc.		Telephone (408) 996-4190 - office
Onsite Contact Person Dan Zacharisen - Quarry Manager		Telephone (408) 206-4926 - cell
Mailing Address 24001 Stevens Creek Blvd.		
City Cupertino	State CA	ZIP Code 95014
E-mail Address (optional) Dan.Zacharisen@LehighHanson.com		

III. Designated Agent Greg Knapp		Telephone (925) 244-6570
Mailing Address 12667 Alcosta Blvd., Suite 400, Bishop Ranch 15		
City San Ramon	State CA	ZIP Code 94583
E-mail Address (optional) Greg.Knapp@hanson.com		

IV. SMARA Lead Agency Name (City, County, BCDC, or SMGB) Santa Clara County		
Inspector Kit Custis, consultant, and Marina Rush		Telephone (408) 299-5784
Title Planner III	Organization Department of Planning and Development	
Mailing Address 70 W. Hedding Street, East Wing, 7th Floor		
City San Jose	State CA	ZIP Code 95110
E-mail Address (optional)		

V. Does the operation have:	P	NR	No	Yes	
A Permit to Mine	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		Permit # - Start and Expiration Dates vested
Vested Right to Mine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		Year of Lead Agency determination February 8, 2011
A Reclamation Plan	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		RP# 2250-13-66-84P Date Approved March 1985
Reclamation Plan Amendment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		RP Amendment # (as applies) 2250-13-66-10P(M1) Date Approved or Status of Amendment June 26, 2012
Has the Operator filed a Mining Operation Annual Report (Form MRRC-2) this Year?					Year of Most Recent Filed Annual Report: 2014
Check One: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

VI. Is this Operation on Federal Land? Check One: If "Yes," Provide One or Both of the Federal Mine Land Identification Numbers Below:		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
California Mining Claim Number (CAMC#): N.A.	Latitude/Longitude at Mine Entrance (Decimal Degrees): 37.321036°, -122.086107°		
U.S. Forest Service or BLM Identification Number (Plan of Operations #) : N.A.	Status of Plan of Operations (Current/Expired/In Process): N.A.		

INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

Form MRRC-1 (4/97) Page 1 (Rev. 07/13)

This report is intended to comply with the requirements of California's Surface Mining and Reclamation Act (SMARA – Public Resources Code Sections §§ 2710 et seq., and the associated California Code of Regulations found in Title 14, division 2, beginning at § 3500, hereinafter respectively "PRC" or "CCR") and specifically PRC § 2774(b) and CCR § 3504.5 for operations located on private land and/or partly or solely on Bureau of Land Management (BLM) and U.S. Forest Service (USFS) lands (Title 43, parts 3500, 3600, and 3800 of the Code of Federal Regulations). A Memorandum of Understanding between the U.S. Department of Interior, BLM; U.S. Department of Agriculture, USFS; the State of California, Department of Conservation; and the State Mining and Geology Board (SMGB), discusses implementation of SMARA on Federal lands in California that are under the jurisdiction of the BLM and/or the USFS.

As required by PRC § 2774(b) and CCR § 3504.5(g), Lead Agencies shall file an Inspection Notice that includes a statement regarding compliance with SMARA, a copy of this Surface Mining Inspection Report (MRRC-1) and any other supporting documentation with the Department within 30 days of completion of the inspection. The Lead Agency shall also forward a copy of the Inspection Notice, MRRC-1, and any supporting documentation to the operator.

BLOCK I: Enter the name of the Mining Operation, the date of the inspection, and the California Mine ID number.

BLOCK II: Enter the name of the Mine Operator, mailing address, phone number, name, and email address (optional) of the person to serve as the onsite contact.

BLOCK III: Enter the name, mailing address, phone number, and email (optional) of the Designated Agent who, under PRC § 2772(c)(1) and 2207(a)(1), will serve as a contact for any follow-up correspondence or discussions regarding the inspection or noted violations.

BLOCK IV: For "Lead Agency," enter the name of the certified SMARA Lead Agency that is conducting this inspection. Acceptable entries include the name of the city, county, Bay Conservation and Development Commission (BCDC), or State Mining and Geology Board (SMGB). For "Organization," enter the name of the agency, firm or other organization that employs the inspector.

BLOCK V: Check the appropriate boxes.

P	Pending (on appeal or awaiting approval by Lead Agency)
NR, No, Yes	Not required for this operation at the time this inspection was completed
	No
	Yes, supply information

Note: Where appropriate, to aid in determining when the lead agency recognized that the operation has vested mining rights, inspectors are advised to review older agency correspondence, minutes of lead agency hearings, including agendas and staff reports associated with approvals of any kind related to the mining operation.

BLOCK VI: Indicate if the operation is on federal Land; if operation is on federal land, include a California Mining Claim Number and/or a BLM/USFS Identification Number and Plan of Operations Number, if applicable. Give the status of the BLM/USFS Plan of Operations, as indicated. Give the latitude and longitude at the mine entrance in decimal degrees.

DISTRIBUTION INSTRUCTIONS:

One copy of the inspection notice and this completed Inspection Report (all pages) shall be given to the Mine Operator and the operator's designated agent by the lead agency (PRC Section 7374(b)).

The Lead Agency must retain the original copy of this Inspection Report and submit one copy of this Inspection Report, along with an original inspection report notice (PRC Subsection 2774(b)), within 30-days of the completion of the inspection, to:

Department of Conservation
Office of Mine Reclamation
801 K St MS 09-06 Sacramento, CA 95814-3529

If any part of the operation inspected is on BLM or USFS land, one copy of this Inspection Report should be forwarded to the appropriate BLM or USFS office.

SURFACE MINING INSPECTION REPORT

VII. Financial Assurance		Inspection Date: 9/4 & 9/5, 2014	CA MINE ID#: 91- 43-0004	
Type of Financial Assurance Mechanism(s)	Financial Assurance Mechanism Number(s)	Amount of Mechanism	Date of Expiration	Date of Lead Agency Approval of Mechanism
5 bonds posted: 1&2. Travelers Casualty & Surety Company 3. Liberty Mutual Insurance Company 4. Lexon Insurance Company 5. Fidelity & Deposit Company Bond	1. Bond #64S104790142BCM 2. Bond #280331 3. Bond #022033624 4. Bond #1066515 5. Bond #09054091 Note: see additional discussion on page 5 of 5 of this report.	\$7,570,047.00 \$540,001.00 \$18,963,259.00 \$1,691,220.00 \$25,958,768.00	none none none none none	1. 10-19-07 2. 08-18-10 3. 02-03-12 4. 01-28-11 5. 04-28-14
Total Amount of Mechanism(s)		\$54,723,295.00		

Financial Assurance Mechanism Pending Review by Lead Agency? If yes, provide date submitted/explanation and amount of pending mechanism:

No, see below

Has there been a change of operator since last inspection? If yes provide the date of notice. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Date of Change: N/A	If yes, has the new operator posted a Financial Assurance Mechanism? <input type="checkbox"/> Yes <input type="checkbox"/> No If not, describe status of new operators Financial Assurance Mechanism: N/A	Does new operator's Notice of Change include a statement of responsibility for reclamation? <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date and Amount of Most Recent Approved Financial Assurance Cost Estimate:	Date: April 4, 2014	Amount: \$54,723,295.00
<input checked="" type="checkbox"/> Financial Assurance Cost Estimate Pending Review with Lead Agency?	Date Submitted/Explanation/Amount of pending estimate: The operator submitted a revised FACE at end of August 2014. Santa Clara County is reviewing the calculations; the County will forward a certified 2014 FACE to OMR for review, as required under SMARA.	
<input type="checkbox"/> Financial Assurance Cost Estimate Appealed by Operator?	Date Submitted to State Mining and Geology Board or Lead Agency for Appeal/Explanation: N/A	
<input type="checkbox"/> Other?	N/A	

INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

Form MRRC-1 (4/97) Page 2 (Rev. 07/13)

BLOCK VII: Type of Financial Assurance Mechanism(s): Fill in the type of mechanism(s) that are on file. PRC § 3803 and SMGB Financial Assurance Guideline number 10 describe Surety Bonds, Trust Funds, or Irrevocable Letters of Credit as acceptable financial assurance mechanisms for non-governmental entity operators. For surface mining operations owned and operated by state and local government entities, Surety Bonds, Trust Funds, Irrevocable Letters of Credit, Pledges of Revenue, and Budget Set Aside are acceptable financial assurance mechanisms.

State the Financial Assurance Mechanism(s) document number(s). State the dollar amount of each Financial Assurance Mechanism(s) currently on file. State the date of expiration of the Financial Assurance Mechanism(s) currently on file. State the date of approval for the most recent lead agency approved Financial Assurance Mechanism(s) on file. State the total dollar amount of mechanisms held for reclamation.

Indicate if any Financial Assurance Mechanisms are pending review by the lead agency and the date and amount of submittal to the lead agency.

Indicate if there has been a change of operator of record since the last inspection and, if so, note the date the change occurred and whether the new operator has signed any document acknowledging reclamation responsibility under the approved reclamation plan and if the new operator has posted a Financial Assurance Mechanism. If a replacement Financial Assurance Mechanism has not been posted, indicate the status of the new operator's replacement Financial Assurance Mechanism. Per PRC § 2773.1(c) and Guideline number 19 of the SMGB's Financial Assurance Guidelines, when operatorship is transferred, "the original financial assurance must remain in effect until the lead agency has approved, following department review, the replacement assurances provided by the successor operator."

The Financial Assurance amount must be adjusted and approved annually to account for new lands disturbed by surface mining operations and lands to be disturbed in coming year, inflation, and reclamation of lands accomplished in accordance with the approved Reclamation Plan (PRC § 2773.1(a)(3) and SMGB Financial Assurance Guideline #16). In order to determine what adjustments, if any, are appropriate to the Financial Assurance Mechanism amount, each mine operator must submit annually a revision of the written Financial Assurance Cost Estimate to the Lead Agency (PRC § 3804(c)). Provide the date of the operator's most recent revision of the Financial Assurance Cost Estimate to the Lead Agency and where appropriate, provide a status of the pending Financial Assurance Cost Estimate. Provide the date and amount of the most recently approved Financial Assurance Cost Estimate.

Also indicate if the Financial Assurance Cost Estimate is under appeal to the lead agency or whether it has been appealed to State Mining and Geology Board as described in PRC § 2770(e).

Use the Financial Assurance "Other" and "Explanation" blocks to provide any other pertinent information regarding the status of Financial Assurance(s). If the operation does not have a sufficient Financial Assurance Cost Estimate and/or Financial Assurance Mechanism, explain in detail.

SURFACE MINING INSPECTION REPORT

VIII. Non-SMARA facility operations conditions solely of local concern (e.g. hours of operation) do not need to be noted here. See Instructions for Block VIII on reverse side of page. [Use separate sheet(s) where necessary. Refer to item numbers below]		CA MINE ID # 91- 43-0004	
Potential Reclamation Plan Requirements:	List Reclamation Plan Requirements (Recommended to be filled out prior to field inspection)	Note Site Conditions and Compliance Issues (Note additional comments on Page 5 as necessary)	VN?
1) General Information	a) limestone cement and aggregate b) 45 million tons total c) Dec. 31, 2030; RPA Table 2 d) N/A (vested mine) e) opens space - hillside Fig 2.3-2	Mine quarry and rock plant operating in accordance with 2012 RPA. See additional comments in attached inspection letter.	<input type="checkbox"/>
a) Permitted Mineral Product(s)			
b) Approved Production Amount (Annual/Gross)			
c) End Date of Operations Per RP			
d) Permit end date			
e) End Use			
2) Boundaries	a) RPA-Fig 1.0-2 - 3,510 ac b) RPA-Fig 1.0-2 - 1,238.6 ac c) RPA-Fig 1.0-2 & 1.0-4 - 1,238.6ac d) variable, see RPA-Fig 3.3-1	Property boundaries in compliance with 2012 RPA.	<input type="checkbox"/>
a) Property Boundary			
b) Permit Boundary			
c) Rec. Plan Boundary (RPB)			
d) Setbacks			
3) Slopes – Grading	Overburden: a,i) 1.5H to 1V to 2H:1V a,ii) EMSA-2H:1V;WMSA-2.5H:1V N.Pit backfill - 2.5H:1V a,iii) COA 25, 70, b,i) Limestone and greenstone bedrock b,ii) N.Quarry-1mst-1H:1V-overall;50deg-interbench; greenstone 38 to 50 deg. c,iii) reclaimed same as working; RPA 3.17.2	Quarry slopes in compliance with 2012 RPA. WMSA and EMSA slopes are in compliance, but will be regrade for final reclamation.	<input type="checkbox"/>
a) Fill Slopes – Note Condition of:			
i) Slopes – Working (max/current)			
ii) Slopes – Reclaimed			
iii) Compaction			
b) Cut Slopes – Note Condition of:			
i) Slopes – Working (max./current)			
ii) Slopes – Reclaimed			
4) Erosion Control	a) Oct. 22, 2012 SWPPP; RPA 3.9 b) RPA Appendix F - Chang, 12/12/2012 c) RPA Appendix B - WRA 12/2011; RPA 3.18, 3.19; COAs 68 to 70; 78 to 81	BMPs and stormwater management program is active and winterization is proceeding. County staff will inspect again prior to this winter.	<input type="checkbox"/>
a) BMPs			
b) Grading			
c) Vegetation			
5) Ponds	a, b & c) RPA Table 8, RPA-Appendix F; 12/22/2012 SWPPP; COA 33, 83	Ponds functioning and clean out for this winter.	<input type="checkbox"/>
a) Design – Function			
b) Capacity (area/depth/volume)			
c) Maintenance			
6) Stream & Wetland Protection	a to g) RPA 3.18, 3.19; RPA-Appendix D, Table 2; RPA Fig. 3.3-1, COAs 57 to 61	Permanente Creek restoration plan being developed for gov't agency approval in accordance with settlement agreement.	<input type="checkbox"/>
a) Buffers (distance to channel)			
b) Berms (distance/length/height)			
c) Best Management Practices			
d) Drainage			
e) Grading & Slopes			
f) Stockpiles			
g) Stream Diversions			
7) Sensitive Wildlife & Plant Protection	a) RPA 2.9; RPA 3.17.1; RPA-Appendix B; b) RPA-Appendix D-50' setback	Wildlife surveys conducted prior to east highwall mining. Ongoing protection measures being implemented as per RPA & COAs.	<input type="checkbox"/>
a) List Species			
b) Protection Measures			

INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

Form MRRC-1 (4/97) Page 3 and 4 (Rev. 07/13)

BLOCK VIII: INSTRUCTIONS FOR EACH DATA COLUMN:

Potential Reclamation Plan Requirements (Column 1): Under CCR § 3504.5(f), "Inspections may include, but shall not be limited to the following: the operation's horizontal and vertical dimensions, volumes of materials stored on the site; slope angles of stock piles, waste piles and quarry walls; potential geological hazards; equipment and other facilities; samples of materials; photographic or other electronic images of the operation; any measurements or observations deemed necessary by the inspector or the lead agency to ensure the operation is in compliance with Public Resources Code Chapter 9." Column 1 provides a list of items that may be included in the approved reclamation plan, either expressly or by reference as described in PRC § 2772(d), which may include conditions of approval, other permit requirements and supplementary documents, including environmental documents, prepared for the project pursuant to Division 13 (commencing with Section 21000).

It is not expected that all reclamation plans will include each item of Section VIII, or be limited to the items listed. Items in Column 1 that are not operative requirements in the reclamation plan may not need to be addressed by the inspection. Operative reclamation plan requirements not listed in Items 1 through 12 may be listed in Item 13, under "Other Reclamation Plan Requirements."

Reclamation Plan Requirements (Column 2): Prior to field inspection, it is recommended that the inspector review the approved reclamation plan and any amendments, as well as any other documents included by reference, including conditions of approval, other permit requirements and supplementary documents, such as environmental documents prepared for the project pursuant to Division 13 (commencing with Section 21000) that specifically relate to reclamation of the mine site. The most recently approved Financial Assurance Cost Estimate and any pending or ongoing enforcement actions should also be reviewed. Conditions of approval that relate to facility operations solely of local concern, such as hours of operation, noise, and dust control are not subject to the inspection.

Column 2 is intended to provide the inspector a place to match any items noted in Column 1 with those items included in the approved reclamation plan either expressly or by reference as described in PRC § 2772(d), which may include conditions of approval, other permit requirements and supplementary documents, including environmental documents prepared for the project pursuant to Division 13 (commencing with § 21000). Also note any Interim Management Plan (IMP) requirements where the mine is subject to an IMP pursuant to PRC § 2770(h).

Indicate the source document for the reclamation plan requirements at the end of the entry in parenthesis; i.e. (COA) (POO) (EIR) (WDR) (SWPPP), etc. Conditions of approval that relate to facility operations solely of local concern, such as hours of operation, noise, and dust control should not be included in Column 2. If items listed in Column 1 of Section VIII of the form are not included in the reclamation plan or other documents included by reference, write not applicable or "NA" in Column 2.

Specific reclamation requirements may not apply to an operation at the time of inspection, but they are important to be aware of to ensure current activity at the site will not prohibit reclamation in accordance with the approved reclamation plan.

A copy of the Surface Mining and Reclamation Act of 1975 and 1993 SMGB regulations may be obtained at <http://www.conservation.ca.gov/omr/lawsandregulations/Pages/SMARA.aspx>.

Site Conditions and Compliance Issues (Column 3): Describe current site conditions and compliance issues noted for both operating and reclaimed surfaces that pertain to the reclaimed condition of the mining site. Block IX is provided for additional space to describe site conditions and/or compliance issues. Attach additional sheets as necessary. Evaluations of slope stability and engineered compaction should be prepared by qualified professionals only. PRC § 2774(b) states "The lead agency may cause an inspection to be conducted by a state licensed geologist, state licensed civil engineer, state licensed landscape architect, or state licensed forester, who is experienced in land reclamation and who has not been employed by a surface mining operation within the jurisdiction of the lead agency in any capacity during the previous 12 months."

VN? (Column 4): Use this box to indicate if violations were noted for any of the specific items under the corresponding item group heading (e.g., Boundaries, Slopes-Grading, etc.) during field inspection of the site. Enter number of violations in the box.

SURFACE MINING INSPECTION REPORT

VIII. Non-SMARA facility operations conditions solely of local concern (e.g. hours of operation) do not need to be noted here. See Instructions for Block VIII on reverse side of page. [Use separate sheet(s) where necessary. Refer to item numbers below]		CA MINE ID # 91- 43-0004	
Potential Reclamation Plan Requirements:	List Reclamation Plan Requirements (Recommended to be filled out prior to field inspection)	Note Site Conditions and Compliance Issues (Note additional comments on Page 5 as necessary)	VN?
8) Soil/Overburden Stockpile Management	RPA 2.6, 3.17.3.1; RPA-Fig 2.6-1 a&b,i) WMSA and EMSA; COA 26 a&b,ii) temp. angle of repose a&b, iii) 12/22/2012 SWPPP; COA 27	Additional topsoil storage areas in WMSA (1), and EMSA (2). BMPs in place for topsoils storage areas. All overburden and washout fines being placed in North Quarry.	<input type="checkbox"/>
a) Topsoil	c,i) RPA 3.4, 3.10;RPA-Appendix B; c,ii) RPA-Appendix B c,iii)RPA-Appendix B c,iv) RPA-3.17.3	Soil/overburden stockpile management in compliance with 2012 RPA.	
i) Location			
ii) Slope Stability			
iii) BMPs			
b) Overburden		See attached inspection report for more information.	
i) Location			
ii) Slope Stability			
iii) BMPs			
c) Topsoil Application			
i) Amendments			
ii) Depth			
iii) Moisture			
iv) Application Methods			
9) Revegetation	a) RPA-3.17.3.3, RPA-Appendix B, RPA-Fig 2.9-1; COAs 28, 29, 77 b) RPA-Tables 3 to 6; c, d & e) RPA-Table 7; f) RPA-3.17.3.2; g) RPA-3.17.3.5; h) RPA-3.17.3.4	Final test plot report is being prepared. South Exploration area has been revegetated and being evaluated for success.	<input type="checkbox"/>
a) Test Plots			
b) Species Mix			
c) Density			
d) Percent Cover			
e) Species Richness			
f) Protection			
g) Success Monitoring			
h) Invasive Species Control			
10) Structures	RPA-3.20; COA 31	New crusher facility operational. Old crusher being dismantled. New mine office structure completed.	<input type="checkbox"/>
11) Equipment	RPA-3.20; COA 31		<input type="checkbox"/>
12) Closure of Adits		Conveyor tunnel open at this time, will be closed during reclamation.	<input type="checkbox"/>
13) Other Reclamation Plan Requirements	No limestone on surface; remove limestone from stormwater contact; water quality treat to remove selenium; reclaim PCRA	Limestone rock removed from drainage controls. Interim plant for mine water treatment is being constructed. Restoration plan for PCRA submitted and being reviewed. SFBRWQCB issued consolidated WDR/NPDES permit R2-2014-0010, CA0030210 on March 12, 2014. See attached inspection report for additional information.	<input type="checkbox"/>

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SURFACE MINING INSPECTION REPORT

<p>IX. List comments/description/sketches to support observations of mine site conditions, including violations. Where any violations are noted, list in numerical order, along with suggested corresponding corrective actions. Also describe preventative measures recommended by the inspector to avoid or remedy potential violations. Indicate if you have attached photos, sketches, and/or notice(s) of violation(s) or other documents to this form. (Add additional sheets as necessary)</p> <p>Refer to Attachment A, a report dated October 20, 2014, from Kit H. Custis, CEG 1219, CHG 254 of Pacific Municipal Consultants (PMC).</p> <p>Financial Assurance Discussion: Over the course of approximately six years the operator posted five bonds that collectively serve as the Financial Assurance for Permanente Quarry. The total bond amount is \$54,723,295.00. A new August 2014 FACE, in the amount of \$54,601,774.00, has been submitted for review by Santa Clara County. The County has completed its FACE review, and forward the certified calculations to OMR for its mandated 45-day review on October 30, 2014. The 2014 FACE is less than the bonds by \$121,521.00 and does not recommend reducing the bond amount.</p> <p>The bonds include the following:</p> <p>Travelers Casualty & Surety Company of America Surety Bond #64S104790142BCM (\$7,570,047.00), Oct. 19, 2007;</p> <p>Travelers Casualty and Surety Company of America Surety Bond #280331 (\$540,001.00), Aug. 18, 2010;</p> <p>Liberty Mutual Insurance Company Bond #022033624 (\$18,963,259.00), Feb. 3, 2012;</p> <p>Lexon Insurance Company Bond #1066515 (\$1,691,220.00), Jan. 28, 2011;</p> <p>Attachment B Fidelity & Deposit Company Bond #09054091 (\$25,958,768.00), April 28, 2014. This bond was recently increased and approved to cover increased reclamation costs as determined by the February 2014 Financial Assurance Cost Estimate.</p> <p>Santa Clara County prepares an annual report to the Santa Clara County Planning Commission assessing the July 1 through June 30 reclamation activities and condition compliance with the 2012 Reclamation Plan Amendment. The first annual report, covering July 1, 2012 through June 30, 2013, is attached to this MRRC-1. The second annual report will be presented to the Commission on November 20, 2014 and will be included in next years reporting period.</p> <p>Additional sheets/documents attached: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>CA MINE ID # 91- 43-0004</p> <hr/> <p>Inspection Date: 9/4 & 9/5, 2014</p> <hr/> <p>Weather Code(s): CR</p> <hr/> <p>Duration of Inspection: 12 hours over 2 days Start Time: 9am/9:30am End Time: 4pm/1pm</p> <hr/> <p>Status of Mine Code(s): OP</p> <hr/> <p>Status of Reclamation Code(s): R - So. Exploration area Approximate Acreage Under Reclamation: 19.5 acres <small>Approximate Acreage the lead agency has determined reclaimed in accordance with the approved reclamation plan: NONE</small></p> <hr/> <p>Approximate Total Disturbed Acreage: 669.2 ac of 1268.6 acres Approximate Pre-SMARA Disturbed Acreage: 49.2 acres</p> <hr/> <p>Disturbed Acreage Identified in Most Recent Financial Assurance Cost Estimate: 639.6 acres</p> <hr/> <p>Previous Inspection Date (and Number of Violations then Noted): Sept. 26 & 27, 2013; None Violations Corrected? (explain in block to left) None w/2012 RPA</p> <hr/> <p>Inspection Attendees and Affiliations: Dan Zacharsen -Lehigh Cliff Maddox - Lehigh Chow Yip - Lehigh Sean Avent - WRA/Lehigh Marina Rush - SC County Jim Baker - SC County Steve Beams - SC County Kit Custis - PMC</p>
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X. Number of Current Violations: <div style="text-align: center; font-size: 2em; font-weight: bold;">0</div>	Inspectors Signature: <hr/> Date Signed:	If inspector is a contractor for the lead agency give license type and number: Kit H. Custis, CA-CEG 1219 and CHG 254
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INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

Form MRRC-1 (4/97) Page 5 (Rev. 05/13)

BLOCK IX Inspectors may use the large open block for comments to describe violations, corresponding corrective actions, or preventative measure(s) suggested by the inspector to address noted violations or avoid potential violations, and to explain any limitations on the inspection conducted. The inspector can also use this space to describe the status of any pending or current enforcement actions. Separate violations that are the subject of existing enforcement actions from violations observed during the current inspection.

Enter California Mine ID Number and Date of Inspection.

Weather Codes: CR = Clear; CL = Cloudy; RN = Rain; SN = Snow; WD = Windy

For "Duration of Inspection," indicate the start and end times of the inspection (do not include travel time).

SMARA Status Codes (based on annual report and reported production under CCR § 3695, indicate the appropriate status code):

NP = Newly Permitted (surface mining operation not begun)
OP = Operation Not Idle (Per § 2727.1) or abandoned (Per §2770 (h)(6))
I = Idle (Per § 2727.1)
AB = Abandoned (Per § 2700 (h)(6))
NOP-NC = Not in Operation, Reclamation NOT Completed
NOP-C = Not in Operation, Reclamation Completed

If idle, indicate either the date operation became idle as defined by PRC Section 2727.1, the date an IMP was approved, or the status of any pending IMP.

Status of Reclamation Codes:

RN = Reclamation not begun
R = Reclamation in progress
P = Post reclamation monitoring
RC = Reclamation complete

Enter approximate acreage under reclamation (the number of acres actively being reclaimed in accordance with the approved reclamation plan).

Enter approximate acreage determined to be reclaimed in accordance with the approved reclamation plan by Lead Agency.

Enter approximate total disturbed acreage. This includes all acreage disturbed by the surface mining operation, as defined by PRC § 2729: "Mined Lands' includes the surface, subsurface, and ground water of an area in which surface mining operations will be, are being, or have been conducted, including private ways and roads appurtenant to any such area, land excavations, workings, mining waste, and areas in which structures, facilities, equipment, machines, tools or other materials or property which result from, or are used in, surface mining operations are located." This should include acreage under reclamation that has not been determined to be reclaimed in accordance with the approved reclamation plan by the Lead Agency.

Enter the total number of acres within or adjacent to the disturbance area of the operation disturbed pre-SMARA (disturbance before January 1, 1976, that has not had mining related disturbance after January 1, 1976).

Enter the disturbed acreage identified in the most recent Financial Assurance Cost Estimate (i.e., the disturbed acreage that was used to calculate the most recent Financial Assurance Cost Estimate.

Enter the date of the previous lead agency inspection and number of violations noted during that inspection.

Attendees: Provide the names and affiliations of parties in attendance at the inspection.

BLOCK X: Enter the number of violations noted during the inspection. Sign and date the Inspection Report. If the inspector is a consultant to the lead agency, include the inspector's certification (PE, PG, CEG, etc.) and license number, if applicable. The lead agency may cause an inspection to be performed by contracting with private consultants, specifically: state licensed geologist, state licensed civil engineer, state licensed landscape architect, or state licensed forester per § 2774(b).



October 20, 2014

Marina Rush, Planner III
SANTA CLARA COUNTY
70 West Hedding Street
San Jose, CA 95110

**RE: 2014 SMARA MINE INSPECTION
CPO FILE 2250-13-66-09PAM (PERMANENTE ROAD)
PERMANENTE QUARRY, 91-43-0004
CUPERTINO, CALIFORNIA**

Dear Ms. Rush:

This letter report summarizes the findings of PMC's annual Surface Mining and Reclamation Act (SMARA) site inspection of the Permanente Quarry in Cupertino, CA (Mine ID #91-43-0004) conducted on September 4 and 5, 2014. PMC was retained by Santa Clara County to assist County staff with the annual SMARA mine inspection and to provide written documentation of our observations, issues of concern and recommendations.

The 2014 annual SMARA inspection was conducted for 12 hours; 8 hours on September 4, 2014 and 4 hours in the morning of September 5, 2014. In attendance, along with myself, were Dan Zacharisen, Cliff Maddox, Chow Yip and Sean Avent (WRA) as representative of the Lehigh Southwest Cement Company (Lehigh), and Marina Rush (Planner III), Jim Baker (County Geologist), and Steve Beam (Construction Inspector) from the Santa Clara County Planning and Development Department (County).

The mine was active during the inspection. The Rock Plant was operating and washout fines were being placed in the North Quarry. Mining was ongoing in the North Quarry mostly along the southern highwall. Overburden materials were being placed against the toe of the western quarry high wall. Waste material in the northeastern portion of the EMSA west of Pond 30 was being reworked to create a benched slope that drains towards the south into the settling pond upstream of Pond 30. The mine's entrance is located near latitude 37.321036° and longitude -122.086107°. The weather during the inspection was clear and warm.

The acreage disturbed by current mining activities during the 2013 inspection was approximately 620 acres out of the 1,268.6 acres included in the RPA. The RPA identifies nine (9) specific areas within the mining boundary: 1) North Quarry, 2) West Material Storage Area (WMSA), 3) East Material Storage Area, 4) Crusher/Support area, 5) Surge Pile, 6) Rock Plant, 7) South Quarry Exploration Area, 8) Permanente Creek Restoration Area treatment areas (PCRA), and 9) Buffer Areas. Figure 3.3-1 of the RPA provides a map that shows the general location of each mining area and Table I lists the acreage.

One area that was not inspected at this time was the 599.3 acres of the Buffer Areas. The Buffer Areas are no-disturbance areas surrounding the active mining areas.

BACKGROUND

The County Board of Supervisors approved a Reclamation Plan Amendment (RPA) for Permanente Quarry on June 26, 2012. Eighty-nine Conditions of Approval (COAs) are applied to the amended reclamation plan that incorporate both SMARA and non-SMARA requirements as well as mitigation and monitoring measures identified under CEQA. The RPA is designed to address mining activity over the next 18 years with an end date of 2032. The 2012 RPA has three phases of reclamation that coincide with the completion of mining and reclamation of the EMSA in Phase 1; backfilling of the North Quarry with WMSA overburden in Phase 2; and final reclamation grading and re-vegetation in Phase 3. Table 2 of the RPA lists the time intervals for each of the three mining phases.

The 2012 RPA changed the final reclamation of the mine from what was approved in the 1985 Reclamation Plan. In some areas, this change is significant. The previous reclamation work done in portions of the north facing slopes of the WMSA will now be removed during Phase 2 as this overburden stockpile is excavated and then material placed as backfill in the North Quarry. The RPA now includes the PCRA. The PCRA reclamation activities approved in the RPA has seven (7) restoration subareas within the creek that have been disturbed by previous mining activities.

Lehigh at the request of the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) submitted an application and necessary documents to consolidate the various water quality permits. On March 12, 2014, the SFBRWQCB adopted consolidated waste discharge requirements (WDR) and NPDES permits, Order No. R2-2014-0010, NPDES CA 0030210. This permit allows for discharges to Permanente Creek at six locations, Ponds 4A, 13B, 9, 17 20 and 30. On the same day, the SRBRWQCB adopted a Cease and Desist Order No. R2-2014-0011 that required implementation of an interim water treatment plant to reduce selenium discharges from the mine pit waters. Construction of the interim treatment plant was ongoing during the 2014 SMARA Annual Inspection.

SITE CONDITIONS

This discussion of the mine's existing conditions is broken into sections based on the nine mining areas defined in the RPA. In addition, issues that apply to all or several parts of the mine site will be discussed under separate topics. Photo 31 provides a February 23, 2014 mine overview image along with the locations of inspection report photo stops.

RPA Mining Areas

I. North Quarry.

Quarry operations were apparent during the 2014 inspection. In addition to drilling shot holes and mining excavation work was being done in the south quarry wall, overburden material was being placed along the western wall within pit (Photo 1). At the end of Phase I, when excavation in the North Quarry ceases, the RPA anticipates that approximately 12 million tons of overburden material generated by the ongoing quarrying will have been placed as backfill in the quarry. An additional 48 million tons of WMSA overburden will also be placed as quarry backfill. The current maximum depth of the pit was approximately 675 feet mean-sea-level (msl) (personal communication D. Zacharisen). The maximum anticipated depth of the north quarry is 440 feet msl. The final reclaimed, after-backfilling elevation proposed for the quarry will be between 990 and 1,750 feet msl. The maximum angle of the western backfill slopes is proposed at 2.5H:1.0V. The maximum overall angle of the quarry rock slopes is

proposed at 1.0H:1.0V. The northeastern highwall will not be regraded as part of reclamation, while the eastern highwall will have final rock slopes from 2H:1V to 1H:1V (see 12-15-11 Engineering Drawing Details sheet 12 of 13). Mining of the upper portion of the eastern quarry began in the last year and final 2-horizontal-to-1 vertical (2H:1V) slopes have been cut for most of the upper portions of the slope (Photo 2).

As part of the site's stormwater management, numerous rock checkdams have been placed along the haul roads. Limestone check dam materials have been replaced with non-limestone greenstone rock to reduce the potential for selenium to leach into stormwaters, (Photo 3).

The northern highwall of the North Quarry has had three large rockslides, which are described in the RPA. No major new movement on these rockslides was observed during the 2014 inspection. The upper portions of the Mid-Pen Rockslide that extends approximately halfway down the eastern highwall was graded out recently during mining (Photo 4). The Scenic Easement Rockslide has a slope failure that extends down slope approximately as far as the Mid-Pen Rockslide (Photo 5). This rockslide lowered the ridgeline contrary to the 1972 Ridgeline Protection Easement requirement. The largest slide, the Main Rockslide, appears to extend across most of the current height of the northwestern highwall (Photo 6).

A fourth apparent landslide occurs on the western side of the pit. This area of movement was noted by Golder and Associates in their November 2007 Slope Stability Evaluation report and may extend westward below the toe of the eastern slope of the WMSA overburden stockpile (right of center of Photo 1). The County's Geologist, Mr. James Baker, referred to this western landslide as the "Haul Road Slide." The placement of overburden backfill against the western toe of the North Quarry is intended to stabilize this slide.

2. West Material Storage Area (WMSA)

During the 2014 inspection, no overburden material was being placed in the WMSA. All overburden is currently being placed in the North Quarry. A new topsoil material storage area was created in 2013 just east of the existing topsoil storage area to take materials excavated with the eastward expansion of the quarry (Photo 7). In addition, large woody debris is being stockpiled on the top of the new topsoils stockpile for later use in reclamation of Permanente Creek. Both of the WMSA topsoil stockpile continue to be signed. Beginning around 2021 in Phase 2 of the RPA, approximately 48 million tons of overburden material including wash fines from the WMSA quarry will be placed in the North Quarry to help stabilize the western wall and raise the final floor elevation to approximately 990 feet msl. Revegetation efforts along the northern WMSA was observed (Photo 8).

Prior to the 2012 RPA, the 1985 Reclamation Plan allowed the overburden placed in the WMSA to remain in place with some final grading to create slopes at a gradient of 2.0H:1.0V or shallower. Recent grading and re-vegetation of the lower northern portions of the WMSA have been done to reduce the visual impact and control erosion (Photo 8). Portions of the current southern slopes of the WMSA abut a portion of the mine that had been considered pre-SMARA. The 2012 RPA includes grading of the upper portion of this area to increase final slope stability of the WMSA and allow for proper drainage (see RPA Figure 3.16-14). During Phase 2 of reclamation, the WMSA northern fill slope will be excavated down to an elevation that daylight at approximately the current contact between the native vegetation and the revegetated area seen in Photo 8.

Running across the pre-SMARA slopes south of the WMSA is an old unpaved mid-slope road that is not used in the current mining operations and functions like a drainage bench. A low point in this road causes concentrated runoff to discharge over the slope and appears to create a sedimentation problem at Permanente Creek. This condition was noted in the 2008 annual SMARA report, and during the 2009 SMARA inspection a number of large rocks were observed being placed in this outfall with the intention of mitigating the potential erosion and instability. In 2014 straw waddles and bales that were added in 2012 and 2013 to this drainage outfalls along the mid-slope road to capture potential sedimentation appears to be performing as intended (Photos 9 and 10). During the 2014 inspection, deposition of fines on top of rock talus were observed as in the 2012 and 2013 inspections west of the main drainage outfall from the mid-slope roadway approximately one-third of the way down the slope (Photo 11). It does not appear that this area of fines has noticeable movement based on the lack of displacement of the silt fencing placed during 2013 (Photos 11 and 12). The headscarp of this slope failure hasn't extended into the mid-slope road/bench. Hydroseeding of the upper portions of the pre-SMARA slope above the mid-slope road was done in late 2012. The drainage outfalls along this roadway should continue to be monitored as part of the site's stormwater management. County staff should continue to observe the roadway before the end of November as part of the pre-winter inspection.

3. East Material Storage Area (EMSA)

Overburden material and washout fines were not being placed in the EMSA during the 2014 inspection. (The overburden material and the Rock Plant washout fines were being placed against the toe of the west side of the quarry pit (Photo 1). The northeastern portion of the EMSA just west of Pond 30 is being regarded to create a benched slope that drains southward into the settling pond upstream of Pond 30 (Photo 13). This is being done better control stormwater runoff and improve water quality of Pond 30 discharges.

The 2012 RPA has specific requirements for the disposal of wash fines in the EMSA. (See RPA Attachment C, Section 4.5.1 and COA #70d.) Wash fines must be covered with a minimum of 25 feet of non-limestone material below the approved final reclamation elevation and be at least 30 feet horizontally from the final reclaimed slope face. The keyway for the waste rock fill being placed in the northeastern portion of the EMSA was inspected by a representative of Golder Associates to document that the RPA wash fine cover requirement was met. Documentation of the keyway inspection will be included in Lehigh's annual report to the County in October.

The operator had the northern and eastern boundaries of the EMSA delineated with flagged surveyor lath or metal t-posts and orange safety caps. The County Surveyor re-surveyed the EMSA in January 25, 2013 to check that the grades don't exceed what is permitted in the RPA. At that time the EMSA elevations were found to be in general compliance with the maximum RPA grade of approximately 900 feet msl. Because of the recent grading activity in the northeastern portion of the EMSA, the County requested that the mine operator's surveyor and County surveyor shoot spot elevations to verify continued compliance with the maximum elevation requirements. As part of this additional surveying work, the boundary between the eastern EMSA and the cement plant operations will be monumented, likely with the safety capped metal t-post. No new overburden is being placed in the EMSA, but some non-limestone small diameter rock material is being placed that will eventually be used as capping materials. The EMSA will need to be re-contoured as part of final reclamation to create the approved slopes, benches and drainage structures.

The operator has created a network of lined and unlined drainage ditches to convey stormwater runoff from the EMSA into holding ponds. During the 2012-13 rainy season a slope failure occurred in a small spill fill previously placed in the upper portion of the drainage just north of the eastern end of the conveyor tunnel (Photos 15 and 2013 Photo 14). This deposited limestone rock in the upper portions of the drainage ditch that runs along the western edge of the EMSA (Photo 14). This material was removed last year. A series of sediment catch basins were created as an additional BMP to trap sediment and minimize the requirement of cleaning out the ditch (Photos 15 and 16). The western ditch was being cleaned out during the inspection (Photo 14). Continued failure of the drainage ditch slope is anticipated.

The lowermost stormwater pond is called Pond 30 (Photo 17), which discharges runoff through a culvert into Permanent Creek. Rock armoring with greenstone was re-done with large sized rock to mitigate erosion at the outfall of Pond 30 (Photo 18). A sensor has been placed in the outfall of Pond 30 to alert the operator when discharge begins to facilitate stormwater sampling. County staff should inspect the channels, ponds and culvert outfall as part of the pre-winter site inspection to document that the structures will function properly.

4. Crusher/Support Area

The Crusher and Support area lies southeast of the North Quarry, and contains the primary and secondary crushers and numerous conveyors that transport limestone rock either to the cement plant or to the Surge Pile/Rock Plant. A new primary and secondary crusher was constructed in 2013 and is operational (Photos 19 and 20). The old primary crusher was being dismantled during the 2014 inspection (Photo 21). The new crushers are connected to the existing conveyor system and the portion of the conveyor to the west will be removed. The drainage in the new crusher area will be directed to a sump and then pumped over to the North Quarry for treatment. The slopes surrounding the new crushers were hydroseeded, straw bailed and straw waddled before last winter (Photo 22). The County staff should inspect the new crusher area slopes and drainage control as part of the pre-winter site inspection.

The mine offices and maintenance support facilities are also part of this area. Reclamation of the Crusher and Support areas will begin in Phase 3, following the completion of mining and backfilling of the North Quarry. No adverse conditions were noted in this area during the site visit. As with other mine areas, the County staff should inspect any drainage channels, ponds, and checkdams in the Crusher/Support area as part of the pre-winter site inspection to document that the structures will function properly.

An upper bench area located north of the mine office had a stockpile of limestone rock that was sufficiently high as to be visible from the City of Cupertino. County staff noted this material during the 2012 pre-winter site inspections and removal was required. During the 2014 inspection, the area of this limestone stockpile was found that it had been removed (Photo 23).

The conveyors and associated structures will be removed from the Crusher and Support areas during reclamation Phase 3. One feature that likely will need special consideration is the 500-foot west-to-east conveyor tunnel. Following the removal of the conveyor system, the tunnel should be closed off to prevent public access. The method of closure isn't specified in the RPA, but consideration should be given to the potential for wildlife inhabiting the tunnel. It is recommended that the wildlife protection and mitigation procedures already specified in the RPA and COAs be applied to the tunnel closure, with adaptation as necessary.

5. Surge Pile

The Surge Pile is located between the North Quarry and the Rock Plant and provides a stockpile for aggregate materials processed in the plant (Photo 24). The volume of the surge pile is approximately the same as during the 2013 annual inspection (compare Photo 24 to 2013 Photo 23). Material is conveyed to the Surge Pile after being partially crushed and transported to the Rock Plant as needed either by truck or conveyor. The Surge Pile partially overlies and buries the historic Permanente Creek bed. Sedimentation off of the Surge Pile is controlled by barrier berms along the now partially channelized creek. At the time of this inspection, no runoff from the Surge Pile or sedimentation from the pile to Permanente Creek was observed. The 2012 RPA requires that the Surge Pile area be reclaimed to pre-mining conditions. This reclamation work will be done during Phase 3.

6. Rock Plant

At the time of the inspection, the Rock Plant was in limited operation. The Rock Plant area has numerous stockpiles of processed aggregate along with the crushing, sorting and conveying equipment. Runoff from the area is directed to the northeast into Pond 17 located east of the access road in the area of the Rock Plant gate (Photo 25). At the time of the 2014 inspection, runoff from the Rock Plant area was collecting in Pond 17 and after flowing through a series of rock baffles is pumped back to the Rock Plant for re-use (Photo 26). According to D. Zacharisen, during normal operations, Pond 17 water is pumped to Pond 11 for use at the cement plant, but the liner of Pond 11 has been repaired due to a tear. Once the liner is repaired cement plant use of Pond 17 water can resume.

7. South Quarry Exploration Area

The South Quarry Exploration Area lies south of Permanente Creek and was disturbed as part of the evaluation of mineral resources for an area Lehigh calls the South Quarry. (No mineral extraction is approved by the County in this area at this time.) Portions of the South Quarry Exploration Area were observed during the 2013 and 2014 inspections. A more detailed inspection was performed by County staff in 2012. Exploration activities have stopped and the access roads and drill pads have been seeded and erosion control measure put in place. Areas inspected during 2014 were limited to roadways and drill pad accesses from the upper exploration roadway (see Figure 3.16-13 in RPA). The revegetation has been ongoing for approximately 5 years and appears to be functioning properly (Photos 27 to 30). Photo 31 is a Google Earth image from February 2014 of the South Quarry Exploration Area that shows the general progress of the revegetation. General locations for Photos 27 to 30 are marked on Photo 31. The mine operator could seek closure of reclamation of the South Quarry Exploration Area after surveys to confirm the revegetation effort meets the RPA performance standard listed in Table 7.

8. Permanente Creek Restoration Area (PCRA)

Permanente Creek flows eastward along the southern edge of the active quarrying area and north of the South Quarry Exploration Area. Disturbance of the creek by mining activities pre-date the 1976 SMARA legislation while some areas of disturbance continued post-1976. The 2012 RPA identifies seven (7) subareas along the creek and provides for area-specific restoration activities (see RPA Section 3.19 and Figure 3.19-10) with the intent that work will be implemented throughout mining Phases 1 to 3 (see RPA Table 11). A recent April 24, 2013 settlement agreement between Lehigh and the Sierra Club

requires that the design of the reclamation of Permanente Creek be revised and a new Conceptual Creek Restoration Plan be submitted to all pertinent agencies.

In reporting year 2013 Lehigh submitted several work products relating to the removal of limestone boulders that impact the creek and its water quality (COAs #38 and #39), and began the work. Lehigh has selected California Certified Engineering Geologist, Dave Bieber of Geocon Consultants, to identify the boulders for removal. A report was prepared that documents potential the water quality impacts of the boulders in Permanente Creek (Geocon Consulting, August 2012). A supplemental letter from Lehigh, dated July 10, 2013, provided additional information on the potential impacts on sedimentation and hydraulic of the creek from boulder removal. This letter concluded that all but one boulder, #23, could remain in the creek area. A final table listing each boulder to be removed and those to be left in place was submitted in August 20, 2013, based on input and comments from County staff. One boulder (boulder #23) was identified to be potentially removed by hand. However, due to the lack of creek access, combined with the steep and vegetated hillsides, removal would require use of heavy equipment, which would require authorization from the California Department of Fish and Wildlife under Fish and Game Code Section 1602 to evaluate the potential impacts to the creek removal of boulder #23. In accordance with the Best Management Practice for Limestone Boulders from Permanente Creek, County staff has determined that removal of the identified limestone boulders (including boulder #23) is not required because (a) the boulders are not a significant source of selenium and (b) removal of the boulders would result in impacts to Permanente Creek associated with sedimentation and impacts to the hydrology of the creek and existing riparian habitat.

9. Buffer Areas

As discussed above, the Buffer Areas are considered “no disturbance” areas that surround the active mine. The RPA states that the Buffer Areas function to protect the Permanente Quarry from land use encroachment, and also to protect nearby land uses from the potentially adverse sights, sounds and other characteristics of mining. Figure 3.3-1 in the RPA shows the location of the Buffer Areas.

Separate Topics

Topsoil

In order to address the issue of the lack of topsoil for re-vegetation of the site, the operator established topsoil storage areas in both the WMSA and EMSA. The WMSA topsoil storage area occurs at two locations. The older location has stopped receiving material and the slopes have erosion controls in place. The newer topsoil storage area is actively receiving material and has a silt fence at the toe to control sedimentation. A stockpile of large woody debris has been placed at the top of the new WMSA topsoil storage site. This material will be used in the remediation of Permanente Creek. Signs identify both the WMSA topsoil storage areas. In the EMSA three topsoils storage areas have been designated. Only one has received topsoil, the other two are for future storage. The EMSA topsoil storage areas are signed. County staff will inspect to determine that all topsoil storage areas are properly signed during the pre-winter site inspection.

Mined Land Boundary

In September 2011 and again on January 25, 2013, the County Surveyor surveyed the stockpiled material in the WMSA and EMSA to determine whether the mine operator is in compliance with the maximum

height conditions. County staff found that the tops of the stockpiles are in compliance with the maximum allowable height conditions for both areas. The 2012 RPA requires that any limestone washout fines be covered with a minimum of 25 feet of overburden material and offset a minimum of 30 feet from the final reclaimed slope face (COA #70d.) Validation of this condition requires that the elevation of any washout fine deposits be surveyed. Either the operator or the County Surveyor should determine the elevation and location(s) of these fines whenever they are conducting a survey to verify that this condition is being met.

The 2012 RPA approval included a condition that the northern and eastern boundaries of the WMSA and EMSA be clearly staked and flagged (COA #22). Another condition of approval requires that the operator provide to the County every 24 months the surveyed coordinates of the limits of reclamation along with aerial photos (COA #23) to show where mining has occurred in the previous 24 months and what the topography will be at the end of the next 24 months. The aerial photos were flown in June 2013 and more recent higher elevation imagery acquired in February 2014. Copies of the June 2013 imagery were submitted to the County and the February 2014 imagery will be part of the upcoming annual report. The February 2014 imagery can also be viewed on Google Earth (Photo 31).

Stormwater and Water Quality

Lehigh at the request of the SFBRWQCB submitted an application and necessary documents to consolidate the various water quality permits. On March 12, 2014, the SFBRWQCB adopted a consolidated WDR/NPDES permit, Order No. R2-2014-0010, NPDES CA 0030210. This permit allows for discharges to Permanente Creek at six locations, Ponds 4A, 13B, 9, 17 20 and 30. On the same day, the SRBRWQCB adopted a Cease and Desist Order No. R2-2014-0011 that required implementation of an interim water treatment plant to reduce selenium discharges from the mine pit waters. Construction of the interim treatment plant was ongoing during the 2014 SMARA Annual Inspection.

Lehigh at the request of the SFBRWQCB submitted on October 15, 2013 a workplan prepared by Golder Associates for investigation runoff and groundwater seepage in the EMSA/WMSA. The SFBRWQCB issued a Conditional Concurrence letter for this workplan on November 5, 2013. On October 31, 2013, Lehigh submitted at the request of the SFBRWQCB a workplan prepared by Golder Associates to begin a groundwater investigation and monitoring program for the WMSA and EMSA. Approval from the SFBRWQCB to begin this groundwater investigation is pending.

On June 30, 2014, Lehigh submitted the first annual report for the Selenium Impact Assessment Study prepared by Robertson and Bryan, Inc., to the SFBRWQCB. This report was required by the June 27, 2013 amended Order No. R2-2013-1005-A1. This report addresses the water quality impacts from discharging quarry pit waters. The long-term average discharge rate from the quarry pit is 1,000 gallons per minute (gpm), but can be as high as 2,000 gpm during the wet season. The 2014 WDR/NPDES permit allows an average monthly effluent limitation (AMEL) for selenium of 4.1 mg/L. The current quarry pit water discharges exceed this standard. The 2014 Cease and Desist Order required that a treatment facilities for selenium be constructed. Pilot tests for the treatment plant have been completed and the interim treatment plan is being constructed. The interim treatment plant is allowed to discharge up to 400 gpm of discharge by October 1, 2014. By December 1, 2014, the treatment must achieve a 50% reduction in selenium concentrations (or achieve an effluent concentration of <10 mg/L when influent concentrations are < 20mg/L). By March 31, 2016, compliance with the AMEL must be achieved in the interim treatment facility discharge. By October 1, 2017, all non-stormwater flows must be treated to comply with the AMEL.

The operator is continuing to work with the SFBRWQCB to investigate of water quality impacts from mining. Lehigh should inform the County of the results of these investigations and provide written copies of all correspondence, approval letters and permits, as soon as available (Conditions of Approval #76, #78, and #79).

Wildlife and Vegetation

The operator has conducted a series of re-vegetation test plots to evaluate various soil treatments and to determine what soil and seed combinations will be best for successful re-vegetation. One of these test plots is located in a flat area southeast of the WMSA, called the Yeager Site. A second re-vegetation test plot has been established on the north-facing slope in the EMSA to evaluate various soil treatments necessary for re-vegetation of slopes in this area. Test plots of different re-vegetation treatments in the EMSA also appear to be yielding good results. These test plots have run for five years and the mine operator biologist is preparing a final report for submittal to the County.

The 2012 RPA approval included a number of conditions that cover wildlife and vegetation (COAs # 46 to #61). These conditions require that pre-disturbance surveys and setback buffers be implemented during critical time periods. Qualified biologists must conduct survey work. These survey were conducted prior to the expansion of mining into the eastern wall of the North Quarry. There are also conditions to prevent invasive species and Sudden Oak Death. Evaluation of compliance with wildlife and vegetation protections was not done as part of this inspection effort. Either County staff or their consultant will evaluate compliance with wildlife and vegetation conditions.

VIOLATIONS

With the approval of the RPA by the Santa Clara County Board of Supervisors on June 26, 2012, past SMARA violations were resolved. The operator continues to work with the SFBRWQCB to provide permit applications, workplans, technical reports and monitoring reports that address water quality requirements for the mine waste rock, stormwater, groundwater and process waters. The SFBRWQCB has a web site where Lehigh Permanente documents can be found, http://www.waterboards.ca.gov/sanfranciscobay/water_issues/hot_topics/lehigh.shtml. During the 2014 inspection no new SMARA violations were noted.

AREAS OF CONCERN AND ISSUES TO MONITOR

No concerns, quarry and reclamation activities are in compliance with the approved 2012 Reclamation Plan Amendment. Issue to continue monitoring are as follows:

- I. Continue monitoring the WMSA and EMSA for stability and erosion control. Prior to this winter, condition of check dams, drainage channel armor and drainage outfalls should be inspected by the County. The mid-slope road south of the WMSA should be monitored for erosion control and instability. The drainage on the north side of the WMSA should continue to be monitored and modified, as necessary to prevent erosion. The recently re-graded northeastern EMSA should be inspected by the County as part of the pre-winter inspection to ensure that the drainage will function properly and erosion will be minimal.

2. Continue monitoring rockslides in North Quarry and the operator should notify the County if new landslides occur, or the existing rockslides enlarge, particularly further into the RPA. Monitor the western-slide area that may underlie the haul road.
3. The operator should continue to work with the SFBRWQCB and the County to provide information required for compliance with water quality regulations. The operator should provide to the County copies of documents submitted to the SFBRWQCB. The County should periodically assess how investigations being conducted for the SFBRWQCB will impact reclamation of the mine.

FINANCIAL ASSURANCE

The operator submitted a revised financial assurance cost estimate (FACE) at the end of August 2014. PMC will provide written comments to the County in a separate letter within 30 days of receipt. When the County certifies the 2014 FACE, it will forward the calculations to OMR for its 45 day review.

CONCLUSIONS AND RECOMMENDATIONS

Permanente Quarry is in compliance with SMARA, and is working with the SFBRWQCB on water quality requirements, workplans, investigations, treatment plant operations, and compliance with discharge permits. The following tasks should be undertaken to control potential erosion and maintain slope stability on the site:

1. The perimeter slopes of the WMSA and EMSA rock storage piles should continue to be monitored for erosion control and modified, as necessary.
2. The mitigation measures implemented to control runoff from the road running mid-slope south of the WMSA should be monitored, and modified, as necessary.
3. The final report of the re-vegetation test plots should be submitted to the County.
4. The drainage ditches and sediment catch basins constructed in the EMSA rock storage area should be monitored, cleaned out, and repaired as necessary.
5. The rock-armored outfall of the stormwater Pond 30 should be monitored and modified, as necessary.
6. The operator's geotechnical consultant should continue to monitor the long-term stability of the highwalls in the North Quarry, and the slope on the south side of the WMSA rock storage pile. The mine operator and geotechnical consultant should report to the County, as soon as possible, any changes in the stability of the mine slopes.
7. The locations of any new deposits of limestone washout fines in the EMSA should be surveyed to demonstrate that they will be buried as required by COA #70d.
8. The operator should continue to provide to the County updated maps of material stockpile locations, as soon as possible, but at least each year before the annual inspection.

9. The County should remain in contact with the SFBRWQCB regarding water quality investigations. The mine operator should inform the County when results of water quality investigations may impact reclamation of the mine.
10. When the PCRA remediation plan is approved by the SFBRWQCB and other permitting agencies, the plan should be incorporated into the RPA. Pending this plan's approval, the County should continue with implementing the PCRA mitigation measures and conditions that are part of the June 26, 2012 RPA approval.
11. The erosion control measure implemented along the slopes draining to Permanente Creek should be monitored and repaired as necessary.
12. The County should re-inspect the new primary and secondary crusher area for compliance with erosion and drainage requirements as part of the pre-winter inspection.

LIMITATIONS

Our services are limited to providing professional opinions and recommendations made in accordance with generally accepted engineering geology principles and practices. No warranty, expressed or implied, of merchantability or fitness, is made or intended in connection with our work, by our proposal for consulting or other services, or by our oral or written reports or findings. Our services have been limited to review of the Reclamation Plan as provided by the County, review of previous available annual SMARA inspection reports, visual field inspections, discussions with the County and operator staff, and the preparation of this letter report.

If you have any questions, please feel free to contact me at (530) 750-7076 or e-mail me at kcustis@pmcworld.com.

Sincerely,
PMC



Kit H. Custis, Engineering Geologist – Hydrogeologist
PG 3942, CEG 1219, CHG 254
Expires 2/28/2016

KHC:kc:pa: Final_Permanente_2014_SMARA_Inspection_Report_PMC_10_20_14.pdf

2014 SMARA INSPECTION PHOTOS



Photo 1: North Quarry, southwest portion. Waste rock material being placed at toe of western slope. Potential “Haul Road Slide” in eastern slope of WMSA, right of image. Floor elevation of quarry at approximately 650 feet msl. Dated September 4, 2014.



Photo 2: Upper portion of eastern highwall of North Quarry with slopes at final grade. Dated September 4, 2014.



Photo 3: Check dams on WMSA haul road that were replaced with non-limestone materials, looking eastward. Dated September 4, 2014.



Photo 4: Looking northeast at the North Quarry. Mid-Pen Rockslide area at in center of image upper portion removed by recent mining. Compare to Photo 4 in 2013 inspection report. Dated September 4, 2014



Photo 5: Looking northwest at Scenic Easement Rockslide in left half of image. Dated September 4, 2014.



Photo 6: Looking west at Main Rockslide and WMSA. Dated September 4, 2014.



Photo 7: Eastern topsoil storage area in WMSA, looking north. Sign and silt fence in foreground. Dated September 4, 2014.



Photo 8: Portion of re-vegetated north-facing slope of WMSA, looking east. A portion of this slope will be removed in Phase 2 to backfill of North Quarry. Dated September 4, 2014.



Photo 9: Rocked outfall in mid-slope bench on southern WMSA slope, looking southwest into Permanente Creek drainage. Dated September 4, 2014.



Photo 10: Straw waddles and bales at outfalls of mid-slope bench on southern slope of WMSA, looking west. Dated September 4, 2014.

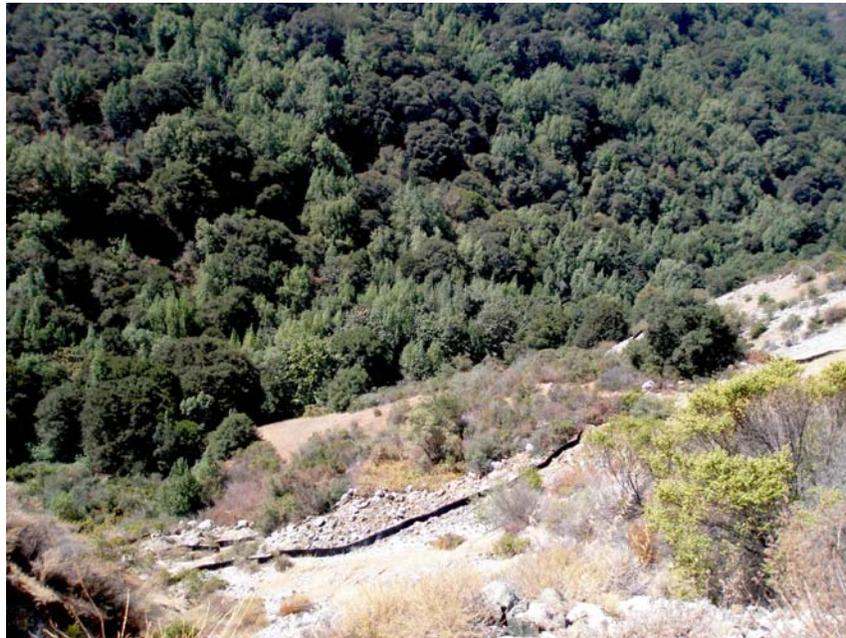


Photo 11: Silt fencing on southern slope of WMSA below outfall in Photo 9. Note soil mixed with talus adjacent to silt fence may be result of past slide; silt fence shows no significant displacement. Dated September 4, 2014.



Photo 12: Southern slope of WMSA with silt fencing, looking west up Permanente Creek. Dated September 4, 2014.



Photo 13: Recent grading northeastern EMSA looking southwest. Grading will be completed before winter. Dated September 4, 2014.



Photo 14: Western perimeter drainage ditch in EMSA. Ditch being cleaned out and greenstone rock lining bottom, looking northeast. Dated September 4, 2014



Photo 15: Sediment catch basin at toe of slope failure north of eastern end of 500-foot long conveyor tunnel in Crusher/Support Area, looking west. Dated September 4, 2014.



Photo 16.: Second sediment catch basins constructed above western perimeter drainage ditch in background. Dated September 4, 2014.



Photo 17: Pond 30 lowest pond in EMSA and drains into Permanente Creek, looking south at cement plant. Walls of pond and drainage ditch relined with greenstone. Dated September 4, 2014.



Photo 18: Pond 30 outfall to Permanente Creek, relined with coarser greenstone. Dated September 4, 2014.



Photo 19: New primary and secondary crusher structures, looking southwest. Drainage from area will be collected and pumped into North Quarry for treatment before discharge. Dated September 4, 2014.



Photo 20: New secondary crusher conveyor dumps to tunnel conveyor, looking north. Note straw bails and waddles on slope. Slope was hydroseeded last winter. Dated September 4, 2014.



Photo 21: Old primary crusher being dismantled, looking east.. Dated September 4, 2014.



Photo 22: Slopes on roadway to new crusher area. Slope straw waddled and hydroseeded before last winter. Dated September 4, 2014.



Photo 23: Upper bench area above mine office, stockpile of limestone removed, looking east. Dated September 4, 2014.



Photo 24: Surge pile below conveyor in center of image, looking east. Dated September 4, 2014.



Photo 25: Pond 17 collects runoff from Rock Plant, looking south. Dated September 4, 2014.



Photo 26: Pond 17 with pump to recycle water back to rock plant. Dated September 4, 2014.



Photo 27: Re-vegetated Pit 3 East Road in South Quarry Exploration area near N37° 18.894', W122° 06.844', looking south from drill site gt 3-5A. Dated September 5, 2014.



Photo 28: Re-vegetated exploration area geo 4-35 in South Quarry Exploration area near N37° 18.725', W122° 06.148', looking northwest. Dated September 5, 2014.



Photo 29: Re-vegetated drill pad with monitoring well HG-9 in South Quarry Exploration area near N37° 18.800', W122° 06.169', looking south. Dated September 5, 2014.



Photo 30: Re-vegetated drill roadway in South Quarry Exploration area near N37° 18.865', W122° 06.214', looking northwest. Dated September 5, 2014.



Photo 31: Photo stops photos #1 through #30. Image from Google Earth; aerial photo dated February 23, 2014.