Volume 1: Chapters 1 through 4

Final

LEHIGH PERMANENTE QUARRY RECLAMATION PLAN AMENDMENT

Environmental Impact Report
State Clearinghouse No. 2010042063
Mine ID No. 91-43-0004

Santa Clara County
Department of Planning & Development
Planning Office

May 2012

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CHAPTER 1
Introduction

1.1 Purpose of this Document

The California Environmental Quality Act (CEQA) and its implementing regulations (the "CEQA Guidelines") require a lead agency to prepare and certify a Final Environmental Impact Report (Final EIR) before it may approve a project for which a Draft Environmental Impact Report (Draft EIR) has been prepared. The County of Santa Clara (County) Department of Planning and Development is the CEQA lead agency for the Lehigh Permanente Quarry Reclamation Plan Amendment (RPA, or Project) proposed by Lehigh Southwest Cement Company (Lehigh, or Applicant).[1] This document and the December 2011 Lehigh Permanente Quarry Reclamation Plan Amendment Draft EIR (SCH No. 2010042063) together constitute the Final EIR.

On December 23, 2011, the County released the Draft EIR on the Project for public review and comment. The Draft EIR describes the Project and its environmental setting; analyzes potential direct, indirect and cumulative environmental impacts that could occur as a result of the slope stability, revegetation, drainage and erosion control, structure dismantling and removal, monitoring, and other reclamation activities proposed by the Project; identifies impacts that could be significant; recommends mitigation measures, which, if adopted, could avoid or substantially reduce such impacts; and identifies impacts that are expected to remain significant and unavoidable even with the implementation of recommended mitigation measures. The Draft EIR also evaluates alternatives to the Project, including a No Project Alternative.

This Final EIR will be used by the County in its consideration of the Project. The County Planning Commission will decide whether to certify the Final EIR and approve the Project at a public hearing anticipated to be held in May 2012. Public notification will be provided in accordance with state law upon confirmation of the hearing date.

1.2 Project Overview

The Permanente Quarry is a limestone and aggregate mining operation located in the foothills west of the City of Cupertino. The Applicant proposes to amend the existing, approved 1985 Reclamation Plan for a 20-year period dating from Project approval. The proposed reclamation activities would occur in an approximately 1,238.7-acre area in an unincorporated

[1] The Permanente Quarry (Mine ID No. 91-43-0004) is owned by Hanson Permanente Cement, Inc. and operated by Lehigh Southwest Cement Company. Lehigh and Hanson both are part of the HeidelbergCement Group, a worldwide producer of construction materials.

area of the County (the Project Area) within the Applicant's overall 3,510-acre ownership. The 1,238.7-acre area consists of the existing Quarry pit, two overburden disposal areas referred to as the West Materials Storage Area (WMSA) and the East Materials Storage Area (EMSA), the crusher/Quarry office support area, surge pile, Rock Plant, approximately 284-acres located south of Permanente Creek that have been disturbed by prior exploratory activities (the "Exploration Area"), approximately 25.9-acres in and adjacent to Permanente Creek (the "Permanente Creek Restoration Area" or PCRA), and open space areas that serve to physically separate operations at the site from other uses in the surrounding environs.

The Project is designed to make the reclaimed lands suitable for future open space uses. Toward this end, the Project includes site-specific activities to satisfy the reclamation requirements of the Surface Mining and Reclamation Act of 1975 (SMARA) and its implementing regulations,[2] as well as the County's surface mining ordinance (County Code § 4.10.370) and Surface Mining and Land Reclamation Standards (County of Santa Clara, 2000).

The Project also is intended to ensure that Permanente Quarry is in compliance with state and local law. The Applicant has a vested right to conduct surface mining (resource extraction) activities, so no permit to mine is required from the County for the current operation. Although the right to mine is vested, Lehigh is subject to SMARA's and the County's requirement that it have a lead agency-approved reclamation plan for its surface mining operations (Pub. Res. Code § 2770; County Code § 4.10.370(C)). As demonstrated by Notices of Violation issued by the County in 2006 and 2008 for mining outside of the approved 1985 Reclamation Plan boundary, the Applicant currently is out of compliance with SMARA and the County's requirements. The Project, if approved, would abate these violations.

1.3 Organization of the Final EIR

CEQA Guidelines section 15132 requires Final EIRs to consist of the following elements:

(a) The Draft EIR or a revision of the draft;

(b) Comments and recommendations received on the Draft EIR either verbatim or in summary;

(c) A list of persons, organizations, and public agencies that commented on the Draft EIR;

(d) The responses of the lead agency to significant environmental points raised in the review and consultation process; and

(e) Any other information added by the lead agency.

Printed copies of this document contain CD copies of the Draft EIR. Copies of this document will be provided in either printed- or CD-format to all agencies, organizations, and individuals who received copies of the Draft EIR as well as to those who provided comments on the Draft EIR.

[2] SMARA is set forth in Public Resources Code section 2710 et seq.; its implementing regulations are found in Title 14 of the California Code of Regulations section 3500 et seq.

The required Final EIR elements described above, with the exception of the Draft EIR itself, are contained in the following chapters of this document:

Chapter 1, *Introduction*.

Chapter 2, *Introduction to Comments and Responses*. This chapter describes opportunities for public comment on the Draft EIR, the County's approach to responding to comments, and a list of agencies, organizations, and individuals who provided comments on the Draft EIR.

Chapter 3, *Response to Comments*. This chapter contains copies of the written comments received on the Draft EIR, a transcript of comments received at a public meeting where comments on the Draft EIR were accepted, "Master Responses" that have been prepared to address common issues or themes identified in a number of the comments, and responses to each of the individual comments received.

Chapter 4, *Revisions to the Draft EIR*. This chapter contains text changes to the Draft EIR that reflect additions, corrections and clarifications resulting from the analysis conducted by the County in preparing responses to comments on the Draft EIR. These changes are incorporated as part of the Final EIR.

CHAPTER 2
Introduction to Comments and Responses

This chapter describes the outreach and public review period for the Draft EIR, provides the County's approach to responding to comments, and lists the public agencies, private organizations, and individuals who provided comments on the Draft EIR.

2.1 Outreach and Public Review of the Draft EIR

Notification

On Friday, December 23, 2011, the County published and distributed the Notice of Availability (NOA) of a Draft EIR to advise interested local, regional, and state agencies, and the interested members of the public, that a Draft EIR had been prepared and published for the Project. The NOA solicited both written and oral comments on the Draft EIR during a 60-day comment period (December 23, 2011 through February 21, 2012), and provided information on a forthcoming informational public workshop and public comment meeting. Additionally, the NOA presented the location, purpose, and description of the Project and its anticipated environmental impacts; locations where copies of the Draft EIR are available for review; and contact information for requesting other documents and information regarding the Project.

In addition to the distributed NOA, the County notified the public about the Draft EIR public comment meeting through multiple newspaper legal advertisements. The County published legal advertisements in the Cupertino Courier on Friday, December 23, 2011; the Saratoga News on Tuesday, December 27, 2011; and the Los Altos Town Crier on Wednesday, December 28, 2011. The NOA and newspaper legal advertisements are presented in Appendices A and B, respectively. Notifications provided basic project information, the date, time, and location of the public comment meeting, and a brief explanation of the public meeting process. Through the NOA and other notices, the public was encouraged to submit written comments and concerns regarding the Project and the adequacy of the Draft EIR by mail, facsimile, or email to the County.

Additionally, an electronic copy of the NOA and the Draft EIR were posted on the County's website at: http://www.sccgov.org/portal/site/planning/agencyarticle?path=%252Fv7%252FPlanning%252C%2520Office%2520of%2520%2528DEP%2529&contentId=c012cb72c3cd4110VgnVCM10000048dc4a92____.

2.1.1 Public Workshop and Public Comment Meeting

The County hosted an informational public workshop on January 26, 2012, at the Quinlan Community Center, 10185 N. Stelling Road, Cupertino, at which the County provided an overview of the Project, the Draft EIR and its findings, and the CEQA comment process. The County also conducted a public meeting by the County Planning Commission on Thursday, February 2, 2012, in the County Government Center in order to receive oral comments on the Draft EIR. Over a dozen members of the public attended the public comment meeting, as well as six Planning Commissioners. Materials including a Planning Commission Meeting Agenda and the Planning Commission Staff Report on the Project were made available.

At both public meetings, County staff gave a presentation that included an overview of the purpose of the meeting, the Project, its environmental review process, the contents of the Draft EIR including significant and unavoidable impacts, the role of the public comments, and the next steps to be taken. Following the presentation, public comments were accepted at the Planning Commission meeting and transcribed by a court reporter (see Chapter 3, Section 3.5). All attendees were encouraged to submit written comments (see Chapter 3, Sections 3.2 through 3.4).

2.2 Response to Comment Format

Comment Coding

Thirty-five (35) comment letters were received during the Draft EIR public review period. The comment letters received on the Draft EIR are listed below in Section 2.3, organized by public agencies, organizations, and members of the public, and are further organized by their order of arrival. Each comment letter has been assigned a corresponding alphabet letter designation, as well as a unique comment number designating order of receipt. Letters from public agencies are designated with a capital ‘A’, organizations are designated with a capital ‘O’, and members of the public with a capital ‘P’. For example, the first letter received from a public agency was from the County of Santa Clara Parks and Recreation Department, and is identified as letter A1. Individual comments within letters are marked sequentially with numbers, such as A1-1, A1-2, etc. Copies of all letters received are provided in Chapter 3.

Oral comments received during the February 2, 2012 Planning Commission meeting were transcribed by a court reporter. Written comments, if submitted by those who provided oral comments, were assigned separate letter designations as shown in Table 2-1, below. The transcript of the oral comments made by the court reporter is provided in Chapter 3. Individual comments are identified alphanumerically, consisting of a capital ‘PH’ followed by a number. Comments are numbered sequentially. For example, the first comment delineated in the public meeting transcript is identified as PH-1.

Response Methodology

As required by CEQA, the responses to comments in this Final EIR address significant environmental issues raised by commenters during the review period (Pub. Res. Code § 21091(d);

CEQA Guidelines §§ 15088(a), 15132). Where the text of the Draft EIR has been revised in response to a comment, the revised text is included as part of the response with revisions shown using the following conventions:

1) Text added to the wording in the Draft EIR is shown in underline,
2) Text deleted from the wording in the Draft EIR is shown in ~~strikeout~~, and
3) Text changes are shown in indented paragraphs.

These text changes also appear in Chapter 4, *Revisions to the Draft EIR*, of this document.

A number of written comments submitted on the Draft EIR raised the same or similar questions. Rather than repeat responses to such comments, the County is providing a comprehensive discussion of the issues and related topics as Master Responses in Section 3.1. Responses to each individual comment are provided in Section 3.2 through Section 3.5; these individual responses cross-reference the Master Responses where appropriate. These Master Responses are intended to provide a detailed response to common comments and concerns that have been expressed. Individual responses are still provided, but often refer to the Master Responses for further detailed discussion and technical information. The Master Response topics are summarized briefly below:

- Master Response 3.1.1: Vested Rights and Surface Mining and Reclamation Act (SMARA)
- Master Response 3.1.2: California Environmental Quality Act (CEQA)
- Master Response 3.1.3: Compliance Status
- Master Response 3.1.4: Project Description
- Master Response 3.1.5: Selenium
- Master Response 3.1.6: Groundwater
- Master Response 3.1.7: Offsite Flooding

2.3 List of Commenters on the Draft EIR

Table 2-1 is an index list of the agencies, organizations, and individual members of the general public who commented on the Draft EIR during the comment period.

TABLE 2-1
COMMENTERS ON THE LEHIGH PERMANENTE QUARRY RECLAMATION PLAN AMENDMENT DRAFT ENVIRONMENTAL IMPACT REPORT

Comment Letter	Agency/Person	Date of Letter/ Comments
Comments from Public Agencies		
A1	County of Santa Clara Parks and Recreation Department, Kimberly Brosseau, Park Planner	February 1, 2012
A2	City of Los Altos, Community Development Department, Engineering Division, Justin Gustafson, P.E., Engineering Services Manager	February 2, 2012
A3	Santa Clara Valley Water District, Michael Martin, Environmental Planner, Community Projects Review Unit	February 21, 2012 March 27, 2012
A4	California Regional Water Quality Control Board, San Francisco Bay Region, Shin-Roei Lee, Chief, Watershed Management Division	February 21, 2012
A5	California State Clearinghouse, Scott Morgan, Director	February 22, 2012
A6	Midpeninsula Regional Open Space District, Matt Baldzikowski, Resource Planner II	February 22, 2012
Comments from Organizations		
O1	Citizens Against Pollution (CAP), Cathy Helgerson	February 20, 2012
O2	Committee for Green Foothills, Alice Kaufman, Legislative Advocate	February 21, 2012
O3	Sierra Club, Michael J. Ferreira, Conservation Chair, Loma Prieta Chapter	February 21, 2012
O4	Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc., Sean K. Hungerford, Esq., Harrison Temblador Hungerford & Johnson	February 21, 2012
O5	Bay Area for Clean Environment, Inc. (BACE), Barry Chang, Chairman of the Board	February 21, 2012
O6	West Valley Citizens Air Watch, Joyce Eden	February 21, 2012
O7	San Francisco Baykeeper, Abigal Blodgett, Legal Fellow, and Jason Flanders, Program Director	February 21, 2012
O8	Quarry No, Bill Almon	February 21, 2012
Comments from Individual Members of the Public		
P1	Cathy Helgerson	January 26, 2012
P2	Marilyn and John Buenz	January 27, 2012
P3	Vicky Ho	January 30, 2012
P4	Cathy Helgerson	February 2, 2012
P5	Terry Hertel	February 2, 2012
P6	Mary Ann Lemons	February 5, 2012
P7	Rhoda Chung	February 8, 2012
P8	Terry Hertel	February 9, 2012
P9	Terry Hertel	February 9, 2012
P10	Rowena Bell	February 13, 2012
P11	Terry Hertel	February 14, 2012
P12	Rhoda Fry	February 2, 2012
P13	Terry Hertel	February 2, 2012
P14	Rhoda Fry	February 21, 2012
P15	Susan Sievert	February 21, 2012
P16	Barbara and Dennis West	February 21, 2012
P17	Libby Lucas	February 21, 2012
P18	Terry Hertel	February 21, 2012

TABLE 2-1 (Continued)
COMMENTERS ON THE LEHIGH PERMANENTE QUARRY RECLAMATION PLAN AMENDMENT DRAFT ENVIRONMENTAL IMPACT REPORT

Comment Letter	Agency/Person	Date of Letter/ Comments
Comments from Members of the General Public (cont.)		
P19	Timothy Brand	February 21, 2012
P20	Frank Geefay	February 21, 2012
P21	Terry Hertel	February 22, 2012
Oral Comments from the February 2nd Public Comment Meeting		
PH	Bill Almon, Quarry No	February 2, 2012
PH	Cathy Helgerson	February 2, 2012
PH	Terry Hertel	February 2, 2012
PH	Dave Singhal	February 2, 2012
PH	Barry Chang, Bay Area for Clean Environment	February 2, 2012
PH	Rhoda Fry	February 2, 2012
PH	Martin Howell, Director of Land Use Planning and Permitting, Lehigh Western Region,	February 2, 2012
PH	Henrik Hesseling, Permanente Quarry	February 2, 2012
PH	Libby Lucas	February 2, 2012
PH	Tim Brand	February 2, 2012
PH	Gary Latshaw, Sierra Club	February 2, 2012

CHAPTER 3
Responses to Comments

3.1 Master Responses

The Master Responses provided in this section are intended to provide a detailed response to common comments and concerns that have been expressed. Individual responses are provided to each comment, but these may refer to one or more of the Master Responses for further detailed discussion and technical information. The Master Responses provided in this section are as follows:

- Master Response M1: Vested Rights and Surface Mining and Reclamation Act (SMARA)
- Master Response M2: California Environmental Quality Act (CEQA)
- Master Response M3: Compliance Status
- Master Response M4: Project Description
- Master Response M5: Selenium
- Master Response M6: Groundwater
- Master Response M7: Offsite Flooding

3.1.1 Master Response M1: Vested Rights and Surface Mining and Reclamation Act (SMARA)

Commenters and Comments Addressed

Commenter	Comment Number(s)
California Regional Water Quality Control Board, San Francisco Bay Region	A4-9, A4-10, A4-14
Midpeninsula Regional Open Space District	A6-1
Citizens Against Pollution	O1-20, 01-29, O1-32, O1-52
Sierra Club	O3-6, O3-8
Bay Area for Clean Environment, Inc.	O5-1, O5-2
West Valley Citizens Air Watch	O6-4, O6-25
San Francisco Baykeeper	O7-1, O7-5
Quarry No, Bill Almon	O8-3, 08-5, O8-6, O8-10

Commenter	Comment Number(s)
Rhoda Fry	P12-1, P14-2, P14-3, P14-4, P14-8, P14-17
Susan Sievert	P15-4
Frank Geefay	P20-1
Oral Comments from the February 2nd Public Comment Meeting	PH-21, PH-33, PH-44, PH49, PH-50

Summary of Issues Raised

A. The Quarry's vested right to mine

B. SMARA's Reclamation Plan requirements

C. SMARA's Financial Assurances Requirement, including the Financial Assurances Cost Estimate (FACE) for the Permanente Quarry

Overview

The purposes of California's Surface Mining and Reclamation Act (SMARA) (Pub. Res. Code §§2710-2796.5) are three-fold: eliminate hazards to public health and safety; ensure that mined lands are reclaimed to a usable condition; and encourage the production and conservation of minerals (Pub. Res. Code §2712). With limited exceptions, surface mining permits must be conditioned on the approval of a reclamation plan and the provision of financial assurance for reclamation (Pub. Res. Code §2770). Even when the right to mine is vested, a reclamation plan and financial assurances are required. The Applicant's vested right to mine is clarified in subsection A of this Master Response, its obligation to have an approved reclamation plan is described in subsection B, and information about the financial assurances cost estimate (FACE) is provided in subsection C.

A. Vested Rights

Multiple comments questioned the extent of the Applicant's right to engage in surface mining activities on the site. See, e.g., Comments P12-1, P14-2, P14-4, P14-8, and P14-7.

A vested right to use property without the need to obtain new land use permits often is referred to as a "grandfathered" or legal nonconforming use. The California Supreme Court has defined a nonconforming use as a use "that existed lawfully before a zoning restriction became effective and that is not in conformity with the ordinance when it continues thereafter" *Hansen Brothers Enterprises, Inc. v. Board of Supervisors* (1996) 12 Cal.4th 533, 541.

Records show that surface mining operations began in the Project Area as early as 1903 and have been continuous since 1939. On February 8, 2011, the County Board of Supervisors held a public hearing and considered public comments before making a determination that mining operations are a legal nonconforming use (i.e., a vested right) in the Project Area (Santa Clara County Board of Supervisors, 2011) that is subject to the proposed RPA reviewed in the Draft EIR. Documents and materials related to this determination, including the Department of Planning and

Development's Staff Report to the Board of Supervisors and related evaluations, ordinances, and other state and local documentation, is available on the County's website (Santa Clara County Planning Office, 2011). A description of the Applicant's vested right to conduct surface mining operations in the Project Area is provided in the Draft EIR (see, e.g., Draft EIR Section 1.2, page 1-2; Section 2.3.1, page 2-5).

Although a vested right to mine avoids the requirement to obtain land use entitlements(such as a use permit) from the County to engage in surface mining, all mining remains subject to SMARA's reclamation and financial assurance requirements. These requirements are discussed below.

B. SMARA's Reclamation Plan Requirements

Several comments inquire about SMARA's reclamation plan requirements. See, e.g., Comments P14-3, A4-8, A4-9, and A4-10.

SMARA requires an approved reclamation plan for all mining operations conducted after January 1, 1976, or proposed to be conducted after that date regardless of whether the right to mine is vested (Pub. Res. Code §§2770(a), 2776). The reclamation plan must be applicable to a specific piece of property and be based upon the character of the surrounding area and such characteristics of the property as type of overburden, soil stability, topography, geology, climate, stream characteristics, and principal mineral commodities; it also must establish site-specific criteria for evaluating compliance with the approved reclamation plan, including topography, revegetation and sediment, and erosion control (Pub. Res. Code §2773). An amended reclamation plan is required if the SMARA lead agency (in this instance, the County of Santa Clara) determines that a substantial deviation from the approved reclamation plan is proposed by the mine operator (14 Cal. Code Regs. §3502(d)), or that the surface mining operation no longer can be reclaimed in accordance with its approved reclamation plan (14 Cal. Code Regs. §3502(e)).

As described in the Draft EIR, the County approved the existing reclamation plan for the Quarry in March 1985 (Draft EIR Section 1.1, page 1-1; Section 2.4, page 2-8). That plan was intended to govern a 25-year period and that "another reclamation plan [would] be prepared in approximately 20 years" (1985 Reclamation Plan, p. 29). The first in the series of reclamation plan amendment proposals was submitted for the County's consideration in 2007, the second in 2009, the third in 2010, and the fourth in July 2011. The July 2011 proposal was updated in December 2011 to include the mining exploration area located south of Permanente Creek and the Permanente Creek Restoration Area. Each of the prior proposals is described briefly in the Draft EIR (see Draft EIR Section 1.4.1, page 1-4 et seq., and Section 2.4, page 2-8 et seq.). The December 2011 Reclamation Plan Amendment for the Permanente Quarry (EnviroMINE, 2011) is the Project that is the subject of the Draft EIR; it supersedes all prior applications for amendment to the 1985 Reclamation Plan. Accordingly, all aspects of the prior draft proposals, including the new mining areas that were proposed in the 2007 and 2010 applications have been withdrawn from the County's consideration by the Applicant and superseded by the Project, which does not propose any new mining areas, including the excavation of a new pit (see, Draft EIR Ch. 2, page 2-1 et seq.).

The specific information and documents that must be included in a legally adequate reclamation plan are listed in Public Resources Code Section 2772(c). The statutory requirements are further described in the implementing regulations (14 Cal. Code Regs. §3502). For example, an amended reclamation plan must incorporate current reclamation performance standards (14 Cal. Code Regs. §3502(e)). Reclamation performance standards have been established for wildlife habitat; backfilling, regrading, slope stability, and recontouring; revegetation; drainage, diversion structures, waterways, and erosion control; prime and other agricultural land reclamation; building, structure, and equipment removal; stream protection; topsoil salvage, maintenance, and redistribution; and tailing and mine waste management (14 Cal. Code Regs. §3700 et seq.).

The performance standards for drainage, diversion structures, waterways, and erosion control (14 Cal. Code Regs. §3706) and for stream protection, including surface and groundwater (14 Cal. Code Regs. §3710) are specifically relevant to several comments received on the Draft EIR and are discussed in greater detail below. In particular, comments received on the Draft EIR expressed concern about the significant and unavoidable surface water quality impacts that would occur prior to final reclamation of the site and suggest that SMARA compliance cannot be achieved as a result.

The regulatory performance standards for drainage, diversion structures, waterways, and erosion control (14 Cal. Code Regs. §3706) state, in relevant part[1]:

(a) Surface mining and reclamation activities shall be conducted to protect onsite and downstream beneficial uses of water in accordance with the Porter-Cologne Water Quality Control Act, Water Code section 13000, et seq., and the Federal Clean Water Act, 33 U.S.C. section 1251, et seq.

(b) The quality of water, recharge potential, and storage capacity of ground water aquifers which are the source of water for domestic, agricultural, or other uses dependent on the water, shall not be diminished, except as allowed in the approved reclamation plan.

(c) Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of a surface mining operation to minimize siltation of lakes and watercourses, as required by the Regional Water Quality Control Board or the State Water Resources Control Board.

(d) Surface runoff and drainage from surface mining activities shall be controlled by berms, silt fences, sediment ponds, revegetation, hay bales, or other erosion control measures, to ensure that surrounding land and water resources are protected from erosion, gullying, sedimentation and contamination. Erosion control methods shall be designed to handle runoff from not less than the 20-year/1-hour intensity storm event.

(e) Where natural drainages are covered, restricted, rerouted, or otherwise impacted by surface mining activities, mitigating alternatives shall be proposed and specifically approved in the reclamation plan to assure that runoff shall not cause increased erosion or sedimentation.

[1] Subsections (f) and (g) of Section 3706 relate to stream diversions, and are not relevant to the Project or the environmental analysis.

In turn, the performance standards for water quality and stream protection dictate that surface and groundwater "shall be protected from siltation and pollutants which may diminish water quality as required by the Federal Clean Water Act, sections 301 et seq. (33 U.S.C. section 1311), 404 et seq. (33 U.S.C. section 1344), the Porter-Cologne Act, section 13000 et seq., County anti-siltation ordinances, the Regional Water Quality Control Board or the State Water Resources Control Board" (14 Cal. Code Regs. §3710(a)).

As stated on page 4.10-42 of the Draft EIR, the proposed reclamation activities would continue for approximately 20 years until final reclamation is complete and, during this time, could deliver selenium-bearing stormwater to Permanente Creek, which has been identified as a waterway impaired for selenium (see Draft EIR, page 4.10-4). The potential direct and indirect effects of Project-related selenium mobilization to water quality and aquatic habitats in this impaired waterway were determined to be significant and unavoidable during the 20-year interim period during which reclamation activities would be in progress (see the analysis of Impact 4.4-5, beginning on Draft EIR page 4.4-37 and the analysis of Impact 4.10-2, beginning on page 4.10-42). The Draft EIR has disclosed this impact, and the decision-making body (i.e., the Planning Commission) will consider this information in determining if the proposed RPA is compliant with SMARA.

For additional information about selenium and the Project, see Master Response M5. For more information about groundwater considerations, see Master Response M6. Concerning drainage and runoff considerations, see Master Response M7.

C. Financial Assurances Cost Estimate (FACE)

Several comments inquired about how the FACE was determined and its adequacy to ensure that reclamation could be performed in accordance with the proposed Reclamation Plan Amendment. See, e.g., Comment P20-1.

Under SMARA, all surface mining operations are required to have an annually updated financial assurance cost estimate approved by their lead agency that reflects the cost of reclaiming the site pursuant to an approved reclamation plan (Pub. Res. Code §§2770, 2773.1, 2773.15; 14 Cal. Code Regs. §3702). Financial assurances may include, but are not limited to, surety bonds, irrevocable letters of credit, or trust funds.

The County most recently approved an Interim FACE, which is dated January 23, 2012 (EnviroMINE, 2012). It addresses all disturbed lands at the Quarry whether or not they were included in the 1985 Reclamation Plan. The Interim FACE determined that $47,727,786 would be required for the County to reclaim the lands disturbed by mining activities at the Quarry if Lehigh is not able to perform the reclamation. Although some specifics of a previous FACE dated April 2011 are provided in Draft EIR Section 2.7.11.5 (page 2-41 et seq.), the current FACE dated January 23, 2012 is provided as Appendix F to this Final EIR. Both the County and the State Office of Mine Reclamation (OMR) reviewed and approved the Interim FACE.

On January 26, 2012, the County directed Lehigh to post a Financial Assurance (FA) equal to the amount determined by the Interim FACE. Lehigh submitted performance bonds that increased the FA to a total of $47,727,786.00. Both the County and OMR reviewed and approved the performance bonds submitted for this purpose.

In approving the Interim FACE, the County and OMR acknowledge that the FA will be adequate in the interim, and, once a reclamation plan amendment is approved, a revised FACE must be submitted by Lehigh based on the approved RPA.

SMARA requires that financial assurances be reviewed annually by Lehigh, the County, and OMR in order to determine whether adjustments to the FA are necessary. As a requirement of SMARA, Lehigh is responsible for maintenance of financial assurances continuously throughout the life of the mining operation, including idle periods and extended monitoring periods, and until reclamation is completed pursuant to an approved Reclamation Plan.

3.1.2 Master Response M2: California Environmental Quality Act (CEQA)

Commenters and Comments Addressed

Commenter	Comment Number(s)
City of Los Altos, CA, Community Development Department, Engineering	A2-4
California Regional Water Quality Control Board, San Francisco Bay Region	A4-6, A4-22
Midpeninsula Regional Open Space District	A6-4, A6-14
Citizens Against Pollution	O1-9, O1-13, O1-17, O1-20, O1-21, O1-22, O1-29, O1-33, O1-34, O1-36, 01-37, O1-37, O1-43, O1-49
West Valley Citizens Air Watch	O6-20, O6-24, O6-35
Quarry No, Bill Almon	O8-1, O8-7, O8-8
Cathy Helgerson	P4-4
Terry Hertel	P5-3, P5-4, P5-7, P9-1
Rhoda Fry	P12-2, P14-4, P14-5, P14-6, P14-7
Susan Sievert	P15-2, P15-6
Libby Lucas	P17-18
Timothy Brand	P19-2
Frank Geefay	P20-2
Oral Comments from the February 2nd Public Comment Meeting	PH-4, PH-10, PH-12, PH-38, PH-42

Summary of Issues Raised

This Master Response is intended to provide a general response to many of the general concerns raised regarding the adequacy of the Draft EIR. Specific responses to specific comments are provided in Sections 3.2 through 3.5.

A. Comments that are general in nature and include submittal of scientific or technical information unrelated to the EIR, or offer general opinions or unsubstantiated assertions regarding adequacy or accuracy of the Draft EIR;

B. Comments that question the adequacy of the analytical baseline relied upon for purposes of the environmental review;

C. Comments that question the adequacy of the cumulative effects analysis, specifically if future activities are considered in the analysis to be reasonably foreseeable future projects.

Overview

A fundamental purpose of CEQA is the protection of the environment by providing information to decision-makers and members of the public about the environmental consequences of the decisions being made and avoiding, reducing, and preventing environmental harm when possible and feasible by requiring mitigation measures or alternatives. (Pub. Res. Code §§21000-21002; 14 Cal. Code Regs. §15002). CEQA applies to most state and local public agency decisions to authorize or carry out projects that have the potential to cause adverse environmental effects. The County prepared the Draft EIR to document its analysis of the direct, indirect, and cumulative impacts to the environment that could result from the Project or alternatives. Mitigation Measures are identified where appropriate to avoid or substantially reduce significant impacts that otherwise would occur. See, for example, Draft EIR Table ES-3 (page ES-13 et seq.), which summarizes the impacts and mitigation measures identified for the Project. Alternatives are described in Chapter 3 of the Draft EIR, their environmental impacts are analyzed on a resource-by-resource basis throughout Chapter 4, and then, in Chapter 5, alternatives are compared and an environmentally superior alternative is identified.

CEQA does not regulate project implementation. Instead, it requires that information about environmental effects be disclosed and carefully considered before a decision to approve or deny a project, that other agencies and members of the public be afforded opportunities to provide input, and that environmental impacts be avoided or reduced where it is feasible to do so. Agency and public participation in the process is needed for the CEQA process to be successful. Agency and public participation in the CEQA process for the Project is described in Draft EIR Section 1.4 (page 1-4 et seq.).

CEQA does not require the disapproval of a project that would cause adverse environmental effects. If significant effects cannot be mitigated below established thresholds, the lead agency must adopt a "statement of overriding considerations," supported by substantial evidence in the administrative record, explaining why the project is being approved given the environmental harm that would result (Pub. Res. Code §21081; 14 Cal. Code Regs. §15093).

After the lead agency approves a project, one or more approvals from other state or local agencies (called "responsible agencies") may be required. State and local agencies that could issue permits or other approvals in reliance on the EIR are identified in Draft EIR Table 1-1 (page 1-3). With certain exceptions, responsible agencies must use the EIR prepared for the project and certified by the lead agency (14 Cal. Code Regs. §15096). Generally, no subsequent or supplemental EIR is required to support permits or other approvals by these other agencies (Pub. Res. Code §21166).

Clarification of the responses to comments provided in this Final EIR is provided in subsection A of this Master Response. Requested clarification of the analytical baseline used to evaluate the significance of Project impacts is provided in subsection B. Additional information about the cumulative effects analysis is provided in subsection C.

A. General Comments, Submittal of Unrelated Technical Information, and Submittal of General Opinions

As the lead agency under CEQA, the County has evaluated the comments received on the Draft EIR and prepared written responses for inclusion in the Final EIR (Pub. Res. Code §21091(d); 14 Cal. Code Regs. §§15088(a), 15132). As stated in the CEQA Guidelines, responses to comments "shall describe the disposition of significant environmental issues raised" (14 Cal. Code Regs. §§15088(a), 15132). California courts have explained that this requirement helps "to ensure that the lead agency will fully consider the environmental consequences of a decision before it is made, that the decision is well informed and open to public scrutiny, and that public participation in the environmental review process is meaningful." *City of Long Beach v. Los Angeles Unified School District* (2009) 176 Cal.App.4th 889, 904.

Consistent with CEQA, detailed responses are provided in response to comments that raise a significant environmental issue, and general responses are provided to more general comments (14 Cal. Code Regs. §15088; *Browning Ferris Industries v. City Council* (1986) 181 Cal.App.3rd. 852). For example, in cases where a commenter provides new information and/or substantiated facts pertaining to the Project, Project Area, or Draft EIR, this information has been reviewed and evaluated regarding its bearing on the adequacy of the analysis in the Draft EIR. Revisions have been made to the Draft EIR where appropriate, and responses to such comments are provided in this Chapter 3.

Also consistent with CEQA, the County has not responded in technical detail to non-Project specific scientific materials submitted in support of comments or comments that do not pertain to the contents of the Draft EIR. Several comments received did not raise a significant environmental issue relevant to the sufficiency of the Draft EIR (i.e., the adequacy or accuracy of the environmental analysis) or identify any other significant environmental issue requiring a response. As explained in CEQA Guidelines Section 15204, relating to the focus of review:

(a) In reviewing draft EIRs, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts of the environment and the ways in which the significant effects of the project might be avoided or mitigated…CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to

comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.

(c) Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.

In instances where comments were directed toward the perceived merits or demerits of the Project or expressed an unsubstantiated opinion without specifying why the Draft EIR analysis was inadequate (see, e.g., Comments P4-4, P5-3, P5-4, P5-7, P9-1, P12-2, P14-4, P14-6, P14-7, P19-2, and A6-10), the County is providing a limited response as detailed in Section 3.2, *Individual Responses*. In cases where the commenter provides an opinion but does not challenge the adequacy or accuracy of the Draft EIR, the County notes the opinion raised, but does not provide a response. When a comment includes unsubstantiated assertions and/or unsubstantiated opinions about a significant environmental impact or the adequacy or accuracy of the Draft EIR, the County notes the opinion, but does not provide a detailed response, consistent with CEQA Guidelines Section 15204.

B. Baseline

Some comments question the adequacy of the baseline relied upon in the EIR, suggesting that the County should have used a different one (see, e.g., Comment A2-6, A4-2, A4-22, A6-4, A6-14, and P14-5).

Baseline conditions equate to the conditions against which the significance of project impacts are assessed. For purposes of assessing the environmental effects of a proposed project, CEQA Guidelines Section 15126.2 states, "the Lead Agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published." In addition, CEQA Guidelines Section 15125(a) states, "An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant." These rules apply even where the existing conditions include activities that occurred as a result of illegal operations. *Communities for a Better Environment v. South Coast Air Quality Management District* (2010) 48 Cal.4th 310, 321, fn. 7 and cases cited therein. However, there is no uniform, inflexible rule regarding establishment of this baseline, and a lead agency has considerable discretion to decide how the existing physical conditions without the project can most realistically be measured.

For the purposes of analyzing the Project in the Draft EIR, and for reasons described in detail on pages 4.0-3 and 4.0-4 of the Draft EIR, the County has determined that the appropriate date for the baseline for purposes of evaluating the Project's environmental effects is June 2007, the date the County first issued a Notice of Preparation (NOP) to evaluate the environmental effects associated with amendment of the Applicant's existing, approved reclamation plan. The Draft

EIR Section 4.0 (page 4.0-3 et seq.) also identifies the actual existing physical conditions to provide a point of comparison of pre-Project conditions (the baseline) and post-Project conditions to ensure that changes caused by the proposed reclamation activities are seen in context and any and all potential significant environmental effects can be identified and analyzed accurately.

For one environmental resource area (Draft EIR Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*), insufficient data were available to determine the exact state of the environment at the time of the June 2007 baseline. Relevant data limitations, the methodology for evaluating the Project's environmental effects with respect to Aesthetics, Visual Quality, and Light and Glare, and the rationale for the baseline used to assess potential impacts for this resource area are described in detail in Draft EIR Section 4.1.2 (page 4.1-20 et seq.). As described in that section, the County determined that, with the exception of the EMSA, the available setting photographs taken in 2008, 2010, and 2011 adequately represent visual conditions substantially similar to what would have been observed in June 2007. With respect to the EMSA, the analysis also relies on baseline photographs of views of the EMSA taken in 2007 and 2008.

In five environmental resource areas (Sections 4.3, *Air Quality*; 4.6, *Energy*; 4.8, *Greenhouse Gas Emissions*; 4.13, *Noise*; and 4.17, *Transportation/Traffic*), the baseline conditions include current and several years of past quarry operations within the Project Area. This baseline is used within these resource areas as environmental impacts are associated with the rate of quarry operations and these operations are characterized by fluctuating production and associated air emissions, energy needs, and transportation demands in response to continually changing market conditions. For these resource areas, an analysis that considers only those conditions that existed in June 2007 (or any other specific point in time) may substantially over- or under-represent background conditions. Accordingly, the analytical baseline for those resource areas is based on an average over the 11-year period from January 1, 2000 to December 31, 2010, which includes periods of relatively high production as well as relatively low production at the Quarry, and thereby provides a point of comparison that does not reflect an artificial spike or dip that could skew background conditions.

These deviations in baseline for the purposes of the Draft EIR analysis are supported by recent case law. In the instance of *Pfeiffer v. City of Sunnyvale City Council* (2011) 200 Cal.App.4th 1552, it was decided that CEQA does not mandate the use of a particular baseline and a baseline that deviates from existing conditions is allowed under the circumstances at issue so long as there is substantial evidence supporting the deviation. For further discussion see, for example, pages 4.0-3 and 4.0-4 of the Draft EIR.

C. Cumulative Effects

Some of the comments received question the adequacy of the Draft EIR's cumulative effects analysis, suggesting that the scope of reasonably foreseeable future projects should have included an expansion in mining operations, including the excavation of a new quarry pit (see, e.g., Comment PH-4).

As explained in CEQA Guidelines Section 15355, "cumulative effects" refer to two or more individual impacts that, when considered together, may compound or increase the effect of

environmental impacts. Individual impacts can be changes resulting from a single project or from a number of separate projects. The cumulative impact from multiple projects is the change in the environment caused by the incremental impact of the proposed project when combined with other closely related past, present, and reasonably foreseeable probable future projects. Individually minor but collectively significant projects that occur over the same period of time can potentially cause significant cumulative impacts.

Cumulative effects are analyzed in Draft EIR Chapter 6: the cumulative scenario is identified and described in Section 6.1, and cumulative impacts are evaluated on a resource by resource basis in Section 6.2. The analysis considers all sources of environmental effects (including past, present, and reasonably foreseeable probable future projects) that would cause impacts that could combine with the incremental impacts of the proposed reclamation activities.

In discussing reasonably foreseeable projects, CEQA states, "foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can" (CEQA Guidelines §15144). At the same time, CEQA does not require speculation (CEQA Guidelines §15145). Comment PH-4 suggests that the cumulative effects analysis for the Project should have considered the excavation of a new quarry pit as a reasonably foreseeable future project, and analyzed related impacts of a new pit in the context of the Draft EIR's cumulative effects analysis.

The Draft EIR discloses that the excavation of a new quarry pit was identified on a reclamation plan previously submitted to the County by the Applicant. See, for example, Draft EIR Section 1.4.1, page 1-4, which discusses the previous proposal of a new pit in connection with two prior reclamation plan amendment applications, i.e., the 2007 Proposed RPA and the 2010 RPA[2]. The Draft EIR also states that approval of the Project "would not preclude future extraction activities within the Project Area," and "does not foreclose the possibility of future mining in other unincorporated areas of the Applicant's 3,510-acre ownership" (Draft EIR Section ES.4.1, page ES-3). The Applicant currently has a vested right to conduct surface mining activities in the Quarry pit, WMSA, EMSA, crusher/ Quarry office support area, Surge Pile, and Rock Plant, which are within the Project Area subject to the proposed RPA.

However, the proposed RPA does not provide any entitlements or any approvals to conduct mining operations beyond the areas identified in the RPA. Although additional mining activities (e.g., excavation of a new pit south of Permanente Creek) were identified on a reclamation plan and use permit application previously submitted to the County, that application officially has been withdrawn and is not relevant for purposes of the Draft EIR.

If the Applicant were to propose any future mining activity outside the areas identified in the proposed RPA, the proposal would require an amendment to the RPA and would require the issuance of a Use Permit if it would occur outside of areas determined to be "vested" by the County Board of Supervisors in February 2011. This future application would be subject to the

[2] The Applicant's request for approval of the new pit proposed as part of the 2010 RPA was formally withdrawn by letter, dated June 3, 2011, and, as explained in Draft EIR Section 1.1 (p. 1-1), the "December 2011 application supersedes all prior applications for amendment of the 1985 Reclamation Plan."

CEQA and require the preparation of subsequent CEQA documents. The reclamation plan and financial assurances would have to be approved by the County (or other SMARA lead agency (Pub. Res. Code §2770)) and CEQA complied with *in advance* of any surface mining activity.

Any attempt to analyze the environmental effects of a potential future pit at this time would by necessity be predicated on a series of "ifs" and guesswork. At present, consideration of a new quarry pit as a reasonably foreseeable future project in the EIR for the Project would be premature. As the proposal for a new pit is not identified in any applications currently under review by the County or another known public agency, any analysis of potential environmental impacts of such a pit would be speculative and would not provide information to the public and decision-makers about the cumulative environmental impacts associated with the project. For relevant CEQA case law, see generally, *Concerned McCloud Citizens v. McCloud Community Services District* (2007) 147 Cal.App.4th 181 and cases cited therein.

3.1.3 Master Response M3: Compliance Status

Commenters and Comments Addressed

Commenter	Comment Number(s)
City of Los Altos, CA, Community Development Department, Engineering	A2-5
Midpeninsula Regional Open Space District	A6-6, A6-12, A6-20
Citizens Against Pollution	O1-2, O1-8, 01-9, O1-12, O1-14, O1-18, O1-30, O1-31, O1-32, O1-43, O1-50, O1-53
West Valley Citizens Air Watch	O6-5, O6-19, O6-27, O6-28
Quarry No, Bill Almon	O8-2, O8-6, O8-15
John and Marilyn Buenz	P2-2
Cathy Helgerson	P4-3
Rhoda Fry	P12-3, P12-7, P12-8, P14-6, P14-7, P14-9, P14-15
Susan Sievert	P15-1, P15-2, P15-4, P15-8, P15-9, P15-10, P15-20
Oral Comments from the February 2nd Public Comment Meeting	PH-21, PH-23, PH-43, PH-45

Summary of Issues Raised

A. Comments that suggest that inadequate County enforcement of past violations has occurred.

B. Comments that suggest that other agencies have not enforced past violations.

Overview

Several comments received on the Draft EIR express concern that, despite the issuance of multiple notices from the County and the Regional Water Quality Control Board (RWQCB) that violations of applicable laws have occurred, no enforcement, remedial action, or levying of

penalties against the Quarry operator has occurred. As described in the Draft EIR and explained below, this is not the case. As explained in subsection A of this Master Response, the County has issued two Notices of Violation related to SMARA, and, as explained in subsection B, the San Francisco Bay Regional Water Quality Control Board (RWQCB) has issued multiple citations over the years related to water quality violations at the site.

A. The County Has Issued Two Notices of Violation (NOVs) Related to SMARA

Multiple comments were received regarding the status of the Applicant's compliance with the NOVs issued by the County under SMARA (see, e.g., Comments P4-3, A6-6, A6-12, A6-20).

The County implements a SMARA inspection program that enforces the State and County requirements for surface mines and reclamation plans within unincorporated Santa Clara County. This program includes field inspections and reporting of compliance by each operation. The SMARA program seeks abatement of violations rather than the assessment of fines, although fines may be levied if the County determines it is necessary. SMARA prescribes a process by which the County could assess fines should such an action be necessary. Moreover, should a mine operation fail to comply with direction from the County once an NOV is issued, the mine operator may be faced with removal from the "AB 3098 list," which is maintained by OMR as set forth under SMARA §2717(b). Removal from this list would prohibit state and local government agencies from purchasing materials from the mine operation (Santa Clara County, 2011).[3]

As described in the Draft EIR, the County twice has enforced its SMARA ordinance by issuing NOVs for unlawful surface mining-related activities at the Permanente Quarry: one in October 2006, another in June 2008. See, for example, Draft EIR Section 1.4.1 (page 1-4), Section 2.4 (page 2-8), and Section 4.0.2.2 (page 4.0-3). See also, Draft EIR Section ES.5.3 (page ES-7) and Section 3.3.1.3 (page 3-14), each of which explains that the No Project Alternative would not abate the NOVs. However, as stated in the Draft EIR, approval of the Project, Alternative 1, or Alternative 2 would abate the violations identified in the NOVs.

In October 2006, the County issued a NOV to the operator for deviating from the 1985 Reclamation Plan by engaging in mining activities outside its approved reclamation boundary. (Draft EIR, page 2-8.). The operator noted in response that the 1985 Reclamation Plan did not cover all mining-related disturbances when it was approved (such as the Rock Plant, roads, and certain material storage areas) because this was consistent with how SMARA was understood at that time. In order to update the 1985 Reclamation Plan according to the current application of SMARA's requirements, and to abate the NOV, the operator submitted a reclamation plan amendment in January 2007 that encompassed all disturbed areas and mining-related access roads, structures, stockpiles and storage areas (specifically including the Rock Plant), and that addresses the slope instability along the north wall of the Quarry pit.,. Necessary additional geological analysis was conducted to address slope stability issues in the Quarry pit, resulting in

[3] As stated on the Division's website, "Our responsibility is to achieve compliance with Santa Clara County Ordinances, Zoning, Building, Fire, and Grading Codes. Our violation process aim is to find a way of working with non-compliant property owners to achieve code compliance. To work together with our customers towards solving (abating) the violation (violated Ordinance or Code) before our customers get to the citations and/or fines process."

major modifications to the 2007 application. In June 2008, the County issued a second NOV to the Quarry operator for stockpiling overburden material in a different area outside the 1985 Reclamation Plan boundary – the EMSA. The proposed RPA, if approved, would address both of these NOVs.

Some of the comments received question whether the Applicant may be relied upon to implement lawfully and faithfully the proposed Reclamation Plan Amendment if the County should approve it (see, e.g., Comment A6-20). The County conducts inspections at the Permanente Quarry at least annually to determine, among other things, whether activities are in compliance with requirements of SMARA. If the County determines or otherwise confirms that a violation is occurring, it would take appropriate action in accordance with Public Resources Code sections 2774 and 2774.1.

B. The RWQCB Has Issued Multiple Citations for Water Quality Violations

Comments received also relate to the RWQCB's enforcement authority under California's Porter-Cologne Water Quality Control Act (see, e.g., Comment A2-5).

The Porter-Cologne Water Quality Control Act vests the water boards with primary authority to protect the quality of State waters. The RWQCB exercises this authority by issuing orders to those whose actions could or do pollute California waters and by pursuing a variety of remedies if the recipients of such orders fail to comply. The RWQCB makes determinations about enforcement priorities, typically pursuing simpler enforcement remedy before escalating the agency's response (SWRCB, 2010; SWRCB, 2011). As discussed below, the RWQCB has cited the Quarry at least five times over the years for violating water quality standards.

On July 27, 1999, the RWQCB issued Cleanup and Abatement Order No. 99-018 regarding the "discharge of concrete and other wastes into Permanente Creek" from the Permanente Quarry, aggregate plant, and Cement Plant. The order required the implementation of interim and long-term corrective actions, most of which have been satisfied. To fulfill the last requirement, Lehigh/ Hanson proposed the Permanente Creek Long-term Restoration Plan to the RWQCB in March 2011 (URS Corporation, 2011). The Permanente Creek Long-term Restoration Plan is intended to fulfill RWQCB Cleanup and Abatement Order No. 99-018.Some activities that would occur in the PCRA under the proposed RPA overlap with activities that would occur under the Permanente Creek Long-term Restoration Plan. Where this is true, the Draft EIR describes and analyzes the associated environmental effects as part of the Project; where there is no overlap, the Draft EIR describes and analyzes the impacts of the Permanente Creek Long-term Restoration Plan as part of the cumulative scenario (Draft EIR Section 6.1.2.1, page 6-7 and page 6-23 et seq.).

On March 26, 2010, the RWQCB issued an NOV for failure to comply with stormwater protection requirements. This notice required two things to occur: First, an update of site maps to clearly identify all structural control measures that affect stormwater discharges, authorized non-stormwater discharges, and areas where stormwater enters the site from surrounding areas; and second, the implementation and maintenance of best management practices to eliminate discharge of pollutants from Ponds 9 and 17 into Permanente Creek, reduce sediment discharge into Pond 9,

prevent discharge of sediments from slope erosion, minimize exposure of pollutants to stormwater at the vehicle and equipment shop and washing area, eliminate prohibited non-stormwater discharges relating to vehicles and equipment, minimize exposure of pollutants to stormwater at a concrete maintenance pad, and prevent the discharge of sediments from the unstabilized Upper Quarry Road and areas around it. This NOV and its requirements are described as part of the cumulative scenario for the Project in Draft EIR Section 6.1.2.1 (page 6-8).

On November 29, 2010, the RWQCB relied on its authority under Water Code section 13267 to require Lehigh to submit a technical report to document non-stormwater discharges from the site, including "a description of any and all non-stormwater discharges to Permanente Creek from the Lehigh facility and/or resulting from Lehigh's operations at the facility during the past three years."

On February 18, 2011, the RWQCB issued a subsequent NOV related to non-storm water discharges at the Cement Plant.

On April 29, 2011, the RWQCB issued Administrative Civil Liability Complaint No. R2-2011-0023 in the amount of $10,000 alleging that a pipe outfall (discharge) to Permanente Creek had not been disclosed despite a requirement to have done so. This is described in Draft EIR Section 6.1.2.1 (page 6-8).

On June 10, 2011, the RWQCB issued a Water Code section 13267 Investigative Order related to water quality concerns (RWQCB, 2011). The order requires a comprehensive plan to address discharges from the Permanente facility to ensure compliance with the Porter-Cologne Water Quality Control Act, the Federal Clean Water Act, and applicable water quality standards. This is described in Draft EIR Section 6.1.2.1 (page 6-8).

On October 20, 2011, in response to the Section 13267 Order, Lehigh submitted a comprehensive monitoring plan. In accordance with this plan, process-related discharges from the Quarry were authorized in October and November 2011 by the RWQCB pursuant to the General NPDES Permit for Aggregate Mining, Sand Washing, and Sand Offloading operations, Order No. R2-2008-0011 ("Sand & Gravel Permit"). A Report of Waste Discharge was subsequently submitted to the RWQCB by Lehigh on November 30, 2011, for purposes of obtaining an individual NPDES Permit for the facility that will specifically regulate pollutants of concern, namely, selenium. The Regional Water Board is in the process of preparing and issuing that NPDES permit, and a comprehensive monitoring plan was submitted to the RWQCB by Lehigh on October 20, 2011 to support its issuance.

The Quarry has implemented interim measures as required by the RWQCB to help control erosion and subsequent sediment delivery to Permanente Creek. In addition and as stated on page 4.10-42 of the Draft EIR, under the current requirements from the RWQCB, Lehigh must continue to maintain and pursue all appropriate permits and authorizations through the RWQCB including the NPDES Permit to reduce selenium. In addition, Lehigh must comply with requirements set forth by the RWQCB in the Sand & Gravel Permit authorizations, and in the upcoming issued site specific NPDES Permit. The Applicant must conduct water quality

sampling as directed by the Sand & Gravel Permit as well as comply with any requirements established in the upcoming issued site specific NPDES Permit. Finally, Lehigh must maintain procedures to ensure prompt identification and repair of damage to Best Management Practices (BMPs) or structural control facilities, especially after large storm events.

The RWQCB's exercise of its enforcement authority under the Water Code is separate from and independent of the County's analysis of potential environmental effects of the proposed Reclamation Plan Amendment: the RWQCB is authorized to initiate, pursue, and resolve enforcement actions against Lehigh for activities at the site regardless of whether the EIR is certified and regardless of whether the Project is approved. Nonetheless, as analyzed in Draft EIR Section 4.10 (page 4.10-1 et seq.) implementation of the Project would improve water quality conditions for all concerns once reclamation is complete.

3.1.4 Master Response M4: Project Description

Commenters and Comments Addressed

Commenter	Comment Number(s)
County of Santa Clara Parks and Recreation Department, Kimberly Brosseau, Park Planner	A2-11
Midpeninsula Regional Open Space District	A6-2, A6-3, A6-5
Citizens Against Pollution	O1-2, O1-5, O1-15, O1-21, O1-22, O1-32, O1-33, O1-37, O1-39, O1-42, O1-48
West Valley Citizens Air Watch	06-2, O6-4, O6-24, O6-25, O6-27, O6-30
San Francisco Baykeeper	O7-2, O7-5
Quarry No, Bill Almon	O8-3, O8-5, O8-6, O8-7, O8-10
John and Marilyn Buenz	P2-4
Vicky Ho	P3-2
Cathy Helgerson	P4-5, P4-6
Terry Hertel	P5-1
Mary Ann Lemons	P6-1
Rhoda Chung	P7-1
Rhoda Fry	P14-3, P14-4, P14-10
Susan Sievert	P15-4, P15-20
Libby Lucas	P17-3
Frank Geefay	P20-2
Oral Comments from the February 2nd Public Comment Meeting	PH-23

Summary of Issues Raised

A. The surface mining operation and related impacts should be analyzed as part of the Project.

B. The Cement Plant and related impacts should be analyzed as part of the Project

C. Excavation of a new quarry pit and related impacts should be analyzed as part of the Project

D. The scenic easement and impacts related to achieving compliance with it should be analyzed as part of the Project

Overview

Multiple comments question the adequacy of the Project Description, suggesting that it should have included additional components, such as the existing surface mining operations, the Cement Plant, excavation of a new quarry pit, the scenic easement, the Permanente Creek Restoration Plan, and the Santa Clara Valley Water District's Permanente Creek Flood Protection Project. These comments are addressed, in order, in subsections A through F of this Master Response.

CEQA requires an EIR to include an accurate, stable, and consistent description of the proposed project. The description must contain enough specific information about the project to allow decision makers and members of the public to evaluate the environmental consequences of an approval. An accurate description of a proposed project is "necessary for an intelligent evaluation of the potential environmental effects of a proposed activity" *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus*, 27 Cal.App.4th 713 (1994). Consistent with CEQA Guidelines section 15124, the description of a proposed project included in an EIR should contain certain specified information but "should not supply extensive detail beyond that needed for evaluation and review of the environmental impact."

As required by CEQA, the Draft EIR for the Project identifies the precise location and boundaries of the Project on detailed maps. See, for example, Draft EIR Figure 2-1 (page 2-3), *Regional Location*, and Figure 2-2 (page 2-4), *Project Area*. The topography of the site is shown in Figure 2-3 (page 2-6), *Existing Topography*. A statement of the Project objectives is provided in Draft EIR Section 2.5 (page 2-9). To assist the County in developing a reasonable range of alternatives to evaluate in the EIR, a statement of the Project's purpose and need also is provided (see Draft EIR Section 2.4, page 2-7 et seq.). A general description of the Project's characteristics is provided in Chapter 2 (page 2-1 et seq.). A statement describing the intended uses of the EIR is provided in Chapter 1 (page 1-1 et seq.), which describes the purpose of the document and its use by public agencies, among other things.

The EIR does not supply exhaustive detail beyond that needed for evaluation and review of the environmental impacts of the proposed reclamation activities. Based on the principle that lead agencies and others are not to interpret CEQA to add new requirements beyond those specified in the statute and regulations, additional information beyond the technical requirements of CEQA Guidelines section 15124 is not provided. Comments received suggest that the Project Description included in Chapter 2 of the Draft EIR should describe activities associated with the following: the surface mining operations, Cement Plant, excavation of a new quarry pit, the scenic easement, the Permanente Creek Restoration Plan being developed by the Applicant in coordination with the RWQCB, and the Santa Clara Valley Water District's Permanente Creek Flood Protection Project. Because these activities are not part of the proposed final reclamation of the Permanente Quarry and not part of the Reclamation Plan Amendment submitted by the Applicant for the County's consideration, exhaustive detail about them is not included in the Draft EIR.

A. Surface Mining is Not a Component of the Project

Several comments suggest that the environmental effects of surface mining should be evaluated as part of the Project in the Draft EIR (see, e.g., Comment O7-2).

As described in Section 2.3.1, *Existing Land Use in the Project Area*, the Project Area contains approximately 636.8 acres of existing or planned surface mining activities related to mineral extraction, overburden storage, roads, exploration areas, and ancillary facilities. See also, Draft EIR Section 1.2, page 1-2; Section ES.4.1, page ES-3. As discussed in Master Response M1(A), *Vested Rights*, mining operations began at the Quarry as early as 1903, have been continuous since 1939, and have been determined by the County to be a legal nonconforming use. Consequently, land use entitlement (use permit) is not required from the County for the operator to continue mineral extraction (surface mining)within the Project Area and, thus, the environmental impacts related to surface mining are not analyzed as part of the Project evaluated in the Draft EIR. However, mining-related impacts are considered as part of the setting conditions and cumulative impacts analysis within the Draft EIR (see Chapter 6, *Cumulative Impacts*).[4]

B. The Cement Plant is Not a Component of the Project

Several comments suggest that the environmental effects of the Cement Plant should be evaluated as part of the Project in the Draft EIR (see, e.g., A6-5, P2-4, P3-2, P5-1, P6-1, P7-1, P14-10, and P20-2).

Both the County and the Department of Conservation Office of Mine Reclamation (OMR) have determined that the Cement Plant is not subject to the Reclamation Plan requirements per SMARA. A letter dated August 23, 2007, from OMR to the Director of the County Department of Planning and Development related to the Permanente Quarry determined "the cement manufacturing operation is a distinct operation" and provided three reasons for its decision that "the cement manufacturing operation does not meet the definition of 'mined lands'" as defined in SMARA. First, the Cement Plant site is and has been used exclusively for the manufacture of cement – no mineral extraction has ever occurred there. Second, cement production began at the plant 36 years after surface mining operations commenced. Finally, the Cement Plant operates pursuant to a use permit that was issued consistent with local zoning requirements in May 1939. As a result, the letter concludes that "the County is not required to include the cement manufacturing operation in the reclamation plan amendment for this site."

The Cement Plant is located outside the Project Area and would not be subject to the RPA (Draft EIR SectionES.4.1, page ES-3; Section 2.3.2, *Existing Land Uses in the Vicinity of the Project*, page 2-7). See also, Draft EIR Section 2.2.2, page 2-2 ("The Cement Plant and other areas of the site that are not within the Project Area are not part of the Project.").

[4] Documents, analysis, and other information about the County's nonconforming use determination for the Permanente Quarry is available for review on the County's website: http://www.sccgov.org/portal/site/planning/agencyarticle?path=%252Fv7%252FPlanning%252C%2520Office%2520of%2520%2528DEP%2529&contentId=1824cdd032fbd210VgnVCM10000048dc4a92____.

Although Cement Plant operations are not part of the Project, they are described for purposes of the cumulative effects analysis in Draft EIR Section 6.1.2.1, *Other On-site Activities*, and potential environmental impacts resulting from Cement Plant operations are analyzed as appropriate on a resource by resource basis in that Chapter. See, e.g., Draft EIR Section 6.2.1 (page 6-13), *Aesthetics, Visual Quality, and Light and Glare*; Draft EIR Section 6.2.3.2 (page 6-16), *Toxic Air Contaminants*; Draft EIR Section 6.2.9 (page 6-23), *Hazards and Hazardous Materials*; Draft EIR Section 6.2.10 (page 6-24), *Hydrology and Water Quality*; Draft EIR Section 6.2.13 (page 6-26), *Noise*; and Draft EIR Section 6.2.17 (page 6-28), *Transportation/Traffic*.

C. Excavation of a New Quarry Pit is Not a Component of the Project

Multiple comments suggest that the environmental effects of excavating a new quarry pit should be evaluated as part of the Project in the Draft EIR (see, e.g., Comments P4-5, P4-6, and O1-22).

The Draft EIR identifies that excavation of a new quarry pit was identified on earlier reclamation plan amendment proposals submitted to the County by the Applicant. See, for example, Draft EIR Section 1.4.1, page 1-4, which describes the previous proposal of a new pit in connection with two prior reclamation plan amendment applications, i.e., the 2007 Proposed RPA and the 2010 RPA. However, the Applicant's request for approval of the new pit proposed as part of the 2010 RPA was withdrawn by letter, dated June 3, 2011, and, as explained in Draft EIR Section 1.1 (page 1-1), the "December 2011 application supersedes all prior applications for amendment of the 1985 Reclamation Plan." Because a new quarry pit is not proposed as part of the current Project, related impacts are not evaluated as part of the Project in the Draft EIR. With regard to why a new quarry pit is not considered a reasonably foreseeable future project for purposes of the cumulative analysis in the Draft EIR, please see Master Response M2(C).

D. The Scenic Easement is Not a Component of the Project

Some comments suggest that the environmental effects of returning existing environmental conditions to a state of compliance with the scenic easement should be evaluated as part of the Project in the Draft EIR (see, e.g., Comments A6-2 and A6-3).

As described in footnote 5 in the Project Description (page 2-7) of the Draft EIR and in the 1985 Reclamation Plan (page 1), "Kaiser Cement Corporation granted a permanent easement to the County of Santa Clara to ensure the protection of the view of Permanente Ridge from the Los Altos Area. This easement… states that the ridge would not be lowered below the elevation of 1500 feet for the majority of its length, and not below 1650 feet for a specified area." The scenic easement also is discussed briefly in Draft EIR Section 4.7.1.4 (page 4.7-19) in connection with the Scenic Easement Slide. However, a complete restoration of the ridgeline within the conservation easement is not proposed under the Project and thus is not evaluated in the EIR.

3.1.5 Master Response M5: Selenium

Commenters and Comments Addressed

Commenter	Comments
Regional Water Quality Control Board San Francisco Region	A4-1, A4-5, A4-8, A4-9, A4-11, A4-13, A4-14, A4-15, A4-16, A4-23, A4-24, A4-30,
Midpeninsula Regional Open Space District	A6-18
Citizens Against Pollution	O1-7, O1-14, O1-45, O1-50, O1-56
Committee For Green Foothills	O2-3, O2-6, O2-7, O2-8, O2-9, O2-10
Sierra Club	O3-3, O3-6
Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc.,	O4-6, O4-11, O4-14
Bay Area for Clean Environment, Inc.	O5-1
West Valley Citizen's Air Watch (WVCAW)/Bay Area for a Clean Environment (BACE)	O6-6, O6-10
San Francisco Baykeeper	O7-4, O7-5, O7-6, O7-8
Rhoda Fry	P14-7
Susan Sievert	P15-12
Libby Lucas	P17-20
Oral Comments from the February 2nd Public Comment Meeting	PH-48

Summary of Issues Raised

A. Water quality data and evaluation for selenium in the surface water and groundwater at the Project Area and offsite is inadequate, and the impact from elevated selenium concentrations in the site runoff is insufficiently characterized.

B. The interim reclamation activities would generate increased concentrations of selenium in discharge.

C. The soil cover proposed in the RPA would be inadequate to reduce concentrations of selenium in runoff after reclamation.

D. The Draft EIR's evaluation of treatment options and technologies to mitigate impacts from selenium is inadequate.

Overview

Beneficial uses of Permanente Creek surface water are currently impaired by concentrations of selenium that exceed water quality objectives identified in *San Francisco Bay Basin (Region 2) Water Quality Control Plan* (Basin Plan) (5 µg/L for chronic aquatic life protection and 20 µg/L for acute protection, total recoverable basis) (RWQCB, 2007). Elevated selenium concentrations in Permanente Creek are primarily the result of surface water runoff that contacts limestone and that are exposed to oxygen and water. The Draft EIR described the processes by which selenium

is released, actions to be taken during reclamation that may influence concentrations of selenium in water leaving the waste material storage areas or Quarry pit, and mitigation measures that would be implemented to further reduce the discharges of selenium.

This Master Response addresses the numerous comments received on the Draft EIR regarding impacts associated with selenium. Many comments question the adequacy of the surface and groundwater data used as a basis for the technical analysis of the RPA reclamation measures and the water quality analysis in the Draft EIR. Several comments express concern that the interim reclamation activities would generate increased discharges of surface water that contain selenium, while others question the reliability of the interim and long-term mitigation measures identified to reduce selenium discharges. Certain comments request additional information on whether the cover or "cap," which is proposed on the EMSA, WMSA, and final Quarry pit, would be adequate to protect surface water from selenium discharges. Finally, several comments requested additional information on treatment options and questioned whether the Draft EIR adequately evaluated available options for treatment of selenium. These comments are addressed below.

A. Surface water quality data and evaluation for selenium in the surface water and groundwater in the Project Area and offsite is inadequate and the impact from elevated selenium concentrations in the site runoff is insufficiently characterized.

The water quality analysis in the Draft EIR (Section 4.10, *Hydrology and Water Quality*), was based on various sources of surface and groundwater water data. While the data originated from many sources over a period of several years, it adequately represents the baseline conditions at the Project site for the purpose of developing a reasonable analysis under CEQA. For selenium concentrations detected in surface water at the Project Area and in Permanente Creek, the body of data provided to evaluate selenium concentrations for the Project analysis is sufficient and represents a level of data adequate to characterize background conditions and potential impacts from the Project for purposes of disclosure in the Draft EIR. CEQA requires that there be a sufficient degree of analysis to provide the decision-makers with enough information to make a decision that intelligently accounts for environmental consequences. The analyses to evaluate environmental effects do not need to be exhaustive; rather, the analyses must be adequate, complete, and demonstrate a good faith effort at full disclosure.

The surface water data used in the Draft EIR to characterize the selenium concentrations in the Project Area and Permanente Creek are summarized in Draft EIR Table 4.10-2 (page 4.10-9). and the locations of the primary sampling points are shown in the Draft EIR, Figure 4.10-2 (page 4.10-7). The primary source of surface and groundwater data was collected since 2007 on behalf of the Applicant by Golder Associates and has been reported in its Hydrologic Investigation Report (Golder Associates, 2011) report since 2007. The Golder investigation includes surface water collected from two representative locations on Permanente Creek (SW-1, upstream of the Quarry operations, and SW-2, adjacent to the Cement Plant) and one sampling location in Monte Bello Creek (SW-3, located in the adjacent water shed to the south). Comments question the use of the SW-3 sample location for background water quality on Permanente Creek. The Golder report does not indicate that SW-3 was intended as a background water quality sample for

Permanente Creek water quality but rather, it appears as a regional background sample to assess undisturbed watershed for both surface water and groundwater discharge.

Golder also collected wall washing samples and groundwater samples. Groundwater samples were obtained from five wells (HG-4, HG-6, HG-7, HG-9, and HG-10) located in an undisturbed portion of the Project Area, south of the Permanente Creek. Some comments question the validity of these groundwater sample locations to adequately asses the selenium concentrations in the groundwater, because the sample locations are not in the disturbed portion of the Project Area. However, the use of these wells to evaluate local groundwater conditions in the Franciscan Bedrock underlying the site is valid because they intersect bedrock that has a very similar geologic composition to the Project Area (Draft EIR, page 4.10-17).

As shown in Draft EIR Table 4.10-2 (page 4.10-9) surface water samples were collected from several sources to assess selenium, including Golder Associates, Environmental Science Associate (ESA), SES, and the RWQCB. Some of the samples were reported as dissolved concentrations and others as total recoverable concentrations. The Basin Plan Water Quality Objectives for selenium are reported as total recoverable concentrations. Several comments expressed concern that the dissolved selenium concentrations were compared to the concentrations of total recoverable selenium, and inferred that because the total recoverable concentrations are often higher, the analysis underestimated the impact.[5] The analysis used the best available data and the dissolved selenium concentrations used in the analyses represent the most comprehensive data available for evaluation of the Project. Analyses based on dissolved selenium concentrations are reasonably representative of what can be expected to occur during and following reclamation. Furthermore, except for the results from wall washing sample analysis which were expectedly high due to the wall wash process, total and dissolved selenium concentrations are similar (see **Table 3-1**, below).

Some comments expressed a lack of confidence in the predictive modeling completed by the Applicant's consultant, SES. SES used the data available from Golder to assess the water quality impacts of the RPA on surface and groundwater at the Quarry pit and presented the findings in a water quality report (SES, 2011), which is summarized and discussed in the Draft EIR (Impact 4.10-1, pages 4.10-36 et seq.). The Draft EIR relied on this study for its analysis of post-reclamation water quality. Prior to its use as a technical support document for the EIR, the SES study was peer reviewed by the County and its consultants to assess whether the information and data provided an adequate basis on which to evaluate potential project impacts and develop mitigation measures. The peer review evaluated assumptions, methods, findings, and conclusions for accuracy, reasonableness, and consistency with professional standards and practices. The primary reviewers included Mr. Mark Woyshner, Water Quality Specialist at Balance Hydrologic, Inc. (Balance), who completed a detailed review of the predictive model, and Mr. Harry Ohlendorf,

[5] A" dissolved" metal concentration is the amount of the metal in a water sample that is dissolved. A "total" metals concentration is the amount of metal in the sample that is both dissolved and present as particulates in the water. Dissolved concentrations should always be less than total, as the dissolved concentration is a subset of the total. Dissolved samples are prepared by first filtering the water with a 45 micron filter to remove the particulates.

TABLE 3-1
COMPARISON OF DETECTED SELENIUM CONCENTRATIONS
TOTAL AND DISSOLVED

	Dissolved selenium (µg/L)		Total selenium (µg/L)	
	range/discrete	average	range/discrete	average
Surface Water				
Permanente Creek				
SW-1[b]	1.7 - 11.0	7.2	2.3 - 9.2	7.1
SW-2[b]	13 - 81	62	13 - 87	62
SL-23-CR[e]	24	--	22	--
SL-26-CR[e]	22	--	20	--
SL-RSA-CR[e]	23	--	23	--
PER070[a]	5.1 - 18.8	9.9	5.8 – 18.7	11.6
ZOMB-1[f]	19	--	14	--
SL-4A3-PD[g]	48	--	46	--
PERMUS[h]	ND(<10)	--	ND(<10)	
Monte Bello Creek				
SW-3[b]	ND (<0.38) - 0.71	0.366	ND(<0.5) – 0.52	0.372
Upland Runoff				
EMSA 01 (road)[e]	33	--	35	--
EMSA 02 (ditch/gully)[e]	38	--	35	--
EMSA P31B-IN (pond inlet)[e]	7.8 - 43	25	8.3 - 36	22
EMSA P31B (pond)[e]	12 -18	15	12 -18	15
EMSA P30-IN (pond inlet)[e]	5.9 - 23	14	7.1 - 22	15
EMSA P30 (pond)[e]	12 - 20	16	13 –19	16
WMSA[d]	29	--	33	--
Groundwater				
HG-4[b]	0.27 – 3.9	1.4	ND(<0.5) – 1.3	2.8
HG-6[b]	(<0.4)	(<0.4)	ND(<0.5)	ND<0.5)
HG-7[b]	(<0.4)	(<0.4)	ND(<0.5) – 0.9	0.47
HG-9[b]	(<0.4) – 0.9	0.5	ND(<0.5) – 1.1	0.47
HG-10S[b]	(<0.4) – 2.8	1.5	ND(<0.5)	ND(<0.5)
Wall Washing				
*Limestone (HG)[c,i]	49	--	230	--
*Limestone (MHG)[c,i]	14	--	60	--
*Limestone (MLHG)[c,i]	0.7	--	160	--
Greywacke[c,i]	ND(<0.38)	--	ND(<11)	--
Chert[c,i]	ND(<0.38)	--	ND(<11)	--
Greenstone[c,i]	ND(<0.38)	--	ND(<11)	--

[a] As reported in RWQCB (2007a); samples collected in Jun 02, Apr 02, and Jan 03.
[b] As reported in Golder Associates (2011) and SES (2011); samples collected in Feb 09, Apr 09, Sep/Oct 09, and Jan 10 (HG-10S only sampled in Sep/Oct 09 and Jan 10).
[c] As reported in SES, (2011); sampled on November 24, 2009.
[d] As reported in SES, (2011); sampled on January 13, 2010.
[e] As reported in ESA (2011); samples collected on February 16, 2011.
[f] Violet creek Tributary, south of WMSA. Sampling conducted by Lehigh, April 7, 2010 (Lehigh, 2010)
[g] Pond 4 retention pond, adjacent to Quarry pit. Sampling conducted by Lehigh, April 7, 2010 (Lehigh, 2010)
[h] County Access Road Bridge. Sampling conducted by Lehigh, April 7, 2010 (Lehigh, 2010)
[i] Results for wall washing in [ ] presented as total recoverable

µg/L = micrograms per liter
ND= not detected

* HG = High grade limestone; MHG = Medium to High grade limestone; MLHG = High and Medium/Low grade limestone
** Values in ( ) are non-detect with indicated detection limits.

SOURCE: ESA, 2011; SES, 2011; Golder Associates, 2011; RWQCB, 2007c

Technical Fellow at CH2MHill, Inc., who provided expertise on selenium fate and transport and treatment. Balance commented that the predictive model is not conservative enough to evaluate potential long-term concentrations of metals. Consequently, SES completed a sensitivity analysis (see Draft EIR Impact 4.10-1, page 4.10-36) to evaluate the accuracy of the model. For the sensitivity analysis, SES increased the input concentrations from each source of surface water and groundwater inflow, used the maximum groundwater concentration as the final long-term groundwater inflow concentration (rather than the average used in the base case), and reduced the monthly rainfall by 30 percent for a period of 8 years to simulate the influence of an extended drought. The results of the sensitivity analysis, as discussed in the Draft EIR, indicated that 1) runoff from the limestone walls would have the most profound influence on the water quality projections but the difference between the original input values and sensitivity assumptions were insignificant, and 2) lower monthly rainfall amounts increase the amount of time required for the pit to fill to its equilibrium level and increases the amount of time required to reach the long term concentration. Reducing the rainfall by 30 percent over 8 years lengthens the time required for the pit to fill with groundwater by one year, but does not impact the final concentration of selenium. Selenium has the greatest range of variation among the different sources of inflow, as shown in the Draft EIR, (Table 4.10-6, page 4.10-37) and therefore, the sensitivity analyses for selenium are worst case among the parameters analyzed. The County and its consultants peer reviewed the sensitivity analysis and concurred with its methodology and conclusions.

Selenium biogeochemistry is very complex and, although the Draft EIR recognized that there were uncertainties relative to some information available for use in predicting future conditions during and following reclamation, there is reasonable confidence in the conclusions presented. Sensitivity analyses presented in the Draft EIR (page 4.10-36 to 4.10-38) support the conclusions reached through water quality modeling. Furthermore, the Draft EIR included Mitigation Measure 4.10-1b, which includes several measures to verify and monitor conditions with respect to selenium and water quality.

B. The interim reclamation activities would generate increased concentrations of selenium in discharge

This impact is discussed in the Draft EIR (Impact 4.10-2, page 4.10-42 et seq.). The Draft EIR acknowledges that once reclamation begins, construction activities could increase sediment in stormwater runoff, which could entrain selenium and other metals as well as high Total Dissolved Solids (TDS) because of excavation, grading, conveyor operation and other material handling (Draft EIR, Impact 4.10-2, page 4.10-42 et seq.). As discussed in the Draft EIR (Impact 4.10-2, page 4.10-44), during reclamation, overburden storage piles in the WMSA and EMSA would be exposed to stormwater runoff and the limestone in those piles would be susceptible to oxidation prior to installation of the proposed surface cover material and revegetation. The RPA provides for temporary sediment control Best Management Practices (BMPs), implemented in accordance with the drainage plan and current Stormwater Pollution Prevention Plan (SWPPP). However, because interim reclamation conditions could introduce sediment, waterborne selenium, and TDS into the drainage channels, desiltation basins, and potentially, Permanente Creek, the Draft EIR considered this a significant impact and prescribes aggressive interim BMPs to protect areas that are disturbed, temporarily inactive, and partially reclaimed from stormwater runoff and erosion.

The performance of those measures would be monitored with a surface water monitoring program. The measures outlined in the Draft EIR were designed to exceed the measures that are typically undertaken at the Project site per the SWPPP under baseline conditions. Further, the stormwater and sediment controls present in the Draft EIR (Mitigation Measure 4.10-2a, page 4.10-44) exceed what are typically employed at large construction sites under compliance with the California Construction General Permit. In addition, the EMSA would be subject to a stormwater sampling plan that would supplement preexisting surface water monitoring required by General Industrial Storm Water and Sand and Gravel NPDES Permit and be designed specifically to monitor surface water during reclamation activities in active and inactive excavation and backfill areas. The purpose of this plan is to evaluate performance of temporary BMPs and completed reclamation phases at the EMSA and to identify areas that are sources of selenium, sediment, or high TDS. The stormwater and sediment control measures prescribed in the Draft EIR could prevent stormwater contact with limestone materials, control runoff and sedimentation and considerably reduce to acceptable levels the concentrations of selenium that reach the receiving water of Permanente Creek.

The Draft EIR contains comprehensive mitigation measures (containing an extensive list of stormwater water and sediment control BMPs, among other actions) aimed at alleviating this significant impact. This mitigation measure represents state-of-the-art strategies to minimize run-off of stormwater and sediment. Based upon professional experience and the understanding of the Project site and proposed operational conditions, it is reasonable to expect that the implementation of Mitigation Measures 4.10-2a and 4.10-2b would be effective in reducing sediment and TDS to acceptable levels such that interim impacts from sediment and TDS would be less than significant.

However, there is not sufficient empirical data (testing of surface water runoff from areas subject to enhanced BMPs) or models or other tools to conclusively demonstrate at this time the efficiency of the mitigation strategies contained within Mitigation Measure 4.10-2a with regard to the control of selenium. Since release of the Draft EIR, the County has undertaken further technical analysis to determine the feasibility of installing an on-site water treatment facility that could treat selenium in stormwater discharges to levels below 5 µg/L (see subsection D, below). However, despite the addition of Mitigation Measure 4.10-2e which requires the Applicant to design and test a pilot-scale treatment facility to remove selenium, uncertainty remains regarding the feasibility of installing a full-scale treatment system that would be adequately effective in achieving a discharge concentration at or below 5 µg/L for selenium. Consequently, the Draft EIR conservatively concludes that the water quality impact, with regard to selenium, would remain significant and unavoidable.

C. The soil cover proposed in the RPA would be inadequate to reduce concentrations of selenium in groundwater and runoff after reclamation

Several comments on the Draft EIR (e.g., A4-13, A4-11, A4-14) doubt the effectiveness of the primary measures to control selenium discharges to receiving waters including Permanente Creek. The elements in question are 1) the 1-foot cover consisting of a non-limestone material with overlying vegetative cover and 2) the organic mulch material that would be mixed in with the backfill of the Quarry pit. The Draft EIR describes these elements of the Project in Section 2.8.4

(page 2-84 et seq.), and Impact 4.10-1 (page 4.10-29 et seq.) provides an analysis of these measures. Please refer to Master Response M6 (Groundwater), for a further discussion and refinement regarding establishing reducing conditions in the Quarry backfill and the enhanced treatment afforded by mixing the backfill with organic material.

As described in the Draft EIR (pages 4.10-8 to 4.10-12), selenium is released to varying degrees from limestone rock at the site through biogeochemical processes when the rocks are exposed to water and oxygen. As discussed in the Draft EIR (Section 4.10.1.2, page 4.10-11) selenium leachability from the overburden materials (such as greywacke, fault breccia, greenstone, metabasalt and chert) was very limited; concentrations were less than 0.6 µg/L from those rocks, even though selenium concentrations in the rocks were typically higher than in limestone. Thus, limiting the exposure of limestone to water and oxygen during and following reclamation is a major focus of the materials-handling plans and associated reclamation and mitigation activities and is one of the most significant factors considered in the reclamation plan.

Regarding the proposed cover for the EMSA and the Quarry pit, comments on the Draft EIR include concerns that the cover would erode, fail, or crack, or infiltration of surface water through the cover would occur, reducing its effectiveness. Some comments state that the cover proposed under the RPA for the EMSA, the Quarry pit, and portions of the WMSA is not of adequate thickness. Comments on the mulched material in the Quarry pit backfill include concerns that, over time, the mulch would become ineffective or cause groundwater impacts. It is important to note that the proposed cover for both the EMSA and Quarry pit is neither considered nor intended to function as an impermeable cap that would be typical at a site with hazardous soil or groundwater contamination. The proposed cover strategy for the EMSA, Quarry pit, and portions of the WMSA has two main functions: (a) to prevent direct stormwater contact with the selenium-bearing limestone, and (b) promote lateral flow[6] with some lesser degree of infiltration. The discussion below is based on a letter report prepared by Strategic Engineering and Science, Inc (SES) that provides further clarification and refinement of the regulatory, physical, and construction elements of the proposed cover and its ability to reduce selenium by hindering limestone exposure and promoting runoff (SES, 2012).

Draft EIR Mitigation Measures 4.10-1a and b, 4.10-2a, 4.10-2b, and 4.10-6 describe actions that would be implemented to manage surface water drainage during and after reclamation to reduce selenium transport to Permanente Creek. One goal of drainage management for the site is to facilitate surface water runoff without erosion of reclaimed surfaces, which would limit the amount of infiltration that would occur. The effectiveness of water management (including run-on as well as runoff) affects the amount of cover material needed over waste rock that has the potential to release selenium. This, in turn, would reduce the potential for creating downgradient seeps that may bring dissolved selenium to the surface. Recent observations support the approach of encouraging flow and limiting the ponding of water on reclaimed surfaces. Per the mitigation measures, limestone materials from the EMSA and WMSA would be segregated from other waste rock and covered by a 1-foot-thick layer of non-limestone rock and then six inches of topsoil-

[6] Lateral flow refers to flow that travels laterally, following the slope of the surface (as opposed to vertical flow into the ground, which is referred to as infiltration).

blended material to serve as a growth-enhancing medium installed to support vegetation. In addition, these mitigation measures provide for refinement of the selenium protection measures should an issue arise (see Mitigation Measure 4.10-1b).

Regulatory Framework

The Surface Mining and Reclamation Act (SMARA) requires protection of surface and groundwater from discharges, which may diminish water quality as required by the Porter-Cologne Act and other State and County requirements. Title 27 requirements are more specific than those of SMARA. Among the requirements of Title 27, which specifically regulates designated mining waste management units, is that a waste pile cover must provide equivalent protection of water quality compared to a prescriptive cover that incorporates a low permeability layer (Title 27, §20080[b]). Title 27 requirements relevant to the Project Area address mine waste that is designated as a Group B Mining Waste by the RWQCB; i.e., a waste that has the potential to impact water quality with pollution other than turbidity. In the Project Area, the majority of the limestone material that is mined and not used in products may fall into this category due to the potential for selenium mobility. Much of the other material (which is essentially the waste material that includes greywacke, greenstone, and chert) does not have Group B characteristics and would only require sediment controls, much like fill generated during a routine construction project. As explained in Response A4-4 and Draft EIR Section 2.8.6 (page 2-49) and Section 4.10.1.4 (page 4.10-22), the Draft EIR makes a reasonable assumption about the WMSA and EMSA that mining wastes in the Project Area are Group B waste. Because of the likely Group B status of limestone materials, the proposed reclamation cover needs to prevent soluble metals (particularly selenium) in the underlying waste materials from impacting the quality of surface runoff, as well as minimizing infiltration through the waste to prevent groundwater quality impacts (SES, 2012).

The proposed reclamation cover for the EMSA, Quarry pit, and portions of the WMSA consists of 1 foot of silty to clayey sand with gravel and cobbles (screened non-limestone material) and a minimum of 3 (nominally 6) inches of topsoil. Material for the 1-foot thick layer would be obtained from onsite materials stockpiled at the WMSA and excavated from the WMSA or Quarry pit during the remainder of mining. This material would be selectively processed from the existing stockpiles or from future waste generated to provide cover construction soils with sufficient fines content and limited oversize materials to allow for compaction to a density that minimizes infiltration. This level of compaction would also allow for root development and maximum evapotranspiration. The overlying topsoil layer would be amended with organics as necessary to promote vegetation (SES, 2012).

Following approval of the reclamation approach contained in the RPA, the Applicant would prepare detailed cover design and construction specifications and provide those details, as necessary, to the RWQCB in a Report of Waste Discharge (ROWD) or an equivalent permit document that would be submitted to the RWQCB for approval before the significant earthmoving elements of site reclamation could commence.

The approach to cover design would include:

- Cover water balance (infiltration, runoff, and evapotranspiration) modeling to demonstrate cover performance.

- Sampling and geotechnical testing of the proposed cover materials to establish suitability as final cover materials as part of the final design process. The geotechnical testing would include classification tests (grain-size analyses and Atterberg limits tests); compaction and relative density testing; and hydraulic conductivity testing of representative remolded samples prepared at specified relative densities.

- Field-scale demonstration, cover construction and infiltration testing. The results of the analyses and testing noted above would be used to finalize the material and earthwork (processing, hauling, and compaction) specifications for the cover design. This final design may include refinements of the proposed layer thickness, as necessary.

- Perform routine testing of each of the various rock types that comprise the overburden to further characterize bulk and leachable concentrations of key metal constituents (selenium in particular). Such testing shall be performed until the average concentrations and the variability within a rock type is no longer changing significantly as data are gathered. (See Draft EIR Mitigation Measure 4.10-1b, page 4.10-41).

The results of the analyses and testing noted above would be used to finalize the material and earthwork (processing, hauling, and compaction) specifications for the cover design. This final design may include refinements of the proposed layer thickness, as necessary (SES, 2012).

Cover Performance. The performance of a soil cover is optimized through selection of soil texture and layer thickness; a good balance of clay, silt and sand; and not-overly compacted soil layers. A site-specific engineered soil cover is developed such that the cover sheds excess runoff, absorbs and stores infiltration water and then subsequently allows for evaporation and transpiration of stored water; thereby minimizing infiltration and contact with waste, protecting surface and groundwater quality. The key to the engineered cover is that any given soil layer is prevented from reaching its field moisture storage capacity for the anticipated precipitation conditions and conversely that the cover is not susceptible to desiccation and cracking in summer months, as is typical with many high clay-content covers. Further, if too much reliance is placed on high compaction, for example with a silty, clayey material, then the cover performance would degrade over time as the natural weathering processes causes the material to loosen. If the cover is too sandy then it would let through too much of the infiltrating water, not allowing it to be stored and evaporated. Also, if the cover is too thin, then it may result in an increase in infiltration. The intent of the cover conceptualized in the RPA is to achieve such a “well balanced” cover (SES, 2011).

Project Cover Materials. Cover materials are available in the EMSA, WMSA, and the Quarry pit. The materials for building the cover would be non-limestone waste rock materials such as graywacke, chert, and greenstone. Lithologies occurring onsite are commonly identified by geologists based on fundamental techniques such as visual observations, field acid testing, and scratch testing. These same techniques would be applied during reclamation activities for segregation of limestone from other lithologies. To further demonstrate and clarify the suitability and availability of onsite waste rock for use as cover materials, SES has compiled available

results of previous investigations completed in the WMSA and EMSA, as they pertain to the textural and lithologic properties of the non-limestone waste rock. It can be anticipated that any similar types of material excavated from Quarry pit would have similar characteristics (SES, 2012).

WMSA. The WMSA is located adjacent to and upslope of the Quarry's northwestern boundary. The WMSA currently consists of 172 acres of waste rock derived from previous mining of the Quarry pit. Golder Associates' Geotechnical Investigation (Golder Associates, 2010) report contains five borings logs documenting the lithology of the stockpiled WMSA waste rock. These logs indicate that the WMSA is comprised of both limestone and undifferentiated non-limestone greywacke and greenstone rock types. The logs indicate that each boring penetrated mixed and discontinuous limestone and greenstone/greywacke zones, with minimal distinct or identifiable litho-stratigraphy, particularly in the borings in the upper slope portions of the WMSA. Boring logs indicate that the WMSA contains predominantly limestone with minor non-limestone rock zones. Lower slope borings appear to have a higher percentage of non-limestone materials (primarily greenstone waste rock) and formational materials (SES, 2012).

Based on the lithologic descriptions contained in the boring logs, the WMSA consists of mainly waste rock mixed with waste limestone. However, SES estimates that the WMSA contains approximately 9.7 million cubic yards of non-limestone materials which can be segregated because they occur in discontinuous layers between limestone lifts (Attachment A of SES, 2012). Segregation of this non-limestone material for use in cover materials would be possible using selective grading and monitoring during excavation. This amount on its own exceeds what is required for the proposed cover over all areas onsite to be covered. Additional non-limestone material may be available from the WMSA using carefully designed screening protocols.

EMSA. The EMSA is currently the main overburden storage site for mining operations and is located in the northeastern portion of the site. Exploratory logs indicate that the EMSA is composed of limestone, greywacke, greenstone, and siltstone/sandstone rock types and that in general, the materials at the EMSA occur in stratified, identifiable zones of limestone and non-limestone materials (greenstone, greywacke and weathered sandstone, with a significant uppermost zone of weathered sandy clay soils) (SES, 2012).

Cover Material Processing. During reclamation, larger clasts within the EMSA and WMSA could be further crushed into smaller particles that are more suitable for cover soil materials, if necessary. Further, anticipated weathering of these materials would also increase the proportion of fines in this material. Site specific experience relative to fracturing and weathering of the waste rock materials is described further below (SES, 2012).

The greywacke available onsite is anticipated to fracture with moderate effort, using water and track-walking with a dozer or a sheepsfoot compactor. The greywacke is expected to weather into a silty sand, followed by further weathering into a clayey, silty sand. The greenstone should fracture with moderate to relatively high effort using water and track-walking with a dozer or running a sheepsfoot compactor. The greenstone is expected to weather into a silty or sandy gravel with clay that would readily weather to a gravel-sand-silt-clay mixture.

The chert should fracture with relatively high effort by track-walking with a dozer. The fractured chert is expected to create a gravel that would be highly resistant to further weathering. The cherty material would make an excellent lining material for drainage swales and other areas subject to rapid water flow. The greywacke and metavolcanic rock would constitute stable cap materials once placed and properly compacted, and would be capable of providing support for the growth of vegetation as topsoil layer, with amendment, as necessary.

Available Material Volumes. The volume of non-limestone cover materials needed for reclamation of the Quarry pit, WMSA, EMSA, Crusher Area, and PCRA is 1.3 million cubic yards. This includes materials for the proposed one foot of silty to clayey non-limestone material and the minimum three inches of topsoil, plus a 10 percent contingency. Therefore, compared with the estimates of 9.7 million cubic yards that can be separated from waste in the WMSA, SES concludes that the site contains sufficient material for cover construction. Note that this conclusion does not account for additional non-limestone material that can be easily and effectively segregated during the remainder of mining.

Preliminary Cover Water Balance Analyses. The Applicant completed a cover water balance analysis to determine the preliminary performance of the proposed cover. The preliminary model demonstrates that the hydraulic performance of the proposed reclamation cover and a typical prescriptive Title 27 cover are comparable (SES, 2012). The preliminary model presented some general assumptions regarding material properties and default, synthetically generated, weather data. Therefore, it was discussed in the Applicant's report for demonstration and discussion purposes and would require refinement concurrent with the engineering design of the proposed reclamation cover.

Permitting Design and Constructions. The soil cover proposed in the RPA is authorized by the current Title 27 regulations. Permitting of the proposed soil cover requires a site-specific design process to establish conformance to the Title 27 alternative cover requirements. The design process begins with an approved reclamation plan, and further allows for a cover design that would be demonstrated to provide equivalent protection to surface and groundwater in accordance with Title 27 regulations. As such, permitting would take significant interaction with and demonstration to the regulatory agencies to demonstrate the viability of the design. In particular, the flexibility in the regulations must be recognized and allowed to achieve the performance required in a cost effective manner. As outlined herein, final design, permitting and approval of the soil cover would require further field investigation of borrow sources, laboratory testing and soils characterization, engineering analyses to develop a site-specific final design and demonstrate adequacy of water quality protection, and preparation of construction materials handling work plans and earthwork specifications. The permitting and design phases would be conducted after RPA approval and before any cover construction commences. The design phase would generate additional data, refine the cover design details and provide for construction plans and specifications. It is possible that additional borings would be conducted, material samples collected and geotechnical laboratory analyses completed. This data, in conjunction with the available information, would be used to develop material schedules that ensure the appropriate materials are available when they are needed for cover construction. Material preparation, acceptance, and placement specifications would be established to ensure the covers are constructed as designed (SES, 2011).

Cover performance evaluations would be completed to demonstrate compliance with the Title 27 requirements as necessary, and the cover layer designs would be finalized. If necessary, cover test plots may be established and instrumented during phase one in order to assist in finalizing the design details, identify a design percentage of fines content in the cover material, identify potential adjustments to the thicknesses, and evaluate alternative re-vegetation treatments.

Case Studies

Some comments (A2-3, O2-8, O3-3, O7-6) assert that the Draft EIR should provide case histories to demonstrate the effectiveness of soil covers and groundwater amendments to reduce selenium on other project sites. The following section provides additional information on other project sites that utilize similar reclamation strategies including experience with coal mining operations in British Columbia, Canada, and phosphate operations in Idaho.

Conditions existing at the site developed over many years of mining activity, without particular attention to the segregation of materials that may release selenium from those that do not. This is typical of many types of mining, such as that for phosphate in Idaho and coal in Canada (BLM, USFS, and IDEQ, 2007; SAPSM, 2010). Recent measures used at these comparable mining operations to reduce release of selenium from waste rock materials have increasingly focused on "keeping clean water clean" through varying applications of best management practices for drainage, segregation of selenium-releasing rocks from other waste rock and isolating it from exposure, and other measures that are applicable on a site-specific basis to reduce the mobility of selenium by creating chemically reducing conditions to make selenium less mobile. As presented below in the discussion of case studies, these measures to segregate, isolate, and reduce selenium mobility have been developed over the years and are used at other mining operations in the United States and Canada where selenium concentrations are elevated in overburden waste material. These measures have been incorporated into the reclamation plan amendment for the Permanente Quarry taking into account site conditions.

Soil cover of various thicknesses over selenium-releasing waste rock at other mines has been evaluated to determine how much cover would be needed under the Project, and the conclusions vary by site (e.g., BLM, USFS, and IDEQ, 2007; Formation, 2010; BLM, 2011). The thickness of required cover in other mining operations ranges from 1 foot up to 4 feet, and also may be combined with soil conditioning and fertilization to enhance plant growth (which is similar to that proposed in the RPA). In combination with an effective drainage management program and the proposed Verification and Water Quality Monitoring (Draft EIR Mitigation Measure 4.10-1b), there is reasonable confidence in the effectiveness of the proposed reclamation approach, as mitigated. It should also be noted that mitigation measures require post installation monitoring and verification of effectiveness as follows: (Draft EIR page 4.10-42 – Mitigation Measure 4.10-1b):

> "Reclamation of the Quarry Pit, EMSA, and WMSA areas shall not be considered complete until 5 years of water quality testing as described above demonstrate, to the satisfaction of the Director of Planning and Development, that selenium in surface water runoff and any point source discharges has been reduced below all applicable water quality standards, including Basin Plan [Objectives]."

In addition to the above requirement, Mitigation Measure 4.10-1b includes refinement of water management procedures based the results on monitoring activities.

Smokey Canyon Mine, Idaho. The Smokey Canyon Mine is located in the Phosphoria mining district in southeastern Idaho. The waste rock at this and other nearby mines leaches very high concentrations of selenium into surface water (historically up to over 1,000 µg/L in local drainages) and has been known to result in the death of livestock that drink the water or forage on vegetation grown with the selenium-rich water. As part of the Record of Decision for remediation of this still-operating mine, the operator has implemented a standard operating procedure of encapsulating the seleniferous waste with a minimum 4-foot thick layer of non-seleniferous waste and then concurrent reclamation by cover with a thin layer of topsoil and revegetation. The 4-foot thickness for encapsulation prevents bioaccumulation of selenium in the reclamation vegetation which is consumed by wildlife and livestock. In the areas where the encapsulation has been performed properly, the seleniferous waste rock has been eliminated as a source of selenium to surface water and surface water throughout the area generally meets the water quality objective (5 µg/L). However, a noted difference between the Project and the case study at the Smokey Canyon Mine is the thickness of cover. The cover is thicker at Smokey Canyon because of the necessity to control selenium concentration that approach 1,000 µg/L in an area utilized for livestock grazing. Reported selenium concentrations in the Project Area, which is in an urban area with no grazing, approach 82 µg/L, far lower than those detected in runoff at the Smokey Canyon site. The design of the non-limestone cover proposed for the EMSA, Quarry pit, and portions of the WMSA is unique to the Project Area and is based on various factors, including the geographic layout of the site, leachability of selenium from the waste rock and the limestone, availability of cover material, feasibility of placement and management, and water quality goals. The Smokey Canyon case study provides a working example of the effectiveness of isolating selenium-containing materials and reducing selenium in surface water runoff.

Another feature of the proposed reclamation plan that reflects application of current knowledge of selenium biogeochemistry is the back-filling of the Quarry pit (Draft EIR pages 4.10-34 through 4.20-36). A review of sustainability practices relative to mine waste from coal-mining operations in Alberta and British Columbia, Canada, by a Strategic Advisory Panel on Selenium Management found that when mined-out pits were back-filled and the waste rock was flooded, there was less release of selenium to downstream locations (SAPSM, 2010). This observation was based on experience with the Canadian coal mine operations and similar findings relative to waste rock from phosphate mining in Idaho (BLM, USFS, and IDEQ, 2007; Kirk et al., 2010; Kirk, 2011). In particular, the Smokey Canyon Mine (discussed above) has demonstrated success in reducing selenium concentrations by containing rock in pit backfills. The Final Environmental Impact Statement (EIS) for Smoky Canyon Mine Panels F & G (p. 2-71) references evidence from other mining locations and laboratory testing by Simplot showing a potential for lower release rates of dissolved selenium in phosphate pit backfills where certain conditions of moisture content, atmospheric gas flux with low oxygen content (anoxic), and selenium-reducing microbial communities can be developed. The research conducted by Simplot and other companies to determine if such conditions can be developed and naturally maintained in the backfills of future phosphate pits continued following the finalization of the EIS for the Smoky Canyon project and

has continued to show effectiveness of pit backfill as a measure to reduce selenium mobility to surface water and groundwater. This research and past experience supports the effectiveness of the approach described in the Draft EIR (including the amendment of the upper 25 to 50 feet of pit backfill with organic matter to enhance chemically reducing conditions) in reducing the transport of selenium through the backfilled pit to discharge into Permanente Creek.

Royal Mountain King Mine. Over 250 acres of waste rock piles have been closed using a minimum six inch soil cover placed directly on the waste rock with vegetation. The Royal Mountain King (RMK) is a metallic mine currently being closed under SMARA and CCR Title 27, located near Copperopolis, California in similar climatic conditions to the Lehigh Permanente Quarry. The covered waste rock has the potential to release arsenic. Routine surface water sampling conducted under the General Industrial Storm Water Permit and as required by the site Waste Discharge Requirements have shown that there are no significant detections of arsenic in surface water downstream of the waste rock piles. There is still ongoing discussion between the owners and the RQWCB on the basis for regulating elevated groundwater concentrations at the mine caused by both natural and mining conditions. Water quality monitoring provides supportive evidence that efforts to cover the waste rock have reduced arsenic concentrations in the stormwater runoff.

D. The Draft EIR's evaluation of treatment options and technologies to mitigate impacts from selenium is inadequate

Some comments on the Draft EIR (e.g., A4-13, A4-11, A4-14) state that the County did not explore the option of treatment adequately to conclude that treatment is not a feasible option to reduce to the significant and unavoidable water quality impact associated with interim selenium discharges. In response, the County contracted with CH2M Hill to study the feasibility of surface water treatment as a mitigation to reduce water-borne selenium to below Basin Plan Objectives (5 µg/L measured as total recoverable selenium). The two-phase study reviewed available options considering constraints of the Project site, flow rates, flow volumes, seasonal variation, selenium speciation and biogeochemistry as well as schedule and constructability. The first phase of the study (CH2M Hill, 2012a) concluded that compliance with the selenium limit may be achieved through either treatment and one or more, or a combination of, water management approaches.

Water treatment alternatives that were reviewed in this study and are able to treat to or below 5 µg/L on average are as follow:

- Biological reduction
- Passive biological treatment
- Zero Valent Iron Ion exchange

There are a variety of ways to manage selenium treatment; however, there are challenges to employing such a technology. Achieving selenium levels less than 5 µg/L in surface water discharges from the Permanente Quarry poses a challenge given that: 1) selenium removal is limited by the minimum and maximum feasible ranges of surface water design flows that can vary greatly over time; 2) selenium predominantly exists in the selenate form; 3) selenium is relatively

dilute in concentration (e.g., less than 500 µg/L, which is the optimum level required for function of most biological treatment systems); 4) removal is confounded by the physical and chemical characteristics of the water (e.g., temperature, pH, sulfate, and other chemicals); 5) treatment generally results in a concentrated by-product or residual; and 6) re-release of selenium from the residuals can occur. If significant variation in selenium levels and flows exists, this increases the complexity of where to target treatment of selenium. Generally, all the selenium treatment technologies are hydraulic dependent versus selenium mass dependent; therefore, some form of up-front water flow equalization and diversion maybe required to reduce the sizing of the selenium treatment plant, and stabilize the influent water flow rate (CH2M Hill, 2012a).

Notwithstanding these potential constraints, the second phase of the feasibility study conducted by CH2M Hill concluded that a water treatment facility to remove selenium from the Quarry discharge may be technically feasible (CH2M Hill, 2012b). The feasibility study examined a number of methodologies that have provided the most consistent treatment of selenium down to 5 µg/L levels in other industrial and mining applications, including attached growth biological (e.g., fluidized bed reactor [FBR], Advanced Biological Metals Removal [ABMet], course coal reject bioreactor [CCR], and immobilized cell bioreactor [ICB]), evaporation/crystallization, ion exchange, passive (e.g., biochemical reactor and constructed wetlands), and zero valent iron (ZVI) technologies.

The feasibility assessment selected a conceptual system design based on FBR technology as the most effective system for selenium removal at the Quarry. For such a system to be effective for selenium removal down to 5 µg/L or below, however, a comprehensive water management program would be required, accommodating for water flows both from the EMSA area and the Quarry Pit. Further, a FBR system would be expensive, with a total installed capital cost estimated to range from $31.8 million to $127 million with an annual maintenance and operations cost of over $6 million (CH2M Hill, 2012b). This estimate does not include costs for technology confirmation or pilot testing.

As there are no existing selenium treatment systems in operation with similar influent characteristics and flow variability as would be experienced at the Quarry, CH2M Hill recommends several additional studies to further engineer and test the conceptual FBR design. These are:

- Preliminary engineering
- Water quality monitoring study
- Runoff water management study
- FBR pilot study

CH2M Hill estimates that completion of the above steps would take approximately two years. If successful, then final engineering, design, and construction of a full-scale facility would take approximately another year (CH2M Hill, 2012b).

In consideration of the results of this feasibility study, the County has therefore revised Mitigation Measure 4.10-2 to require Lehigh to conduct further characterization and design studies including construction and testing of a pilot-scale treatment facility to establish whether a full-scale treatment

facility onsite is feasible. Feasibility in this context includes not only technological feasibility but also economic, legal, social, or other considerations pursuant to CEQA Guidelines section 15091(a)(3). As revised, the mitigation measure to address potential temporary significant impacts to water quality resulting from selenium concentrations in surface water runoff into Permanente Creek during interim reclamation activities would still require design and implementation of a rigorous BMP program as previously described in the Draft EIR (see Draft EIR Section 4.10, *Hydrology and Water Quality*, Mitigation Measures 4.10-2a and 4.10-2b).

The additional work to design and test a pilot-scale treatment facility would run in parallel with the BMP program for the separate phases of Reclamation in which there is a potential for increased selenium concentrations in surface water runoff. A full-scale treatment facility would be constructed only if (a) the BMPs are not fully effective at reducing selenium concentrations to 5 µg/L or less at the point of discharge into Permanente Creek, and (b) the pilot-scale test confirms that a full-scale system is feasible. The revised mitigation measure is included in Appendix F of this Final EIR.

Despite the enhancement of Mitigation Measure 4.10-2 with the requirement to design and test a pilot-scale treatment facility to remove selenium, uncertainty remains regarding the feasibility of installing a full-scale treatment system that would be adequately effective in achieving a discharge concentration at or below 5 µg/L for selenium. Even if proven feasible, the construction of such a facility could take at least three years to complete, and this does not include the time required to obtain appropriate permits from the RWQCB. Consequently, it remains possible that selenium concentrations in surface water runoff into Permanente Creek during interim reclamation activities would exceed the Basin Plan Objective of 5 µg/L. Therefore, there is no change to the Draft EIR's conclusion that the Project's incremental contribution to water quality impacts from selenium during reclamation would be both individually and cumulatively significant (Draft EIR page 6-24).

3.1.6 Master Response M6: Groundwater

Commenters and Comments Addressed

Commenter	Comments
Santa Clara Valley Water District	A3-2, A3-5
Regional Water Quality Control Board, San Francisco Region	A4-7, A4-8, A4-9, A4-13, A4-18
WVCAW and BACE	A6-18
West Valley Citizens Air Watch	O6-6, O6-8, O6-9, O6-10, O6-21
Susan Sievert	P15-12, P15-19
Libby Lucas	P17-1, P17-2, P17-13, P17-14, P17-15, P17-22
Oral Comments from the February 2nd Public Comment Meeting	PH-22, PH-41

Summary of Issues Raised

A. The Project would adversely affect groundwater quality beneath the Project Area and in the water supply aquifers in Santa Clara Valley.

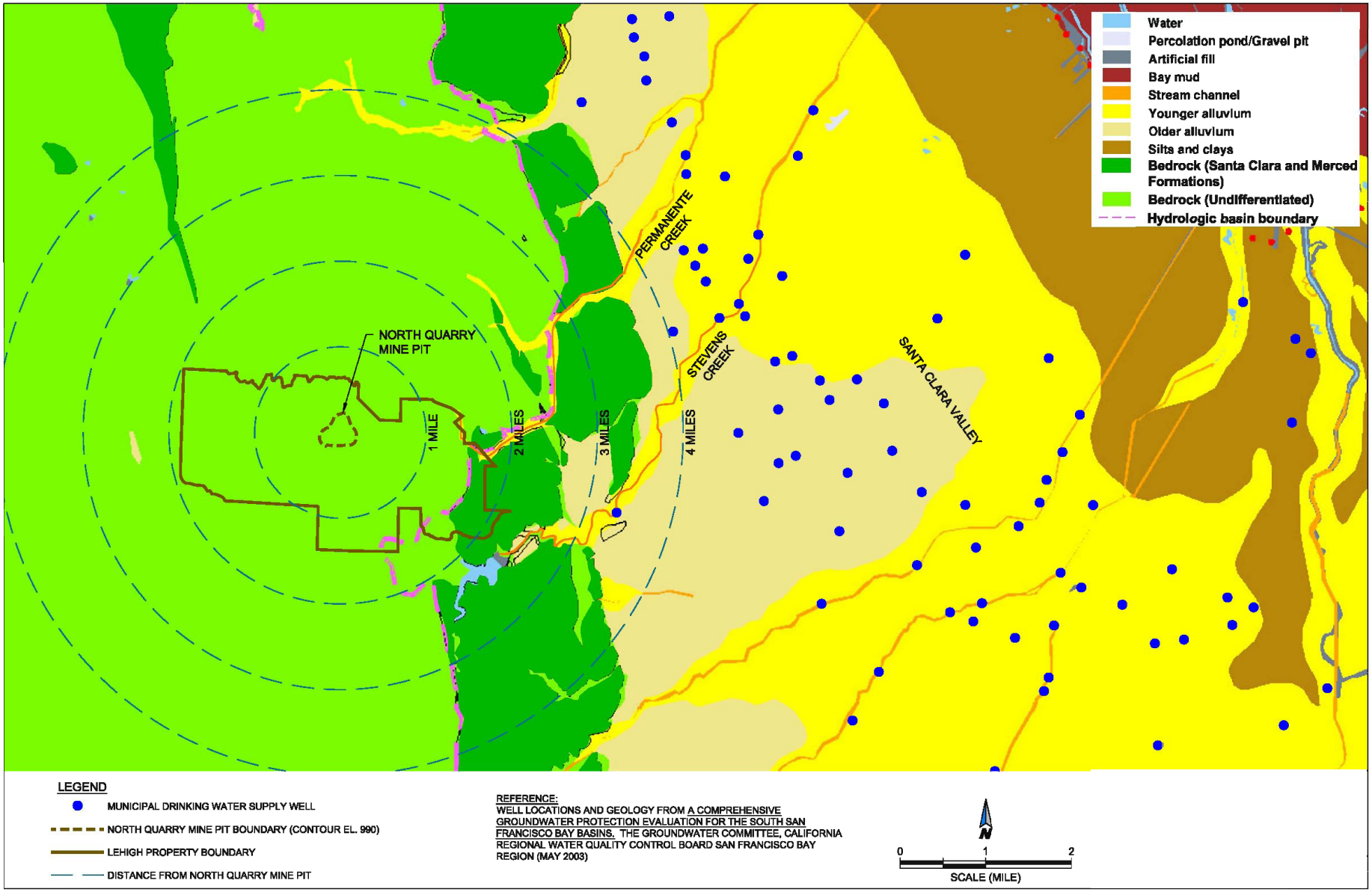
Overview

Several comments expressed concern that the Project would result in contamination of the groundwater beneath the Project Area and in the municipal supply wells located to the east in Santa Clara Valley (see, for example, comments A3-2, A3-5, A4-18, P17-1, P17-2, P17-13, P17-14, P17-15, P17-22). Two comments questioned the effects of groundwater flow and quality from backfilling the Quarry pit under the proposed RPA (comments A3-3, O6-6). Given that the discussion of these general issues are similar, they are addressed together in this Master Response. This Master Response provides further clarification of the site-specific and regional groundwater conditions and presents supplemental information regarding the predicted effects that the Project would have on groundwater quality beneath the Project site and whether the proposed changes to the onsite groundwater conditions would have an effect on the municipal groundwater supply wells located in the shallow recharge and deep primary aquifer of the Santa Clara Subbasin. The analysis relies on existing information and data provided by various studies completed by Golder Associates (Golder Associates, 2010; Golder Associates, 2011) and Strategic Engineering Sciences, Incorporated (SES, 2011; SES 2012b). Reports prepared by Golder and SES were considered the primary technical documents for the analysis of the Project impacts under CEQA, and were peer reviewed by the County and the County's consultants, ESA and Balance Hydrologics. The peer review determined that the technical reports were adequate to support the impact analysis in the Draft EIR.

A. Impact of Project on Groundwater and Drinking Water Aquifers

Regional Hydrogeologic Setting

As described in the Draft EIR, the Quarry is located in the southeastern foothills of the Santa Cruz Mountains, which are underlain by a set of volcanic and sedimentary rocks regionally referred to as the "Franciscan Complex" (Draft EIR Section 4.7.1.1, page 4.7-1and Figure 4.7-1). These rocks have been displaced by hundreds of miles; altered under high heat and pressure (i.e., variably metamorphosed); and faulted, folded, and uplifted by tectonic forces over millions of years. Along the far eastern boundary of the Project Area, the Santa Clara Formation is exposed, which is a more permeable deposit of unconsolidated to slightly consolidated conglomerate, sandstone, siltstone, and claystone. The Santa Clara Formation lies directly upon the eroded surface of the Franciscan Complex bedrock within the central and eastern portions of the EMSA (Draft EIR Section 4.7.1.1, page 4.7-5). The Santa Clara Formation bedrock contacts valley alluvium approximately 1 mile east of the Project Area in a zone of transition from the bedrock of the Santa Cruz Mountains to the alluvial deposits of the Santa Clara Valley (see **Figure 3-1**). The alluvium at the valley margin is referred to by the Santa Clara Valley Water District (SCVWD) as the Santa Clara Subbasin Recharge Area (SCVWD, 2010). Beyond the Subbasin Recharge area is the deeper confined zone of the Santa Clara Subbasin. The majority of municipal groundwater supply wells nearest the site are located over 2 miles to the east in the principal aquifer of the Santa Clara Confined Zone (Figure 3-1).



SOURCE: SES, 2011

Lehigh Permanente Quarry Reclamation Plan Amendment Final EIR

Figure 3-1

Regional Surface Geology and Locations of Drinking Water Wells

Groundwater Occurrence beneath the Project Area

As discussed in the Draft EIR, groundwater beneath the Project Area flows within bedrock of the Franciscan Complex, which is a chaotic mix of highly deformed, ancient marine sediments and crustal rocks (Section 4.10.1.3 page 4.10-16). The occurrence of groundwater throughout the Franciscan Complex is almost exclusively within secondary openings such as joints, fractures, shear zones and faults within the bedrock (Golder, 2011). Groundwater flow is mostly relegated to fractures or joints within discrete limestone and/or metabasalt blocks that are bounded by faults or fractures. Little or no hydraulic connection is believed to occur between these discrete blocks (Golder, 2011a). Groundwater flows preferentially into the Quarry pit through more permeable limestone units. However because the limestone units are of limited extent (truncated by greenstone and graywacke), the overall groundwater flow system is controlled by the lower permeability of the greenstone/graywacke units (Golder Associates, 2011).

Potential for the Project to Impact Groundwater

The Draft EIR concluded that the Project would not affect groundwater quality downstream of the Quarry (Draft EIR Section 4.10.4 page 4.10-28). This section provides additional information to clarify the conclusion in the Draft EIR.

Permanente Creek. East of the Project Area, Permanente Creek crosses the Santa Clara Subbasin Recharge Area (Draft EIR, Section 4.10.1.2 page 4.10-1). Surface flow from Permanente Creek may recharge the shallow aquifer in this area and if the surface water contains selenium and other metal concentrations above Basin Plan Objectives, there is a potential that those constituents may enter the groundwater in the Santa Clara Subbasin. According to the SCVWD, between 1973 and 2007, 359 wells in the Santa Clara Subbasin were sampled for selenium and 168 of those wells indicated a detection of selenium; of the 168 detects, only one sample from one well exceeded the Maximum Contaminant Level (MCL) for selenium (SCVWD, 2010). (An MCL is a standard set by the U.S. EPA for drinking water quality; it is the legal threshold limit on the amount of a substance, such as selenium, that is allowed in public water systems under the Safe Drinking Water Act.) Similarly, 368 wells were sampled for mercury between 1971 and 2007 and 98 wells contained mercury with 2 detects exceeding the MCL. Nickel was sampled between 1987 and 2007 and of the 323 wells sampled, 122 contained nickel but no concentration exceeded the MCL. Among other observations, these data suggest that the groundwater in the Santa Clara Subbasin is low in metals likely due to its overall size, and distance (including depth) from contaminated recharge. Permanente Creek currently contains selenium concentrations that exceed Basin Plan Objectives and there is a possibility that it has in the past and may be currently contributing selenium to the shallow and deep aquifer in the Santa Clara Subbasin. However, based on the groundwater quality data presented above for selenium in SCVWD wells, Permanente Creek does not appear to be having an effect on municipal wells located in the primary drinking aquifers in the Santa Clara Valley. The Project would significantly reduce the concentration of selenium and other metals in Permanente Creek once the Project Area is reclaimed and would contribute to the reduction of metals concentrations in Permanente Creek during the interim period of reclamation.

EMSA and WMSA. Reclamation of the EMSA would not result in degradation of groundwater quality. The EMSA would be reclaimed by regrading, recontouring, capping, and revegetating slopes to enhance runoff and reduce erosion. Details of the reclamation approach are provided in the Draft EIR (Section 2.7 page 2-13 and Impact 4.10-1, page 4.10-32).While some seepage of stormwater into the EMSA could occur, the majority of stormwater would run off the slopes and be captured by drainage conveyance facilities. Stormwater that would infiltrate into the materials in the reclaimed slopes would be either taken up by vegetation through evapotranspiration or held in the soil structure. However, any limestone materials beneath the cap of the EMSA would not be exposed to the atmosphere and potential oxidation of limestone rock (selenium is released from limestone materials through biogeochemical processes when the rock surface is exposed to water and oxygen). Therefore, limestone materials beneath the cap are not expected to release selenium to the surface water that infiltrates beneath the cover and is not taken up by evapotranspiration. Further, the EMSA is underlain by dense bedrock, which would present a barrier to vertical migration of surface water between the materials in the EMSA and deep groundwater. Soil borings drilled by Golder in the EMSA did not encounter groundwater to the depth of drilling refusal, which ranged between 32 feet and 45 feet (Golder, 2011b). As discussed above, selenium does not appear to be a contributor to a regional water quality problems in the primary confined aquifer of the Santa Clara Subbasin even though the selenium concentrations in Permanente Creek have been elevated for several decades.

WMSA reclamation would remove the overburden material from the WMSA and the material would be placed in the Quarry pit as backfill. In most locations, the WMSA area would be graded down to reflect pre-mining contours that would expose the native bedrock (mostly greenstone) (Draft EIR, Impact 4.10-1, page 4.10-34). In some areas where limestone is exposed at the surface following removal of the overburden material, the RPA requires coverage with non-limestone-bearing overburden material (approximately one foot as is required at the WMSA). The presence of the native greenstone bedrock at the surface and the cover material in limestone-exposed areas would hinder the infiltration of surface water containing selenium and other metals to the underlying groundwater.

SES Quarry Pit Geologic and Hydrologic Containment Study. Subsequent to the release of the Draft EIR, the Applicant and its water quality consultant (SES) conducted a study and prepared a technical memorandum that provided supplemental information to evaluate whether the reclamation of the Quarry pit, as proposed in the RPA, would address groundwater consistent with SMARA's performance standards for the reclamation of mine waste and tailings, and mine waste disposal units pursuant to Title 27 of the California Code of Regulations (SES, 2012b). This study was peer reviewed by the County and its consultants and was determined to be adequate to support the conclusions in the Draft EIR regarding groundwater quality (Draft EIR Section 4.10.4 page 4.10-28).

The study conducted by SES demonstrated that backfilling of the Quarry pit, as proposed in the RPA, would meet the requirements of Title 27. Mine waste disposal in an excavated quarry is consistent with Title 27 which allows containment using suitable topographic and nature features (such as a valley) and natural geologic materials. The proposed backfilled Quarry pit containment

would be equivalent to the prescriptive containment requirements of Title 27 for more conventional mining waste piles, and would be protective of ground and surface water quality (SES, 2012). The backfilled Quarry pit would be contained within a mass of bedrock of the Franciscan Complex that includes predominantly low-permeability greenstone units along sections of the mine pit perimeter where outward groundwater flow is anticipated. Relatively higher permeability limestone and metabasalt geologic units within the Quarry area have been folded, faulted, and uplifted by a series of nearby thrust faults, resulting in highly compartmentalized groundwater conditions. Groundwater flow at the site and surrounding area is mostly relegated to fractures or joints within discrete limestone and/or metabasalt blocks. Little connectivity between these blocks and low recharge (by infiltrating precipitation) in low-permeability bedrock units substantially limits groundwater migration from the vicinity of the Quarry, including the Pit. Although further design details need to be established, these are best accomplished after approval of the RPA pursuant to the express requirements of Title 27. The necessary details would then be presented to the Regional Water Quality Control Board (RWQCB) in the form of a Report of Waste Discharge (ROWD), or equivalent document.

Hydrogeologic Connection between Quarry Pit and Drinking Water Aquifer Recharge. The groundwater that infiltrates into the Quarry pit and the shallow and deep aquifers of the Santa Clara Subbasin do not share a common groundwater table. As discussed in the Draft EIR (Section 4.10.4, page 4.10-28), there are no active groundwater supply or drinking water wells within the RPA area. Groundwater modeling (Golder, 2011) indicated that the ongoing Quarry operation and proposed reclamation would not have a significant effect to groundwater levels in supply wells located along Monte Bello Ridge. Groundwater communication between the Project Area, Monte Bello Ridge, and the alluvial aquifers located to the east in the Santa Clara SubBasin is impeded by the bedrock geology underlying the Project Area and the surrounding geologic structure. The closest identifiable beneficial use aquifer that could be considered a potential water supply is located at least three miles to the east of the Quarry site in alluvial sediments of the Santa Clara Valley Subbasin (Figure M6-1). The Subbasin consists of alluvial deposits up to 1,500 feet thick, underlain by non-water bearing bedrock units similar to those of the upthrust Santa Cruz Mountains to the west. Little to no lateral flow is believed to occur between the bedrock and the alluvium. As stated by the RWQCB (RWQCB, 2003), *"Groundwater basin boundaries, from a flow perspective, are generally drawn along barriers to groundwater flow. The only boundaries that meet this definition in the South Bay are those between alluvium and bedrock."* The Quarry pit and any beneficial use aquifers are not considered to be in direct vertical or lateral hydraulic connection due to the geologic containment resulting from the generally low permeability of the bedrock surrounding the Quarry pit and the lack of communication between bedrock and alluvial groundwater regimes for which fault defined blocks result in compartmentalized groundwater units (SES, 2012).

The SES study of Quarry pit containment also evaluated the extent to which the Quarry would be able to contain groundwater (hydraulic containment). The analysis measured containment in areas where the groundwater adjacent to the Quarry pit is at a flat gradient or outward flow gradient using groundwater modeling tools (SEEP/W software code). These analyses incorporate the hydraulic conductivities of the rock formations, the closure geometry, and the backfilled Quarry

pit groundwater contours from the Golder (2010) Modflow model (SES, 2012). The hydraulic conductivity of geologic units surrounding and down gradient of the Quarry pit ranged from horizontal hydraulic conductivity of about 1.3×10^{-5} centimeters per second (cm/sec) in the greenstone to about 1.4×10^{-4} cm/sec in the limestone.

In addition, the SES study evaluated seepage rates at three segments of Quarry pit rim at post reclamation: the "inward gradient" (the segment of Quarry pit rim receiving inflow from upgradient bedrock, [62 percent of the rim area]), the "flat gradient " (the segment where inflow or outflow could occur [23 percent of the rim]), and "outward gradient" (the segment where groundwater would flow out of the pit [15 percent of the rim]). The seepage rates in these three segments were 0 feet per year (ft/yr) for the inward gradient segment, 0.06 ft/yr for the flat gradient segment, and 0.4 ft/yr for the outward gradient segment. Together, the seepage rate for these three segments averaged 0.1 ft/yr. In addition, SES performed a worst case analysis for the outward gradient segment assuming that water might be able to migrate through a 500-foot wide, slightly more fractured limestone block within the outward gradient segment. The results indicate that over this 7 percent segment of the total Quarry rim, the seepage rate could be up to 4 ft/yr (SES, 2012).

CCR Title 27 contains the regulations for disposal of mine waste that have been established in accordance with the Porter-Cologne Act and administered by the RWQCB. Under Title 27, the materials that are placed in the Quarry pit would be considered either a Group C or Group B mine waste depending on the rock type. However, the RWQCB has not classified these materials.

As explained in Response A4-4 and Draft EIR Section 2.8.6 (page 2-49) and Section 4.10.1.4 (page 4.10-22), the Draft EIR makes a reasonable assumption that mining wastes in the Project Area are Group B waste. A new Group B Waste Management Unit is typically required to include a low hydraulic-conductivity bottom liner no less than one foot thick with a maximum saturated hydraulic conductivity of 1×10^{-6} centimeters per second (cm/s) and an overlying leachate collection and removal system. This hydraulic conductivity is equivalent to a seepage rate of 1 foot per year (ft/yr) through a bottom liner that has been saturated with the overlying contained liquid. This 1 ft/yr provides a useful comparative basis when one considers the amount of waste containment that is provided by the Quarry pit, particularly since containment in a quarry is being compared to that in a waste pile on the surface (SES, 2012). The SES seepage analysis concluded that average of 0.1 ft/yr meets the prescriptive Title 27 requirement of 1 ft/yr. For the worst-case analysis described above, the average seepage rate is 0.33 ft/yr, still meeting the Title 27 requirement.

Groundwater Treatment. The Quarry pit would be backfilled with limestone and non-limestone overburden materials, currently stored onsite, in particular the WMSA (Draft EIR Impact 4.10-1, page 4.10-34). Overlying the backfill material would be a cover system that includes a one-foot thick layer of non-limestone material (i.e., greywacke, chert, and greenstone), and a minimum of three to six inches of topsoil. As predicted by groundwater modeling, the backfilled Quarry would gradually fill with groundwater (Golder, 2011a; SES, 2011) over a period of about 14 years. Eventually groundwater levels would equilibrate within the backfill and excess groundwater that

occurs would drain out to Permanente Creek (Draft EIR, Impact 4.10-1, page 4.10-34). The ultimate groundwater level in the Quarry would range from 5 to 10 feet below the surface of the final cover (SES, 2012). The groundwater in the backfilled Quarry would establish reducing conditions, which would be conducive to minimizing concentrations of dissolved selenium and other metals in the water. Reduction of selenium would cause the metal to partition from the liquid to the solid or gas phases, decreasing the dissolved concentration in water. Free selenium is a solid, and selenide forms insoluble compounds with iron, calcium, and other common mineral cations. Selenide can also form hydrogen selenide or methylated selenium which are harmless volatile compounds that de-gas. Reducing conditions will also cause reduction of other metals, such as nickel, cadmium, copper, and arsenic, in addition to selenium, drawing them out of solution and decreasing their dissolved concentrations (Draft EIR, Impact 4.10-1, page 4.10-38).

According to SES, reducing conditions already occur naturally in groundwater at the site, as demonstrated by the following observations:

- Selenium is generally absent from groundwater samples collected at the site, suggesting that reducing conditions (with respect to selenium) exist naturally, and will remove selenium from the groundwater.

- Along with relatively low nitrate concentrations, the presence of nitrite and ammonia in most of the groundwater samples collected suggest reducing conditions.

- The absence of any substantial hexavalent chromium detections in the samples, even when total chromium results indicate that chromium is present, also suggests reducing conditions. For example, the October 2009 sample from well HG-4 contained a total chromium concentration of 20 Micrograms per liter (µg/L), and the hexavalent chromium result was below its laboratory reporting limit of 0.70 µg/L.

- Groundwater at the site contains low sulfate concentrations, ranging from between 8.6 to 48 milligrams per liter (mg/L). Samples from well HG-4 are an exception, which consistently contained substantial sulfate concentrations between 380 and 770 mg/L. Low sulfate concentrations could either be caused by lack of available sulfur, or by reducing conditions.

In addition to the creation of reducing conditions through the backfill of the Pit, organic matter would be placed in the upper layers of backfill to increase the rate at which reducing conditions are reestablished. Similar to the reaction that occurs in typical garden compost, the organic matter would serve as an electron donor (reducing agent), and its decomposition would consume available oxygen.

SES anticipates that the effect of establishing reducing conditions would be to reduce selenium concentrations in discharge from the reclaimed Quarry pit into Permanente Creek to between 3 and 5 µg/L (SES, 2011). Therefore, this discharge is expected to meet existing water quality criteria including the water quality objectives promulgated in the Water Quality Control Plan for San Francisco Bay Basin, as well as EPA maximum contaminant levels.

Conclusions Regarding Groundwater in the Quarry Pit. The information provided in this Master Response clarifies and supplements information on hydrogeology and groundwater

quality provided in the Draft EIR (section 4.10.1.3, page 4.10-16, Section 4.10.4 page 4.10-27, Impact 4.10-5 page 4.10-49). The information presented in this response does not change the conclusion in the Draft EIR that the Project would not affect water supply wells, including those located along Monte Bello Ridge, and the Project would not affect groundwater quality downstream of the Quarry (Draft EIR, Section 4.10.4 page 4.10-27). Given the geologic and hydraulic containment of the Quarry pit and the treatment of water within the reducing conditions in the pit backfill, the impact to groundwater from the proposed RPA actions would be negligible. Based on the findings of this supplemental study, there is a low potential that groundwater would infiltrate out of the confines of the Quarry pit and near zero potential for the water that is contained in the reclaimed Quarry pit to migrate to the groundwater drinking wells in the Santa Clara Subbasin, over 4 miles to the east and several hundred feet deeper.

3.1.7 Master Response M7: Offsite Flooding

Commenters and Comments Addressed

Commenter	Comments
County of Santa Clara Parks and Recreation Department	A1-3
Santa Clara Valley Water District	A3-1, A3-4, A3-6
Regional Water Quality Control Board, San Francisco Region	A4-1, A4-18
Midpeninsula Regional Open Space District, Matt Baldzikowski, Resource Planner II	A6-22
Committee for Green Foothills	O2-9
Sierra Club	O3-5, O3-6
Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc.,	O4-7, O4-12, O4-13
WVCAW and BACE	O6-12, O6-21
Rhoda Fry	P14-12
Libby Lucas	P17-12

Summary of Issues Raised

A. Increased peak flows of water leaving the Project site in downstream Permanente Creek could result in flooding and hydromodification in the cities of Los Altos and Mountain View.

Response

Under existing conditions, the Quarry pit captures drainage from 361.5 acres of the Permanente Creek watershed (Draft EIR Section 10.5, page 4.10-48). The Project, if approved, would backfill the Quarry pit with materials currently stored in the WMSA to raise the base elevation of the pit from 440 above mean sea level (amsl) to 990 amsl (see, e.g., Draft EIR Sections 2.6.2 and 2.6.3, beginning on page 2-10, and Section 2.7.4, beginning on page 2-16). The drainage study released in December 2011 (Chang, 2011) proposed a small desiltation basin on the reclaimed Quarry pit

floor at elevation 990 amsl. This basin was to collect runoff from the reclaimed slopes and the floor of the backfilled Quarry pit prior to releasing it to Permanente Creek.

Draft EIR Hydrology and Water Quality Impact 4.10-4 (page 4.10-48 et seq.) concluded that the Project, even with the proposed desiltation basin, could result in increased stormwater runoff rates and on- or offsite flooding in downstream communities. The post-reclamation 100-year flow rate decreases within the Project Area due to detention basins and drainage configuration proposed under post-reclamation design, but the flow rate delivered offsite and downstream increases because storage currently provided by the Quarry pit would be eliminated when the pit is backfilled by reclamation. This potential impact of the Project was determined in the Draft EIR to be significant and unavoidable unless an onsite detention facility could be constructed that would manage increased runoff caused by the proposed reclamation of the Quarry pit, reducing excessive discharges to Permanente Creek. This basin would need to have the capacity to detain and release the 100-year flow using onsite detention ponds while optimizing groundwater infiltration (Draft EIR Impact 4.10-4, page 4.10-48 et seq.). Such a facility has now been determined to be feasible.

Subsequent to publication of the Draft EIR, the Applicant coordinated with the Santa Clara Valley Water District (SCVWD) to address the potential increased risk of offsite flooding, and designed a detention basin located on the reclaimed Quarry pit floor. The proposed detention basin, referred to as new Basin 40A, is described (and shown in Figure 3-1). Analysis by hydrologists and engineers has shown the proposed detention basin to be feasible, and sufficient to satisfy the criteria outlined in Draft EIR Mitigation Measure 4.10-4 to mitigate impacts pertaining to flooding to a less than significant level. Accordingly, the following language from the Draft EIR has been revised to clarify Mitigation Measure 4.10-4 based on the details of Basin 40A:

Page 4.10-48, top paragraph:

> **Impact 4.10-4: The Project would alter the existing drainage pattern of the site, which could cause~~result~~ increased stormwater runoff rates and on- or offsite flooding. *(Less than Significant ~~and Unavoidable~~ Impact with Mitigation Incorporated)***

Page 4.10-49, second paragraph from the top:

> The severity of this impact would be reduced and the impact could be avoided by implementing the following mitigation measure~~, if it is deemed feasible~~.

Page 4.10-49, Mitigation Measure 4.10-4 has been clarified as follows:

> **Mitigation Measure 4.10-4: Construction of Onsite Detention Facility.** The Applicant shall design and construct detention facilities that would 1) manage increased runoff caused by the reclaimed Quarry pit, 2) reduce excessive discharges to Permanente Creek, and 3) develop the capacity to detain and release the 100-year flow using onsite detention ~~ponds~~ basins while optimizing groundwater infiltration. The final drainage design shall ensure that offsite, downstream flows would not cause an increased flooding potential or lead to hydromodification effects. Design considerations for onsite detention basins shall include the following performance standards. The basin shall be designed to:

- Maintain turbidity of receiving water outflows within discharge limitations for Permanente Creek, as set forth by the San Francisco Bay Regional Water Quality Control Board Basin Plan or other more stringent, site-specific limitations set forth by the RWQCB.

- Effectively drain between storm events within the period of time specified by the Santa Clara County 2007 Drainage Manual.

- Enhance the settlement of fine sediment while limiting the potential for sediment-laden water to be discharged to Permanente Creek.

- Incorporate appropriate sediment traps (i.e., low areas that promote sediment settlement) in areas away from outflow structures to limit discharge of sediment at high flow periods.

- Control surface water inflows to the detention facility using energy reduction features (i.e., rip-rap aprons, vegetated swales) to reduce inflow velocity and agitation of sediment within the basin.

- Infiltrate surface water to the extent practicable while accounting for and protecting the local groundwater condition and water quality.

In addition to the detention facilities for the Quarry pit, the Applicant shall ensure that the desiltation ponds proposed in other smaller project areas such as the EMSA, are engineered to function as detention basins and manage 100-year peak flow to the extent practical. The Applicant shall also consider a broader watershed approach and consult with SCVWD on ways to detain peak flows offsite in relation areas of existing flooding and to the current SCVWD flood control improvement project.

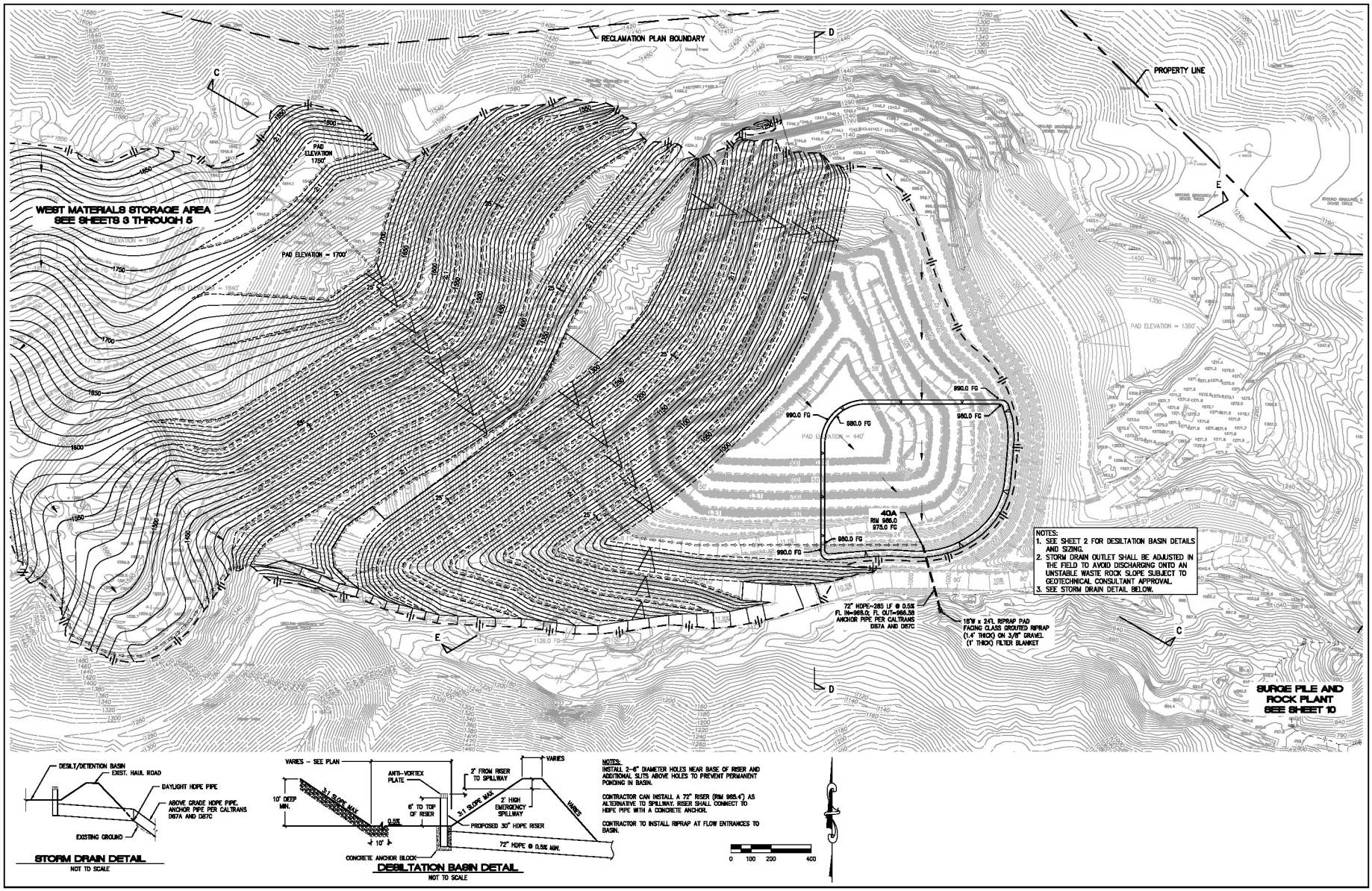
Page 4.10-49, third paragraph from the top:

Significance after Mitigation: Implementation of Mitigation Measure 4.10-4 would provide the necessary facilities to reduce offsite stormwater discharge to Permanente Creek during the 100-year storm event~~. However, as of the time that this EIR was published, it is unknown if a basin or other detention measure of sufficient size could be feasibly constructed onsite to reduce this impact~~ to less than significant levels. ~~If this is not determined to be feasible, the impact would remain significant and unavoidable.~~

Documentation of this analysis is provided below.

A. Description of Onsite Detention Facility

The new onsite detention facility, referred to as Basin 40A, has been designed to function as a desiltation and detention basin and therefore, the proposed volume is much greater than the previous desiltation basin described by Chang (2011). Basin 40A would be approximately 700 feet by 1000 feet in plan dimension and approximately 10 feet deep. As shown in **Figure 3-2**, the basin would occupy about half of the proposed reclaimed Quarry pit surface and the outside extent would follow the curvature of the proposed reclaimed slopes. The berm of the basin would be trapezoidal with the interior slopes set at a maximum 3:1 horizontal to vertical (H:V) and the



SOURCE: Chang Consultants, 2012

Lehigh Permanente Quarry Reclamation Plan Amendment Final EIR

Figure 3-2

Basin 40A Onsite Detention Facility

exterior slopes would vary depending on location. The top of the berm also would vary in width depending on location. The bottom of the basin would be composed of compacted backfill material but would not be lined with an impervious membrane.

Some infiltration would occur; however, because Basin 40A would be designed to temporarily store runoff water and release it over the period of hours or days through an outflow structure; the amount of longer-term ponding would be inconsequential. In addition, the bottom of the basin would be sloped to further avoid excessive ponding between storm events and during dry periods. Based on the preliminary design of Basin 40A (Chang, 2012), water would be released from the basin via a 6-foot vertical riser connected to a 72-inch high-density polyethylene (HPDE) discharge pipe set at a 0.5 percent minimum slope. The discharge pipe would be approximately 400 feet long and release water into a discharge area composed of an 18-foot by 24-foot rip-rap (1.4 feet thick) pad underlain by a filter blanket composed of 3/8-inch gravel at a thickness of 1 foot. Water exiting the drainage area then would enter Permanente Creek.

Construction of Basin 40A would take place during Phase 3 of the Project and would not require a workforce or equipment above and beyond what is described Draft EIR Chapter 2, *Project Description*, and analyzed in the resource sections in Chapter 4, *Environmental Analysis*. The system would work by gravity, and no pumps or other mechanized equipment would be required. Water exiting the drainage area and entering Permanente Creek would do so at the existing Basin 40 location. Basin 40 would be removed. Some long term maintenance of the pond would likely be required to remove sediment and reestablish drainage slopes.

B. Analysis of Potential Impacts Created by Construction of Basin 40A

Aesthetics, Visual Quality, and Light and Glare

Basin 40A would not be visible to the public viewer groups identified on Draft EIR page 4.1-9, including motorists along major and scenic roadways, visitors to recreational areas, and visitors to scenic vistas. As such, Basin 40A would not change the Draft EIR impact conclusions pertaining to scenic vistas (Impacts 4.1-1 and 4.1-2, page 4.1-40 et seq.), scenic roadways (Impacts 4.1-3 and 4.1-4, page 4.1-43 et seq.), or the visual character or quality of the Project Area (Impacts 4.1-5 and 4.1-6 (page 4.1-45 et seq.). Construction, operation, and maintenance of Basin 40A would not create a new source of light or glare, and thus would not change the impact conclusions pertaining to light and glare (Impacts 4.1-7 and 4.1-8, page 4.1-48 et seq.). Because Basin 40A would not include construction or major modification of a building, structure, or development, it would not conflict with the Guidelines for ASA, applicable General Plan policies, or Zoning Ordinance Provisions (significance criteria e) and f).) Therefore, construction, operation, and maintenance of Basin 40A would not affect the impact conclusions contained in Draft EIR Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*.

Agriculture and Forestry Resources

Basin 40A would be located within the Project Area analyzed in the Draft EIR, on land that is not designated as, used as, or zoned as farmland, forest land, or land under a Williamson Act Contract. As such, construction, operation, and maintenance of Basin 40A would not change the

impact conclusions in Draft EIR Section 4.2, *Agriculture and Forestry Resources*, for significance criteria a) through f).

Air Quality

The construction of Basin 40A would not require additional construction equipment beyond that already included in the air quality analysis (see Draft EIR Appendix B); consequently, there would be no new or different criteria air pollutants or toxic air contaminants emitted during the construction of Basin 40A than already were analyzed in the Draft EIR. As described on page 4.3-19 of the Draft EIR, with the exception of annual and daily particulate matter (PM10 and PM2.5) emissions, all other criteria pollutant emissions would be highest during reclamation Phase 1, during which emissions associated with ongoing mining operations also would occur. Annual and daily PM10 and PM2.5 emissions would be highest during reclamation Phase 2. Emissions during reclamation Phase 3 would be substantially lower than in either Phase 1 or Phase 2. Because Basin 40A would be constructed during Phase 3 of the Project, its construction emissions would not add to the maximum incremental emissions of criteria pollutants shown in Draft EIR Tables 4.3-3 and 4.3-4 and, therefore, would not affect the conclusions in Draft EIR Section 4.3 with regard to Impact 4.3-1. Similarly, the incidental Project traffic that might occur in Phase 3 with construction of Basin 40A would be considerably less than that during Phases 1 and 2, and, therefore, the conclusion in Draft EIR Section 4.3 with regard to Impact 4.3-2 (CO emissions on roadways and at intersections in the Project vicinity) would not be affected.

The Draft EIR health risk assessment relies on the maximum emission rate of toxic air contaminants that would occur during each phase of the Project (see Draft EIR Appendix E, Table 1). Maximum annual emissions of diesel particulate matter (DPM, the toxic air contaminant responsible for the vast majority of the Project's incremental health risk) in Phase 3 are shown to be less than one-tenth that of Phase 1 and one-fifth that of Phase 2. Further, the incremental DPM emissions that might occur as a result of Basin 40A construction in Phase 3 would be expected to be small in comparison with the total Phase 3 DPM emissions. Consequently, any increase in incremental health risk from the construction of Basin 40A in Phase 3 would be inconsequential, and the impact conclusions in Draft EIR Section 4.3 with regard to health risk would not be affected.

Finally, operation of Basin 40A would not result in the release of any air emissions, and any vehicle trips required for periodic maintenance of the basin would be indistinguishable from those infrequent trips that would be required for maintenance of the entire reclaimed area. Therefore, the construction, operation, and maintenance of Basin 40A would have no effect on the conclusions of Draft EIR Section 4.3, *Air Quality*, with regard to significance criteria a) through e).

Biological Resources

Implementation of Mitigation Measure 4.10-4 includes the creation of Basin 40A, which would be constructed within what is currently the active quarry pit. Creation of this feature would not require disturbance of any habitats potentially supporting special-status species, sensitive natural communities, jurisdictional wetlands, or protected trees. Therefore, construction, operation, and maintenance of Basin 40A would not have the potential to cause a significant impact related to

Draft EIR Section 4.4, *Biological Resources*, significance criteria e), f), or g). With regard to the potential for Basin 40A to provide habitat for California Red Legged Frog (CRLF) such that periodic maintenance of the basin could then directly or indirectly impact that species, the Applicant has incorporated the following Applicant Proposed Measures (APMs) as part of the Project which would also be applicable to Basin 40A and would result in a less-than-significant impact to CRLF (WRA, 2011):

(1) To minimize disturbance to dispersing or foraging CRLF, all grading activity shall be conducted during the dry season, generally between May 1 and October 15, or before the onset of the rainy season, whichever occurs first, unless exclusion fencing is utilized. Construction that commences in the dry season may continue into the rainy season if exclusion fencing is placed around the construction zone to keep the frog from entering the construction area.

(2) Pre-construction surveys for CRLF shall be conducted prior to construction activities. If CRLF are observed in the construction area or access areas, they shall be removed from the area by a USFWS permitted biologist and temporarily relocated to nearby suitable aquatic habitat.

(3) Because dusk and dawn are often the times when CRLF are most actively foraging, all restoration activities shall cease one half hour before sunset and shall not begin prior to one half hour after sunrise. Additionally, restoration activities shall not occur during rain events, as CRLF are most likely to disperse during periods of precipitation.

Cultural Resources

Basin 40A would be located within the Project Area analyzed in the Draft EIR. Construction of Basin 40A would not result in additional disturbance to the potential Kaiser Permanente Quarry Mining District beyond what is analyzed under Draft EIR Section 4.5, *Cultural and Paleontological Resources*, Impact 4.5-1. Basin 40A would be located in an area that has been substantially disturbed by mining and evaluated in the Draft EIR; construction, operation, and maintenance of Basin 40A would not change the impact conclusions pertaining to archaeological resources (Impact 4.5-2); paleontological resource, site, or unique geological features (Impact 4.5-3); or human remains (Impact 4.5-4).

Energy Conservation

Basin 40A would be constructed during Phase 3 of the Project using only the vehicles currently at the Quarry. Therefore, even with Basin 40A, the Project still would comply with existing energy standards, including, but not limited to, the General Plan standards and policies that call for energy conservation efforts in the industrial sector, reduction in transportation energy demand and oil-dependency, and modification of industrial processes to take advantage of energy savings and to reduce operational costs. Consequently, the Project would cause no impact related to Draft EIR Section 4.6, *Energy Conservation*, significance criterion b).

Construction and maintenance of Basin 40A would require no additional electricity usage above that already analyzed for the Project in Draft EIR Section 4.6. The consumption of diesel and gasoline fuels may change slightly from the quantities analyzed in Draft EIR Section 4.6, but the

increase, if any, would be incrementally miniscule as the work required to construct the basin would be indistinguishable from the work that would have been done in that same area of the Quarry pit to construct the finished grade without Basin 40A. No new materials would be imported to form the basin, so the total amount of material handled in Phase 3 would be unchanged from that previously analyzed. Further, vehicle trips required for periodic maintenance of the basin would be indistinguishable from those infrequent trips that would be required for maintenance of the entire reclaimed area. Therefore, the construction, operation, and maintenance of Basin 40A would have no effect on the conclusions of Draft EIR Section 4.6, *Energy Conservation*, with regard to criterion a).

Geology, Soils, and Seismicity

The creation of a 10-foot deep detention basin on the floor of the final reclaimed Quarry pit (as opposed to a small desiltation basin that originally was proposed) would not change the conclusions in Draft EIR Section 4.7, *Geology, Soils, and Seismicity*. The detention basin would be constructed entirely within overburden materials used for the Quarry backfill (i.e., there would be no cuts into quarry walls), and the maximum slope inclination along the rims of the detention basin would not exceed 3:1. Prior geotechnical characterization of overburden rock slopes have found them to be stable at even greater slope gradients (such as within the EMSA where slopes would be a maximum of 2:1 between benches). The Applicant's geologic consultant, Golder Associates, reviewed the geotechnical aspects of the proposed Basin 40A and concluded that the basin would not result in a discernible impact or effect on the geotechnical elements of the Quarry backfill and slope buttress design. The County and its consultants reviewed the Golder opinion on geotechnical stability and concur with its findings. Golder stated in its report that the change in the basin size does not remove any rock mass from the portions of the buttress that are stabilizing the Quarry slopes and, therefore, its construction would not have an effect on the slope stability of the final reclamation plan (Golder Associates, 2012). The design would be in compliance with SMARA standards and would not worsen the risk of slope failures in other portions of the reclaimed Quarry pit. The proposed detention basin would not have a bearing on other geologic topics analyzed in the Draft EIR, except that the increased size of the basin would increase its effectiveness in removing suspended sediment from runoff prior to discharge into Permanente Creek. Therefore, there would be no change to the conclusions in Draft EIR Section 4.7, *Geology, Soils, and Seismicity*, with regard to significance criteria a) through g).

Greenhouse Gas Emissions

As described on page 4.8-12 of the Draft EIR, the analysis determined that GHG emissions would be highest during Phase 1 of the Project, during which emissions associated with ongoing mining operations would also occur. Because any GHG emissions associated with construction of Basin 40A would occur during Phase 3 and the difference in construction activities associated with achieving the finished grade at the Quarry pit, as previously assumed, versus construction of Basin 40A would be incrementally inconsequential, there would be no change to the conclusions in Draft EIR Section 4.8, *Greenhouse Gas Emissions*, with regard to significance criteria a) and b).

Hazards and Hazardous Materials

Basin 40A would be located entirely within the Project Area analyzed in the Draft EIR; as such, it would not change the impact determinations related to hazards in proximity to schools, hazardous materials sites, or airports. Basin 40A would not impair implementation of or physically interfere with the County Emergency Operations plan, for the same reasons described for the Project on Draft EIR page 4.9-13. Construction, operation, and maintenance of the 10-foot deep detention basin on the floor of the final reclaimed Quarry pit would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Basin 40A would not include a new parking area, access points, residential uses, buildings, roads, or septic systems, and as such would not result in a safety hazard due to a proposed site plan or hazards from construction of such features on slopes of 20 or 30 percent. Construction, operation, and maintenance activities associated with Basin 40A would not change the kinds or amounts of hazardous materials associated with Project construction or operation, and as such would not change the Draft EIR impact conclusions pertaining to the routine transport, use, or disposal of hazardous materials, or hazards to the public or environment through reasonably foreseeable upset and accident conditions. Therefore, Basin 40 would not change the impact conclusions in Section 4.9, *Hazards and Hazardous Materials*, related to significance criteria a) through g), and i) through k).

Significance criterion h) (Impact 4.9-3, Draft EIR page 4.9-16), pertains to the Project providing breeding grounds for vectors. Basin 40A would create a periodic source of standing water in the Project Area. To address this, the following language from the Draft EIR (page 4.9-16 to 4.9-17) has been updated:

> **Impact 4.9-3: Sedimentation <u>and detention</u> basins planned for erosion <u>and flood</u> control at the Project site could provide breeding grounds for vectors. *(Less than Significant Impact)***
>
> To control drainage from the site<u>,</u> ~~and~~ prevent sedimentation of receiving water bodies, <u>and prevent downstream flooding,</u> the Applicant would install new temporary sedimentation basins for storm water runoff in the Quarry pit and along the south-facing slope of the WMSA<u>, and a detention basin in the Quarry pit</u>. If not properly managed, these ~~sedimentation~~ basins could provide a source of standing water that could provide breeding grounds for mosquitoes, which can be vectors for disease transmission.
>
> As proposed, the ~~siltation~~ <u>sedimentation</u> basins would be designed to drain completely after storm events<u>. Because Basin 40A, the proposed detention basin, would be designed to temporarily store runoff water and release it over the period of hours or days, the amount of longer-term ponding would be inconsequential. In addition, the bottom of Basin 40A would be sloped to further avoid excessive ponding between storm events and during dry periods.</u> ~~and, t~~<u>T</u>herefore, <u>the proposed basins</u> would not contain standing water for sufficient periods of time to provide breeding grounds that would promote mosquito population growth. ~~Similarly, sedimentation basins would not contain vegetation that could be an attractant to mosquitoes.~~ The~~se~~ proposed sedimentation basins would operate until site vegetation is established and then would be reclaimed as described in the Project Description. <u>Some long term maintenance of Basin 40A would</u>

> likely be required to remove sediment and reestablish drainage slopes. However, over time, the amount of sediment trapped by the basin would likely decrease considerably as vegetation is established over the surrounding reclaimed slopes.

Basin 40A would be operated and maintained in accordance with the facility's SWPPP, and therefore its operation and maintenance is not anticipated to cause a significant impact related to the breeding of mosquitoes. Therefore, Basin 40A would not cause a new significant impact or a substantial increase in the severity of an impact related to hazards and hazardous materials criterion h).

Hydrology and Water Quality

Basin 40A would provide adequate detention volume to accommodate surface water runoff generated during a 100-year flood event. The proposed expanded basin would provide the capacity needed to replace the detention volume provided by the Quarry pit under baseline conditions and would alleviate the downstream flooding potential once the Quarry pit is backfilled under the RPA. The basin would be designed to discharge water to Permanente Creek at a constant, controlled rate and therefore would not alter the flow conditions or lead to hydromodification in Permanente Creek. According to the revised drainage plan (Chang Consultants, 2012), the surface water modeling completed to analyze Basin 40A shows that the total 100-year flow rate (235 cfs) generated from the tributary area would be attenuated to 6 cfs. The hydrologic analysis concludes that Basin 40A, in concert with detention provided by the other proposed basin in this area of the Project site, would reduce the post-reclamation 100-year flow rate onsite and mitigate potential for flooding downstream and offsite.

The construction and use of Basin 40A would not result in a violation of water quality standards or otherwise degrade water quality because of its proposed dual function as a desiltation basin. Sediment would be captured in the basin and would settle out. Some long term maintenance of the pond would likely be required to remove sediment and reestablish drainage slopes. However, over time, the amount of sediment trapped by the basin would likely decrease considerably as vegetation is established over the surrounding reclaimed slopes. Further, based on the erosion controls proposed under the RPA and considering the coarse-grained materials present on the site, the sediment that enters the basin would be expected to rapidly settle out of the water column, thereby reducing the amount of fine grain sediment that would be discharged to Permanente Creek.

The analysis for Basin 40A demonstrates that an adequately sized basin could be feasibly constructed to reduce the potential flooding impacts. Final design of the basin would be required to comply with the Santa Clara County Drainage Manual and final construction specifications would require County approval prior to construction.

Cumulative Impact

As stated in Chapter 6 of the Draft EIR (Section 6.2.10, Page 6-23), site drainage and flooding is considered a significant and unavoidable impact of the Project because the backfilling the Quarry would result in higher storm water flows leaving the site and entering Permanente Creek. This additional flow would cause an exceedance of the 100-year peak flow in a FEMA 100-year flood

hazard zone located on the site and could exacerbate a flooding condition downstream and offsite. The Draft EIR concludes that, when considered in combination with the impacts of other projects in the cumulative scenario, the Project's incremental contribution to downstream flooding would be cumulatively considerable unless it is feasible to construct a detention basin capable of managing sediment and detaining peak flows from a 100-year event. Basin 40A would eliminate the significant and unavoidable impact and reduce the Project impact to less than significant with mitigation incorporated. Reducing the impact significance by the implementation of Mitigation Measure 4.10-4 eliminates the cumulative impact because the Project no longer would have a cumulatively considerable contribution to downstream or regional flooding, with or without the Permanente Creek Flood Protection project. Therefore, the text of Chapter 6, Section (6.2.10) has been revised:

Section 6.2.10, pages 6-24 to 6-25, second full paragraph through the end of the section:

> Regarding drainage, the Permanente Creek Flood Protection Project (Cumulative Project #27) also would affect flow rates to Permanente Creek. However, the Permanente Creek Flood Protection Project is likely to improve flow and reduce the potential of localized flooding along the upper reaches of Permanente Creek. Under the proposed Project, implementation of Mitigation Measure 4.10-4 would ensure that impacts to Permanente Creek and subsequent downstream flooding would be less than significant with mitigation incorporated. Therefore, when considered in combination with the impacts of other projects in the cumulative scenario, the Project's incremental contribution to downstream flooding would be less than significant.
>
> ~~Aside from water quality impacts, the issue of drainage is perhaps most profound because the Project, when completed, would result in higher storm water flows leaving the site and entering Permanente Creek. This is in large part due to the backfilling of the Quarry pit, which under baseline conditions, acts like a large detention basin for the majority of site drainage. Once filled, stormwater that would otherwise be detained in the Quarry pit would be discharged to Permanente Creek. The impact of drainage is considered significant and unavoidable unless it is feasible to construct a detention basin capable of managing sediment and detaining peak flows from a 100-year event. While various detention basins are proposed for the Project and the drainage plan is designed to meet SMARA and Santa Clara County Drainage standards, the potential of downstream flooding would still exist unless mitigated.~~
>
> ~~**Impact 6-2: Incremental Project-specific activities could contribute to downstream flooding.** ***(Significant and Unavoidable Impact)***~~
>
> ~~The Permanente Creek Flood Protection project is also likely to improve flow and reduce the potential of localized flooding along the upper reaches of Permanente Creek. Following Phase 3 of Project implementation, when storm flows no longer are captured in the Quarry pit, they would be discharged to Permanente Creek. This additional flow would cause an exceedence of the 100-year peak flow in a FEMA 100-year flood hazard~~

~~zone located on the site and could exacerbate a flooding condition downstream and offsite. While the Permanente Flood Control Project may lessen the effects of future flooding in this reach of Permanente Creek, it is not known whether it would ameliorate flooding that could result from the increased 100-year peak flows released from the Project Area after the completion of reclamation. Therefore, when considered in combination with the impacts of other projects in the cumulative scenario, the Project's incremental contribution to downstream flooding would be cumulatively considerable.~~

> ~~**Mitigation Measure 6-2: Construction of Onsite Detention Facility.** The Applicant shall design and construct facilities that would manage runoff on the site, reduce excessive discharges to Permanente Creek and develop the capacity to detain and release the 100-year flow using on-site detention ponds while optimizing groundwater infiltration. Desiltation ponds proposed in other smaller Project Areas such as the EMSA, also shall be engineered to function as detention basins and manage 100-year peak flow to the extent practical. These mechanisms would be in place to control and manage 100-year flows to Permanente Creek and verify that these flows are not are increased.~~

~~**Significance after Mitigation:** Significant and unavoidable. Implementation of Mitigation Measure 6-2 would provide the necessary facilities to reduce offsite storm water discharge during the 100-year storm event. However, because it is unknown whether this mitigation measure is feasible, the impact would remain significant and unavoidable.~~

Land Use and Planning

Basin 40A would be located within the Project Area analyzed in the Draft EIR; it would not change the land uses proposed by the Project, physically divide a community, be located within a land use or zoning designation not analyzed in Draft EIR Section 4.11, or conflict with any with applicable land use plans, policies, or regulations. There would be no change to the conclusions in Draft EIR Section 4.11, *Land Use and Planning*, with regard to significance criteria a) through d).

Mineral Resources

Basin 40A would modify how the Quarry pit would be backfilled; however, it would not reduce the overall availability of mineral resources in the Project Area, for the reasons explained under Impact 4.12-1 (Draft EIR page 4.12-5), including: (1) continued mining in the Quarry pit is becoming infeasible from a geotechnical standpoint, and (2) Basin 40A would not preclude future mineral resource extraction opportunities on the site. Therefore, the construction, operation, and maintenance of Basin 40A would have no effect on the conclusions of Draft EIR Section 4.12, *Mineral Resources*, with regard to significance criteria a) and b).

Noise

The noise impact analysis in Draft EIR Section 4.13 was conducted separately for each phase of the Project. Because Basin 40A would be constructed entirely during Phase 3, the noise analysis for Phases 1 and 2 and the Draft EIR conclusions in that regard are unaffected. The noise analysis in the Draft EIR for Phase 3 (Draft EIR Section 4.13, page 4.13-25 et seq.) considered the type of heavy equipment that would operate during that phase and its proximity to the nearest noise-sensitive

receptors, which are residences at the end of Balboa Road to the southeast of the Project Area closest to the Rock Plant. Because construction of Basin 40A would not require any new pieces of construction equipment, and the construction activity would occur no closer to the Balboa Road residences than was already considered in the analysis, there would be no change in the maximum Project-related noise exposure for Phase 3 and the conclusion of Impact 4.13-3 would not be affected. Therefore, the construction, operation, and maintenance of Basin 40A would have no effect on the conclusions of Draft EIR Section 4.13, *Noise*, with regard to significance criteria a) through d).

Population and Housing

Construction of Basin 40A would not change the number of workers required for Project construction, nor would it propose new homes or businesses, extend infrastructure onsite, or displace any housing or people. As such, construction, operation, and maintenance of Basin 40A would have no effect on the conclusions of Draft EIR Section 4.14, *Population and Housing*, with regard to significance criteria a) and b).

Public Services

Construction of Basin 40A would not result in the construction of new or expanded existing government facilities for public services, nor would it change the number of workers required for Project construction discussed in the Draft EIR. Therefore, it would not cause an increased demand or need for fire protection police protection, school facilities, parks, or other public facilities, beyond what was discussed in Draft EIR Section 4.15. Consequently, there would be no change to the conclusions in Draft EIR Section 4.15, *Public Services*, pertaining to significance criterion a).

Recreation

Basin 40A does not propose any recreational facilities, nor would it change the number of workers required for Project construction described in the Draft EIR. As such, it would not cause physical deterioration of existing facilities, or indirectly require construction or expansion of recreational facilities. Basin 40A would not result in the loss of open space rated as high priority for acquisition in the "Preservation 2020" report, and it would not interfere with access to nearby recreational areas. Indirect impacts to users of the parks, open space preserves, and trails surrounding the Project Area would not change from that already described in the Draft EIR for the reasons described above under Aesthetics, Air Quality, and Noise. There would be no change to the conclusions in Draft EIR Section 4.16, *Recreation*, with regard to significance criteria a) through d).

Transportation and Traffic

Construction of Basin 40A would take place during Phase 3 of the Project and would not require a workforce or equipment above and beyond what is described Draft EIR Chapter 2, *Project Description*, and analyzed in Draft EIR Section 4.17. Construction, operation, and maintenance of Basin 40A would not alter the transportation network in the vicinity of the Project Area, and would not change traffic volumes or flow conditions analyzed in Draft EIR Section 4.17, including travel patterns, trip generation, transportation conditions with Project activities, traffic

safety, or wear-and-tear on area roadways. Therefore, there would be no change to the conclusions in Draft EIR Section 4.17, *Transportation/Traffic*, with regard to significance criteria a) through h).

Utilities and Service Systems

Construction of Basin 40A would not change the amount of wastewater or solid waste generated onsite, or water used onsite. It would thus not change the wastewater needs, wastewater treatment facilities, water supply needs, or solid waste disposal needs described and analyzed in Draft EIR Section 4.18, *Utilities and Service Systems,* and there would be no change to the conclusions in with regard to significance criteria a), b), d), e), f), or g). Construction of Basin 40A would alter the stormwater treatment facilities described under significance criterion c), and analyzed under Impact 4.18-1 (Draft EIR page 4.18-6 et seq.) Given the modifications to Mitigation Measure 4.10-4, the following text from the Draft EIR has been revised:

Page 4.18-7, Table 4.18-1:

Basin	Proposed Location	Description
40A	Quarry pit final floor (990 foot elevation)	*Basin floor length*: ~~86~~1,000 feet *Basin floor width*: ~~43~~700 feet *Storage volume*: ~~22,892~~ 4,340,000 cubic feet (cf) *Minimum outlet pipe*: 72-inch HDPE ~~*Minimum d*~~*Depth*: 10 feet (approx.) This ~~sedimentation/de-siltation pond would release flows to PCRA Subarea 6 via pipes installed under the access road. The outfall pipe would release to engineered grouted rip-rap pads, which would dissipate the outflow energy.~~ desiltation and detention basin would temporarily store runoff water and release it over the period of hours or days to a discharge area composed of an 18-foot by 24-foot rip-rap pad 1.4 feet thick underlain by a 1-foot-thick filter blanket of 3/8-inch gravel. Water exiting the drainage area would then enter Permanente Creek.

Page 4.18-7, bottom paragraph:

> …~~The p~~Proposed ponds 40B, 40C, and 40I would be installed temporarily (Chang, 2011), maintained until areas of disturbance are revegetated sufficiently to allow for self-sustained erosion control, and then would be reclaimed. Natural reclamation would occur over a period of years, meaning that they would be allowed to accumulate sediment, and revegetation would occur (WRA, 2011). Pond 40A would require some long-term maintenance to remove sediment and reestablish drainage slopes. However, over time, the amount of sediment trapped by the basin would likely decrease considerably as vegetation is established over the surrounding reclaimed slopes ~~be actively revegetated with wetlands vegetation to serve as eventual wetland habitat as described in the Revegetation Plan (WRA, 2011)~~.

Page 4.18-8, analysis under Impact 4.18-1:

> Construction of the proposed stormwater drainage facilities would be accomplished during the dry season in previously-disturbed areas, away from sensitive environmental areas. The construction of sedimentation and detention basins would involve the use of backhoes and excavators to excavate stockpiled material and, in the case of Ponds 40B and 40C, the installation of a concrete or other impervious lining.

Despite the clarifications to the design details of Basin 40A, there would be no change to the conclusions in Draft EIR Section 4.18, *Utilities and Service Systems*, with regard to significance criterion c) (Impact 4.18-1, page 4.18-8). All construction activities associated with Basin 40A would be in accordance with the provisions of an industrial stormwater permit and the SWPPP's construction-related best management practices. The proposed detention basin would be an integral part of the proposed RPA, for which the potential environmental effects from construction and implementation are identified and analyzed in this EIR. Further, the purpose of Basin 40A is to reduce or avoid impacts from surface water runoff, and thus its construction would reduce the potential for environmental harm. Accordingly, Basin 40A would not cause a new significant impact or a substantial increase in the severity of an impact related to criterion c).

3.2 Responses to Written Comments from Public Agencies

Letter A1

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org

MEMORANDUM

DATE: February 1, 2012

TO: Marina Rush, Planner
County Planning Office

FROM: Kimberly Brosseau, Park Planner
County Parks Department

SUBJECT: Draft Environmental Impact Report for the Mining Reclamation Plan Amendment for Permanente Quarry (SCH# 2010042063))

The County Parks Department has reviewed the Draft Environmental Impact Report (EIR) for the Permanente Quarry for a Mining Reclamation Plan Amendment for issues related to park use, trails, and implementation of the Countywide Trails Master Plan and submits the following comments.

The County Parks Department noted that the earlier comments that were submitted on September 1, 2011 were not entirely addressed nor were all the requested additions made in the Draft EIR. Attached is a copy of the original comment letter.

The Draft EIR notes "trail route within private property." The Trails Element of the Park and Recreation Chapter of the 1995-2010 County General Plan indicates a trail alignment nearby the subject parcel. Per the General Plan, Countywide Trail Route R1-A (*Juan Bautista de Anza NHT*) is located northeast of the project site. The *Santa Clara County Countywide Trails Master Plan Update*, which is an adopted element of the General Plan, designates the countywide trail as a trail route within other public lands for hiking, off-road cycling, and equestrian use. The Draft EIR should revise the wording to replace "trail route within private property" with "trail route within other public lands. This trail route provides an important connection between the City of Cupertino and Rancho San Antonio County Park. The City of Cupertino's Final Stevens Creek Trail Feasibility Study also indicates this trail route as an important connection between Rancho San Antonio County Park and the City of Cupertino. A1-1

Surface Hydrology, Drainage and Water Quality

The EIR for the Reclamation Plan Amendment should evaluate potential hydrological impacts resulting from any grading, recontouring and seeding of the site. The EIR should also discuss if there are any proposed modifications to the riparian corridor or Permanente Creek. The Reclamation Plan Amendment A1-2

should also take into account adequate erosion control measures and proposed grading and the potential impacts it may have to the adjacent County parkland and trails. A1-2

The Santa Clara Valley Water District (SCVWD) is currently preparing a Final EIR for the Permanente Creek Flood Protection Project, which includes a proposed flood detention basin facility to be constructed, operated and maintained at Rancho San Antonio County Park Diocese Property as the Project's Recommended Alternative. This Permanente Creek Quarry's Reclamation Plan should evaluate future hydrological modifications that may impact the District's Permanente Creek Flood Protection Project for portions of Permanente Creek through Rancho San Antonio County Park. A1-3

Air Quality

The EIR for the Reclamation Plan Amendment should evaluate any potential air quality impacts as a result of the quarry use and associated truck trips generated to and from the quarry on the adjacent Rancho San Antonio County Park and impacts that may have on park users. A1-4

The County Parks and Recreation Department appreciates the opportunity to provide comments on the Draft EIR for the Permanente Quarry Reclamation Plan Amendment. If you have any questions regarding this letter, please contact me at (408) 355-2230 or by email at: Kimberly.Brosseau@prk.sccgov.org.

Sincerely,

Kimberly Brosseau
Park Planner

cc: Elish Ryan, Acting Senior Planner
Don Rocha, Natural Resources Management Program Supervisor
Ana Ruiz, Midpeninsula Regional Open Space District

County of Santa Clara

Parks and Recreation Department

298 Garden Hill Drive
Los Gatos, California 95032-7669
(408) 355-2200 FAX 355-2290
Reservations (408) 355-2201
www.parkhere.org

MEMORANDUM

DATE: September 1, 2011

TO: Marina Rush, Planner
County Planning Office

FROM: Kimberly Brosseau, Park Planner
County Parks Department

SUBJECT: Notice of Preparation of an Environmental Impact Report for the Mining Reclamation Plan Amendment for Permanente Quarry (File No. 2250-13-66-10P (M1) and 10EIR (M1))

The County Parks Department has reviewed the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the Permanente Quarry (modification to the existing May 2010 application) for a Mining Reclamation Plan Amendment for issues related to park use, trails, and implementation of the Countywide Trails Master Plan and submits the following comments.

The Trails Element of the Park and Recreation Chapter of the 1995-2010 County General Plan indicates a trail alignment nearby the subject parcel. Per the General Plan, Countywide Trail Route R1-A (*Juan Bautista de Anza NHT*) is located northeast of the project site. The *Santa Clara County Countywide Trails Master Plan Update*, which is an adopted element of the General Plan, designates the countywide trail as a "trail route within other public lands" for hiking, off-road cycling, and equestrian use. This trail route provides an important connection between the City of Cupertino and Rancho San Antonio County Park. The City of Cupertino's Final Stevens Creek Trail Feasibility Study also indicates this trail route as an important connection between Rancho San Antonio County Park and the City of Cupertino. A1-5

Visual Resources

The quarry is located adjacent to Rancho San Antonio County Park (Diocese Property). Since the County Parks Department is an adjacent property owner, modifications to the Reclamation Plan should take into account the potential aesthetic/visual impacts of the quarry and mitigation of views from these public parklands and trails. A1-6

The project is located in a Zoning District with a Design Review overlay for the Santa Clara Valley Viewshed (d1). It is expected that the applicant will construct as per the submitted plans and comply with design guidelines towards screening the project from public views.

An adequate vegetated buffer between the degraded hillsides and the adjacent County parkland and trails should be incorporated into the Reclamation Plan for the quarry. A1-6

Biological Resources

The EIR for the Reclamation Plan Amendment should discuss whether or not the project would have an impact on Permanente Creek and the California red-legged frog (CRLF) and California tiger salamander. The CRLF has mitigation sites on the adjacent Diocese property. A1-7

Surface Hydrology, Drainage and Water Quality

The EIR for the Reclamation Plan Amendment should evaluate potential hydrological impacts resulting from any grading, recontouring and seeding of the site. The EIR should also discuss if there are any proposed modifications to the riparian corridor or Permanente Creek. The Reclamation Plan Amendment should also take into account adequate erosion control measures and proposed grading and the potential impacts it may have to the adjacent County parkland and trails. A1-8

The Santa Clara Valley Water District (SCVWD) is currently preparing a Final EIR for the Permanente Creek Flood Protection Project, which includes a proposed flood detention basin facility to be constructed, operated and maintained at Rancho San Antonio County Park Diocese Property as the Project's Recommended Alternative. This Permanente Creek Quarry's Reclamation Plan should evaluate future hydrological modifications that may impact the District's Permanente Creek Flood Protection Project for portions of Permanente Creek through Rancho San Antonio County Park. A1-9

Noise Impacts

The EIR for the Reclamation Plan Amendment should evaluate any potential noise impacts to the adjacent Rancho San Antonio County Park and impacts that noise from the quarry may have on park users. A1-10

Air Quality

The EIR for the Reclamation Plan Amendment should evaluate any potential air quality impacts as a result of the quarry use and associated truck trips generated to and from the quarry on the adjacent Rancho San Antonio County Park and impacts that may have on park users. A1-11

The County Parks and Recreation Department appreciates the opportunity to provide comments on the NOP of an EIR for the Permanente Quarry Reclamation Plan Amendment. We look forward to reviewing the EIR once it becomes available. If you have any questions regarding this letter, please contact me at (408) 355-2230 or by email at: Kimberly.Brosseau@prk.sccgov.org.

Sincerely,

Kimberly Brosseau
Park Planner

cc: Jane Mark, Senior Planner
Don Rocha, Natural Resources Management Program Supervisor
Ana Ruiz, Midpeninsula Regional Open Space District

3.2.1 Comment Letter A1: County of Santa Clara Parks and Recreation Department

A1-1 The following revision has been made to Draft EIR Section 4.16.1.2, second paragraph, beginning on line 4 (Draft EIR page 4.16-2):

> This trail segment is designated as "trail route within other public lands ~~private property~~," a designation intended for uses such as hiking, off-road bicycling, and equestrian use, according to the CWTMP.

A1-2 The Draft EIR analyzes potential hydrological impacts of the Project and alternatives in Section 4.10, *Hydrology and Water Quality* (page 4.10-1 et seq.), including from the grading, recontouring and seeding of the site that are described as part of the Project in Draft EIR Chapter 2, *Project Description*. For example, Hydrology and Water Quality Impact 4.10-1 (Draft EIR page 4.10-30 et seq.) considers post-reclamation selenium conditions reflecting the grading, contouring and revegetation of the EMSA (page 4.10-33), the WMSA (page 4.10-35), and other parts of the Project Area. In turn, Hydrology and Water Quality Impact 4.10-2 (Draft EIR, page 4.10-43 et seq.) considers hydrology- and water quality-related conditions in the Project Area while the proposed reclamation activities (including grading, contouring and revegetation) are in progress.

Proposed modifications to the Permanente Creek Restoration Area, including affected portions of the riparian corridor and the creek itself, are described in the Project Description (Draft EIR Section 2.6.7, page 2-12; Section 2.7.8, page 2-26 et seq.). Effects within this area are analyzed on a resource-by-resource basis throughout Chapter 4, *Environmental Analysis*, and in Chapter 6, *Cumulative Effects*. See, for example, Hydrology and Water Quality Impact 4.10-2 (page 4.10-44, 4.10-46) and Hydrology and Water Quality Impact 4.10-3 (page 4.10-48), which specifically relates to the potential for PCRA reclamation activities to contribute concentrations of selenium, Total Dissolved Solids (TDS), and sediment in Permanente Creek.

Erosion control, drainage, and the potential for the Project to affect offsite areas are addressed in Hydrology and Water Quality Impact 4.10-4 (page 4.10-49 et seq.) and Impact 4.10-6 (page 4.10-51).

A1-3 The Santa Clara Valley Water District's (SCVWD's) environmental review of the Permanente Creek Flood Protection Project is identified in Draft EIR Chapter 6, Table 6-1 (page 6-5) as cumulative project number 27 and the location of that project within San Antonio County Park is shown in Draft EIR Figure 6-1, *Cumulative Projects*. The Draft EIR for the Project did evaluate the incremental impacts of the Project in combination with the effects of the District's project. See, for example, the analysis of Draft EIR Cumulative Impact 6-2, on page. 6-24, regarding the Project's potential contribution to downstream flooding. However, subsequent to publication of the Draft EIR, the Applicant coordinated with SCVWD to address the potential increased risk of

offsite flooding, and designed a detention basin located on the reclaimed Quarry pit floor. The proposed detention basin, referred to as Basin 40A, is described in Master Response M7. SCVWD submitted a follow-up comment letter in which they confirmed that "the District is satisfied that downstream flooding impacts have been adequately addressed." See Comment A3-6.

A1-4 The Draft EIR analyzes air quality impacts of the Project and alternatives in Section 4.3, *Air Quality* (page 4.3-1 et seq.). This analysis considers effects within the boundaries of the San Francisco Bay Area Air Basin (Bay Area Air Basin) and the Santa Clara Valley climatological subregion (Draft EIR, page 4.3-1), which encompasses the Project Area and Rancho San Antonio County Park. Page 4.3-2 identifies motor vehicle transportation, including trucks, as the major contributor to regional air pollution.

As stated in the analysis of Transportation and Traffic Impact 4.17-1 (page 4.17-7 et seq.) and elsewhere in the Draft EIR, the Project would generate truck trips during each phase of reclamation. Activities during Phase 1 would generate a total of up to 348 external haul truck trips per year for fuel transport, resulting in about one external truck trip per day (two one-way trips) (Draft EIR, page 4.17-8). Activities during Phase 2 would generate a total of up to 1,141 external haul truck trips per year for fuel transport and the importing of mulched green waste materials, resulting in about eight external truck trips per day (16 one-way trips), which equates to about one truck trip per hour (Id.). Activities during Phase 3, including the removal of equipment and structures throughout the Project Area, would generate substantially fewer numbers of external truck trips than during Phases 1 and 2 (Id.).

The analysis of air quality impacts takes into account baseline conditions (which include emissions from off-road diesel equipment, onsite work trucks, and offsite fuel transport trucks as well as other vehicles and emissions sources for the existing surface mining operation and other on- and offsite uses) as well as Project-related truck emissions (Draft EIR Air Quality Impact 4.3-1, page 4.3-19). Further, the health risk assessment prepared for the Draft EIR examined acute health risks for recreational users of the Rancho San Antonio Open Space Preserve, who could be exposed to Project emissions for a short time while they are close to the Project site. As described on page 4.3-31 of the Draft EIR, the analysis found that impacts in the Rancho San Antonio Open Space Preserve would decrease as a result of the implementation of the Project and therefore would be less than significant.

In summary, truck trips associated with the Project, as they contribute to effects to regional and local air quality experienced by park users and others, and air quality conditions resulting from existing quarry use and associated truck trips, are considered in the analysis.

A1-5 Comment addressed. See Response A1-1. It should be noted that this comment was provided in response to the Notice of Preparation and not the Draft EIR.

A1-6 The Draft EIR analyses visual impacts to recreational areas in Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*, under Impacts 4.1-1, 4.1-2, 4.1-5 and 4.1-6 (page 4.1-40 et seq.). The visual simulations in Figure 4.1-7 show the Project Area during construction as seen from within the Rancho San Antonio Open Space Preserve and Rancho San Antonio County Park (RSA Preserve/Park) from the Hammond-Snyder Loop Trail. The section describes impacts to viewsheds throughout the RSA Preserve/Park, including from the scenic vista at the Anza Knoll, the PG&E Trail, and the Hammond-Snyder Loop Trail. As discussed under Impacts 4.1-1 and 4.1-5, construction of the Project would have a significant and unavoidable adverse effect on this recreational area during the implementation of active reclamation activities. However, as discussed under Impacts 4.1-2 and 4.1-6, monitoring and maintenance of the Project would not have a substantially adverse effect on the recreational viewsheds from within the RSA Preserve/Park, or any other recreational area.

Regarding the Design Review Combining Zoning District, the commenter is referred to Draft EIR page 4.1-39. Although located within the Design Review Combining Zoning District, Santa Clara Valley Viewshed (d1), the d1 regulations would not be applicable to the Project because the Project is a modification of an existing reclamation plan, and because no new buildings are proposed. As such, the Project would not conflict with applicable general Plan policies or Zoning Ordinance provisions, and there would be no impact. It should be noted that this comment was provided in response to the Notice of Preparation and not the Draft EIR.

A1-7 Draft EIR Impacts 4.4-5 and 4.4-6 describe potential direct and indirect Project impacts to the California red-legged frog both within and outside of several off-channel ponds and one on-channel pond (Pond 13) associated with Permanente Creek. The California tiger salamander was excluded from analysis in the Draft EIR due to lack of aquatic and upland habitats, and because the Project site is outside of this species' known range. Appendix A of WRA's December 2011 Biological Resources Assessment, which was submitted to the County by the Applicant as Attachment D to the Reclamation Plan Amendment, considered occurrence of the California tiger salamander unlikely, based on poor-quality aquatic breeding habitat and limited upland dispersal habitat within the Permanente Quarry property. Based on this finding, no detailed impact analysis of this species was included in the Draft EIR. It should be noted that this comment was provided in response to the Notice of Preparation and not the Draft EIR.

A1-8 Comment addressed. See Response A1-2. It should be noted that this comment was provided in response to the Notice of Preparation and not the Draft EIR.

A1-9 Comment addressed. See Response A1-3. It should be noted that this comment was provided in response to the Notice of Preparation and not the Draft EIR.

A1-10 The Draft EIR analyzes noise impacts of the Project and alternatives in Section 4.13, *Noise* (page 4.13-1 et seq.). This section identifies the RSA Preserve/Park as one of the

uses closest to the Project Area (Draft EIR Section 4.13.2.2, page 4.13-10), and analyzes impacts of the Project to the park. See, for example, Impact 4.13-1, which acknowledges that the County Noise Ordinance does not establish any noise standards applicable to parks and open space areas and nonetheless discloses that "Project activities associated with Phase 1 would likely be audible at the PG&E Trail in the Rancho San Antonio Preserve/Park, which is located approximately 0.25 mile (1,320 feet) from the nearest boundary of the EMSA" (Draft EIR, page 4.13-18). To the extent that this comment requests analysis of mining-related noise impacts as distinct from reclamation-related noise, see Draft EIR Section 6.2.13 (page 6-26 et seq.), which analyzes cumulative noise impacts, including noise that would be generated by the Project, if approved, in combination with noise generated by surface mining within the Project Area, operation of the Cement Plant, and the Permanente Creek Flood Protection Project. It should be noted that this comment was provided in response to the Notice of Preparation and not the Draft EIR.

A1-11 Comment addressed. See Response A1-4. It should be noted that this comment was provided in response to the Notice of Preparation and not the Draft EIR.

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February 2, 2012

County of Santa Clara-Planning Office
70 West Heading Street, East Wing, 7th Floor
San Jose, CA 95110

Attn: Mr. Rob Eastwood, Principal Planner

SUBJECT: The Lehigh Permanente Quarry Reclamation Plan Amendment Draft Environmental Impact Report (DEIR)

Dear Mr. Eastwood :

Thank you for the opportunity to comment on the Draft Environmental Impact Report dated December 23, 2011 concerning the Lehigh Permanente Quarry Reclamation Plan Amendment. The City Council and staff of Los Altos have been monitoring the permit and compliance issues for the Lehigh Quarry with concerns for public health impacts. The following comments are based on potential health impacts that might affect the residents of Los Altos, and are requested to be addressed prior to County adoption of a Final Environmental Impact Report.

The DEIR documents the environmental consequences of implementing the Lehigh Permanente Quarry Reclamation Plan Amendment (RPA, or the Project) which has been submitted to the Santa Clara County Department of Planning and Development (the County).

The following sections are the focus of these comments: Section 4.3, Air Quality, Section 4.8, Greenhouse Gas Emissions, Section 4.10, Hydrology and Water Quality, Appendix B, Air Resources, and Appendix E, Health Risk Assessment.

Air Quality:

DEIR Impact 4.3-1: Criteria Pollutant Emissions

The cause of the large reductions in the maximum daily and maximum annual emissions of most criteria pollutants is unclear in this section. The baseline air emissions included periods of relatively high and relatively low production at the Facility. Therefore, if the Facility operates at the maximum permitted production rate (i.e., high production) during Phase I of the Project when mining activities are planned to continue, it would appear that Facility emissions would be higher than the baseline. A2-1

DEIR Impact 4.3-3: Increased Cancer Risk Due to Toxic Air Contaminants

The DEIR presents an incremental health risk assessment to examine the increase or decrease in adverse health impacts due to toxic air contaminants associated with the Project as compared to the conditions that would exist without the Project. This health risk assessment concluded that the incremental cancer risks would be above the threshold of 10 in a million for the adult resident, primarily due to exposures to diesel particulate matter (DPM). However, several mitigation measures are proposed which are estimated to lower the cancer risks to levels below the threshold. Therefore, this impact is concluded to be a "less than significant impact with mitigation incorporated."

The analysis presented focuses on metals within fugitive dust, crystalline silica, and DPM. However, other toxic chemicals associated with diesel truck traffic such as benzene, formaldehyde and acetaldehyde are not addressed. For completeness, all chemicals should be included in the analysis. At a minimum, it should be demonstrated qualitatively that these chemicals are insignificant to cumulative health risks. A2-2

On the surface the mitigation measures do not appear to be sufficient to ensure the incremental change in emissions of toxic air contaminants are below thresholds. At a minimum, this analysis should be updated annually during the Project to incorporate the mitigation measures which are put in place to demonstrate that the predicted emissions reductions do occur.

With the inclusion of the assumed mitigation measures, the incremental cancer risk is 8.7 in a million and is therefore slightly below the threshold of 10 in a million. Because the predicted cancer risk is only slightly below the threshold, it should be verified that the incremental cancer risk remains below the threshold if production is increased to the maximum permitted level.

DEIR Impact 4.3-4: Increased Acute and Chronic Health Risks Due to Toxic Air Contaminants

Incremental acute and chronic hazard impacts are quantified and shown to be below thresholds. Therefore, no mitigation measures are proposed and the impact is concluded to be a "less than significant impact."

A health risk assessment conducted for the Facility showed that acute and chronic health risks are of concern at the Facility primarily due to naturally occurring mercury in regional soil (AMEC, 2011). It

would be helpful for this health risk assessment to more fully explain the release mechanisms and exposure conditions assumed for mercury. In particular, if mercury was assumed not to be present in the volatile, elemental form the basis should be stated in the risk assessment. Without more details regarding the assumptions of the risk assessment, it is difficult to agree with the conclusion that acute and chronic hazards are not of concern for the Project. A2-2

Hazard quotients in this analysis are calculated as the ratio of the chemical concentration to toxicity value. However, some California Environmental Protection Agency (Cal/EPA) risk assessment guidance recommends the inclusion of exposure assumptions in the calculation noncancer hazard quotients. In particular, it would be more conservative to follow the guidance of including an age-adjusted receptor which is assumed to be a child for a portion of the exposure duration to account for the higher per body weight exposures that occur during the childhood years (Cal/EPA, 2005).

DEIR Impact 4.3-5: Human Health Risks Due to Increased Emissions of PM2.5

An analysis was conducted to determine the maximum annual increase in particulate matter with a diameter of 2.5 micrometers or less (PM2.5) for sensitive receptors in the vicinity of the Project. The analysis concluded that the incremental annual PM2.5 concentration was above the threshold and would therefore constitute a potentially significant impact without mitigation. The DEIR proposes implementing the same mitigation measures discussed above in Section 2.2 to reduce the incremental PM2.5 concentration to levels below the threshold. Therefore, this impact is determined to be a "less than significant impact with mitigation incorporated." A2-3

As discussed above, these mitigation measures do not appear to be sufficient to obtain the necessary emissions reductions. Because the predicted incremental concentration with the incorporation of the mitigation measures is essentially equal to the threshold, a small decrease in the functionality of the mitigation measures could result in the threshold being exceeded. It may be advisable to incorporate other mitigation measures. At a minimum, the performance of these mitigation measures should be demonstrated to ensure anticipated emissions reductions are occurring.

Greenhouse Gas Emissions:

The DEIR presents an analysis quantifying the incremental increase in emissions of greenhouse gases (GHGs) due to the proposed Project. This increase is determined to be above the threshold. Several mitigation measures are proposed to reduce emissions of GHGs to levels below the threshold. This impact is concluded to be a "less than significant impact with mitigation measures." A2-4

The proposed mitigation measures to reduce emissions of GHGs do not appear likely to be capable of significantly reducing emissions of GHGs due to the Project. The DEIR proposes several offsets for all remaining Project incremental emissions above the threshold following mitigation measures. However, it may be optimal to develop mitigation measures which are capable of significantly reducing the emissions of GHGs particularly because it is not clear how BAAQMD will treat the use of carbon credits as GHG mitigation under CEQA.

Hydrology and Water Quality:

The DEIR provides a summary of historical violations of the Facility which have occurred primarily as a result of discharges of sediment-laden water to Permanente Creek. The DEIR notes that "a notice A2-5

of violation was issued to the Quarry as recently as March of 2010." However, there are more recent violations issued by the Water Board, such as the notice of violation issued on February 18, 2011. Of significance is that the Water Board plans to require the Facility to obtain coverage under a different discharge permit. This was not noted in the March, 2010 notice of violation which is referenced in the DEIR. A2-5

The baseline conditions used in the hydrology and water quality analyses presented in the DEIR are those that existed in June 2007. This is inconsistent with Section 4.3, Air Quality which used an 11 year timeframe to calculate baseline conditions in order to account for fluctuations in the production rate of the Facility due to market demand. On the surface, higher production rates appear to have the potential to increase the mobilization of some chemicals of potential concern, such as selenium. The DEIR should document the rationale for this inconsistency in defining baseline conditions and should document that the varying production rates of the Facility do not significantly affect the analyses presented in this section. A2-6

DEIR Impact 4.10-1: Post-Reclamation Impacts to Permanente Creek

Activities associated with the Project have the potential to increase the mobilization of naturally occurring chemicals thus increasing the runoff of these chemicals to Permanente Creek. An analysis is conducted which is intended to demonstrate that all chemicals other than selenium will not be released to Permanente Creek at levels above thresholds. A detailed analysis specific to selenium is conducted and it is concluded that with mitigation measures impacts to the creek will be below thresholds. Therefore this impact is concluded to be a "less than significant impact with mitigation incorporated."

The evaluation presented includes total dissolved solids (TDS), sulfate, molybdenum, and selenium as primary chemicals of potential concern because they have been detected above the water quality objectives in samples from surface runoff and/or Permanente Creek. TDS and sulfate are determined to be present at similar concentrations upstream and downstream of the Facility. Additionally, historical detections of mercury are shown to generally be below thresholds.

Hexavalent Chromium

It would be helpful if hexavalent chromium were included in these evaluations. At a minimum, sampling results for hexavalent chromium should be mentioned and shown to be below applicable water quality standards. Hexavalent chromium has been detected in previous sampling and is thought to occur naturally in regional soils. Given the relatively high toxicity of hexavalent chromium, it should be discussed within this impact in some fashion. A2-7

Molybdenum

Releases of molybdenum are not considered an issue because the only applicable objective for molybdenum is associated with agricultural supply, which is not a designated beneficial use of Permanente Creek. However, molybdenum has been detected above some thresholds [such as Environmental Screening Levels (ESLs)] and the Project may contribute to these elevated concentrations. A more thorough evaluation of molybdenum is necessary to determine the significance of these impacts.

Mercury

The evaluation of mercury is insufficient to demonstrate that the Project will not contribute to elevated concentrations in Permanente Creek. Mercury does occur naturally in regional soils and the Project is likely contributing to mobilization and discharge of mercury. The DEIR presents three mercury samples which are above the water quality objective, one of which is 20 times higher than the objective. Though mercury is present naturally at relatively low concentrations in regional soils, the high toxicity of some forms of mercury necessitates ongoing monitoring of the potential impacts of the Project on mercury concentrations in Permanente Creek. A2-7

Selenium

Selenium is of particular concern because the Water Board in 2009 adopted a proposal to list Permanente Creek as water quality impaired by selenium under the Clean Water Act (CWA) (SFBRWQCB, 2010). As noted in the DEIR, previous sampling has indicated that the Facility is a significant contributor to selenium concentrations in Permanente Creek. The reclamation activities propose a number of mitigation techniques. In particular, the Project calls for covering exposed limestone with other materials which do not contain high levels of selenium. The mitigation measures call for ongoing monitoring to ensure adequacy of these measures. However, the DEIR solely compares selenium concentrations to the Basin Plan's Benchmark. Of note, as part of the CWA, the Water Board plans to develop a Total Maximum Daily Load (TMDL) for selenium in Permanente Creek by 2021 which will limit the total amount of selenium Permanente Creek can receive in order to achieve water quality goals. This analysis should be reevaluated in the context of the TMDL when it becomes available. A2-8

DEIR Impact 4.10-2: Interim Impacts on Permanente Creek

The DEIR presents an evaluation of the potential impacts to Permanente Creek during the reclamation activities. It is concluded this impact is a "significant and unavoidable impact" because of the releases of selenium to Permanente Creek. The DEIR proposes several mitigation techniques intended to help minimize the impacts. In the past the Facility has not adequately or sufficiently implemented in-place Best Management Practices (BMPs) to control runoff of sediment-laden water. The DEIR should contain measures for assessing the effectiveness of the mitigation measures as they are implemented. A2-9

Health Risk Assessment

A health risk assessment was conducted and is presented as Appendix E of the DEIR. The health risk assessment supports the evaluation and conclusions contained in the Section 4.3, Air Quality. The health risk assessment is intended to be conducted in accordance with applicable federal, state, and regional agencies guidance. Comments and limitations of the health risk assessment are discussed below. A2-10

In general, the health risk assessment presented as Appendix E of the DEIR should more clearly an explain the methodology followed.

Chemicals of Potential Concern

The health risk assessment concluded that diesel vehicles are the primary driver of potential health risks to offsite receptors. While DPM is included in the risk assessment, other chemicals which are potentially significant for evaluating diesel vehicle emissions such as benzene, formaldehyde, and acetaldehyde are not included. Inclusion of these chemicals would result in a more complete analysis. At a minimum, a justification of the rationale for excluding chemicals should be provided. A2-10

Toxicity Assessment

Appendix E states that the health risk assessment used toxicity values published by the Cal/EPA website. However, the toxicity values reported in Table 7 for mercury do not match what is on Cal/EPA's website for inorganic mercury. A detailed review of toxicity values for all chemicals has not been performed; it is possible other chemicals also do not match current Cal/EPA guidance. Additionally, some departments of Cal/EPA [e.g., the Department of Toxic Substances Control (DTSC)] recommend including toxicity values from other sources and using the most conservative value to estimate health risks.

Approval of Cement Plant HHRA (AMEC, 2011)

Appendix E states that the HHRA previously conducted for the cement plant has been approved; however, the main text of the DEIR states that approval is pending. Clarifying this discrepancy would be helpful. A2-11

Sincerely,

Jim Gustafson, P.E.
Engineering Services Manager

Cc: DJS, City Manager

3.2.2 Comment Letter A2: City of Los Altos Community Development Department, Engineering Division

A2-1 As noted in footnote "a" of Tables 4.3-3 and 4.3-4, the only emission control that was in place during the baseline period consisted of watering unpaved roads for dust control. For the Project, as noted on page 4.3-19 of the Draft EIR, the Applicant has committed to the following additional emission control measures to be implemented as part of the Project:

- Water active areas consistent with a dust mitigation plan submitted to the BAAQMD in 2010;
- Use an Overland Conveyor System, powered by electric motors, to move 75 percent of the waste rock from the WMSA to reclaim the Quarry pit; and
- Water conveyor transfer points and screens associated with the proposed Overland Conveyor System.

These additional emission control measures were factored into the emission calculations for the Project. In particular, the Overland Conveyor System would eliminate a substantial number of onsite truck trips and thus would eliminate those exhaust emissions as well as the particulate matter (PM) emissions associated with truck travel on unpaved roads. The net effect of these Project-related controls is that even with an increase in material handling compared to baseline, the Project emissions would be substantially less than baseline for all criteria pollutants except for SO_2 emissions, which would increase slightly over baseline.

A2-2 This comment questions several aspects of the health risk assessment in the Draft EIR. For clarity, this response is organized by the specific topics in the comment.

Diesel Exhaust

Diesel exhaust is a complex mixture of hundreds of individual gaseous and particulate compounds emitted from diesel-fueled combustion engines (Cal/EPA, 1998). Diesel particulate matter (DPM) is formed primarily through the incomplete combustion of diesel fuel. Under California regulatory guidelines, DPM is used as a surrogate measure of carcinogen exposure for the mixture of chemicals that make up diesel exhaust as a whole. The California Environmental Protection Agency (Cal/EPA) recommends using the surrogate approach to quantify cancer risk associated with the diesel mixture, and prefers the use of this method over the component-based approach.

A component-based approach involves estimating risks for each of the individual components of a mixture. The component-based approach may underestimate the risks associated with diesel as a mixture because the identity of all chemicals in the mixture may not be known and/or exposure and health effects information for all chemicals identified within the mixture may not be available. Cal/EPA has concluded that

"potential cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multi-pathway cancer risk from the individual components."

Therefore, the health risk assessment for the Project used an inhalation cancer slope factor of 1.1 mg/kg-day and a chronic reference exposure level (REL) of 5 μg/m^3 as established by the California Office of Environmental Health Hazards Assessment (OEHHA) (OEHHA, 2012) for DPM as a whole. Use of both the toxicity values for DPM as a whole and the toxicity values associated with the individual component would be considered "double counting." In contrast, risk assessments for gasoline emissions typically analyze each toxic air contaminants separately including acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and toluene (BAAQMD, 2011), as there is not a toxicity value for gasoline emissions as a whole.

Notably, there is no acute REL for DPM as a whole. However, diesel exhaust does contain acrolein and other compounds, which do have acute REL. Thus, the emissions of acrolein within diesel exhaust were included in the acute hazard impact analysis for the Project. As recommended with the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines*, BAAQMD's DPM speciation table (based on profile 4674 within the US Environmental Protection Agency [USEPA] Speciate 4.2)[1] was used to assess the acute impacts from DPM. Acrolein emissions are approximately 1.3 percent of the total DPM emissions. The acute REL for acrolein was established by the California OEHHA (OEHHA, 2012) as 2.5 μg/m^3.

As shown in Table 3-2, acrolein provides the greatest relative acute hazard contribution (accounting for the acute REL and the speciation factor) to the acute impact of the DPM emissions. Inclusion of the other components of diesel exhaust (such as formaldehyde) in the acute impacts would not change the calculated maximum impact of 0.52 for the Project, which is below the significance threshold of 1.0 and therefore less than significant.

TABLE 3-2
SPECIATION OF DIESEL EXHAUST – ACUTE HAZARD

Pollutant	Speciation Fraction	Acute REL (μg/m^3)	Relative Acute Hazard Contribution
Acetaldehyde	0.07353	470	0.02
Acrolein	0.01297	3	0.65
Benzene	0.02001	1,300	0.0019
Formaldehyde	0.14714	55	0.34
Methyl ethyl ketone	0.01477	13,000	0.00014
m-xylene	0.00611	22,000	0.000035
o-xylene	0.00335	22,000	0.000019
Toluene	0.01473	37,000	0.000050

[1] Provides for a speciation faction of 1.3 percent of acrolein per DPM emission rate. http://www.epa.gov////.html.

Mitigation Measure Effectiveness and Verification

The commenter raises the concern that the mitigated cancer risk for the Project is only slightly below the significance threshold, and suggests that an annual review of toxic air contaminant (TAC) emissions and mitigation measure effectiveness be conducted to ensure that the emission reductions do in fact occur, especially if the Project is operated at its maximum permitted level. First, the risk assessment prepared for the Draft EIR assumes that the operations and activities occur at the maximum rates identified in the Project Description, so that the results and conclusions are applicable to that maximum scenario. With regard to verification of mitigation measure implementation and effectiveness, the commenter is referred to the Mitigation, Monitoring, Reporting, and Compliance Program, which will be included with the County's Findings of Fact and Conditions of Approval for the Project, for details regarding how the required mitigation measures would be enforced and monitored.

Health Risk from Mercury

The AMEC (2011) risk assessment mentioned by the commenter was prepared by others for the Lehigh Cement Plant, not to analyze impacts of the proposed RPA. Consequently, the conclusions in that risk assessment cannot be directly compared with the risk assessment in the Draft EIR for the Project. Nevertheless, the commenter notes that mercury in soil was a primary component of the risk for the Cement Plant and questions whether and to what extent mercury in soil was considered in the risk assessment for the Project. In that regard, emission estimates for the Project included fugitive dust-generating activities such as material loading and unloading, material storage, blasting, traffic on unpaved roads, and wind erosion. The concentration of various metals species (including mercury) within onsite fugitive dust was based on material sampling (McCampbell Analytical, October 4, 2010 and ALG, November 29, 2010), which is summarized in Table 2 of Draft EIR Appendix E. The metals content was used to estimate the speciated fugitive dust emissions, including mercury, as a function of the PM10 emissions. The resultant speciated emissions were then analyzed as part of the health risk assessment for the Project. The risk assessment methodology included ingestion, dermal, and inhalation pathways. As described on pages 4.3-31 through 4.3-32 of the Draft EIR, the majority of the incremental acute health risk from the Project is associated with acrolein (as a component of DPM) while the primary contributor to the incremental chronic health risk is crystalline silica and DPM. Based on its measured concentration in onsite soils, mercury is not a significant contributor to the incremental health risks from the Project.

Hazard Quotients

The health risk assessment for the Project was conducted in accordance with technical guidelines such as age adjustment factors developed by federal, state, and regional agencies, including CalEPA, OEHHA *Air Toxics Hot Spots Program* Guidance (OEHHA, 2003), and the BAAQMD's *Health Risk Screening Analysis Guidelines* (BAAQMD, 2005). The cancer risk estimates in the Draft EIR do incorporate exposure

parameters (such as breathing rate, body weight, exposure duration) and age sensitivity factors. This approach provides calculation procedures that factor in the increased susceptibility of infants and children to carcinogens as compared to adults. For example, OEHHA recommends that cancer risks be weighted by a factor of 10 for exposures that occur from the third trimester of pregnancy to 2 years of age, and by a factor of 3 for exposures from 2 years through 15 years of age. For estimating cancer risks for residential receptors over a 70 year lifetime, the incorporation of the age sensitivity factors results in a cancer risk adjustment factor of 1.7.(OEHHA, 2009).

Non-cancer adverse health impacts, acute (short-term) and chronic (long-term), are measured against a hazard index, which is defined as the ratio of the predicted incremental exposure concentration from the Project to a published REL that could cause adverse health effects as established by OEHHA. The ratio of each non-carcinogenic substance that affects a certain organ system is added to produce an overall hazard index for that organ system (i.e., respiratory, nervous system, etc). The overall hazard index is then calculated for each organ system. The BAAQMD *CEQA Air Quality Guidelines* does not include an age adjustment factor for chronic and acute hazard impacts.

A2-3 The commenter raises the concern that the mitigated health risks associated with PM2.5 are just slightly below the significance threshold and suggests that at a minimum the performance of the mitigation measures be monitored to ensure that the desired emission reductions are achieved. First, it should be noted that the risk assessment prepared for the Draft EIR assumes that the operations and activities occur at the maximum rates identified in the Project Description, so that the results and conclusions are applicable to the maximum possible scenario. The County will verify the implementation and effectiveness of the required mitigation measures as part of the Mitigation, Monitoring, Reporting, and Compliance Program (which will be included with the County's Findings of Fact and Conditions of Approval for the Project).

A2-4 The commenter suggests requiring additional greenhouse gas (GHG) mitigation measures, and questions the use of carbon credits as GHG mitigation under CEQA. Mitigation Measure 4.8-1b establishes a performance goal (reduction of Project-related incremental GHG emissions to below 1,100 metric tons per year), and identifies several possible actions that are available to the Applicant to achieve that goal. As a backstop provision, Mitigation Measure 4.8-1b would allow the use of carbon offset credits to make up any shortfall in GHG emission reductions. As described on page 4.8-13 of the Draft EIR, any such carbon offset credits must be verified and registered with The Climate Registry, the Climate Action Reserve, or other source that is approved by the California Air Resources Board (CARB) as being consistent with the policies and guidelines of the California Global Warming Solution Act of 2006 (AB 32). While the BAAQMD does not yet have a policy with regard to the use of carbon credits as CEQA mitigation, carbon sequestration projects and offsite mitigation are among the feasible GHG mitigation strategies identified in the California Air Pollution Control Officers

Association (CAPCOA) report *Quantifying Greenhouse Gas Mitigation Measures.* Furthermore, the use of carbon offset credits as CEQA mitigation has been approved by other California air districts (e.g., the Santa Barbara County Air Pollution Control District).

A2-5 The RWQCB's February 2011 issuance of a NOV to the Applicant, among other enforcement actions, is disclosed in Master Response M3(B). Whether the Applicant's activities at the site are authorized by the RWQCB under a General Permit or an individual one does not modify the County's conclusions about the potential environmental impacts of the Project that are documented in the Draft EIR, and, in any event, the comment does not question the adequacy or accuracy of that analysis.

A2-6 As discussed in Master Response M2(B) pertaining to baseline, there is no uniform, inflexible rule regarding establishment of baseline, and a lead agency has considerable discretion to decide how the existing physical conditions without the project can most realistically be measured. Draft EIR Section 4.0 (page 4.0-3 et seq.) identifies the actual existing physical conditions to provide a point of comparison of pre-Project conditions (the baseline) and post-Project conditions to ensure that changes caused by the proposed reclamation activities are seen in context and any and all potential significant environmental effects can be identified and analyzed accurately. For the purposes of analyzing the Project in the Draft EIR, and for reasons described in detail on pages 4.0-3 and 4.0-4 of the Draft EIR, the County has determined that the appropriate date for establishing the baseline for purposes of evaluating the Project's environmental effects is June 2007, the date the County first issued a NOP to evaluate the environmental effects associated with amendment of the Applicant's existing, approved reclamation plan.

The rationale for choosing a June 2007 baseline for hydrology and water quality impacts is discussed on Draft EIR page 4.10-26: "The baseline established for purposes of analyzing potential impacts to hydrology and water quality reflect the conditions as they existed in June 2007, the year the first NOP of an EIR to analyze impacts of a proposed amendment of the Applicant's existing, approved reclamation plan was published. The regulatory framework described [in Section 4.10.1.4], the physical characteristics of the site drainage, and site operations have not changed significantly since 2007 but many of the surface water and groundwater samples used [in] the analysis of this project were obtained after 2007. However, given that overall conditions have not changed significantly since 2007, the water quality data provided by the post-2007 water samples are considered representative of 2007 site conditions and thus appropriate for this analysis."

However, as environmental impacts associated with air quality emissions are directly related to level of operations associated with quarry activities, a different baseline condition is used, as described in Section 4.3, *Air Quality*. Such operations are characterized by fluctuating production and associated air emissions, energy needs, and transportation demands in response to continually changing market conditions. An

analysis that considers only those conditions that existed in June 2007 (or any other specific point in time) may substantially over- or under-represent typical conditions. Accordingly, the analytical baseline for air quality is based on an average over the 11-year period from January 1, 2000 to December 31, 2010, which includes periods of relatively high production as well as relatively low production at the Quarry, and thereby provides a point of comparison that does not reflect an artificial spike or dip that could skew results.

CEQA does not mandate the use of a particular baseline and a baseline that deviates from existing conditions is allowed under the circumstances at issue, provided substantial evidence supports the deviation. *Pfeiffer v. City of Sunnyvale City Council* (2011) 200 Cal.App.4th 1552. As described above, these circumstances exist in this case. See, for example, pages 4.0-3 and 4.0-4 of the Draft EIR.

A2-7 Concentrations of hexavalent chromium detected in surface water and groundwater at the Project site are below Basin Plan objectives and do not represent a significant adverse impact to water quality. Hexavalent chromium, also referred to Chromium VI, is most often produced by industrial processes and may be an indicator of environmental contamination (EPA, 2012). Hexavalent chromium was sampled by Golder Associates (Golder Associates, 2011) in surface and groundwater samples in February 2009, April 2009, October 2009, and January 2010 and in Quarry wall washing samples in November 2010. Surface water samples were collected from Permanente Creek water stations (SW-1, SW-2, and SW-3) and the Quarry pit and groundwater samples were obtained from groundwater monitoring wells HG-4, HG-6, HG-7, HG-9, and HG-10. These sampling locations are shown in the Draft EIR on Figure 4.10-2 (page 4.10-7). Golder conducted wall washing of the Quarry pit wall for water sample analysis in November 2009 at six location representative of the predominant rock types at the Quarry pit, namely, high grade limestone, greywacke, medium grade limestone, chert, high to medium/low grade limestone, and greenstone. Wall washing is further described in the Draft EIR on Page 4.10-11. The maximum concentration of hexavalent chromium detected in the surface water was 1.4 micrograms per Liter (µg/L) at station SW-3 in February 2009. The Quarry pit discharge water contained 2 µg/L of hexavalent chromium. The highest detection of hexavalent chromium in groundwater was 1.9 µg/L, and in the wall washing samples hexavalent chromium levels were below detection limits. According to the RWQCB-San Francisco Region (RWQCB-SFBR) Basin Plan, the Freshwater Water Quality objective for chromium is 11 µg/L for the 4-day average and 16 µg/L for the 1-hour average. Water quality samples on the site did not contain hexavalent chromium above the Basin Plan objectives. The County completed an independent review of available surface water monitoring data for hexavalent chromium. The data were part of the original data sets compiled by Golder Associates (Golder Associates, 2011). The County concluded that hexavalent chromium, when it was detected in surface water, was below the Basin Plan Water Quality Objectives and did not appear to present a water quality concern for the Project. The County's evaluation also did not identify an

existing source or the potential that the Project activities would in any way increase the concentrations of hexavalent chromium. The County's finding was consistent with the Applicant's water quality evaluation (SES, 2011), which relied on Golder's original surface water data. That evaluation also did not identify hexavalent chromium as one of the constituents requiring further examination. Consequently, hexavalent chromium was not considered a constituent of concern for the Project and the Draft EIR did not include hexavalent chromium in the list of water quality constituents with a potential to result in significant impacts under CEQA.

The Project would not contribute to the currently elevated concentrations of molybdenum in the surface water because reclamation activities are designed to reduce the exposure of waste rock and stockpiled overburden material to oxidation, runoff, and erosion. Molybdenum is present at background concentrations in the geologic materials at the site and has been identified in the surface water, groundwater and in wall washing tests conducted in the Quarry pit. Molybdenum was detected in rock samples representative of the geologic material on the site at concentrations ranging from below the detection limit (0.18 milligrams per kilogram [mg/kg]) to 20 mg/kg in a sample of limestone from the Quarry pit (see Draft EIR table 4.10-3). Leachability results from the Modified CAM-WET tests (see Draft EIR, page 4.10-6) from the similar representative geologic materials detected molybdenum at concentrations ranging from 2.3 µg/L in a sample of greenstone, to 28 µg/L in a sample of meta-basalt (see Draft EIR Table 4.10-4). Groundwater obtained from wells south of Permanente Creek (see Draft EIR Figure 4.10-2) contained concentrations of molybdenum ranging between 2.2 µg/L to 45 µg/L with an average concentration of 10.8 µg/L. Wall washing conducted in the Quarry pit (see Draft EIR Section 4.10) generated dissolved molybdenum concentrations ranging from 0.37 µg/L in the greenstone to 98 µg/L from the high grade limestone; the lowest concentrations of dissolved molybdenum were detected in the wall washing samples from the greywacke (2.6 µg/L), and medium grade limestone (6.7 µg/L). The Draft EIR acknowledges that concentrations of TDS, sulfate, molybdenum, and selenium in samples from surface runoff and/or Permanente Creek are generally above the water quality objectives outlined in the Basin Plan (see Draft EIR Section 4.10, Impact 4.10-1). As stated in the Draft EIR, the SFBRWQCB Basin Plan assigns an agricultural supply water quality objective of 50 µg/L to molybdenum within the San Francisco Bay Region. However, the SFBRWQCB has not assigned molybdenum a water quality objective for municipal water supply or freshwater. The presence of molybdenum in Permanente Creek is an existing condition present in the 2007 baseline, and continued mining could maintain or in some cases temporarily increase concentrations of molybdenum in surface water runoff from the Project area. The actions proposed under the Project would contribute to the reduction of molybdenum and other trace metals as the EMSA is reclaimed (Phase 1), the material in the WMSA is placed into the Quarry pit (Phase 2), and final reclamation is completed (Phase 3). The Project would reduce the exposure of limestone and other rocks that have the potential to leach molybdenum to the environment by managing runoff and arresting erosion on currently unprotected slopes. Runoff management and

slope protection would begin during the interim phases of reclamation when the Applicant is required to implement Mitigation Measures 4.10-2a and 2b (Draft EIR, page 4.10-44). The prescribed mitigation measures would reduce the potential for molybdenum to be discharged to the surface water. Reclamation activities proposed under the Project would improve the water quality overall and would not contribute to elevation of trace metal concentrations, including molybdenum.

The Draft EIR presents adequate data to characterize mercury concentrations on the Project site. As discussed in the Draft EIR (Section 4.10) mercury occurs naturally in the various rock types and in groundwater and meets the Basin Plan Benchmark levels at the Permanente Creek upstream sample location (SW-1) and sample station SW-2 located downstream of the Quarry pit and adjacent to the Cement Plant area (see Draft EIR Figure 4.10-2). One exception was an isolated detection (0.07 µg/L) in a sample collected in January 2009 from station SW-2. This detection was not significantly above the 0.025 µg/L 4-day average goal and is below the 2.4 µg/L 1-hour goal. Elevated concentrations of mercury were found at several locations within the EMSA including one detection of 8.9 µg/L in an atypical sample containing a large amount of suspended sediment from a roadway. These samples were collected in February and March 2011 and while they may have been representative of the EMSA operations area, they did not reflect water quality in Permanente Creek. As shown on Table 4.10-2, analysis of Permanente Creek surface water in April 2011 by a low level mercury method (EPA 1631) yielded results that were well below the Basin Plan objective for surface water (maximum concentration was 0.00731 µg/L). These samples were collected from the upstream Wild Violet Creek tributary (sample ZOMB-1), at the Quarry pit discharge point (SL-4A3-PD), and at the County access road bridge located downstream and offsite (PERMUS).

The Applicant and the County conducted surface water sampling at six representative locations on the WMSA following a major storm event in January 2012. Water samples collected from each station were analyzed for total dissolved solids (TDS), sulfate, total suspended solids (TSS), and dissolved and total trace metals including selenium, mercury, molybdenum, nickel, and arsenic (ESA, 2012). Although only six samples were tested, results from that sampling effort suggest that runoff from unvegetated exposed slopes on the WMSA contain higher metals (i.e., selenium, molybdenum) concentration compared to runoff from partially reclaimed and vegetated slopes. However, mercury was not detected in any of the six runoff samples collected (detection limit 0.025 µg/L), suggesting that runoff from the WMSA overburden piles may not be a significant source of mercury.

The Project would reclaim the Quarry pit, storage areas (such as the EMSA), and other operational areas that have a potential to contribute to the discharge of naturally-occurring, trace mercury concentrations to Permanente Creek. Reclamation would include covering reactive materials, constructing stable slopes and installing drainage controls. As part of the reclamation, the Draft EIR prescribed Mitigation Measure 4.10-

1b (page 4.10-41 et seq.) which requires the Applicant to develop a verification and water quality monitoring program to ensure the effectiveness of the stormwater quality controls throughout and after reclamation and provide data to refine and re-evaluate water quality projections before reclamation is complete (see Draft EIR, Impact 4.10-1, page 4.10-29 et seq). Based on the available data reviewed for the preparation of the Draft EIR, there is no direct evidence that continued mining or the proposed reclamation project would result in concentrations of mercury that are higher than those presently found in the surface water and groundwater in the Project Area or in Permanente Creek.

A2-8 The Total Maximum Daily Load (TMDL) for selenium in Permanente Creek is proposed for completion in 2021. Based on the proposed Project schedule, the TMDL would be released at the start of Project Phase 2. Upon completion of the TMDL, dischargers to Permanente Creek, including the Applicant, would be required to revise their NPDES or other discharge permits for selenium discharges in accordance with the requirements of the TMDL. However, at the time of publication of this EIR, the only regulatory limit is the Basin Plan drinking water and freshwater objectives for selenium, and that will remain the case until further action is taken by the RWQCB.

A2-9 Draft EIR Mitigation Measure 4.10-2b (page 4.10-44 et seq.) requires the Applicant to develop a stormwater sampling plan that would supplement preexisting surface water monitoring required by General Industrial Storm Water and Sand and Gravel NPDES Permit, and be designed specifically to monitor surface water during reclamation activities in active and inactive excavation and backfill areas. The purpose of the stormwater sampling plan is to evaluate performance of temporary BMPs and completed reclamation phases at the EMSA and to identify areas that are sources of selenium, sediment, or high total dissolved solids (TDS). At a minimum, the plan shall require the Applicant to inspect BMPs and collect water samples for analysis of TDS and metals, including selenium, within 24 hours after a storm event and sample non-stormwater discharges when they occur. If elevated selenium, sediment, or TDS is identified through sample analysis, the Applicant shall identify the source and apply any new or modified California Stormwater Quality Association (CASQA)-approved standard BMPs available. BMPs that show sign of failure or inadequate performance shall be repaired or replaced with a more suitable alternative. Following implementation, the Applicant shall re-test surface water to determine the effectiveness of such modifications, and determine whether additional BMPs are necessary. All testing, monitoring, and reporting would occur under the oversight of the County and the RWQCB.

A2-10 This comment questions several aspects of the health risk assessment in the Draft EIR. For clarity, this response is organized by the specific topics in the comment.

Chemicals of Potential Concern

This issue was addressed in Response A2-2.

Toxicity Assessment

The health risk assessment for the Draft EIR was conducted in accordance with technical guidelines, including those for toxicity values developed by federal, state, and regional agencies, including CalEPA, OEHHA *Air Toxics Hot Spots Program Guidance* (OEHHA, 2003), and the BAAQMD's *Health Risk Screening Analysis Guidelines* (BAAQMD, 2005). Occasionally, toxicity values are updated by OEHHA in advance of formal updates to the risk assessment guidelines. Table 7 from Appendix E of the Draft EIR has been updated with the most recent toxicity values, as shown below.

TABLE 7
TOXICITY VALUES

Pollutant	Inhalation Slope Factor (mg/kg-day)	Acute REL ($\mu g/m^3$)	Chronic REL ($\mu g/m^3$)
Acrolein (with DPM)		2.5	
Arsenic	12.0	~~0.19~~ 0.20	~~0.03~~ 0.015
Beryllium	8.4		~~0.003~~
Cadmium	15.0		~~0.02~~
Chromium VI	510		~~0.2~~
Crystalline silica			3
DPM	1.1		5
Copper		100	
Cadmium	15.0		
Lead	0.042		
Mercury		~~1.8~~ 0.6	~~0.09~~ 0.03
Nickel	0.91	6.0	0.05
Selenium			20
Vanadium		30.0	

SOURCE: California Office of Environmental Health Hazards Assessment Toxicity Criteria Database, 201~~1~~2. http://www.oehha.ca.gov/tcdb/

The revisions are minor and do not affect any of the toxic air contaminants that comprise the vast majority of the incremental cancer risk or acute and chronic health hazards associated with the Project (see Draft EIR pages 4.3-28 through 4.3-31). Consequently, these updated toxicity values would not change any of the reported health risk assessment results for the Project.

A2-11 The commenter did not identify what section of the Draft EIR contained the text that was in apparent conflict with the statement in Appendix E that the HHRA for the Cement Plant had been approved. On page 4.3-4 of the Draft EIR, it says that "Lehigh submitted to the BAAQMD and OEHHA a draft revised health risk assessment for the Cement Plant. According to the BAAQMD, OEHHA had very little substantive comment on the draft report and they concluded that the HRA was prepared in accordance with the state's guidance (BAAQMD, 2011c). The BAAQMD intends to post the HRA, OEHHA's comment letter, the BAAQMD assessment memo, and an errata sheet on the BAAQMD website, although those files were not available at the

time of this analysis." That information, which was provided by the BAAQMD (BAAQMD, 2011c), is correct and is consistent with Draft EIR Appendix E. As identified in Master Response M4, the Cement Plant is not a component of the proposed Reclamation Plan Amendment evaluated in the Draft EIR.

Santa Clara Valley Water District

Letter A3

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File: 2985
Permanente Creek

February 21, 2012

Mr. Rob Eastwood
County of Santa Clara
Planning Office
70 West Hedding, 7th Floor, East Wing
San Jose, CA 95110

Subject: Lehigh Permanente Quarry Reclamation Plan Amendment Draft EIR

Dear Mr. Eastwood:

The Santa Clara Valley Water District (District) has reviewed the Lehigh Permanente Quarry Reclamation Plan Amendment Draft EIR dated December 2011. The District has a strong interest in the outcome of the reclamation plan as it relates to future runoff and its contribution to potential flood flows from the site, and the protection of the groundwater basin.

Flooding

The District is in the design phase for the Permanente Creek Flood Protection Project. The project will address erosion control, maintenance, structural repair, and habitat restoration in the Permanente Creek watershed and provide protection from the 1% event to areas currently subject to flooding in Mountain View and Los Altos. The District is planning to start construction on the $40 million project next year.

Under existing conditions, a portion of the quarry lands (361 acres) drain to the quarry pit. The Permanente Creek Flood Protection Project is using this existing condition as a baseline to determine flood impacts. As reclamation progresses, these lands are proposed to drain to Permanente Creek. The EIR estimates that the future condition will add 230 cubic feet per second (cfs) of runoff to the creek during a 1% event. This additional runoff cannot be accommodated by the District's flood protection project and would re-introduce homes to the FEMA 100-year flood hazard zone removed by the District's flood protection project and potentially cause flooding downstream in Mountain View and Los Altos. A3-1

The EIR recognizes that the increase in runoff to Permanente Creek after reclamation is completed would result in significant impacts to downstream flooding and hydromodification effects along the creek. A mitigation measure is included requiring the construction of detention facilities to manage increased runoff from the reclamation of the site and for the applicant to consult with the District. However, the Draft EIR concludes that this impact is still potentially significant and unavoidable since it is currently unknown if a basin of sufficient size can be constructed to meet this requirement.

The District cannot accept a potentially significant and unavoidable conclusion as we believe there are solutions to prevent increased flows in Permanente Creek and flooding in Mountain View and Los Altos. We request the County modify Mitigation Measures 4.10-4 and 6-2 to require the applicant to work with the District to determine the level of runoff that can be accommodated by the District's Permanente Creek project and to include in the reclamation

plan adequate facilities to reduce or detain flows in excess of this level up to the 1% event. District staff is available to work with the County and the applicant to ensure downstream communities are protected from flooding. A3-1

Groundwater Quality

The District is the groundwater management agency for Santa Clara County and Board policy states that the District will aggressively protect groundwater from the threat of contamination. Portions of the project site overlie the Santa Clara Groundwater Subbasin, a major water supply source in Santa Clara County. Downstream of the Quarry, Permanente Creek overlies the groundwater recharge area of the Santa Clara Subbasin. While the Draft EIR states that the proposed actions and mitigation measures will likely reduce the levels of selenium and other contaminants in surface water runoff to Permanente Creek, adequate verification and monitoring is needed to ensure surface water and groundwater quality are protected. Therefore, the District recommends the following: A3-2

- Mitigation Measure 4.10-1b, which relates to water quality monitoring, should identify the monitoring frequency and parameters to be monitored in the runoff from East Materials Storage Area and West Materials Storage Area (6th bullet). This mitigation measure should also identify how all water quality monitoring results will be reported and what actions may be taken to ensure surface water and groundwater quality are protected if Basin Plan benchmarks are exceeded.
- The Draft EIR states that the applicant proposes to add organic material to the backfill as a means to enhance chemical reducing conditions and minimize the mobility of selenium (p. 4.10-38). It should be confirmed that the organic matter to be used will not introduce other contaminants to surface water or groundwater. A3-3
- Mitigation Measure 4.10-4 states that detention basins should be designed to "optimize groundwater recharge." Assuming the water quality projections for the runoff from the reclaimed quarry area (Table 4.10-8) are realistic, this concept seems reasonable. However, runoff monitoring data to be collected during reclamation should be considered prior to designing the detention basins to ensure no negative impacts to groundwater quality will result. Also, potential impacts to nearby properties should be considered, including potential mounding effects. A3-4
- The District recommends that groundwater sampling be conducted in the Santa Clara Subbasin downstream of the Quarry to confirm that the project is not negatively impacting groundwater quality. A3-5

District staff is available to meet and discuss the above areas of concern. Please provide a copy of the Final EIR to the District for review when it becomes available. If you have any questions or need further information, you can reach me at (408) 265-2607, extension 3095.

Sincerely,

Michael Martin
Environmental Planner
Community Projects Review Unit

cc: S. Tippets, C. Elias, S. Hosseini, A. Rouhani, K. Lueneburger, U. Chatwani, V. De La Piedra, B. Ahmadi, File

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Santa Clara Valley Water District

Letter A3

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File: 2985
Permanente Creek

March 27, 2012

Mr. Rob Eastwood
County of Santa Clara
Planning Office
70 West Hedding, 7th Floor, East Wing
San Jose, CA 95110

Subject: Lehigh Permanente Quarry Reclamation Plan Amendment Draft EIR – Flooding Issue

Dear Mr. Eastwood:

The Santa Clara Valley Water District (District) submitted a letter on the Lehigh Permanente Quarry Reclamation Plan Amendment Draft EIR on February 21, 2012. One of the District's concerns was that an additional 230 cubic feet per second (cfs) increase in Permanente Creek flows, resulting from quarry reclamation during a 100-year event, could potentially contribute to downstream flooding and reintroduce homes located downstream to FEMA's 100-year flood hazard zone. In light of these concerns, the District asked that Lehigh and the County work together to identify facilities that would offset this increase in downstream flood risk.

Since providing comments on February 21, the District met with the County and Lehigh to discuss these concerns. Based on these discussions, Lehigh developed a reclamation design for detaining or attenuating the increase in flows from its property, and provided that design to the District in a March 13th, 2012 letter from Chang Consultants. The design proposes to achieve a 230 cfs offset using a larger basin on the floor of the main pit, combined with an uphill slope configuration which features longer flow paths before runoff in the drainage area enters the basin or the creek.

A3-6

The District has reviewed Chang Consultants' proposal, and believes that if the proposal is made a part of the project description or otherwise required by the County, and implemented by the quarry, the revised reclamation design would effectively offset the project-related increase in Permanente Creek flows during the 100-year event. With the incorporation of final plans, specifications, and calculations to implement this design concept, the District is satisfied that downstream flooding impacts have been adequately addressed.

The District would like to thank the County and Lehigh for meeting with us and developing a solution to this potential impact. Please provide a copy of the Final EIR to the District for review

when it becomes available. If you have any questions or need further information, I can be reached at (408) 265-2607, extension 3095.

Sincerely,

Michael Martin
Environmental Planner
Community Projects Review Unit

cc: Marvin E. Howell
Land Use Planning and Permitting
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P.O. Box 639069
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S. Tippets, C. Elias, S. Hosseini, A. Rouhani, K. Lueneburger, U. Chatwani, File

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3.2.3 Comment Letter A3: Santa Clara Valley Water District

A3-1 Please refer to Master Response M7 regarding flooding. The Applicant has committed to the construction of a detention basin on the Project site (Basin 40A), which would attenuate additional flows resulting from the backfilling of the Quarry pit. Basin 40A would be constructed on the final floor of the reclaimed Quarry.

A3-2 Please refer to Master Response M6 regarding impacts to groundwater. The Applicant would be required to develop a site-specific and detailed sampling and analysis plan to conduct the sampling effort described in Mitigation Measure 4.10-1b. The details needed to develop such a plan are not available at the Draft EIR stage of the Project. The sampling and analysis plan would become part of the Report of Waste Discharge (ROWD) required prior to commencing reclamation for approval by the RWQCB.

A3-3 The organic matter that would be combined with the backfill of the Quarry would be certified mulched green waste from composting centers; such centers are available within approximately 45 miles of the Quarry. Based on the need to achieve a mix of 1 percent mulched material into the backfill, it is estimated that approximately 63,000 tons (approximately 170,000 cubic yards) of green waste would be required. The green waste would be mixed into the backfill material during filling of the upper zones of the Quarry within the pit. Draft EIR Mitigation Measure 4.4-7 (page 4.4-10) requires that all organic material imported for mixing with Quarry pit backfill shall have been composted at a facility that meets the standards of Title 14 California Code of Regulations, Division 7, Chapter 3.1; alternative sources of organic material may be used if approved by the County of Santa Clara Agricultural Commissioner as being as effective as the composting process to sanitize Sudden Oak Death-infected materials. Implementation of Mitigation Measure 4.4-7 would ensure that the organic matter used for backfill would not introduce contaminants to surface water or groundwater.

A3-4 The detention basin proposed under the RPA would be subject to a final design phase that would require the Applicant to develop final construction details and specifications including final size, construction materials, and drainage features. Upon completion of final design, the Applicant would be required to submit the plans to Santa Clara County for review and approval. Furthermore, detention basin locations and specifications would also become part of the ROWD required for approval by the RWQCB. The proposed basins would be in areas (e.g., WMSA, Quarry pit, and EMSA) that are not in immediate contact with the shallow groundwater table or a more regional municipal groundwater aquifer, and would be far enough distance away from the Project Area to avoid impact to the local groundwater wells, the closest being located along Monte Bello Ridge, approximately 1.25 miles from the center of the Quarry pit. Detention basins and their locations are discussed in the Draft EIR, Section 2.7.11.5, page 2-38, as well as in Master Response M7.

A3-5 Please refer to Master Response M6 regarding impacts to groundwater. As discussed in Master Response M6 and supported by the Draft EIR discussion on groundwater

(Section 4.10.1.3 page 4.10-16 and 4.10.4, page 4.10-28), the reclamation elements of the Project, the underlying bedrock geology, the groundwater flow characteristics, and the surface water quality concentrations expected after reclamation would limit down gradient groundwater mobility from the Project Area and reduce the potential of groundwater quality impact to the Santa Clara Subbasin located over 2 miles away and several hundred feet deeper. The Project would reduce selenium concentrations in the local surface water sources and could contribute over time to reducing potential water quality impacts to the Santa Clara groundwater basins. Given that the Project would have a low potential to impact downstream groundwater basins and supply wells, monitoring the Santa Clara Subbasin could not reliably evaluate Project impacts on the basin.

A3-6 The County acknowledges receipt of the SCVWD's letter. Please see Master Response M7 which describes the clarification of Draft EIR Mitigation Measure 4.10-4, describing the SCVWD-approved detention basin (Basin 40A).

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Matthew Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

Letter A4

February 21, 2012

Sent via electronic email: No hardcopy to follow

Santa Clara County Planning Office, County Government Center
70 W. Hedding Street, 7th Floor, East Wing
San Jose, CA 95110
Rob.Eastwood@pln.sccgov.org

Attention: Rob Eastwood

Re: Comments on the Draft Environmental Impact Report for the Lehigh Permanente Quarry Reclamation Plan Amendment

San Francisco Bay Regional Water Quality Control Board ("Water Board") staff appreciate the opportunity to review the Draft Environmental Impact Report for the Lehigh Permanent Quarry Reclamation Plan Amendment December 2011 ("dEIR") and submit comments for consideration. The dEIR assesses anticipated environmental impacts resulting from the proposed reclamation activities, which are of serious concern to Water Board staff. In general, the Water Board's comments are:

- The environmental impacts have been significantly underestimated and under-identified.
- The standards of work required under the dEIR are not consistent with level required by the Surface Mining and Reclamation Act ("SMARA"), Title 27 of the California Code of Regulations ("CCR27"), the Federal Clean Water Act and the Porter-Cologne Water Cologne Water Quality Control Act, (at Water Code Sections 13000 et seq.).
- The analysis is based on data not capable of statistical analysis to support the conclusions drawn.
- It is premature to approve the dEIR as it is currently written. To do so would ignore the better practical alternatives and the reclamation activities' real threats to water quality or human health.

We structure our detailed comments to provide guidance as to how to resolve inconsistencies and how to collect critical information before the County proceeds with approving the Reclamation Plan Amendment.

Introduction

The Lehigh Permanente Quarry Reclamation Plan Amendment ("Project") proposes to reclaim approximately 637 acres of existing and planned surface mining disturbance area. The Project components include the reclamation of the East Materials Storage Area (EMSA, 75 acres), Quarry Pit (265 acres), West Materials Storage Area (WMSA, 173 acres), Crusher/Quarry Office Support Area (53 acres), Surge Pile (8.8 acres), Rock Plant (19 acres), an area adjacent to and within the Permanente Creek corridor (Permanente Creek Restoration Area or PCRA, 49 acres), and an area south of Permanente Creek that has been disturbed by prior surface mining-related exploratory activities (Exploration Area, 20 acres). The purpose of the reclamation is to make the Project area suitable for future open space use.

The Project would be implemented in three phases over an approximately 20-year period and completed by 2030. During Phase I, mining activities will continue at the Quarry Pit, which has been mined for over 80 years, until 2025. Overburden materials generated from future mining will be disposed against the west wall of the Quarry Pit, namely the WMSA, while reclamation of the EMSA starts immediately after the Project approval. The restoration of EMSA will be completed in Phase I.

After mining is completed in Phase II, overburden materials currently stored at WMSA will be excavated and used to backfill the Quarry Pit. During Phase III, WMSA and Quarry Pit will be graded and revegetated and final reclamation is achieved. Reclamation of other components of the Project will occur during the three phases of the Project.

As an agency charged with water quality and beneficial uses protection, the following are our main concerns of the dEIR:

- The significant water quality impacts, including from the discharge of selenium and sediment-laden water to Permanente Creek during and after reclamation (Impacts 4.4-5, 4.10-1, and 4.10-2).
- The significant impacts on changes to drainage patterns that may cause increased storm water ponding, accumulation of selenium concentrations, on-site, off-site, and downstream flooding (Impacts 4.10-4, 4.10-6, and 6.2).
- Analysis of surface water flow changes in Permanente Creek (groundwater extraction from the creek during continued mining and groundwater recharge back to the creek after reclamation), and asserts the impact to be insignificant (Page 4.4-44 and Impact 4.4-5).
- Mitigation measure proposals for the significant impacts. Among the impacts, the water quality impacts from discharging selenium and sediment-laden water during the reclamation period cannot be mitigated to less than significant levels.

A4-1

Interaction of CEQA Selection of Baseline and Enforcement

The baseline chosen by the County is June 2007. Water Board policy is typically to choose the current environmental setting. However, the Water Board recognizes the County has significant discretion in selecting the baseline if there is substantial evidence to support the selected baseline. While there is a single comment *infra* regarding baseline and instability, the comments submitted by the Water Board are for the purposes of commenting on the sufficiency and propriety of the dEIR and not for pursuing direct enforcement of Lehigh. Such enforcement,

A4-2

whether through the administrative or legal process, is separate and distinct from the CEQA process, consistent with *Fat v. County of Sacramento* (2002) 97 Cal.App.4th 1270, 1280; *Riverwatch v. County of San Diego* (1999) 76 Cal.App.4th 1428, 1453. However, it is the Water Board's position that comments submitted by staff about the potential for environmental harm gathered through whatever means, whether it be review of the dEIR, interaction with Lehigh personnel, or personal observations at the site, are all appropriate.

A4-2

List of Water Quality/Hydrology Related Impacts Analysis (Section 4.10)

This chart is excerpted from the dEIR Table ES-3, Summary of Impacts and Mitigation Measures for the Permanente Quarry Reclamation Plan Amendment, Hydrology and Water Quality Section. Water Board Staff does not agree in all regards with the dEIR's assessment of viability compiled from the Executive Summary and Table ES-3. The Water Board often disagrees with the dEIR's assessment of viability of mitigation measures and the significance of impact after mitigation. Our comments, presented below, explain our concerns and how our conclusions differ with the dEIR's.

Environmental Impact	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
4.4-5: Project activities could result in selenium burdened runoff reaching aquatic habitats and, thereby, in deleterious effects to aquatic organisms and their prey base.	Significant	**4.4-5:** Selenium-related Impacts to Aquatic Habitat (to implement **4.10-2a** and **4.10-2b**).	Significant and unavoidable
4.10-1: Post-reclamation conditions in the EMSA, WMSA, and Quarry pit would increase selenium concentrations in Permanente Creek to levels exceeding baseline conditions and RWQCB Basin Plan objectives.	Significant	**4.10-1a:** Professional geologist Verification of Non-Limestone-Containing Material Use. **4.10-1b:** Verification Water Quality Monitoring.	Less than significant
4.10-2: Interim reclamation activities within the Project Area would contribute concentrations of selenium, Total Dissolved Solids (TDS), and sediment in Permanente Creek.	Significant	**4.10-2a:** Interim Stormwater Control and Sediment Management. **4.10-2b:** EMSA Interim Stormwater Monitoring Plan.	Significant and unavoidable
4.10-3: The Permanente Creek Reclamation Area (PCRA) reclamation activities would contribute concentrations of selenium, Total Dissolved Solids (TDS), and sediment in Permanente Creek.	Less than significant	None required	Less than significant
4.10-4: The Project would alter the existing drainage pattern of the site, which could result increased storm water runoff rates and on- or offsite flooding.	Significant	**4.10-4:** Construction of Onsite Detention Facility.	Significant and unavoidable

4.10-5: Groundwater discharge from the Quarry pit after backfilling and reclamation is complete would adversely alter surface water flows to Permanente Creek.	Less than significant	None required	Less than significant
4.10-6: The Project would alter the existing drainage pattern of the site, which could result in increased stormwater ponding, accumulation of selenium, and flooding.	Significant	**4.10-6:** Stormwater Control to Avoid Ponded Water and Selenium Accumulation.	Less than significant
Impact 6-2: Incremental Project-specific activities could contribute to downstream flooding.	Significant	**6-2:** Construction of Onsite Detention Facility.	Significant and unavoidable

I. WATER BOARD STAFF COMMENTS RELATED TO WATER QUALTITY STANDARDS AND REGULATIONS

A. California Code of Regulations – Title 27

Comment #1: The dEIR is Inconsistent with the Standards Set Forth in SMARA

As described throughout this letter, the Water Board's comments articulate the deficiencies in the dEIR, in the analysis done prior to issuing the dEIR, in the planned 20 years of reclamation activities, and the inadequate mitigation. The Water Board's initial concern is that the dEIR must hold Lehigh to the performance standards in the governing regulation, SMARA. Most notably, the following SMARA provisions, in the Water Board's opinion, are not met:

> 3704.1 Performance Standards for Backfilling Excavations and Recontouring Lands Disturbed by Open Pit Surface Mining Operations for Metallic Minerals.
>
> …
> (b) Backfilling shall be engineered, and backfilled materials shall be treated, if necessary, to meet all of the provisions of **Title 27, California Code of Regulations**, Division 2, Chapter 7, Subchapter 1, Mining Waste Management, commencing with Section 22740, and the applicable Regional Water Quality Control Board's Water Quality Control Plan. (emphasis added)
>
> …
> (d) … All fills and slopes shall be designed to protect groundwater quality, to prevent surface water ponding, to facilitate revegetation, to convey runoff in a non-erosive manner, and to account for long term settlement.
>
> 3706. Performance Standards for Drainage, Diversion Structures, Waterways, and Erosion Control.
> (a) Surface mining and reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water in accordance with the Porter-Cologne

A4-3

Water Quality Control Act, Water Code section 13000, et seq., and the Federal Clean Water Act, 33 U.S.C. section 1251, et seq.
(b) The quality of water, recharge potential, and storage capacity of ground water aquifers which are the source of water for domestic, agricultural, or other uses dependent on water, shall not be diminished, except as allowed in the approved reclamation plan.
(c) Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of a surface mining operation to minimize siltation of lakes and watercourses, as required by the Regional Water Quality Control Board or the State Water Resources Control Board.

3710. Performance Standards for Stream Protection, Including Surface and Groundwater.
(a) Surface and groundwater shall be protected from siltation and pollutants which may diminish water quality as required by the Federal Clean Water Act, sections 301 se seq. (33 U.S.C. section 1311), 404 et seq. (33 U.S.C. section 1344), the Porter-Cologne Act, section 13000 et seq., County anti-siltation ordinances, the Regional Water Quality Control Board or the State Water Resources Control Board.

3712. Performance Standards for Tailing and Mine Waste Management.
State Water Resources Control Board mine waste disposal regulations in Article 1, Subchapter 1, Chapter 7 of Title 27, California Code of Regulations, shall govern mine waste and tailings, and mine waste disposal units shall be reclaimed in conformance with this article.

A4-3

Comments throughout this letter relate to these performance standards.

Comment #2: The dEIR is Incomplete Due to No Data or Insufficient Data

Water Board staff have been informed that the County is in a severe time crunch, with little room for maneuvering. The Water Board does not find an onerous schedule a valid reason for minimizing impacts to the environment. Specifically, Terry Seward of the Water Board provided information to the County **on November 21, 2011**, along with a pdf of the Title 27 regulations and the statement that the "[Water Board] will need to evaluate your proposed plan to make sure it is consistent with the closure requirement for mine sites contained in Title 27 (section 22510)." The dEIR refers to Title 27 on 4.10-22 as part of the Regulatory Setting.[1] The dEIR concludes that the materials in the waste piles would <u>likely be characterized</u> as Group B mining waste as defined in Title 27, but can offer no support for such a conclusion, because adequate testing has never been completed. Nor has a Report of Waste Discharge for either the WMSA or the EMSA been submitted to the Water Board. The dEIR states, correctly, that under Title 27, Lehigh "would be required to implement certain siting and construction standards,

A4-4

[1] The dEIR also refers to Title 27 on 2-50, noting that it requires that threats to water quality be addressed during mine closure and reclamation. The comment on page 2-50 addresses sediment transport, which is raised in Comments 27 and 28.

including peak stream flow protection, precipitation and drainage controls, and a leachate collection and removal system (LCRS)." Yet none of these items are included as required mitigation in the dEIR, even though the SMARA regulations require the Project to conform to Title 27 standards.

A4-4

Comment #3: The dEIR Has Not Conclusively Determined that Hazardous Materials Are Not Present in the Waste Piles

The dEIR has presented no evidence to supports the conclusion that there are not hazardous materials in either waste pile, yet Water Board staff have observed the disposal of such materials to the waste piles.

Title 27 governs the disposal of non-hazardous, but potentially deleterious waste to land. This includes solid and liquid; municipal, construction, industrial, and mining waste. Section 20164 of CCR 27 defines "mining waste" as: all waste materials (solid, semi-solid, and liquid) from the mining and processing of ores and minerals including soil, waste rock, and other forms of overburden as well as tailings, slag, and other processed mining wastes. The known potential wastes generated by Lehigh that could be regulated pursuant to CCR 27 include mining waste (overburden mine material; waste rock mine material; liquids, solids, and sludges produced from the processing of mined ores, including contact groundwater and surface water from the Quarry Pit) and industrial waste (cement kiln bricks --which have been observed in the EMSA and photographed by Water Board staff--and dust used in the industrial processing of mined material; chemical waste materials; waste liquids, solids, and sludges produced in manufacturing industrial products such as aluminum, cement and sand and gravel).

A4-5

Furthermore, while this EIR creates a distinction between the mining activities and the cement plant activities, the presence of kiln bricks in the EMSA and rock plant mud cake indicates that waste materials from all three operations are being deposited into one or both the EMSA and WMSA. So, not only must the EIR fully characterize the mining waste deposited in the storage areas, it must characterize ALL waste deposited in the storage areas. The Water Board has information that hazardous waste from the decommissioning of the Kaiser Aluminum facility has also been deposited in the vicinity of the EMSA.

Notwithstanding Title 27 and its predecessor regulations, Lehigh and/or the County should have characterized the WMSA and EMSA **for the purposes of the dEIR**. Instead, there has been a complete lack of characterization of the waste piles and the effect of the reclamation activities on the chemical constituents within the piles. While buried, rocks in the piles are in reducing conditions and are not labile (reactive), do not readily leach (dissolve) into surrounding water, and are relatively immobile in the ground. Once exposed to oxygen or oxygenated water, the surface of the rocks become oxidized. Selenium and metals also become oxidized into a labile form, such that they readily leach into surrounding water.

Characterization of waste is required to implement the appropriate level of protective measures to ensure adequate isolation of waste from groundwater and surface water.

Because the EMSA and WMSA have not been adequately characterized, and given historic records from the facility and knowledge of the geology of the area, mining waste (solid and liquid) from the site is likely to contain elevated levels of metals and metalloids such as mercury, chromium, and selenium, which can be harmful to humans and wildlife. Mercury and selenium are bioaccumulative (concentrations increase exponentially up the food chain). Water Board records indicate very limited sampling has been done of the mine related materials and wastes for these contaminants.

A4-5

Comment #4: Insufficient Search To Draw Conclusions (Hazards and Hazardous Materials (4.9))

The dEIR designates impacts as less than significant based on existing use of hazardous chemicals, based on a search of regulatory databases. It is insufficient to use regulatory databases to identify known spills; historical site records must be used. Information in regulatory databases is primarily sourced from Reports of Waste Discharge, which Lehigh failed to submit with respect to mining waste. As noted above, the Water Board has personally observed hazardous materials in the waste piles.

A4-6

Comment #5: Like Mining Waste, Industrial Waste Has not Been Properly Characterized

Industrial waste has not been characterized at the site. The following is a list of wastes likely present:

a) Industrial process water from crushing rock, washing rock and washing equipment may contain metals and metalloids, acrolein and acrylonitrile, and petroleum products.

b) Chemicals used to maintain equipment (fuel oils, lubricants, solvents, paints, etc.).

c) Sludges, dust, and other solid waste materials produced during the processing or manufacturing of industrial products, including waste generated at the co-located cement factory.

A4-7

The petroleum and solvent chemicals contain volatile and semi-volatile organic compounds (e.g., benzene, toluene, TCE), which can be carcinogenic, mutagenic, teratogenic, or otherwise harmful to humans and wildlife. The dEIR lacks the characterization of the waste piles and of these potential harms to human health. Furthermore, the waste piles represent a real and continued threat to groundwater that, even if the dEIR were approved and the Project were to proceed, the waste piles would remain on site for at least seven additional years. Furthermore, the ultimate goal of the proposed Project is to store the same waste in the current Quarry Pit into perpetuity. Without testing, no agency or entity, including the County of Santa Clara or Lehigh, can confidently state that there are not hazardous materials in the waste piles and that the WMSA and EMSA pose no threat to groundwater.

Comment #6: The Reclamation Activities Do Not Comply with Title 27's Siting, Design, and Construction Requirements (Chapter 3, Subchapter 2)

While the reclamation plan ultimately – over the next 20 years – sorts, reuses, and relocates the EMSA and WMSA (summarized at 2-14 and 2-16), because the dEIR did not fully address Title 27, the Project is subject to the water quality risks that Title 27 is aimed at preventing. For example, Title 27 Chapter 3, Subchapter 2 requires proper siting and design, which is intended to ensure adequate isolation of waste from groundwater and surface water. Such protections may include liners separating waste from the ground surface to prohibit migration of waste and leachate to soil, groundwater, or surface water or a cap to minimize percolation of liquids through the waste, and thus leachate production.

By the term "cap" (interchangeable with the term "cover"), what is understood in the context of Title 27 compliance is an impermeable layer such as clay - not the loose, unconsolidated waste material referred to in the dEIR as "cover." Failure to comply with these requirements can result in a failure to isolate wastes from groundwater and surface water. Instead, the "cap" proposed in the dEIR is insufficient to function as intended (to minimize percolation of rain through the waste pile), and does not meet Title 27 regulations. A4-8

For example, the WMSA and EMSA have no such protections, and the dEIR proposes none **for at least the next 7 years**.[2] Staff have personally observed dry kiln bricks in the EMSA, which are hazardous. Neither of the waste piles is covered, exposing them to stormwater. The EMSA and WMSA are not small waste piles; they are vast waste impoundments: approximately 75 acres for the EMSA and approximately 175 acres for the WMSA. Neither of the waste piles is believed to be on a concrete liner. Lehigh has not submitted a Report of Waste Discharge pursuant to Water Code 13260 for either of the waste piles. The groundwater samples contained in the dEIR were collected from the wrong locations for determining if there is any contamination.

Because of Lehigh's failure to submit information under existing regulatory structures, the County may have little information about the characterization of the waste piles. However, it should have required it as part of completing the dEIR. Staff inspections indicate little to no containment structures are employed at the Project site. It is possible leachate has migrated to groundwater and surface water, and therefore possible contaminants from the waste have discharged to groundwater and Permanente Creek.

Comment #7: Inadequate Monitoring Plan Pursuant to Title 27, Subchapter 3, Article 1 A4-9

[2] As is discussed *infra*, the Water Board feels the ultimate resolution – proposed mitigation – is insufficient, and the dEIR sets forth no schedule for establishing mitigation measures during Phase I, which lasts for seven years. Refer to Comment #25.

Because the dEIR is inconsistent with the requirements of Title 27, both retrospectively and prospectively, it also fails to describe or require a water quality monitoring plan during the removal and re-location of the waste piles. The purpose of this requirement is to detect, at the earliest possible time, any release from a Waste Management Unit ("WMU"), such as the EMSA or WMSA, as well as to monitor remediation of known releases. A release of leachate or waste from a WMU to groundwater, surface water, or soil where it might reach groundwater or surface water, constitutes an unauthorized discharge to waters of the state. CCR 27 requires a groundwater monitoring program for WMUs to ensure they are not leaking. Pursuant to CCR27, a hydrogeologic investigation is performed to develop a monitoring program, and typically groundwater upgradient and downgradient of the WMU are compared, or analysis of trends is used to identify a potential release. Monitoring of receiving waters, in this case at least Permanente Creek, is also required to identify impacts. The above described investigations need to be performed, fully and accurately described in this dEIR, and form the basis for project alternatives analyses and impact considerations. A4-9

It is unknown if any WMU at Lehigh is leaking, (i.e., if waste or leachate from waste piles, landfills, surface impoundments, etc., is in contact with groundwater at the site). Given historic records, Staff's knowledge of the geology and hydrogeology of the area, and evidence that the WMUs are unconfined and unlined; it is likely that waste and leachate are in contact with or have impacted groundwater quality. The geology of the area consists of fractured bedrock (fault brecciated Franciscan) and alluvium and colluvium, both of which are permeable deposits that could allow migration of leachate to groundwater. Therefore, groundwater and surface water could be impacted by pollutants from WMUs.

Comment #8: Closure and Post-Closure Maintenance Plans, Title 27, Subchapter 5

The purpose of this requirement is to ensure plans are in place to properly close WMUs to ensure continued isolation from waters of the state. It includes criteria for cover, maintenance, drainage controls, erosion controls, and financial assurances. Failure to comply means the State cannot be assured Lehigh has the plans in place, and the financial ability, to adequately close and maintain the facility during the 20-year reclamation plan to protect human and environmental health.

A4-10

The Project defined in the dEIR, and all proposed alternatives, fail to address requirements of CCR27 for mining waste, and industrial waste (if disposed of onsite). These requirements include:

1. Waste and leachate characterization in the WMSA, EMSA, backfilled quarry, and surface impoundments.

2. Structural standards. Specifically, the Project and alternatives proposes to leave in place the EMSA, or move it to CMSA; however there is no proposal to meet the structural standards required by CCR 27. In addition, the Project and alternatives propose to backfill the Quarry pit with mining waste (overburden and waste rock), which has not been characterized. This waste would be in contact with groundwater (approximately **18 million gallons of groundwater** was pumped out of the pit in 2010), and may leach

contaminants from the waste and **migrate offsite, potentially discharging to Permanente Creek or downgradient drinking water aquifers**.

3. Submittal of Report of Waste Discharge and subsequent coverage under a permit (Waste Discharge Requirements) for discharge of mining waste to land will be required, which was not included in the list of required permits.

4. Proposed final contours of the Quarry do not meet CCR 27 requirements. The proposal is to backfill the pit partially, to create a swale with a lowest elevation in the quarry pit. Surface water runoff would therefore be directed to the Quarry Pit. CCR 27 requires drainage away from waste to minimize percolation and production of leachate.

A4-10

B. Selenium

Comment #9: Conclusions in dEIR regarding Selenium are Not Supported by Data Presented in dEIR; Overall, dEIR Lacks Pertinent and Correct Sampling and Evaluation

Monitoring conducted by the Water Board's Surface Water Ambient Monitoring Program (SWAMP) in 2002 and by Santa Clara Valley Urban Runoff Pollution Prevention or SCVURPPP during 2005-2007 indicated selenium WQOs were exceeded at the downstream reach of the Creek (at a location near the Rancho San Antonio Park). The applicable water quality objectives (WQOs) for selenium are from the National Toxics Rule (NTR), which are 5 µg/L for chronic aquatic life protection and 20 µg/L for acute protection, expressed in total recoverable metal.

A4-11

The dEIR used additional water quality data collected in 2009, 2010, and 2011 at five new locations in the Creek (Table 4.10-2). Among which, two locations, SW-1 (upstream of quarry dewatering discharge point) and SW-2 (downstream of quarry dewatering discharge) are located within the Project area, the other three are next to the Project area. These locations are further upstream of the site used in the SWAMP/SCVURPPP monitoring programs; therefore, these data more closely reflect the impacts from the mining activities.

However, selenium concentrations cited in the dEIR appeared to be all in the dissolved form, and the dEIR compared these dissolved concentrations with the selenium total recoverable WQOs (Table 4.10-2). In fact, total selenium concentrations may be more relevant to evaluate the severity of the problem. Dissolved selenium determines the phase transformation (from dissolved to particulate), but particulate selenium is the bioavailable form of toxicology importance (*Metal Contamination in Aquatic Environments, Science and Lateral Management, Samuel N. Luoma and Philip S. Rainbow, Cambridge University Press, 2008*). The dEIR at Page 4.10-6 states that selenium in the discharges are mostly in dissolved form, however, this statement needs to be supported by the data. Therefore, the analysis needs to be based on total selenium concentrations.

Even with the dissolved concentrations, all five locations in the Creek had selenium concentrations well above the WQOs, with the maximum concentration observed immediately downstream of the Quarry Pit dewatering point (81 µg/L as dissolved selenium versus the chronic objective of 5 µg/L). The Creek at this location is dominated by the Quarry dewatering

discharged from Pond 4A during dry season. Pond 4A had a sample with a selenium concentration of 100 µg/L. Besides, monitoring of the storm water runoff of the two waste materials storage areas (EMSA and WMSA) also indicated elevated selenium concentrations (ranging from 7.1 – 36 µg/L). Monitoring data of the groundwater in the Project area (0.27 to 3.9 µg/L) and in an adjacent reference creek, Monte Bello Creek (from non-detect to 0.71 µg/L), on the other hand, showed very low selenium concentrations. It is important to note that the groundwater samples were taken from the exploratory borings on the other side of Permanente Creek in an area that has not been disturbed by mining. Also, the dEIR needs to confirm that the Monte Bello Creek sampling location is eligible to be a "background" sample location.[3] Our comment here assumes that it is an appropriate background location.

A4-11

Comment #10; Limestone as Potential Source of Selenium

The dEIR also identified limestone to be the rock that leaches the most selenium into the groundwater and surface runoff that has been in contact with the limestone. Groundwater that seeps into the Quarry Pit and storm water runoff that flows into the Quarry Pit, which is high in selenium, are constantly pumped to the Creek. Both WMSA and EMSA contain wasted limestone, portions of the WMSA contain dense quality limestone and aggregates; the Project proposes to separate these limestone during the reclamation (while excavating and backfilling the Quarry Pit using materials from WMSA) for subsequent processing. In the dEIR, it is noted that the EMSA also contains a fine-grade byproduct from limestone washing at the Rock Plant wash plant. Water Board staff have personally observed this same material, referred to by Lehigh staff as "mud cake", deposited in large quantities in the WMSA as well. Lehigh further documented that Rock Plant "mud cake" is deposited in the WMSA in its application materials for coverage under the Sand and Gravel Permit.

This mud cake material may contain high-grade limestone and is considered potential sources of selenium if exposed to storm water and remobilized by runoff (pg. 4.10-32). Surface runoff in contact with these waste materials will bring high concentrations and mass loading of selenium into the discharge. It is unclear how Lehigh deals with the wash water that may be very high in selenium.

A4-12

Therefore, the Water Board finds that the Quarry Pit dewatering and surface runoff from the waste material areas are significant sources of selenium. Furthermore, the crusher operation area and the surge pile contain significant quantities of fines as has been personally observed by Water Board staff.

The dEIR does not mention the full range of pollutants present in mud cake: as personally observed by Water Board staff, petroleum-based lubricants are used in large quantities in the rock crushing operations, and that waste accumulates in the crusher basin area and must be removed to either the WMSA or the EMSA. The Rock Plant uses chemical agents for flocculation, and those chemicals are also present in the "mud cake" that is deposited in the WMSA and EMSA. When the Water Board required Lehigh (per June 2011 13267 order) to propose which chemicals to sample for that would indicate presence of the proprietary chemicals

[3] Refer to Comment #33, *infra*.

used at the Rock Plant, they answered, "acrylonitrile and acrolein," both of which are regulated priority pollutants in the California Toxics Rule. The dEIR needs to contain sampling data for all priority pollutants in all waste streams on site. A4-12

Comment #11: The Water Board Is Not Confident, Based on Current Analysis, that Selenium will not be Mobilized by Project Activities

The impact of selenium and metals contained in the WMSA, EMSA, and Quarry Pit has not been evaluated sufficiently to assume a less than significant impact with mitigation. The Quarry, and materials stored/disposed of in the waste piles (WMSA and EMSA) contain limestone, known to contain selenium. The overburden and waste rock is known to contain metals such as mercury, nickel, cobalt, manganese, and chromium. In elevated concentrations, these elements pose a risk to human and environmental health. While buried, these rocks are in reducing conditions and are not labile (reactive), such that metals on the surface do not readily leach (dissolve) into surrounding water, and are relatively immobile in the ground. Once exposed to oxygen or oxygenated water, as during the mining process, the surface of the rocks become oxidized. Selenium and metals also become oxidized into a labile form, such that they readily leach into surrounding water.

A4-13

In the WMSA and EMSA, this Project's process of moving waste materials to the final storage location increases the concentration of selenium and metals in surface water and likely groundwater. The materials in these waste piles contain rocks, including fines (small particle size), with selenium and metals whose surfaces are oxidized, and therefore labile. Rain water will percolate through the proposed "cap" (which consists of a foot of permeable, coarse grained, non-limestone rock; under a six-inch layer of top soil) and into the material, dissolving selenium and metals. This water can seep from the waste piles contaminating stormwater, or percolate to the water table, contaminating groundwater. We note that the use of the word "cap" is misleading in the dEIR because the proposed layer of waste rock will not act as a cap as that term is used by geologists and others in the field.

Furthermore, the dEIR does not have sufficient information to demonstrate that mercury concentrations are similar to background. Furthermore, staff disagree with the assumption that the mercury concentrations above water quality objectives are necessarily attributable to atmospheric deposition. The contribution of atmospheric mercury to soil is likely negligible as it is primarily present in the atmosphere in the non-reactive elemental form.

An oxidation process similar to that described for the WMSA and EMSA has occurred in the rocks from the WMSA that will be used to backfill the Quarry Pit during reclamation, thereby further contaminating groundwater with selenium and metals if it is backfilled with mining waste. The dEIR does not adequately demonstrate that the mitigation efforts Lehigh proposes (amending the top 25 to 50 feet with organic matter) will adequately immobilize contaminants for the following reasons:

The Water Board staff disagree with the water quality projections for subsurface flow out of the Quarry (Table 4.10-7). The leachable concentrations of selenium and metals used for this projection were taken from the quarried samples rather than samples from the backfill source, the

WMSA. The rocks in the WMSA are presumably smaller sized, and therefore have greater leachable surface area than the quarried rocks. Furthermore, they have been exposed to oxygen longer and are further oxidized.

Staff concurs that the backfilled Quarry Pit will equilibrate to reducing conditions, and that amending the backfill with organic matter will enhance this process. However, the dEIR County has not sufficiently demonstrated that selenium and metals will be immobilized. Furthermore, the dEIR does not propose verification monitoring of groundwater to ensure groundwater is or remains uncontaminated. Specifically:

We cannot accept the assertion on page 4.10-39 that "case histories at other mines in the United States and Canada indicate that backfilling a mine pit and saturating the material causes chemically reducing (i.e., anoxic or anaerobic) conditions that result in very low mobility of selenium."

The references to support this statement are not appropriate. The single case history provided (BLM 2007) was a study creating reducing conditions to precipitate selenium in a quarry pit lake, not a backfilled pit. The water was treated directly, which is not analogous to the dEIR's proposal. The remainder of the "case histories" listed in the citation are proposals or plans, without a demonstration of results. A4-13

While we agree that reducing conditions reduce the lability of selenium and mercury, we cannot concur that this will necessarily result in sufficient sequestration of selenium and mercury (immobility) in the backfilled pit. Abiotic removal of selenate [Se (VI)] from solution is slow, and biotic anaerobic reduction typically results in selenite or elemental selenium, but further reduction to selenide is necessary to strongly bind selenium. Selenite reduction can result in colloids (very small particles) that remain mobile in groundwater. Mercury can be reduced to its elemental form, which though not reactive can be dissolved in groundwater, and is therefore also mobile. The potential therefore exists that selenium and mercury may continue to contaminate groundwater within and downgradient of the Quarry Pit.

The dEIR must demonstrate that mobility of selenium and metals is sufficiently retarded in order to demonstrate that the proposed Project can go forward. Furthermore, pursuant to Title 27, we will require Lehigh to monitor groundwater to ensure it is not impacted by mining or reclamation activities.

Finally, staff disagree with the analysis performed and conclusion that groundwater has not been impacted. Insufficient samples were taken (five) to make this determination. Moreover, the few samples that were taken were collected across Permanente Creek, which acts as a groundwater divide, and therefore are not representative of site groundwater (Figure 4.10-2). In sum, samples were taken in an inappropriate location and, even if they had been taken in an appropriate location, the number of samples taken is too low to provide statistical assurance of data quality.

Comment #12: Selenium Discharge to the Creek Causing Further Degradation is Likely to be Prohibited and Concerns with Effectiveness of Mitigation Measures A4-14

During the 20-year reclamation period, there would be lots of disturbances of the waste materials in the Project area, including excavating, hauling, grading, backfilling that may expose new limestone materials in the waste material storage areas to air and rain; this would exacerbate selenium discharge to the Creek during the interim reclamation period and cause a significant adverse impact to water quality and aquatic habitat. Although the dEIR proposed mitigation measures 4.10-2a: Interim Storm water Control and Sediment Management, and 4.10-2b: EMSA Interim Storm water Monitoring Plan; the dEIR states that "these measures would reduce the potential for storm water runoff to deliver sediment and selenium to Permanente Creek during the Project activities, but would not be sufficient to fully eliminate the possibility"; therefore, the dEIR categorizes the water quality impact from selenium discharge as "significant and unavoidable" after mitigation.

Federal and state Antidegradation Policies prohibit further degradation of impaired water bodies and groundwater. The discharge of elevated selenium or even worse, with potentially higher selenium concentrations associated with reclamation activities, will likely be prohibited. 40 CFR 131.12 states:

> Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

A4-14

Therefore, in order to continue to discharge selenium-laden water into the Creek, either associated with future mining activities or reclamation activities, the dEIR must address the Antidegration Policy requirements.

The dEIR also must include additional data, including, but not limited to, pollutants in sediment, aquatic plant, fish tissue, bird eggs, toxicity and cause of toxicity, to evaluate whether beneficial uses are being achieved or whether the discharge is the cause of the impairment.

For Impact 4.10-1, "Post-reclamation conditions in the EMSA, WMSA, and Quarry Pit would increase selenium concentrations in Permanente Creek to levels exceeding baseline conditions and Water Board Basin Plan objectives", the dEIR's proposed mitigation strategies to reduce selenium concentrations in the surface runoff from WMSA, EMSA, and Quarry Pit, after the reclamation is complete. These include the use of 1-foot non-limestone cover, 6-inch topsoil, and water monitoring to verify selenium concentrations in the runoff being below WQOs. Additional measures to lower selenium discharge in the groundwater that will recharge back to the Creek from the Quarry Pit include backfilling with organic material (to a 25-50 feet depth). The dEIR claims that this conditioning may produce an anaerobic condition in the backfilled

materials that will help transform dissolved selenium to solid forms of selenium. We are concerned about: (1) whether the 1-foot non-limestone cover will be enough to prevent storm water infiltrating into the materials underneath it; (2) how well the 1-foot non-limestone cover is implemented; (3) what else will be done if water quality monitoring indicates exceedance of water quality objectives in the surface runoff besides improving best management practices (BMPs).

A4-14

Comment #13: No Mention of Federal or State Antidegradation Policies in Regulatory Setting (4.10-17-4.10-26)

Permanente Creek is listed as impaired for selenium on the federal Clean Water Act Section 303(d) List for Impaired Waters. The dEIR identifies that mining activities contribute significant loads of selenium to Permanente Creek via surface runoff and Quarry Pit dewatering. The proposed reclamation activities (the Project) could exacerbate selenium discharge during the 20-year reclamation period. The dEIR does not provide effective mitigation measures to reduce selenium discharges to Permanente Creek during the reclamation period. The federal Antidegradation Policy at 40 CFR 131.12 and the California policy embodied in State Water Resources Control Board Resolution 68-16, prohibit further degradation of the water quality in impaired water bodies and groundwater; therefore the discharge of potentially higher selenium concentrations associated with reclamation activities **may be prohibited.**

A4-15

Comment #14: Wastewater Discharge NPDES Permit Requirements

Some of the constituents in the discharge from the Quarry are currently covered under the Water Board's General permit for Aggregate Mining and Sand Washing Facilities (Order No. R2-2008-0011). The Water Board staff is in the process of drafting an individual permit for this discharge due to the complexity of the operations at the site. Future discharges associated with mining and reclamation activities will be covered under the new NPDES permit. The future individual permit may include water quality-based effluent limits for selenium, and effluent limits for other pollutants with reasonable potential to cause WQO exceedance. Since the discharge is into an impaired water body, relaxed effluent limits might not be available for the discharge, as prohibited by the Clean Water Act and the Porter Cologne Water Quality Control Act. There is high risk that the discharge will require significant treatment to prevent WQO exceedances. The EIR does not address how the discharge will comply with expected NPDES permit requirements, especially since, as discussed *infra*, the dEIR concludes without much analysis that no selenium treatment is feasible while the reclamation activities cause significant yet unavoidable environmental impacts.

A4-16

C. Other Issues

Comment #15: Consistency/Comparability between WQOs and dEIR

A4-17

The applicable Water Quality Objectives (WQOs) for selenium in the National Toxics Rule (NTR) and mercury in the Water Quality Control Plan for San Francisco Bay (Basin Plan) are reported in the total recoverable form. The dEIR analysis mistakenly compares dissolved concentrations with the total objectives. A4-17

Comment #16: Beneficial Uses Include Groundwater Recharge

The beneficial uses of groundwater in the area (Santa Clara Valley Groundwater Basin, Santa Clara Sub-basin) include: (a) Municipal and domestic water supply; (b) Industrial process supply; (c) Industrial service supply; and (d) Agricultural supply. Groundwater in this area is used for recharge of aquifers used for drinking water, by the Santa Clara Valley Water District. *See* the Basin Plan Amendment at (http://www.waterboards.ca.gov/sanfranciscobay/board_info/agendas/2010/July/6/Appx_A.pdf)

Given the geology outlined in the dEIR, it is expected that groundwater flow would follow topography (flow from high to low points, the lowest being the creeks). Therefore, it is likely that potentially contaminated groundwater at the site discharges to Permanente and other creeks. The beneficial uses of Permanente Creek are (a) Cold freshwater habitat; (b) Fish spawning; (c) Wildlife habitat; (d) Water contact recreation; and (e) Noncontact water recreation. It should be noted that Permanente Creek is listed as impaired by selenium and toxicity on Clean Water Act Section 303(d) List (in addition to trash and diazinon). A4-18

The hydrology section of the dEIR states that there is insufficient data to understand the hydraulic connection between groundwater and surface water, or to compare background to site groundwater (for TDS and sulfate). There is almost no data provided on site hydrogeochemistry, which is imperative to understanding whether groundwater is contaminated, and can in turn contaminate surface water and drinking water aquifers.

The dEIR suggests that groundwater quality will not be impacted by reclamation; however there is inadequate analysis to make such a conclusion. Furthermore, given the Water Board staff's experience and knowledge of the geology of the area, we are concerned that groundwater is currently contaminated with selenium, and possibly metals.

Comment #17: Contradictory Analysis Related to Mercury and Nickel

The data used in the dEIR suggest that mercury and nickel WQOs are exceeded in Permanente Creek. However, the dEIR asserts that concentrations of these pollutants are either below the WQOs or at natural background levels. This statement appears to contradict the data and needs to be modified. A4-19

Comment #18; Other Water Quality Concerns – Nickel A4-20

Table 4.10-2 summarizes monitoring results for other metals, including mercury and nickel. These monitoring data are either for total or dissolved metals, while the objectives used to compare with are total for mercury and dissolved for nickel. The dEIR needs to be consistent and clear in using either the total or dissolved, when comparing with the same form of WQOs. This comment also applies to other metals like iron, manganese, and molybdenum.

The dEIR claims that nickel concentrations in the Creek and in surface runoff were mostly below the WQO calculated using a hardness value of 100 mg/L as $CaCO_3$. However, concentrations in EMSA surface runoff, Pond 4A water, and in the Creek below the Quarry Pit discharge point mostly exceeded this WQO value. Observed concentrations were also much higher than those of the background (groundwater and reference creek). If the dEIR wishes to use a different WQO value based on actual observed hardness (the higher the hardness, the higher the objective), it needs to provide all hardness data, and uses the minimum observed hardness value for WQO calculation. It is also important to have hardness data collected during rainy season when the Creek is not dominated by Quarry Pit dewatering discharge and when hardness is lower. Such data collection may not be possible this winter as we have had an abnormally dry year.

A4-20

Since the dEIR does not identify nickel as a problematic pollutant, there is no impact analysis to address the high levels of nickel in surface runoff (maximum average of 115 µg/L in one of the runoffs) and in the Quarry Pit water (100 µg/L). The projected nickel in runoff from reclaimed Quarry area, as provided in Table 4.10-8, is 2-3 µg/L. It is not clear how this low concentration is achieved without any measures to address nickel release from rocks. From the leachability test (Table 4.10-4), greenstone seems to leach the highest nickel. This is a different source than selenium (from limestone). It is also one of the rock types proposed to be used as "cover", which would create a higher risk for leaching of nickel into storm water runoff. Therefore, mitigation measures regarding selenium will not work for nickel.

Comment #19: Other Water Quality Concerns – Mercury

Mercury concentrations in four of the five creek monitoring locations were above the applicable WQO, surface water runoff concentrations were also higher than WQOs. The reference site at Monte Bello Creek has lower mercury concentrations than WQOs. Therefore, it appears that mercury might be a concern in the discharge as well in the Creek within and near the Project area. The dEIR asserts that mercury measured in runoff and in the Creek cannot be reliably distinguished from background. However, it is not clear how the conclusions were drawn. If available data are limited, more monitoring data is necessary to provide data for a robust statistical analysis.

A4-21

Comment #20: Stabilization – Affected by Choice of Baseline

Geology, Soils, and Seismicity: Staff disagrees with the choice the baseline of June 2007 . 4.7.1 and 2 Seismic impacts to structures and ground - It is true that the Reclamation Plan will stabilize slopes in the Quarry Pit and waste storage areas, but they are sliding and slumping due to disturbance resulting in a factor of safety around 1 according to the 2011 Terraphase Engineering Report cited in the dEIR (pg. 4.7-18), not due to inherent instability, as suggested in

A4-22

the dEIR. This disturbance occurred prior to June 2007; therefore that data is an unacceptable baseline. A4-22

II. WATER BOARD STAFF COMMENTS RELATED TO SELENIUM TREATMENT, PROPOSED MITIGATION, AND BEST MANAGEMENT PRACTICES

Comment # 21: Selenium treatment – Inadequate Alternative Analysis (Flow)

While the Water Board expects the County of Santa Clara to have prepared the dEIR independently and reviewed the conclusions of its consultants, geologists and engineers with objectivity, the lack of discussion of alternative treatments makes it difficult for the Water Board to review and comment. By simply stating the largest possible flow and therefore assuming the highest possible cost for any treatment, the County has determined selenium treatment to be infeasible (4.10-47). Based on our cursory analysis, more work needs to be done before a conclusion on selenium treatment feasibility can be drawn. For example:

- The dEIR at footnote 14 (4.10-47) concludes that flow is approximately 8 cubic feet per second (cfs), which is based on a maximum pumping rate. There is no discussion, at least in the analysis of the cost of treatment, of Lehigh's reported flows at different outfalls.
- If Lehigh were to treat Quarry Pit water before combining it with other sources of water for discharge via 001, then the amount of water to treat for selenium would be about half of what the County used in the treatment cost estimate.
- No analysis of the economic benefit to Lehigh is conducted, despite regulatory mandates for such economic benefit to be assessed. The dEIR concludes that "approximately $86 million," plus "approximately $2.8 million per year to operate and maintain" is infeasible, and therefore the significant and unavoidable impacts are acceptable, subject to the mitigation proposed in the dEIR. However, such impacts come with consequences. Those selenium discharges are byproducts of Lehigh's operations, and by not being required to pay for treatment, Lehigh is receiving a significant economic benefit.
- Furthermore, **the County contacted the Water Board almost a year ago,** and had a meeting about various selenium treatment options. None of the information exchanged or discussed at the meeting is reflected in the dEIR.

A4-23

Comment #22: Selenium treatment – Inadequate Alternative Analysis (Cost)

The dEIR provided the Water Board with a single study supporting the estimate of $86 million for selenium treatment, with little discussion of alternative current available technologies. While not directly applicable (analysis was in coal mining rather than mineral mining), a quick search revealed other data readily available, including the following study: *Evaluation of Treatment Options to Reduce Water-Borne Selenium at Coal Mines in West-Central Alberta*, located at http://environment.gov.ab.ca/info/library/7766.pdf. In that study, eleven technologies were reviewed

in detail. These include physically-based technologies (reverse osmosis, nanofiltration, and ion exchange), chemically-based technologies (iron precipitation and catalyzed cementation), and biologically-based technologies (algal volatilization, biological treatment plant, in-situ treatment, Biopass and other passive treatment systems, treatment wetlands, and evaporation ponds). Several of these technologies have been tested at a pilot-scale or implemented as treatment facilities.

The above technologies varied considerably with regards to their ability to remove selenate from solution cost-effectively. Several of them could not meet a treatment objective of 5 μg/L. Treatment costs ranged from less than USD $1.00/1,000 gallons for in-situ treatment to over $10.00/1,000 gallons for reverse osmosis and iron precipitation. Some technologies employ very straightforward processes, with simple process flowsheets (e.g., in-situ treatment or constructed wetlands), whereas others rely on more complex processes (e.g., iron precipitation). The County presented none of the benefits or drawbacks, or resulting increase in costs, when discussing selenium treatment.

A4-23

See also Comment 14, *supra*.

Comment # 23: Selenium treatment – Inadequate Alternative Analysis (Regulatory Guidelines)

In water quality regulations, there are specific steps that must be taken in order for a cost of a particular treatment to merit a change in effluent limitations. The dEIR must at least include two alternatives on the opposite side of the spectrum: a costly treatment on the one hand and significant environmental harm on the other. Determining the treatment to be infeasible, the County essentially deemed the harm acceptable, despite the need for a more rigorous analysis whenever such decisions are made by a permitting authority. For example, the federal and state Antidegradation Policies require an analysis of whether the economic and social benefits for discharging selenium into an impaired water body outweigh environmental costs. If not, the discharge will be prohibited. <u>This necessarily requires a calculation of the environmental cost.</u> The dEIR provided no such analysis. EPA has defined the "best conventional pollutant control technology" and "best available economically achievable technology" ("BCT"; "BAT"), both of which take cost-effectiveness into account.

Comment #24: BMPs – General Understanding of Term (4.10-44-45)

A4-24

For the Water Board's purposes, a BMP (Best Management Practice) is an erosion control, a sediment control, a self-monitoring schedule and program, and an iterative repair and maintenance program for erosion and sediment controls, followed by permanent vegetative stabilization.

The appropriate level of BMP implementation is a formal "bar"--Best Available Technology (BAT)--driven by the Clean Water Act and the Water Board's Basin Plan. The Water Board will spell out the requirements for BMP implementation in the individual NPDES permit in conjunction with numeric effluent limits (both technology and water quality based). The BAT

bar for Lehigh in the above categories (erosion, sediment, self-monitoring, and repair and maintenance, permanent vegetative stabilization) is set, at a minimum, by the permits issued to Lehigh.
A BMP is **not** an effective method of treating dissolved pollutants, such as selenium. A4-24

Comment #25: BMPs – No Schedule for Implementing (4.10-44-45)

The Water Board does not generally proscribe manner and method of BMPs; instead, the discharger or permittee submits a proposed BMP plan for the project at issue. In addition to the comments made throughout this letter, this comment address three major caveats regarding the BMPs suggested by the dEIR. One, the dEIR does not address bringing the Project site into compliance with the current permitting structure, both BMPs for stormwater and effluent limits for process wastewater. As noted throughout these comments, the Project site poses a number of regulatory challenges that the dEIR did not address: the EMSA and WMSA being unlined and uncovered; the placement of in-stream sediment ponds as alleged sediment-reduction BMPs; etc. The Water Board did not object to the County's selection of the baseline date; however, the County must recognize what must occur for Lehigh to be brought into compliance. Second, there is no schedule for implementing the list of BMPs set forth in the dEIR. Although Phase I of the Project is scheduled to take place over **7 years**, the Water Board would propose such a time period by which to implement BMPs is not protective of water quality. Lastly, BMPs are preventative in nature, and dischargers/permittees can be held responsible for not selecting, installing, replacing, or maintaining proper BMPs. However, dischargers/permittees can also be held responsible for discharges that occur **notwithstanding** the installation of BMPs. A4-25

Comment #26: BMPs – No Discussion of Interaction with Lehigh and Discussion of Current Conditions and Plan for Correction

While the Water Board, through consultation on Storm Water Pollution Prevention Plans and other related documents and enforcement of Water Code violations, may be involved more directly on a going forward basis with the development of BMPs on the Lehigh site, **for the purposes of the dEIR**, more analysis and stronger mitigation should have been done with regard to the status of the BMPs currently in place and their inadequacy and potential for environmental harm. For example, there is a lack of large scale erosion control BMPs; inadequately sized and inadequately maintained sediment control BMPs; there have been discharges of industrial process water, which is prohibited under the Industrial Storm Water Permit (publicly noticed and subject of current enforcement) as a result of current business practices. A4-26

Comment #27: Erosion vs. Sediment

Best Available Technology BMPs for keeping sediment out of the Creek must be predominantly erosion control and secondarily sediment control. Sediment BMPs are likely to increase the level of dissolved pollutants; erosion control BMPs keep sediment in place and are the most effective and important in keeping sediment out of the Creek. Erosion control BMPs include A4-27

covering disturbed areas with cover such as erosion blankets, bonded fiber matrix, spread and tackified straw, and vegetative cover. Erosion control BMPs are not "one size fits all"--they must be selected based on parameters such as slope, length of time they will be left in place, the particle size distribution of the material being covered, weather, and other factors. A Best Available Technology approach to keeping sediment out of the Creek relies predominantly on erosion control and uses sediment control as a redundant protection.

A4-27

At Lehigh currently, there are no erosion control BMPs being used, and the only BMPs being used to keep sediment out of the creek are sediment controls: check dams on Quarry roads and detention basins. In the dEIR, the majority of BMPs mentioned are sediment controls, such as - silt fences, straw waddles and silt removal from the toe of slopes.

Comment #28: More Specificity Related to Sediment Control Needed

The dEIR needs more specificity in the suite of erosion control practices, techniques, materials, schedules, and operation and maintenance procedures. As currently described, the Project will not be in compliance with the BAT standard for BMPs that keep sediment from the Creek.

Sediment controls remove solids but they increase concentration of dissolved pollutants in discharges to the Creek. The basic concept in sediment control is to create barriers to flowing water so it loses its energy and therefore drops the sediments suspended in it. The sediments remain behind (or in) the BMP feature and the water continues on its way to the Creek. The finer the suspended sediment (along the continuum of gravel, sand, silt, clay), the longer the time required for the water to be slowed down in order to drop the suspended sediments. In the case of silts and clays, the water must be completely ponded still for hours up to days in order to remove the sediments. The "residence time" of a sediment treatment pond is maximized in order to maximize sediment removal.

A4-28

The problem with maximization of residence time is that it increases the time in which solid pollutants are able to dissolve into the water. So, while the solid load going to the Creek decreases, the dissolved pollutant load to the creek increases. At Lehigh, where (with the limited characterization available) we know that dissolved pollutants are an issue, sediment controls are insufficient and actually increasing the pollutant load unless combined in sequence with other pollutant removal technologies.

Comment #29: Mitigation Measure of Professional Geologist; Undefinable amounts of limestone still acceptable under the dEIR

A4-29

The mitigation measure of a professional geologist to verify the use of non-limestone material being used in the cover is insufficient (refer to mitigation measure 4.10-1a). First, the geologist mainly relies on visual observations for large-scale operations and random spot sampling. Keep in mind that the areas to be reclaimed are vast – tens if not hundreds of acres each. A halt to operations is called for only when “significant” amounts of limestone are “intermixed with the supposed non-limestone cover material.” Because “significant” is not a defined term, it is

unclear how much limestone material is acceptable to the professional geologist or the County. As described herein, limestone will be exposed to rain and oxidation, and the runoff that comes in contact with these materials will continuously risk discharging to the Creek. These discharges are violations of existing permits, federal and state antidegredation policies, and no in-depth analysis has been performed to justify the economic issues that outweigh the known environmental and potential health impacts. A4-29

Comment #30: The "cap" does not provide sufficient erosion control

The end goal of the reclamation activities is to reclaim the EMSA and WMSA and end up with a covered area that has a covered area that can be re-vegetated. When the Water Board uses the word "cover," it typically refers to an area that provides adequate erosion control. What the dEIR proposes as "cover," using run of the mine non-limestone materials, does not rise to the level of being a management practice for the following reasons: (1) it does not provide erosion control; it is, itself, loose, unconsolidated material that is subject to erosion; (2) it does not prevent surface water from picking up dissolved or suspended pollutants. The "run of mine" rock may itself be a source of such pollutants; the waste piles have not been adequately characterized to determine what the full range of potential pollutants are; (3) the current state of waste materials in the WMSA and EMSA (as personally observed on multiple inspection dates by Water Board staff) is not organized and segregated into different types of rock; the dEIR has not described a procedure for sorting and verifying material placement that the Water Board finds to be feasible or reasonable to expect to be carried out. Such protections may include liners separating waste from the ground surface to prohibit migration of waste and leachate to soil, groundwater, or surface water or a cap or cover to minimize percolation of liquids through the waste, and thus leachate production. By "cap" or "cover," what is understood in the context of Title 27 compliance is an impermeable layer such as clay—not the loose, unconsolidated waste material referred to in the dEIR as "cover." Failure to comply with these requirements can result in a failure to isolate wastes from groundwater and surface water. A4-30

Comment #31: Other "cap" issues

The proposed 6 inches of soil on top of rock is not likely to support revegetation. This is further exacerbated by fact that most of site is sloped (and will be, even after "reclamation"). Furthermore, the proposed mitigation revegetation period is much shorter than what is considered necessary and standard. Without revegetation, erosion is inevitable.

Comment #32: Sedimentation Basins In Pond Are Not Proper BMPs and Are in Fact Improper

Existing improperly created instream ponds cannot be used for sediment control now or for the proposed Project. It is improper to use a water of the state to treat discharges to waters of the state. However, this process is in effect at the Lehigh facility. It is not acceptable for the dEIR to propose the continued use of these instream ponds as sediment reduction BMPs. A4-31

III. WATER BOARD STAFF COMMENTS RELATED TO THE WATER BOARD'S JURISDICATION, FUTURE PERMITS REQUIRED AND SPECIFIC COMMENTS

Comment #33: Monte Bello Has not Been Established as a Proper Background Source

Lehigh has not established an approved "background" sample location for comparison to the impacts of the facility to Permanente Creek. Prior to review of the draft EIR, Water Board staff had not been informed of the "Monte Bello" creek sample as a surrogate background sample for Permanente Creek. In order for a background sample to be legitimate, it must be outside of the zone of influence of pollutant sources (in this case, quarrying activities), and it must flow over the same geologic formation as the Creek. Lehigh has proposed background sample locations to the Water Board that are on Permanente Creek but still downstream of the WMSA. Lehigh and Water Board staff hiked up to the confluence of a tributary entering Permanente Creek and Lehigh sampled there. That location has not been confirmed as acceptable because the Water Board has not reviewed the geology and the access is not safe. A background sample location needs to be proposed with full documentation of surrounding land uses and geologic formation through which it flows.

A4-32

Comment #34: Key water quality concepts and requirements are misrepresented in the dEIR

The term "benchmarks" when referring to the Basin Plan is used in the dEIR. The correct term is Basin Plan Water Quality Objectives. A benchmark is a value that indicates a protective level and to which test results can be compared to get an idea of whether BMP changes need to be made. A water quality objective is a standard, which, if not attained, the designated beneficial uses are adversely affected. A benchmark implies a goal; the Basin Plan sets forth enforceable standards. From Chapter 3 of the Basin Plan:

> Together, the narrative and numerical objectives define the level of water quality that shall be maintained within the region.
>
> The Regional Board establishes and enforces waste discharge requirements for point and nonpoint source of pollutants at levels necessary to meet numerical and narrative water quality objectives. In setting waste discharge requirements, the Regional Board will consider, among other things, the potential impact on beneficial uses within the area of influence of the discharge, the existing quality of receiving waters, and the appropriate water quality objectives.

A4-33

Comment #35: Species Issues #1
Section 2.7.11.5, Utilities, Stormwater and Erosion Control.

Text in this section proposes to use the three existing in-channel ponds, Ponds 13, 14, and 22, to accommodate some Project-related stormwater flows. Ponds 14 and 22 provide breeding habitat for the endangered California red-legged frog (CRLF), and CRLF were identified in Pond 13 in 2006 (2006 *California Red-Legged Frog (Rana draytonii) Surveys at the Hanson Permanente*

A4-34

Cement Facility, Cupertino California, Mark R. Jennings, Rana Resources, December 30, 2006). Because of the potential for impacts (i.e., take) to CRLF, these in-channel ponds should not be relied upon to provide sediment management for closure activities. A4-34

Comment #36, Species Issues #2 (4.4-44)

4.4-44 mentions that Pond 17 supports California Red Legged Frog (CRLF). This is significant information that Pond 17, an off-stream sediment BMP that receives flow from the Rock Plant area, supports Red Legged Frog habitat. While inspecting in May 2010, the Water Board staff observed tadpoles in Pond 17 and were verbally assured that they were "Pacific Tree Frog, absolutely not California Red Legged Frog" by Lehigh staff Scott Renfrew. Pond 17 is actively dredged, as it should be to perform as a sediment BMP. However, the presence of CRLF in Pond 17 suggests that ANY retention pond on site would be vulnerable to inhabitation by CRLF and therefore cannot be dredged and therefore cannot be functional as a sediment BMP. This further supports the concern that detention basins should not be considered as tools for water quality treatment. A4-35

Comment #37: Species Issues #3

Section 4.4.2.1, Biological Communities and Wildlife Habitat Types, Aquatic Habitat, Streams and Ponds.

Text in this section states that "CRLF had been found to inhabit four off-stream sediment ponds, including Pond 13, and portions of the Permanente Creek." Pond 13 is actually an in-channel pond, in which CRLF were identified in 2006 (2006 *California Red-Legged Frog (Rana draytonii) Surveys at the Hanson Permanente Cement Facility, Cupertino California*, Mark R. Jennings, Rana Resources, December 30, 2006). A4-36

The text in this section concludes that, "the creek does not support aquatic or upland dispersal habitat for CRLF in this region." Since CRLF have been found in four ponds in the Project area, including one in-channel pond, some level of habitat for CRLF appears to be present in the Project area.

Comment #38: Species Issues #4

Section 4.4.1.3, Regulatory Setting, Wetlands and Jurisdictional Waters, San Francisco Bay Regional Water Quality Control Board.

The discussion of RWQCB regulatory activity should be expanded to clarify the way in which permits are issued for projects that include impacts to both federal jurisdictional waters, which are always subject to state jurisdiction, and waters that are only subject to state jurisdiction. When a project will impact waters of the State that are outside of federal jurisdiction, it is the Water Boards' practice to cover all impacts to the waters of the state (including those impacts not subject to federal jurisdiction) in a single permit that includes both CWA Section 401 certification and WDRs issued pursuant to the State's Porter-Cologne Act authority. Water Board staff evaluate the extent of impacts to federal and non-federal State waters in the context of reviewing the application for certification and/or WDRs and set the appropriate level of mitigation on the basis of impacts to all waters of the State. A4-37

Comment #39: Species Issues #5

Chapter 4, Environmental Analysis.
Section 4.4.1.2, Local Setting, Special Status Species.
The discussion of special status species does not include Water Board jurisdiction over activities that may affect special status species. The *Water Quality Control Plan for the San Francisco Bay Region* (*Basin Plan*) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. The beneficial uses that have been identified for Permanente Creek in the *Basin Plan* include: preservation of rare and endangered species; fish spawning; and wildlife habitat. Any activities in Permanente Creek and its tributaries that could impact these beneficial uses are subject to Water Board jurisdiction.

A4-38

Comment #40: Water Board Permits

Chapter 1, Introduction.
Table 1.1, Expected Permits, Approvals and Consultations.
In the row with "San Francisco Bay Regional Water Quality Control Board (RWQCB)" in the 'agency column", there is no discussion of the need to obtain Waste Discharge Requirements (WDRs) in the "permit/approval required" column. The table should be revised to include the Water Board's Porter-Cologne Act Authority, including the need to obtain Water Board permits for actions that are not regulated under Clean Water Act (CWA) authority, such as dredging in waters subject to federal jurisdiction, or actions that occur in areas outside of federal jurisdiction, such as isolated wetlands or creek banks above the ordinary high water mark (OHW).

The State has jurisdiction over streams above the ordinary high water mark (OHW) and over isolated wetlands, as well as over seasonal, intermittent, and ephemeral streams that lack a hydrologic nexus to navigable waters. When a project that is applying for water quality certification will impact waters of the State that are outside of federal jurisdiction, it is the Water Board's practice to cover all impacts to the waters of the state (including those impacts not subject to federal jurisdiction) in a single permit that includes both CWA Section 401 certification and WDRs issued pursuant to the State's Porter-Cologne Act authority. Water Board staff evaluate the extent of impacts to federal and non-federal State waters in the context of reviewing the application for certification and set the appropriate level of mitigation on the basis of impacts to all waters of the State.

A4-39

Comment #41: Workplan Information

Chapter 2, Project Description.
Section 2.3.1, Existing Land Use in the Project Area.
The fourth paragraph of this section discusses a "test plot program" that was initiated at the facility in 2007. In Provision C.7 of Cleanup and Abatement Order No. 99-018, the Water Board required that the facility prepare a technical report containing a work plan for slope stabilization and re-vegetation of the former overburden stockpile area. In response to this provision the

A4-40

Hanson Permanente Cement Former Overburden Stockpile Work Plan and Implementation Schedule (Response to RWQCB CAO No. 99-018, Item C.7) was submitted to the Water Board on December 15, 1999. Water Board staff would like to know if the implementation of this workplan provided any information that was used in the development of the *Revegetation Plan, Permanente Quarry, Santa Clara County, California* (*Revegetation Plan*) (WRA Environmental Consultants, December 2011). A4-40

Comment #42: Restoration Plan Cross-Referencing

Section 2.7.8, Permanente Creek Reclamation Area.
The facility is in the process of finalizing the *Permanente Creek Long-Term Restoration Plan* (URS Corporation, March 11, 2011), which divides Permanente Creek into 21 reaches in the assessment of restoration opportunities. The *Revegetation Plan* for the Quarry proposes restoration measures for the Permanente Creek Reclamation Area in terms of seven subareas. It would be useful to cross-reference the 7 subareas in the *Revegetation Plan* with the reaches in the *Permanente Creek Long-Term Restoration Plan*. Water Board staff can provide County staff with a copy of the most recent version of the *Permanente Creek Long-Term Restoration Plan.* Even if some details of the plan are revised, the reach numbering system is not anticipated to change. A4-41

Comment #43: Sloping/Runoff

Table 2-3, PCRA Subarea 1 Reclamation Treatments
For road treatment, the proposed reclamation treatment is to regrade the roads to inslope them and collect runoff on the inboard edge of the road. It is not clear from the description how water collected along the inboard side of the road would be conveyed to Permanente Creek. Concentrating flow along the inboard side of roads can create more focused, erosive flows at the eventual discharge point. In some cases, it is preferable to outslope roads to prevent concentrating runoff on the inboard edge. The closure plan should provide a more detailed discussion of optimum sloping for post-closure road surfaces. A4-42

Comment #44: Grouted Riprap Inappropriate

Table 2-4, PCRA Subarea 2 Reclamation Treatments
The description of basin outlets and flow controls includes new outfalls from sedimentation basins at the southern edge of the WMSA to tributaries to Permanente Creek. Water Board staff would like to clarify that these tributaries are regulated as waters of the State and permits will be required from the Water Board for the construction of these outfalls. Grouted riprap pads are proposed as energy dissipaters at the outlets to the tributary channels. Grouted riprap is incapable of adjusting to changes in channel morphology that occur naturally over time. Grout should be removed from the proposed design. Ungrouted riprap, which can adjust to changes in channel morphology, should be used to construct energy dissipaters. A4-43

Comment #45: Armoring/Possible Permit Needed

Section 2.7.8.6, PCRA Subarea 6 and Table 2-8.
Proposed actions in PCRA 6 include, "one ravine would be armored during Phase 2 to accept flows from RPA Basin 40A." More detail is needed for this proposed armoring, which may include the placement of armoring in a jurisdictional tributary to Permanente Creek. Any armoring placed in a tributary channel will require a permit from the Water Board and mitigation for the placement of fill in a jurisdictional water. Basin outlets should be designed to minimize the need for extensive armoring at outfalls to tributary channels.

A4-44

Comment #46: Armoring/Possible Permit Needed

Section 2.7.8.7, PCRA Subarea 7.
Proposed actions in PCRA 7 also include armoring a ravine to accept flows from the reclaimed Quarry Pit. More detail is needed for this proposed armoring, which may include the placement of armoring in a jurisdictional tributary to Permanente Creek. Any armoring placed in a tributary channel will require a permit from the Water Board and mitigation for the placement of fill in a jurisdictional water.

Comment #47: State Jurisdiction

Chapter 4, Environmental Analysis.
Section 4.4.1.2, Local Setting, Jurisdictional Waters and Wetlands.
The discussion of jurisdictional waters and wetlands is limited to waters subject to federal jurisdiction. This section should be expanded to include state jurisdiction under the Porter-Cologne Act.

As was noted in the comment on Table 1.1, *Expected Permits, Approvals and Consultations*, the State has jurisdiction over streams above the ordinary high water mark (OHW) and over isolated wetlands, as well as over seasonal, intermittent, and ephemeral streams that lack a hydrologic nexus to navigable waters.

A4-45

Comment #48: Wetlands

Section 4.4.3, Significance Criteria.
Criteria (c) should be revised to replace "adverse effect on any federally protected wetlands" with "adverse effect on any state or federally protected wetlands." The CEQA Guidelines were developed prior to the Supreme Court decisions that limited the extent of federal jurisdiction over wetlands.

A4-46

Comment#49: Wetlands/Other Waters

A4-47

Impact 4.4-8: Project activities could result in substantial adverse effects on wetlands and jurisdictional waters associated with Permanente Creek through direct removal, filing, hydrological interruption, or other means.
This discussion of potential impacts to jurisdictional waters at the Basin Outlets and Flow Controls in PCRA 2 and the discussions of Mitigation Measures 4.4-8a and 4.4-8b are somewhat confusing. In some paragraphs, impacts are described for impacts to both wetlands and other waters. In other paragraphs, only impacts to wetlands are addressed. For clarity, all impacts to state jurisdictional wetlands and other waters should be described and mitigation should be proposed for all impacts to jurisdictional wetlands and other waters.

Mitigation Measure 4.4-8a should be revised to include identification of all wetlands and other waters subject to state jurisdiction.

Mitigation Measure 4.4-8b should be revised to include mitigation plans for impacts to other waters (e.g., stream channels that are impacted by the placement of new armoring or energy dissipaters). Proposed mitigation plans should include performance criteria that would be used to evaluate the success of the proposed creation and/or enhancement of other waters. The discussion of potential mitigation measures for impacts to wetlands and other waters should also evaluate onsite locations at which the creation or enhancement of wetlands and other waters are hydrologically feasible.

A4-47

Comment #50: Beneficial Uses

Section 4.10.1.4, Regulatory Setting, Table 4.10-5, Designated Beneficial Uses of Water Bodies in the Project Area.
The footnote to the table should note that on July 14, 2010, the Water Board adopted Resolution No. R2-2010-0100, which amended the designated beneficial uses in the Basin Plan. This resolution added the beneficial uses of groundwater recharge, the preservation of rare and endangered species, and warm freshwater habitat to Permanente Creek. The resolution has been submitted to the Office of Administrative Law and the U.S. EPA for review and approval. It is likely that the additional beneficial uses designated for Permanente Creek will be approved before the Project is implemented.

A4-48

Comment#51: Incomplete Jurisdictional Description

Section 4.10.1.4, Regulatory Setting, Waste Discharge Requirements
In the first paragraph of this section, the text, "discharges to waters of the State (such as isolated wetlands)," should be replaced with "discharges to waters of the State (such as isolated wetlands, creek banks above OHW, or seasonal, intermittent, and ephemeral streams that lack a hydrologic nexus to navigable waters).

A4-49

Summary of Comments and Conclusion

Water Board staff met with both County of Santa Clara staff and Lehigh consultants prior to submitting these public comments. Additional documentation was submitted by Lehigh and the County immediately prior to the public comment deadline that was not included in the dEIR or the Appendices. However, none of that information changes the conclusions drawn by the Water Board staff about the overall lack of data regarding the waste piles which are the subject of the reclamation plan.

A4-50

Instead, the Water Board recommends additional sampling, characterization and analysis prior to approval of a final EIR. At a minimum, the dEIR should be re-circulated. Preferably, adequate characterization should be done so as to satisfy the Water Board, the public, and the County as the approving agency that there are no hazardous materials in the waste piles and there have been no groundwater impacts by the waste piles.

Water Board staff would be willing to meet with Lehigh and Santa Clara further to discuss the improvement of the dEIR and permit applications described in the Water Board's comments. Lehigh is the subject of active enforcement actions and permit development with Water Board staff.

The dEIR has been reviewed by staff in several of the Water Board's program areas because the impacts are broad ranging. If you have any questions, please direct them to Project Manager Christine Boschen of my staff at (510) 622-2346, or via email at <cboschen@waterboards.ca.gov> , who will disseminate them to the appropriate staff.

Sincerely

Shin-Roei Lee, Chief

Watershed Management Division

3.2.4 Comment Letter A4: California Regional Water Quality Control Board, San Francisco Bay Region

A4-1 This comment is a summary of the RWQCB's main concerns with the Project: significant water quality impacts, changes to drainage patterns, analysis of surface water flows in Permanente Creek, and mitigation measures for impacts. The concerns are further discussed in individual comments A4-2 through A4-50 provided by the RWQCB. Responses to those comments are provided below as well as in Master Responses M5 and M7.

A4-2 Comment noted. See Master Response M2(B). The distinction between enforcement and environmental analysis of a proposed project also is noted.

A4-3 The SMARA performance standards apply to the proposed RPA, not to the Draft EIR. The decision-making body for the County (Planning Commission) will determine whether the RPA meets these standards. Their determination on this SMARA consistency does not reflect on the adequacy or the accuracy of the EIR. If the decision-making body determines that the RPA is inconsistent with SMARA regulations, additional CEQA review could be required if revisions to the RPA are necessitated.

As described in Table 1 of the Scoping Report included as Appendix A to the Draft EIR, the County issued four NOPs requesting agency and other input during four related scoping periods. The RWQCB, as a responsible agency, received the NOPs in accordance with CEQA Guidelines Section 15082(a); however, no response to any of the NOPs was received from the RWQCB. The RWQCB's letter of November 21, 2011 is noted, and was received as a result of a request from the County during preparation of the Draft EIR.

Characterization of waste pursuant to Title 27 is a complex process uniquely within the purview of the RWQCB. The RWQCB's jurisdiction in this area is described in Draft EIR Section 2.8.6 (page 2-49 et seq.). That discussion also explains that mining wastes are classified as Group A, Group B, or Group C depending on their characteristics. Group A mining wastes "are wastes that must be managed as hazardous waste. . . provided the RWQCB finds that such mining wastes pose a significant threat to water quality" (27 Cal. Code Regs. §22480(b)(1)). To the County's knowledge, the RWQCB has made no such determination to date. By comparison, Group B mining waste includes either: mining wastes that consist of or contain hazardous wastes that the RWQCB finds pose a low risk to water quality or mining wastes that consist of or contain nonhazardous soluble pollutants of concentrations that exceed water quality objectives for, or could cause, degradation of waters of the state (27 Cal. Code Regs. §22480(b)(2)). Group C mining wastes "are wastes from which any discharge would be in compliance with the applicable water quality control plan, including water quality objectives other than turbidity" (27 Cal. Code Regs. §22480(b)(3)).

The RWQCB's input as to the characterization of mining waste in the Project Area was requested from the County during preparation of the Draft EIR but no feedback was received. This included a requested meeting with RWQCB staff in November 2011 to discuss this and related water quality issues to assist in preparing the Draft EIR; however this meeting request was denied. Absent that input, the comment is correct that, as stated in Draft EIR Section 2.8.6 (page 2-49), the "EIR assumes that water generated in the Project Area is Group B waste." As discussed in Draft EIR Section 4.10, rock materials in the Permanente Quarry and the overburden material, such as stored in the EMSA and WMSA, were characterized by using several different types of tests. These tests were conducted and reported by Golder Associates (Golder Associates, 2011) and subsequently used by Strategic Engineering and Science, Inc. (SES) for the Water Quality Report it prepared in support of the Applicant's Reclamation Plan Amendment (SES, 2011). On the County's behalf, ESA conducted a technical peer review of the May 2010 Golder Associates report and the December 2011 SES report and, based on that review, the County relied on these two documents to support the water quality analysis in the Draft EIR.

A4-4 The tests used to characterize the overburden and Quarry rock included laboratory analysis of onsite materials for total metals and selenium and for the leachability potential of metals, selenium, and general minerals. For these tests, composite rock samples were prepared by combining portions from samples obtained at the previously proposed South Quarry, south of Permanente Creek. Geologic conditions initially were characterized by Geocon Consultants, Inc. in 2009 for the purposes of geochemical testing of representative geologic rock units and the data was in turn used by Golder for its 2010 Hydrologic Investigation. Geocon conducted a peer review, a geologic site reconnaissance of the existing Quarry pit (which would be reclaimed by the Project), and reviewed several boring logs. Based on this work, Geocon described the following major rock types on the quarry site: greywacke, limestone and dolomitic limestone, fault breccia, greenstone, metabasalt, and chert. Geocon prepared six composite rock samples, representative of each of the six major rock types. These rock types are described in detail by Golder in Table 6.9 of its report, which was independently reviewed by the County and its consultant and which is excerpted and provided as Appendix D to this Final EIR. The number of samples collected for each composite sample was based on the observed variability within a rock type. Geochemical analysis included acid base accounting (ABA), elemental analysis, and static leach testing. The California modified Waste Extraction Test (WET) was used to characterize the metal leaching potential of the rock and soil samples. The WET test is a 48-hour leach test conducted on a crushed rock sample (minus 2 mm) using a 10-to-1 liquid-to-solid ratio. Sample results from this testing are provided in Draft EIR Tables 4.10-3 (page 4.10-13) and 4.10-4 (page 4.10.-15).

Wall washing samples also were collected from the Quarry pit wall to evaluate metal and selenium leaching potential under field scale conditions. Wall washing was performed at six sampling locations on exposed faces within the quarry. The test

involved washing an approximately 1-meter square area of rock face with a known volume of water. The wall washing rinsate was collected and submitted for chemical analysis. This is discussed in the Draft EIR, Section 4.10, and one sample event is provided in Table 4.10-2. Table 7 to the SES report, which is provided in Appendix D to this Final EIR for ease in reference, includes all wall washing analytical data.

The analysis of metals, including selenium, in the rock overburden within the EMSA and WMSA was based on data developed by testing representative composite samples of rock materials found on the site and by analysis of wall washing rinsate. Use of these data was appropriate to characterize the overburden material in the EMSA and WMSA because the composited bedrock materials and material comprising the bedrock faces closely resemble the type of overburden rock that is deposited in these two storage piles. From a geochemical perspective, it is reasonable to use these data to assess the potential effects that the EMSA and WMSA storage piles would have on down gradient surface water quality in Permanente Creek during the interim period during reclamation and after reclamation is complete.

The quotation in the comment relating to the Applicant's duty to implement certain siting and construction standards may be found in Draft EIR Section 4.10.1.4 (page 4.10-22). The Applicant remains subject to applicable legal requirements, including those established in Title 27. Subsequent to the release of the Draft EIR, the Applicant and its water quality consultant (SES) conducted a study and prepared a technical memorandum that provided supplemental information to demonstrate that the reclamation of the Quarry pit, as proposed in the RPA, would provide protection consistent with the requirements of Title 27 (SES, 2012). This study was peer reviewed by the County and its consultants and was determined to be adequate to support the conclusions in the Draft EIR regarding groundwater quality (Draft EIR Section 4.10.4 page 4.10-28).

The study conducted by SES demonstrated that backfilling of the Quarry pit, as proposed in the RPA, would meet the requirements of Title 27. Mine waste disposal in an excavated quarry is consistent with Title 27 which allows containment using suitable topographic and nature features (such as a valley) and natural geologic materials. The proposed backfilled Quarry pit containment would be equivalent to the prescriptive containment requirements of Title 27 for more conventional mining waste piles, and would be protective of ground and surface water quality (SES, 2012). The backfilled Quarry pit would be contained within a mass of bedrock of the Franciscan Complex that includes predominantly low-permeability greenstone units along sections of the mine pit perimeter where outward flow is anticipated. Relatively higher permeability limestone and metabasalt geologic units within the Quarry area have been folded, faulted, and uplifted by a series of nearby thrust faults, resulting in highly compartmentalized groundwater conditions. Groundwater flow at the site and surrounding area is mostly relegated to fractures or joints within discrete limestone and/or metabasalt blocks. Little connectivity between these blocks, and low recharge

(by infiltrating precipitation) in low-permeability bedrock units, substantially limits groundwater migration from the vicinity of the Quarry. Although further design details need to be established, these are best accomplished after approval of the RPA pursuant to the express requirements of Title 27. The necessary details would then be presented to the RWQCB in the form of a Report of Waste Discharge (ROWD), or equivalent document.

A4-5 The Draft EIR does not conclusively determine that hazardous materials are not present in either the WMSA or the EMSA. As explained in Response A4-4 and Draft EIR Section 2.8.6 (page 2-49) and Section 4.10.1.4 (page 4.10-22), the Draft EIR makes a reasonable assumption about the WMSA and EMSA based on the rationale described in Response A4-4 that mining wastes in the Project Area are Group B waste. The comment states that the EIR must "fully characterize the mining waste deposited in the storage areas;" however, the County is not required to provide a conclusive determination as to the characterization of materials present in the waste piles, under CEQA or SMARA. This duty and authority, consistent with Title 27, belongs to the RWQCB.

Notwithstanding which agency bears the primary responsibility for characterization of mining waste under Title 27, the comment states that RWQCB staff members have observed cement kiln bricks and other industrial waste in the EMSA. These aspects of the comment are addressed below.

Cement kiln bricks and other industrial waste in the EMSA

County staff has reviewed the photographs submitted by the RWQCB in support of the assertion that cement kiln bricks and other industrial waste have been observed in the EMSA. Upon more detailed review of the photographs and based on additional feedback from the Applicant, staff have determined that, while the materials shown in the pictures are near the proposed reclamation area, they are not located within it. The Applicant has confirmed that "there is no storage or permanent placement of kiln by-products in the reclamation plan area or fills. Temporary storage of kiln materials such as brick or mill balls does occur near the RPA boundary during maintenance periods, but only on the Cement Plant parcel." (Marvin Howell, 2012a). The Applicant has explained further that the materials shown in the pictures temporarily are stored during maintenance periods, and then are reintroduced into the kiln and used in the production of cement (Marvin Howell, 2012b). Because the materials shown in the photographs are not within the Project Area and are part of the cement manufacturing process and so not reclaimed by the Project, impacts associated with the temporary presence of those materials in the vicinity of the EMSA appropriately are not analyzed in the EIR.

Washed Fines (Also called "Rock Plant Mud Cake")

The comment also identifies "rock plant mud cake" as a type of waste stored in the overburden storage piles that must be characterized. SES, Inc. prepared a technical memorandum evaluating the characteristics of washed fines (sometimes also referred to

as "mud cake") on the Applicant's behalf (SES, 2012c). The technical memo explains how washed fines are generated, and then describes their physical and chemical properties.

As explained in the technical memorandum, the washed fines result from the processing of rocks within the Project Area, and so have the same geochemical characteristics as the original rock, i.e., primarily limestone, greywacke and chert. Table 1 in the technical memorandum summarizes the metals concentrations that could be present in leachate from these materials.

The washed fines are not expected to contain petroleum-based pollutants or other chemical agents such as flocculants as a result of the rock crushing or processing operations. The use of petroleum-based lubricants in the Project Area is governed by a Spill Prevention Control and Countermeasure (SPCC) Plan, and the intentional addition of such chemicals to the rock during processing would diminish the value of the product. Accordingly, the washed fines would not have been exposed to, and are thus are not expected to contain, petroleum-based pollutants.

Flocculants, which are substances that promote the clumping of particles, are used in the de-silting process. The use of these materials generally presents no impact to water quality. Based on evaluation of the Materials Safety Data Sheets for the two flocculant products used by Lehigh, it has been determined that neither would cause human health or environmental/ecological impacts at the strengths used at the Permanente Quarry. Accordingly, any residual flocculant that may remain in the washed fines would not cause or contribute to a significant adverse impact to water quality.

Neither acrolein nor acrylonitrile is a constituent in the flocculants used by Lehigh. As explained in the technical memorandum, acrolein is unstable in ambient conditions and polymerizes. In turn, acrylonitrile is a monomer used in the manufacture of plastic. Neither of these chemicals would be useful as a flocculant or as a component of a flocculant solution.

The potential for materials in the EMSA and WMSA to leach selenium and metals (including chromium and mercury) into surrounding water and be carried to Permanente Creek is described and analyzed in Section 4.10 of the Draft EIR (page 4.10-1 et seq.). The additional information provided in the technical memorandum does not describe any new or substantially more severe environmental impact than was disclosed in the Draft EIR, and the County's review of the new information does not result in any change to the significance conclusions reached in the Draft EIR. Please also refer to Master Response M5.

Waste Generated by the Decommissioning of the Kaiser Aluminum Facility

The use of the property as a site of a former aluminum plant and incendiary materials manufacturing facility is described in the cultural resources discussion in Draft EIR

Section 4.5.1.4, page 4.5-9 et seq. As described therein, a magnesium plant was constructed on the site in 1941. It covered a 30-acre area adjacent to the Cement Plant. By 1947, the production of magnesium had ended and the company began to produce aluminum on the site. In 1950, a new foil mill was installed for the manufacturing of aluminum foil, and aluminum extruded products were manufactured there until 1990, when the plant was closed. However, the former aluminum plant and incendiary materials manufacturing facility site are not within the Project Area. See, for example, Draft EIR Section 4.4.1.2, page 4.4-17 ("The former aluminum plant building at the north east corner of the site outside the Project Area…").

As described generally in Draft EIR Section 4.0.2.2, the environmental baseline for purposes of analysis in the Draft EIR is June 2007. Draft EIR Figure 4.1-3 provides photographs of views of the EMSA taken from or near Cristo Rey Drive at the Hammond-Snyder Loop Trail in 2007 and 2008 (Photos 1 through 5), and a view from I-280 east of the SR 85 interchange in 2007 (Photo 6). The County has no evidence or knowledge of hazardous materials from prior historic site operations being present in or beneath the EMSA or any other overburden pile within the Project Area, and this comment provides no information to substantiate a contrary conclusion. The environmental effects of the reclaiming the EMSA as proposed and pursuant to each of the alternatives is analyzed relative to hydrology and water quality in Draft EIR Section 4.10 (page 4.10-1 et seq.).

A4-6 The Draft EIR evaluates impacts related to hazards and hazardous materials in Section 4.9 (page 4.9-1 et seq.). As described in Section 4.9.1.2, *Regional and Local Setting*, baseline conditions are explained in terms of more than regulatory agencies' records: existing hazardous materials use in the Project Area and site-specific historical conditions, including the use of areas in the immediate vicinity of the Project Area for a magnesium plant and then an aluminum plant, also were relied upon. As stated in Section 4.9.1.2 (page 4.9-2), "Few hazardous materials records exist from this era." In addition to RWQCB databases, which the comment indicates may be under-representative, the Draft EIR also relies on information from DTSC databases. For the reasons provided in Response A4-5, the County has sufficient evidence in the record to support its evaluation of and conclusions regarding hazardous materials in the Project Area. The County appreciates the anecdotal information from RWQCB staff members' personal observations, but the photographs provided by the RWQCB do not appear to depict conditions in the Project Area.

A4-7 The characterization of wastes in the Project Area is addressed in Response A4-4 and Response A4-5. Industrial process water is not a mining waste stored in the WMSA or EMSA. For the reasons discussed in Response A4-5, chemicals used to maintain equipment are not likely to make their way to the WMSA or EMSA and, from there, to mobilize into area waterways. Neither the Cement Plant nor Cement-Plant related wastes are stored in the Project Area, and so none would be affected by implementation of the Project.

The same equipment that operates in the Project Area for purposes of the existing mining operation would be used to implement the proposed reclamation activities. Thus, the Project is expected to cause no change in the type or amount of petroleum products or solvents necessary to implement the proposed reclamation activities. The purpose of the CEQA analysis to evaluate the impacts associated with the implementation, maintenance, and monitoring of the proposed reclamation activities as described in Chapter 2 of the Draft EIR

The comment is accurate that the materials currently stored in the WMSA would be transported into the pit. This is described in Draft EIR Sections 2.6.3 and 2.6.4 (see pages 2-10 and 2-11), and in Sections 2.7.3 and 2.7.4 (pages 2-19 through 2-24). Concerning the characteristics of the overburden materials, see Response A4-4. Concerning potential threats to groundwater from materials stored in the WMSA and EMSA, see Master Response M6.

A4-8 Impacts to water quality that are anticipated to occur during the period of time in which the proposed Reclamation Plan Amendment is being implemented are analyzed in Draft EIR Section 4.10 (page 4.10-1 et seq.). Once complete, implementation of the Project would have improved water quality relative to baseline conditions.

Comments about the proposed cap, including clarification of the amount and type of materials to be used and its sufficiency to function as intended, are described in Master Response M5. The protection of Permanente Creek from impacts related to stormwater laden with selenium, sediment, and other Project-related pollutants is addressed in Master Response M5 as well as Draft EIR Section 4.10 (page 4.10-1 et seq.).

Concerning RWQCB staff members' observance of kiln bricks in the vicinity of the EMSA, see Response A4-5. As noted therein, no kiln bricks are stored in the EMSA.

The comment is correct that neither the WMSA nor the EMSA is covered, and that both are exposed to stormwater under pre-Project conditions. The comment also is correct that the EMSA is approximately 75 acres (this is disclosed in Draft EIR Section 2.6.1 on page 2-10) and that the WMSA is approximately 140 acres with a maximum expected storage area of 173 acres (this is disclosed in Draft EIR Section 2.6.3 also on page 2-10). Neither storage area has a concrete liner.

The status of the Applicant's appropriate authorization from the RWQCB to date for the overburden storage piles pursuant to water quality laws recognized as applicable to the Project in the Draft EIR is irrelevant to the determination as to what extent the proposed reclamation of those storage areas would cause or contribute to significant impacts on the environment under CEQA.

Concerning the appropriateness of groundwater sampling locations for establishing whether existing conditions include contamination that could be affected by the Project,

and concerning the possibility that contaminants have reached groundwater as a result of ongoing operations in the Project Area, see Master Response M6.

Concerning the fact that selenium has reached Permanente Creek as a result of ongoing activities in the Project Area, see Master Response M5.

Comments about the characterization of materials stored in the EMSA and WMSA for purposes of the EIR are addressed in Response A4-4 and Response A4-5. As indicated therein, the County did sufficiently characterize the waste piles for purpose of its CEQA analysis.

A4-9 Consistency with the requirements of Title 27 is addressed in Master Response M1(B). As provided in Draft EIR Section 4.10-5, page 4.10-40 et seq.), a water quality monitoring plan is required by Mitigation Measure 4.10-1b. As suggested in the comment, this plan would require the Applicant to monitor water quality in affected receiving waters, including Permanente Creek.

Comments about whether existing surface water quality has been affected by selenium as a result of ongoing activities in the Project Area are addressed in Master Response M5. Existing conditions, including any existing contamination, was considered in the Draft EIR as part of the baseline against which the environmental significance of Project-related changes was evaluated. See, for example, Draft EIR Section 4.10.1.2 (page 4.10-4 et seq.), which describes existing surface water quality within the Permanente Creek watershed, including existing and proposed Section 303(d) list of impaired water bodies (see Draft EIR Table 4.10-1, page 4.10-5), water quality parameters relating to minerals and metals (page 4.10-6 et seq.), known pollutant concentrations in the Project Area (see Draft EIR Table 4.10-2, page 4.10-9) and suspended sediment (page 4.10-12). See also Draft EIR Section 4.10.5 concerning post-reclamation conditions in the EMSA, WMSA, and Quarry pit relating to surface water quality (page 4.10-29 et seq.), and interim water quality conditions related to selenium, total dissolved solids, and sediment while reclamation activities would be in progress (page 4.10-42 et seq. and 4.10-47).

Comments about whether existing groundwater quality has been affected by ongoing activities in the Project Area are addressed in Master Response M6. Existing conditions, including any existing contamination, was considered in the Draft EIR as part of the baseline against which the environmental significance of Project-related changes was evaluated. See, for example, Draft EIR Section 4.10.4 (page 4.10-27), which concludes that the Project would not substantially deplete groundwater supplies, interfere substantially with groundwater recharge, or adversely affect groundwater quality; and Draft EIR Section 4.10.5 relating to post-reclamation groundwater conditions (page 4.10-29 et seq.), projected selenium concentrations in groundwater and groundwater discharge from the Quarry pit (page 4.10-28 et seq. and page 4.10-49 et seq.).

A4-10 Consistency with the requirements of Title 27 is addressed in Master Response M1(B). The commenter's views on compliance with the requirements of Title 27 Subchapter 5 are noted.

A4-11 Please refer to Master Response M5 regarding selenium. Many of the analyses and descriptions provided in the Draft EIR were based on dissolved selenium concentrations, even though the water quality objectives identified in the Basin Plan are based on a total recoverable basis. The dissolved selenium concentrations used in the analyses represent the most comprehensive data available for evaluation of the Project. It is important to note that total and dissolved selenium concentrations in surface water and groundwater results are consistently similar (see Master Response Table 3-1). The exceptions to this are the concentrations of total and dissolved selenium detected in the wall washing tests conducted by Golder in 2009 (Draft EIR, Page 4.10-11 and Table 4.10-2). Due to the presence of suspended solids and high total dissolved solids (TDS) in these samples, the total selenium concentrations are higher than the dissolved concentrations. Overall, however, analyses based on dissolved selenium concentrations are sufficiently representative of what can be expected to occur during and following reclamation.

Selenium biogeochemistry is very complex and, although the Draft EIR recognized that there were uncertainties relative to some information available for use in predicting future conditions during and following reclamation, there is reasonable confidence in the conclusions presented. Sensitivity analyses presented in the Draft EIR (page 4.10-36 to 4.10-38) support the conclusions reached through water quality modeling. Nevertheless, the Draft EIR included Mitigation Measure 4.10-1b, which includes several monitoring and reporting measures to verify and monitor conditions with respect to selenium and water quality, as reiterated below.

A4-12 Please refer to response to Comment A4-5 regarding rock plant mudcake. SES prepared a technical memorandum evaluating the characteristics of washed fines (sometimes also referred to as "mud cake") on the Applicant's behalf (SES 2012c). The County and its consultants independently reviewed the technical memo, which explains how wash fines are generated, and then describes their physical and chemical properties.

A4-13 Please refer to Master Response M5 regarding selenium. The Draft EIR acknowledges that selenium other metals are contained in the overburden materials at the EMSA and WMSA (Draft EIR, Impact 4.10-1, page 4.10-29). The Applicant and its consultant, SES, completed a water quality study (SES, 2011), as discussed in the Draft EIR (Impact 4.10-1), which modeled the resultant concentrations of selenium and other constituents of concern. The results of that analysis determined that the RPA, as proposed, would reduce surface water and groundwater concentrations of metals, such as selenium and nickel, to below Basin Plan Objectives. The SES analysis was peer reviewed for technical adequacy by the County and its consultants and was determined

to be an appropriate technical basis to determine the impacts of the proposed reclamation. The Project includes measures that would reduce the exposure of limestone and other overburden thereby reducing the discharge metals, TDS, and sediment to the surface water of Permanente Creek.

The Draft EIR also acknowledges the potential impacts of interim reclamation activities causing erosion, increasing sedimentation and resulting in increased selenium and metal concentrations to be released to the surface water of Permanente Creek. The impact of interim reclamation activities on water quality is discussed in the Draft EIR, Impact 4.10-2, page 4.10-42. Please refer to Master Response M5 on selenium, for additional clarification regarding the design, water treatment facility feasibility, and performance of the cover proposed as an RPA water quality protection measure.

Please refer to response to comment A4-14 for a discussion on mercury occurrence on the Project Site.

Please refer to Master Response M6 for further clarification regarding the reducing conditions within the backfilled Quarry pit, which is expected to arrest and reduce oxidation in the limestone thereby reducing concentrations of selenium in the groundwater. Master Response M6 also provides supplemental information regarding the anticipated performance of the organic matter. It should be noted that reducing conditions would be created within the backfill without the organic material; the addition of organics enhances the performance to reduce selenium concentration.

Refer to Master Response M6 for further clarification regarding the geologic and hydraulic containment of the Quarry pit that will reduce or eliminate migration of groundwater from within the backfill material. The RWQCB staff indicated that they do not agree with the projections for surface water flow out of the Quarry but do not identify a specific discrepancy. The presumption that material in the WMSA is fine-grained is not consistent with the descriptions of material sampled from exploratory borings on the WMSA (see master Response M5). The materials comprising the overburden in the WMSA have been described as are coarse-grained. Wall washing samples and leachability sampling of representative geologic materials obtained from the Project site are adequate to estimate oxidation and leachability potential for material in the WMSA. The Draft EIR discusses leachability of the representative rock materials, which would be found in the WMSA (Draft EIR, page 4.10-11).

As discussed in the Draft EIR, Impact 4.10-1 page 4.10-29, Mitigation Measure 4.10-1b, the Applicant would commit to a Verification and Water Quality Monitoring Program, which would require water sampling of seeps, runoff and groundwater discharged for the Quarry pit. Groundwater is not expected to discharge from the reclaimed pit for about 14 years.

Refer to Master Response M5 for further discussion of case studies for selenium cover projects and for further discussion of the associated chemistry of selenium oxidation.

Groundwater samples were obtained from the wells south of the Quarry to gain a better understanding of the geochemistry. These wells were not installed to determine whether the groundwater had been impacted; the presumption was that groundwater was not impacted given the location of the wells. Please refer to Master response M6 for further discussion and clarification on groundwater flow and occurrence beneath the Project Area.

It should be reiterated that the CEQA analysis relies on available data and that exhaustive soil and groundwater investigations are not often appropriate or necessary. The data set provided for the hydrology and water quality analysis of the Project in the Draft EIR was intended to establish a reasonable data set to evaluate the existing conditions and the Project's potential impact thereon. The available data were reviewed and used in the water quality modeling performed by SES. The groundwater quality and surface water data are reliable and sufficient for the level of analysis necessary in the Draft EIR, namely, determining whether the Project would have a significant impact on the surface and groundwater resource.

A4-14 The comment is correct that the analysis of Hydrology and Water Quality Impact 4.10-2 (Draft EIR, page 4.10-42 et seq.) concludes that interim reclamation activities within the Project Area would contribute concentrations of selenium in Permanente Creek that would cause a significant and unavoidable impact. Please see Master Response M5 for additional information regarding selenium.

Federal and State Antidegradation Policy

The U.S. EPA provides information about the federal antidegradation component of water quality standards in Chapter 4 of its Water Quality Handbook (the "EPA Handbook") (U.S. EPA, 2012). As explained in the EPA Handbook, the federal antidegradation policy has three tiers: Tier 1, which protects existing uses; Tier 2, which protects "high quality" waters; and Tier 3, which provides the highest level of protection and applies exclusively to Outstanding National Resource Waters. The language quoted in the comment describes Tier 2 waters.

Tier 2 "high quality" waters consist of those waters where the quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, regardless of the use designation. The EPA Handbook explains:

> *All parameters do a [sic] need to be better quality than the State's ambient criteria for the water to be deemed a 'high-quality water.' EPA believes that it is best to apply antidegradation on a parameter-by-parameter basis. Otherwise, there is potential for a large number of waters not to receive antidegradation protection, which is important to attaining the goals of the Clean Water Act to restore and maintain the integrity of the Nation's waters.*

Draft EIR Section 4.10.1.2 (page 4.10-4 et seq.) describes existing surface water quality within the Permanente Creek watershed, including the RWQCB's process for

identifying Permanente Creek as selenium-impaired under Clean Water Act Section 303(d). See also, Draft EIR Table 4.10-1 (page 4.10-5) and the discussion beginning on page 4.10-6. Based on guidance provided in the EPA Handbook and the RWQCB's recognition of the selenium impairment of Permanente Creek, the County respectfully disagrees that Permanente Creek qualifies as "high quality waters" with respect to selenium concentrations for purposes of the antidegradation policy. The comment provides no rationale for its underlying assumption that Permanente Creek is eligible for Tier 2 protection with respect to selenium, and so the County cannot provide a more detailed response in this regard. Nonetheless, the remainder of this response assumes, for the sake of discussion, that there is a basis to conclude that Tier 2 protections are appropriate with respect to selenium concentrations in the Creek.

The comment asserts that the Draft EIR must address antidegradation policy requirements before the Applicant may continue to discharge selenium-laden water into Permanente Creek, either associated with future mining activities or reclamation activities. As a threshold matter, and as explained in Master Response M1(A) and Master Response M4(A), the County has no jurisdiction over the Applicant's mining activities in the Project Area via this EIR. With respect to reclamation, the EPA Handbook explains that an antidegradation review must occur before any lowering of water quality occurs in high-quality waters. Such a review includes the following:

- A finding that the proposed lowering of water quality is necessary to accommodate important social or economical development in the area where the waters are located. The EPA Handbook explains that "this phrase is intended to convey a general concept regarding what level of social and economic development could be used to justify a change in high-quality waters."

- A full satisfaction of all intergovernmental coordination and public participation provisions. The EPA Handbook explains that "the intent here is to ensure that no activity that will cause water quality to decline in existing high-quality waters is undertaken without adequate public review and intergovernmental coordination."

- Assurance that the highest statutory and regulatory requirements for point sources, including new source performance standards, and BMPs for nonpoint source pollutant controls are achieved. The EPA Handbook explains that "this requirement ensures that the limited provision for lowering water quality of high-quality waters down to 'fishable/swimmable' levels will not be used to undercut the Clean Water Act requirements for point source and nonpoint source pollution control; furthermore, by ensuring compliance with such statutory and regulatory controls, there is less chance that a lowering of water quality will be sought to accommodate new economic and social development."

The RWQCB, not the County, is charged under the Clean Water Act to make these findings. See, for example, the statement in the EPA Handbook, which provides (with emphasis added): "Such activities as new discharges or expansion of existing facilities would presumably lower water quality and would not be permissible unless the State conducts a review consistent with the [the bullet points provided above]. In addition, no [water quality] permit may be issued, without an antidegradation review, to a

discharger to high-quality waters with effluent limits greater than actual current loadings if such loadings will cause a lowering of water quality."

In an unpublished decision about mercury levels, California's First District Court of Appeals has recognized that the RWQCB's interpretation of antidegradation policy to require that water quality be maintained and not lowered was a permissible construction of federal antidegradation policy in the context of NPDES permitting. See, *San Francisco Baykeeper v. California State Water Resources Control Board* (2003) 2003 WL 21235472. The RWQCB has authorized the Applicant's current operations under Order No. R2-2008-0011, NPDES Permit No. CAG982001, General Waste Discharge Requirements for Discharges of Process Wastewaters from Aggregate Mining, Sand Washing, and Sand Offloading Facilities to Surface Waters. The County understands that the RWQCB and the Applicant are working on an individual permit tailored specifically to its ownership that would cover discharges from the Project Area as well as other areas of the site.

Having analyzed the interim environmental impacts of implementing the proposed RPA and having addressed the federal and state antidegradation policy requirements in this response, the County supports and encourages the RWQCB's efforts to establish appropriate interim and long-term limits on the contribution of selenium to Permanente Creek.

Request for Additional Data

The comment requests that the Draft EIR include additional data to evaluate whether beneficial uses are being achieved or whether discharges from the site are the cause of existing conditions of impairment. The purpose of the Draft EIR is to analyze the potential direct, indirect, and cumulative environmental effects of implementing the proposed RPA relative to baseline conditions. The types of existing impairments of concern in the comment were considered in the Draft EIR as part of the baseline condition, and potential Project impacts were analyzed. For example, Draft EIR page 4.10-4 discusses baseline surface water quality conditions: "monitoring data and previous investigations suggest that the existing concentrations of total dissolved solids (TDS), sulfate, some metals, including selenium and mercury, and suspended sediments are relatively high" in the vicinity of the Quarry. Further, Biological Resources Impact 4.4-5 (page 4.4-37) analyzes whether Project activities could result in selenium-burdened runoff reaching aquatic habitats and, thereby, in deleterious effects to aquatic organisms and their prey base, concluding that such impacts would be Significant and Unavoidable under CEQA. In summary, the Draft EIR appropriately considers the fact of existing water quality impairments and analyzes whether the Project could cause or worsen them. See Master Response M5 regarding further evaluation and mitigation of interim selenium impacts.

The RWQCB's concerns about whether the proposed cap will be constructed or function well enough to prevent selenium-laden storm water from infiltrating into the

groundwater are noted. The County shares this concern and conducted a rigorous evaluation of the Applicant's proposal. The analysis and conclusions in the Draft EIR rely on County experts as well as multiple independent third-party water quality experts who have evaluated the proposed cap.[2] For example, Pete Hudson is a Professional Geologist, Certified Engineering Geologist with 22 year experience. Mark Woyshner is a technical expert specializing groundwater and water quality issues. Annette Cayot, PE, CPSWQ, QSD, is an Engineer / Hydrologist with Balance Hydrologics, Inc. Doctor Harry Ohlendorf is a Technical Fellow with CH2Hill and works closely with CH2MHill water quality and water treatment expert, Tom Sandy, and CH2MHill civil engineer and environmental engineer Allen Medine, PE. Without data, references, or other evidence and specific documentation to support a contrary conclusion to the one reached by these experts, the County has no basis to contradict their determinations as set forth in the Draft EIR.

A4-15 As noted in Response A4-14, the Draft EIR discloses and considers the fact of Permanente Creek's inclusion on the 303(d) list of impaired waters. The Draft EIR concludes that the proposed reclamation activities, once complete, would improve water quality conditions in Permanente Creek relating to selenium. Since release of the Draft EIR, the County has further evaluated interim selenium impact conclusion and the feasibility of an on-site water treatment facility (see Master Response M5).

All applicable permits and other necessary authorizations must be obtained from the agencies with jurisdiction over the Project before the Project may be constructed, operated, and maintained as described in Draft EIR Chapter 2. Regardless of whether the County approves the proposed RPA after certifying the EIR, the Applicant would remain subject to the rules, regulations, and determinations of the RWQCB, which could exercise its authority under 40 CFR 131.12 or SWRCB Resolution 68-16 to prohibit the discharge to Permanente Creek of potentially higher selenium concentrations that could result from the proposed reclamation activities.

In response to this comment, the language below has been added to Draft EIR Section 4.10.1.4, *Regulatory Setting*, on page 4.10-19, above the heading for Water Quality Certification (CWA §401):

> **Federal and State Antidegradation Policy**
>
> The federal antidegradation policy is found in Clean Water Act Section 303(d) and Title 40 CFR Section 131.12. The goals of the policy are to ensure that no activity will lower water quality to support existing uses, and to maintain and protect high quality waters. Under the policy's three-tiered structure, Tier 1 protects existing uses, Tier 2 maintains high quality waters by avoiding or minimizing reductions in the water quality of waters that exceed standards, and Tier 3 strictly protects outstanding natural resource waters by not allowing any

[2] The Applicant developed its proposal in reliance on the expertise of Ian Hutchison at Strategic Engineering & Science, Inc.

degradation at all. Review under the policy is triggered by approvals such as wastewater discharge permits.

California's antidegradation policy is found in SWRCB Resolution No. 68-16, Policy with respect to Maintaining High Quality of Waters in California, which states:

> *Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies.*

Resolution No. 68-16 restricts reductions in the quality of surface water or groundwater even when such reductions would allow for beneficial uses to be protected. Consistent with the policy, an adverse change in water quality is allowable only if: (1) it is consistent with maximum benefit to the people of the State, (2) it does not unreasonably affect present and anticipated beneficial uses, and (3) it does not result in water quality less than that prescribed in water quality control plans or policies.

A4-16 For clarification on the treatment of selenium, please see Master Response M5. The impact analysis in the Draft EIR based the performance assessment of the post-reclamation water quality controls on their ability to meet the Basin Plan Water Quality Objectives, which include 5 microgram per liter (µg/L) selenium (Draft EIR Impact 4.10-1, 4.10-29, 4.10-33 and 4.10-38).

A4-17 Please refer to response to comment A4-11.

A4-18 See Master Response M6. The County appreciates the RWQCB providing the Tentative Resolution and Basin Plan Amendment (TENTATIVE RESOLUTION NO. R2-2010-00xx) as part of its comment. The tentative resolution appears to list groundwater recharge as an existing beneficial use of Permanente Creek. The comment states that, given the geology, there is a potential for contaminated groundwater to discharge to Permanente and other creeks. As discussed in the Draft EIR (Section 4.10.1.3 page 4.10.16) and in Master Response M6, groundwater discharges to Permanente Creek, Monte Bello Creek, and an unnamed creek in the eastern half of the Quarry (a tributary to Permanente Creek) from the upland areas south of the Quarry and from undisturbed areas surrounding the site. There is neither evidence nor a reason to expect that groundwater discharging to Permanente and Monte Bello Creek from undisturbed areas surrounding the site would be contaminated. The combination of surface water and groundwater that contains elevated selenium concentrations is contained in the Quarry pit and is currently pumped to Permanente Creek. The water contained in the Quarry pit is below the elevation of Permanente Creek and therefore, cannot naturally discharge to the creek.

There is limited groundwater quality data from beneath the Project Area because of the lack of wells and the bedrock geology; however, groundwater data from the wells samples on the south side of Permanente Creek (Figure 4.10-2, page 4.10-7 and Table 4.10-2, page 4.10-9) provide information on the natural water quality for similar geologic materials. It should be noted that current groundwater contamination beneath the Project Area, if it were to exist, would be considered an existing condition. There is no element of the Project that would contribute to further groundwater contamination as the Project involves reclamation intended to control and reduce the discharge of selenium-containing surface water discharge and contain the groundwater under reducing conditions within the Quarry pit (Draft EIR Impact 4.10-1, page 4.10-38). Master Response M7 provides additional information on the groundwater hydrology beneath the Project Area and its separation from the water supply aquifers in the Santa Clara Valley.

A4-19 The Draft EIR presents adequate data to characterize mercury concentrations on the Project site. As discussed in the Draft EIR (Section 4.10) mercury occurs naturally in the various rock types and in groundwater and meets the Basin Plan Objective levels at the Permanente Creek upstream sample location (SW-1) and sample station SW-2 located downstream of the Quarry pit and adjacent to the Cement Plant area (see Draft EIR Figure 4.10-2). One exception was an isolated detection (0.07 µg/l) in a sample collected in January 2009 from station SW-2. This detection was not significantly above the 0.025 µg/l 4-day average goal and was below the 2.4 µg/l 1-hour goal. Elevated concentrations of mercury were found at several locations within the EMSA including one detection of 8.9 µg/l in an atypical sample containing a large amount of suspended sediment from a roadway. These samples were collected in February and March 2011 and while they may have been representative of the EMSA operations area, they did not reflect water quality in Permanente Creek. As shown on Table 4.10-2, analysis of Permanente Creek surface water in April 2011 by a low level mercury method (EPA 1631) yielded results that were well below the Basin Plan Objective for surface water (maximum concentration was 0.00731 µg/l). These samples were collected from the upstream Wild Violet Creek tributary (sample ZOMB-1), at the Quarry pit discharge point (SL-4A3-PD), and at the County access road bridge located downstream and offsite (PERMUS). The Project would reclaim the Quarry pit, storage areas (such as the EMSA), and other operational areas, that could contribute to the discharge of naturally-occurring, trace mercury concentrations to Permanente Creek. Reclamation would include covering reactive materials, constructing stable slopes and installing drainage controls. As part of the reclamation, the Draft EIR prescribed Mitigation Measure 4.10-1b (page 4.10-41 et seq.) which requires the Applicant to develop a verification and water quality monitoring program to ensure the effectiveness of the stormwater quality controls throughout and after reclamation and provide data to refine and re-evaluate water quality projections before reclamation is complete (see Draft EIR, Impact 4.10-1, page 4.10-29 et seq.). The Project is the reclamation of a Quarry and the potential impact of the Project on trace mercury concentrations would be the eventual overall reduction of trace mercury discharges to Permanente Creek.

A4-20 Sample analysis for total and dissolved nickel are shown in the Draft EIR in Table 4.10-2 and discussed in Impact 4.10-1 page 4.10-30. The analytical data presented on Table 4.10-2 are derived from several sources including Golder Associates, Environmental Science Associates (ESA), RWQCB, and the Applicant, as shown in the footnotes of the table. As required under CEQA, the County reviewed and incorporated into the analysis of water quality in the Draft EIR, all relevant and available analytical data from surface water, groundwater, and wall washing testing. These results were presented in the Draft EIR to establish an adequate representation of the existing conditions.

The County recognizes that Basin Plan Water Quality Objectives for nickel are expressed as dissolved concentrations; however, the Draft EIR discusses both dissolved and total concentrations because the data were available and they were determined by the County to best represent the existing water quality conditions for CEQA review (Draft EIR, Impact 4.10-1, page 4.10-30). Draft EIR Table 4.10-2 reports dissolved concentrations of nickel in samples obtained from Permanente Creek (SW-1, SW-2, PER070), the WMSA, Monte Bello Creek (SW-3), groundwater, and from wall washing tests. The County compared these data to the Basin Plan Water Quality Objective and concluded that nickel concentrations were below the objective of 54 µg/L based on hardness (100 mg/L $CaCO_3$). The exception was the average concentration of nickel at SW-2. This average concentration was elevated above the Basin Plan Water Quality Objective by two discrete concentrations detected February 4, 2009 (70 µg/L dissolved nickel) and April 2, 2009 (110 µg/L dissolved nickel). The reason for these two exceedences is not known but could be due to high winter time storm flows at SW-2.

The Draft EIR also acknowledges that Basin Plan Water Quality Objectives for nickel are hardness dependent (Draft EIR Section 4.10.1.2 page 4.10-6). As stated in the footnote on Page 4.10-6:

> The objective for nickel is based on hardness, and the objective value assumes a hardness of 100 mg/l calcium carbonate ($CaCO_3$) (RWQCB, 2007c). For example, higher hardness values would result in higher concentration values for the water quality objective according to the equations presented by the RWQCB (2007c). The referenced surface water samples (i.e., at SW-1 and SW-2) also reported relatively high hardness values (i.e., between 600 and 800 mg/l, on average). Therefore, the reported nickel concentrations, though high in some instances, would likely not exceed the Basin Plan water quality objectives.

Hardness (as $CaCO_3$) data were available to the County in the Water Quality analysis that SES completed on behalf of the Applicant (SES, 2011). Hardness for sample location SW-1 ranged between 270 milligrams per liter (mg/L) and 1,300 mg/L and averaged 780 mg/L; hardness at SW-2 ranged between 320 mg/L and 740 mg/L and averaged 605 mg/L; and at SW-3, hardness ranged between 290 mg/L and 310 mg/L and averaged 297 mg/L. These data indicate that the hardness in Permanente Creek and Monte Bello Creek exceed the 100 mg/L $CaCO_3$ threshold. Although the dissolved concentrations of nickel reported in the Draft EIR did not exceed the Basin Plan Water

Quality Objective, it is likely that, given the high hardness in the receiving surface water, the Water Quality Objective for nickel in Permanente Creek adjacent to the Project Area would be higher.

Also shown in Table 4.10-2 are relatively elevated concentrations of total nickel in surface water that were detected by ESA in February and March 2011. The ESA samples were obtained within areas of the EMSA (EMSA 01, EMSA 02, EMSA P31B-IN, EMSA P31-B, EMSA P30-IN, EMSA P30) and in Permanente Creek downstream of the site (SL-23-CR, SL-26-CR, and SL-CSR-CR). It should be noted that the concentrations obtained in the EMSA area were reported as total concentrations and were likely higher compared to dissolved concentrations due to particulate matter in the sample. The samples obtained during the same sampling event from Permanente Creek downstream of the Project Area (SL-23-CR, SL-26-CR, and SL-CSR-CR) were also reported as total concentrations but even so were below the Basin Plan Water Quality Objective of 54 µg/L based on hardness of 100 mg/L $CaCO_3$. If those Permanente Creek water samples were reported as dissolved concentrations, they would be further below the Basin Plan Water Quality Objective.

The Draft EIR analysis of water quality considered TDS, sulfate, molybdenum, selenium, iron, manganese, nickel, and mercury (Draft EIR, Impact 4.10-1, page 4.10-30). With the exception of mercury, which had low surface water concentrations overall (see response to Comment A4-19), these constituents and metals were also considered in the water quality analysis and modeling performed by SES to determine the effectiveness of the RPA. Nickel has been identified as a metal that is and would continue to be transported from operations at the Quarry to Permanente Creek; however, due to the hardness (as $CaCO_3$) in the receiving water (discussed above), the dissolved concentrations identified previously in the Permanente Creek (Draft EIR Table 4.10-2), and the relatively low leachability concentrations (Draft EIR table 4.10-4) from the source rock, Project-related activities were not considered likely to cause or contribute to an exceedance of the hardness-adjusted Basin Plan Water Quality Objective for nickel. There is no evidence that reclamation activities would result in elevated nickel concentrations in the surface water reaching Permanente Creek. The County respectfully disagrees with the RWQCB regarding the effectiveness of the RPA for reducing nickel concentrations in the surface water runoff. The proposed cover consisting of reworked overburden material underlain by a vegetative cover would considerably reduce stormwater contact with the cover rock and consequently reduce dissolved concentrations of metals that would ultimately be delivered to Permanente Creek. Water quality sampling and analysis (Draft EIR, Impact 4.10-1, Mitigation Measure 4.10-1b) would verify that the water discharged off the cover material, especially that over the EMSA, is below the Basin Plan Water Quality Objectives. If it is not, the Mitigation Measure requires the Applicant to correct the condition. Supplemental information regarding the composition, placement, and monitoring of the cover as proposed in the RPA is provided in Master Response M5.

A4-21 Please refer to response to Comment A4-19 for a discussion of mercury concentrations. The Draft EIR is based on available data and these data were used to identify constituents of concern. As discussed in the Draft EIR, Measured concentrations of mercury in EMSA runoff and sometimes within Permanente Creek indicate that mercury is being mobilized and transported in surface runoff at levels that sometimes exceed the (4-day average) Basin Plan Objective. Yet, unlike the case for selenium, the range of mercury concentrations in surface water samples from the creek were generally similar to those measured in groundwater (except for the road runoff sample EMSA 01, see Table 4.10-2). Further, atmospheric deposition is a notable source of mercury in the environment and cannot be discounted as a potential source at the EMSA, Quarry pit, or WMSA. As such, the concentrations of mercury measured in runoff from the EMSA and within Permanente Creek cannot be reliably distinguished from background (or natural) concentrations based on the best available information. Mercury, which occurs naturally in the various rock types and in groundwater, meets the RWQCB Basin Plan Objectives for surface water in Permanente Creek apart from one isolated concentration measured at 0.07 µg/l (SES, 2011) and samples SL-23-CR and SL-26-CR, which contained mercury at 0.056 µg/l and 0.52 µg/l, respectively (see Table 4.10-2). These three concentrations only slightly exceed the 0.025 µg/l 4-day average goal and are well below the 2.4 µg/l 1-hour goal. Sampling and analysis of the overburden (non-limestone) material, which would ultimately be used as part of the reclamation cover for limestone rock, has very low total mercury concentrations, ranging from not detected to 0.16 mg/kg. In the mined limestone, the values range from 0.15 to 0.77 mg/kg, which are similar to wetlands standards (0.35 to1.3 mg/kg; Link, 1995). Surface water concentrations at the downstream surface water monitoring station (SW-2) below the Quarry are generally below the Basin Plan Objective of 0.025 µg/l (concentrations range from 0.00133 to 0.07 µg/l, see Table 4.10-2) (SES, 2011). Considering the generally low background concentrations of mercury in the overburden, limestone material, and in surface water, and additionally, given that the low source concentrations would be further reduced through reclamation source control and dilution through the future drainage systems, mercury in the sediments migrating offsite is likely to be low.

A4-22 The commenter disagrees with June 2007 as an appropriate choice of baseline for slope stability and seismic impacts. The commenter is referred to Draft EIR, pages 4.0-3 and 4.0-4, for further explanation as to why the County chose June 2007 as a baseline. In addition, the commenter is referred to Master Response M2(B), for an expanded discussion regarding the adequacy of the baseline relied upon in the Draft EIR. Contrary to the commenter's assertion, the Draft EIR does not claim or suggest that existing slope instabilities within the Quarry pit are solely a result of "inherent" instabilities; rather, it is acknowledged that the Main (1987) Slide likely resulted from the mining-related removal of buttressing rock (Draft EIR page 4.7-19, 2nd paragraph). While quarry operations prior to 2007 have contributed to existing slope instabilities, CEQA guidelines clearly suggest that "the Lead Agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published." Therefore, there is not an

adequate justification in accordance with CEQA guidelines for an earlier baseline for slope stability and seismic impacts.

A4-23 Please refer to Master Response M5 on selenium.

A4-24 Mitigation Measure 4.10-2a (page 4.10-44-46) requires the Applicant to implement stormwater and sediment management controls in addition to general BMPs required by the facilities general SWPPP. The mitigation requires several controls, some regarded as BMPs and others intended to reduce the exposure of limestone materials to oxidation. The rigorous stormwater and sediment control implementation plan is developed to reduce the potential for stormwater runoff to deliver sediment and selenium to Permanente Creek. The County is aware that BMPs are not effective method of treating dissolved pollutants, such as selenium. However, the measures provided in the mitigation measure would reduce and detain runoff, cover exposed piles to reduce exposure of limestone rock to stormwater, and segregate limestone materials; these measures control stormwater discharges that could contain selenium entering into Permanente Creek. See Master Response M5 regarding further discussion and analysis of selenium.

A4-25 The Draft EIR does not address bringing the Lehigh Quarry site into compliance under the current permitting structure in terms of stormwater BMPs and process water effluent limits because the purpose of the Draft EIR is to analyze the potential direct, indirect, and cumulative environmental effects of implementing the proposed RPA relative to baseline conditions. The analysis in the Draft EIR assumes future compliance with current water quality laws and provisions. The reclamation strategy, including removal of the WMSA, backfill of the Quarry pit, and reclamation of the EMSA and other areas, would undergo final design and permitting prior to commencing reclamation. The unlined and uncovered EMSA and WMSA is a baseline condition of the Project Area and is not considered part of the Project under analysis in this Draft EIR. That said, the existing conditions and regulatory challenges on the Quarry site were considered in the Project design so that existing conditions that contribute to surface water and groundwater quality issues could be reduced and/or eliminated by the Project. In regards to the second caveat, it would be premature to establish an implementation schedule at the Draft EIR stage for a large reclamation project with a 20–year time span. The interim sediment and stormwater management controls prescribed as mitigation in the Draft EIR (Draft EIR, Mitigation Measure 4.10-2a and 2b, page 4.10-44 through 46) are intended to supplement the measures required by the Applicant's current SWPPP and the sediment and stormwater control measures prescribed under the proposed RPA. Final design, scheduling, implementation phasing, construction responsibility, maintenance, and inspection of the listed measures at particular locations and times would be developed prior to commencing reclamation activities. Lastly, the Applicant is aware of its responsibility to properly select and place BMPs. The interim erosion control and stormwater management measures required under the Mitigation Measure 4.10.2 (page 4.10-44) would be expected to become part of the Report of Waste Discharge submitted to the RWQCB prior to commencing reclamation.

A4-26 The success (or lack thereof) of the BMPs currently in place is considered in the Draft EIR to the extent it contributes to and is reflected in baseline conditions. Consistent with CEQA, the Draft EIR analyzes potential direct, indirect, and cumulative impacts of the Project relative to baseline conditions; it is not intended to establish causation or allocate responsibility for those existing conditions. The Clean Water Act and Porter Cologne Water Quality Control Act provide authority for the SWRCB and the RWQCB to regulate and enforce water quality controls for the benefit of the people of the state, and the County is aware that the RWQCB has exercised this authority in response to activities at the Permanente Quarry and Cement Plant. The County encourages the RWQCB to continue to interact with the Applicant and to exercise its authority to protect waters of the State. Under CEQA, the EIR has a different purpose.

A4-27 It is reasonable to expect that by the time reclamation of the EMSA, WMSA, and Quarry pit commences, the Applicant would be required by the RWQCB to have a management strategy in place and included in the required Report of Waste Discharge (ROWD) that incorporates a Best Available Technology approach to the installation and maintenance of BMPs. The purpose of the Draft EIR is to analyze the potential direct, indirect, and cumulative environmental effects of implementing the proposed RPA relative to baseline conditions. The Draft EIR assumes future regulatory compliance with water quality requirements. The use and condition of the BMPs currently used on the Project site are considered an existing condition and beyond the scope and purpose of the Draft EIR. The BMPs identified in the Draft EIR do include sediment control BMPs because they would be necessary during certain interim phases at particular locations during reclamation.

A4-28 See response to Comment A4-24 andA4-27. The Draft EIR (Mitigation Measure 4.10-2 page 4.10-44) provides a list of sediment and stormwater controls that would be required as part of the interim reclamation phase. It is not the purpose of the Draft EIR to provide the final details regarding the techniques, materials, schedules, and operation and maintenance schedules. Those details would be finalized and included in the ROWD in the permitting phase of the Project, prior to commencing the reclamation activities. The mitigation measure is intended to ensure that additional sediment and stormwater controls, beyond what is currently used at the site or proposed under the RPA, are utilized during reclamation activities to reduce erosion and sediment discharges to the maximum extent possible.

A4-29 The comment asserts that Mitigation Measure 4.10-1a is insufficient but does not provide additional recommendations. Mitigation Measure 4.10-1a (Draft EIR, Page 4.10-41), requires onsite observation by a California-registered professional geologist who is knowledgeable of the Project Area geology and can assist to ensure that the cover material is placed in accordance with the RPA. This measure affords the Project more oversight than would otherwise be available at other large grading projects (e.g., subdivision construction grading) and is therefore a worthwhile and adequate additional measure. As discussed in the Draft EIR, Mitigation Measure 4.10-1a and 4.10-1b (page

4.10-41) would: 1) ensure that the non-limestone material placed as cover over the EMSA and WMSA consists of documented non-limestone material; 2) verify the effectiveness of the stormwater quality controls throughout and after reclamation to ensure that proposed cover systems are adequately shielding limestone materials from surface exposure and preventing the discharge of selenium in concentrations exceeding applicable water quality standards; and 3) provide data to refine and re-evaluate water quality projections before reclamation is complete. Considering the large scale and breadth of the grading and material handling required for this project, having a responsible professional to manage activity and monitor the active work site while the cover material is placed would be a positive advantage.

A4-30 Please refer to Master Response M5 regarding selenium for clarification on the cover proposed for the WMSA, Quarry pit and EMSA. The Master Response discusses the function of the cover, its erosion control attributes, and its overall effectiveness to improve water quality.

A4-31 It is not clear from the comment what the commenter means by "instream ponds." For purposes of responding to this comment, we assume that "instream" refers to a pond constructed within the banks of Permanente Creek. To our knowledge, there are no existing instream ponds nor are instream ponds proposed as part of the Project. While sediment basins are proposed at several locations as part of reclamation, these ponds are not designed to be within a stream and are located in drainage ways that convey surface water from individual areas.

A4-32 It is the County's understanding that the sampling location SW-3 on Monte Bello Creek was established by Lehigh and its consultant Golder Associates to obtain regional background surface water data to evaluate surface water and groundwater discharges. There is no information that indicates sample location SW-3 is intended to be a background water sample for conditions on Permanente Creek. SW-3 does provide a reasonable comparison between the Permanente and Monte Bello drainages, especially considering that these two drainages share somewhat similar geology. The establishment of a reliable upstream "background" sample location, such as ZOMB1 sampled by Lehigh and the RWQCB in April 2010 (Draft EIR, Table 4.10-2 page 4.10-9), is not considered an objective or requirement of the Draft EIR; rather, it would be reasonable to assume that Lehigh and the RWQCB would establish such a sampling location as a requirement in the process to obtain coverage under Order No. R2-2008-0011, NPDES Permit No. CAG982001 (Aggregate Mining, Sand Washing, and Sand Offloading General Permit). The Draft EIR properly relied on existing available groundwater and surface water data to evaluate impacts of the Project, and analytical results obtained from sample location SW-3 were included in that data set.

A4-33 Comment Noted. The County appreciates the clarification and has globally changed text references in the Draft EIR from water quality "benchmarks" to "Basin Plan Water Quality Objectives."

A4-34 Comment A4-36 states that, because frogs have been observed in Pond 13, habitat in the area should be re-characterized as suitable for California red-legged frog. The commenter is correct that Pond 13 is an in-stream pond, and that, as stated in Draft EIR Section 4.4.2.1, *Biological Communities and Wildlife Habitat Types* (page 4.4-28), frogs were recorded in that pond during surveys in 2006. Pond 13 also has been identified in as potential breeding habitat for California red-legged frog (see WRA (2011), which was provided as an appendix to the Reclamation Plan Amendment). Based on these data, the following text has been revised on page 4.4-28:

> CRLF had been found to inhabit four off-stream sediment settling ponds, as well as an in-stream pond~~including~~ (Pond 13), and portions of Permanente Creek (WRA, 2006a). Additionally, Pond 13 is designated as potential CRLF breeding habitat, ~~This~~ which is consistent with the conclusions of the Habitat Assessment conducted in the Project Area in ~~2010~~2011.~~, which concludes the creek does not support aquatic or upland dispersal habitat for CRLF in this region.~~

As a result of these revisions, text on page 4.4-15 has also been revised as follows:

> CRLF surveys were conducted by herpetologist Dr. Mark Jennings at the site in 1997, 2000, 2006, 2007, 2008, 2009, and 2010 (WRA, 2011). Within the Project Area, CRLF were positively identified in Ponds 14 and 22, which are located along lower Permanente Creek in the northeast portion of the Quarry, approximately 300 feet east of the EMSA. CRLF were also detected in Pond 13, an in-stream pond in the central portion of the Project Area. Outside the Project Area but on the site, CRLF were identified in Pond 21 and in Monte Bello Creek in the southern portion of the site. Dr. Jennings concludes that it would be difficult and unlikely for CRLF to disperse through the intermediate landscape between these two occupied areas of the site, because the landscape is dominated by heavily trafficked roads, paved industrial areas, and unvegetated arid slopes. Furthermore, the ephemeral nature of the intervening creeks and ponds (specifically of the sediment pond in the EMSA), the long distance (1.75 miles), and the steep terrain precludes CRLF movement between the lower Permanente Creek and Monte Bello Creek drainages (WRA, 2011). ~~Based on these results, CRLF are not expected within the Project Area.~~ While CRLF movement and habitat use would be limited through most of the Project Area, frogs could move into vegetated upland areas directly surrounding Pond 13.

The following text on pages 4.4-36 and 4.4-37 has been revised as follows:

> **Impact 4.4-4: Project activities could result in adverse effects on special status aquatic organisms.** ***(Less than Significant Impact)***
>
> As described above in Section 4.4.2.3, *Special-status Species*, CRLF is the only special status aquatic species of concern in the Study Area. ~~However, no CRLF have been found during surveys in the Project Area.~~ Limited ~~U~~upland migration habitat for CRLF is ~~not~~ present in the Project Area, preventing significant

movements of this species in the Project Area (WRA, 2011). However, Pond 13 could support breeding CRLF, which could relocate into upland areas near the pond. PCRA Sub-Area 7 occurs in close proximity to Pond 13, and while no major ground disturbance is proposed, hydroseeding and BMP installation in PCRA Sub-Area 7 could injure or harass any CRLF present. ~~Consequently, it is considered unlikely for the species to occur in the Project Area and therefore no direct impacts to special status aquatic species would be expected to result from Project activities.~~ The Applicant has incorporated three Applicant Proposed Measures which would partially address this potential impact (WRA, 2011):

(1) To minimize disturbance to dispersing or foraging CRLF, all grading activity shall be conducted during the dry season, generally between May 1 and October 15, or before the onset of the rainy season, whichever occurs first, unless exclusion fencing is utilized. Construction that commences in the dry season may continue into the rainy season if exclusion fencing is placed around the construction zone to keep the frog from entering the construction area.

(2) Pre-construction surveys for CRLF shall be conducted prior to construction activities. If CRLF are observed in the construction area or access areas, they shall be removed from the area by a USFWS permitted biologist and temporarily relocated to nearby suitable aquatic habitat.

(3) Because dusk and dawn are often the times when CRLF are most actively foraging, all restoration activities shall cease one half hour before sunset and shall not begin prior to one half hour after sunrise. Additionally, restoration activities shall not occur during rain events, as CRLF are most likely to disperse during periods of precipitation.

Further, as described in Impact 4.9-2 (see Section 4.9, *Hazards and Hazardous Materials*), the Applicant's Stormwater Pollution Prevention Plan (SWPPP) includes provisions to prevent the discharge of pollutants caused by equipment operation, fueling, and maintenance as well as a description of containment controls and site-specific erosion and sediment control criteria. The SWPPP would be revised following Project approval to include the final suite of protective measures that would be implemented in the PCRA and the rest of the Project Area. Final measures are expected to include the following: good housekeeping practices such as clearly labeling hazardous materials containers and storing in an uncluttered area so leaks and spills can be quickly detected and addressed; placing drip pans under leaking equipment; checking construction equipment for leaks regularly; maintaining spill containment and cleanup equipment onsite and training of construction personnel in proper material handling, storage, cleanup, and disposal procedures. These procedures would also help avoid potential impacts to CRLF in the areas around Pond 13.

Finally, the use of jute netting (or similar material) for erosion control is preferred over plastic monofilament which can entangle CRLF and other wildlife. Mitigation Measure 4.10-2a (see Section 4.10, *Hydrology and Water Quality*) requires the use

of jute netting (or similar material) and prohibits the use of plastic monofilament materials for erosion control in the PCRA.

Collectively, the Applicant Proposed Measures together with Project SWPPP requirements and the requirements of Mitigation Measure 4.10-2a provide sufficient protection for CRLF in the Project Area and this impact is considered less than significant. The potential for indirect impacts on aquatic habitat is discussed under Impact 4.4-8, below., ~~and determined to be less than significant.~~

It should also be noted that Ponds 13, 14, and 22 are existing ponds and as such currently experience stormwater flows. Implementation of the Project would include rigorous BMPs and construction of new off-stream sedimentation basins specifically to manage flow and to prevent sedimentation of Permanente Creek and the in-stream ponds. Consequently, with this clarification and the protection measures described above, continued use of Ponds 13, 14, and 22 during closure activities would not have a significant adverse effect on CRLF in the Project Area.

A4-35 The commenter is correct in that page 4.4-44 in the Draft EIR describes that Pond 17 as supporting California red-legged frog. However, this statement in the Draft EIR is inaccurate, as Jennings (2006) explicitly states that no frogs were detected in Pond 17. More recent surveys included in WRA (2011) also did not report California red-legged frogs in Pond 17. Based on this comment and the best supporting biological information, the text on page 4.4-44 has been revised as follows:

In a technical memo prepared by the Project engineer (Chang, 2010), annual precipitation in the Permanente watershed is of sufficient quantity to fill Pond 17 ~~which supports CRLF~~. A calculation of monthly evaporation rates in the same memo shows that a maximum of 2.5 feet of water would evaporate from the pond over the dry summer months. This would leave over 3 feet of water in the pond, an amount sufficient to potentially support CRLF breeding and development. However, current conditions at Pond 17 do not support CRLF, as no CRLF have been observed in surveys to date (Jennings, 2006; WRA, 2011).

A4-36 The commenter is correct that Pond 13 is an in-stream pond, and that, as stated in the text, frogs were recorded in that pond during surveys in 2006 (Jennings, 2006). Additionally, WRA (2011) states that Pond 13 provides potential breeding habitat for California red-legged frog. The revisions to the Draft EIR text that were proposed in Response to Comment A4-34 respond to this comment as well as the potential impacts to California red-legged frogs that may occur in upland areas near Pond 13.

A4-37 In response to Comment A4-37, the following text revisions have been made on page 4.4-23, to clarify the RWQCB's regulatory authority:

Dredging, filling, or excavation of federal jurisdiction waters and waters only subject to state jurisdiction~~isolated~~ ~~waters~~ constitutes a discharge of waste to

waters of the State. Under the Porter-Cologne Act, anyone who discharges waste or proposes to discharge waste within any region that could affect the quality of the waters of the state must file a "report of waste discharge" with the applicable Regional Water Quality Control Board. The regional board then would issue a single permit that includes both Clean Water Act Section 401 certification and ~~(called~~ "waste discharge requirements~~" or~~ (WDRs). Impacts and mitigation to all State waters are based on both the 401 certification and WDRs. This permit would implement~~ing~~ relevant water quality control plans and take~~ing~~ into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, and the need to prevent nuisances (Water Code §13263).

A4-38 According to the *San Francisco Bay Basin (Region 2) Water Quality Control Plan* (Basin Plan), beneficial uses of Permanente Creek do not currently include preservation of rare and endangered species; however, comment A4-48 notes that RWQCB Resolution No. R2-2010-0100 proposes addition of this beneficial use to Permanente Creek. This proposed revision, as well as extensive survey results for California red-legged frog in Permanente Creek, merit inclusion of this beneficial use into the regulatory setting. In response to comment A4-38, the following text has been added to page 4.4-22, above the subheading *Sensitive Natural Communities*:

…species where a Natural Communities Conservation Plan has been approved and is being implemented to ensure protection of those species.

Beneficial Use and Water Quality Objectives (CWA §303)

The RWQCB is responsible for the protection of the beneficial uses of waters within the San Francisco Bay region, including the Project Area. The RWQCB uses its planning, permitting, and enforcement authority to meet this responsibility and has adopted the Basin Plan (RWQCB, 2007) to implement plans, policies, and provisions for water quality management.

In accordance with State policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. Beneficial uses relevant to biological resources for Permanente Creek include Cold Freshwater Habitat, Fish Spawning, and Wildlife Habitat. Nearby Stevens Creek has been designated with the above beneficial uses, as well as Warm Freshwater Habitat. RWQCB Resolution No. R2-2010-0100 proposes the addition of Preservation of Rare and Endangered Species to Permanente Creek; while this beneficial use is not yet officially designated for Permanente Creek, any Project activities near the Creek that could impact this beneficial use would be subject to RWQCB jurisdiction.

Additionally, the following citation has been added to page 4.4-48:

Leidy, R.A. *Ecology, Assemblage Structure, Distribution, and Status of Fish in Streams Tributary to the San Francisco Estuary, California*. San Francisco Estuary Institute. Contribution No. 530. San Francisco, California, 2007.

San Francisco Bay Regional Water Quality Control Board (RWQCB), *San Francisco Bay Basin (Region 2) Water Quality Control Plan*, January 18, 2007.

Santa Clara County, *Santa Clara County Planning Office Guide to Evaluating Oak Woodlands Impacts*, last updated March 8, 2010.

A4-39 Table 1-1 (Draft EIR Section 1.3, page 1-3) recognizes that Clean Water Act Section 401 Certification would be required if the U.S. Army Corps of Engineers determines jurisdictional waters of the U.S. would require a Clean Water Act Section 404 permit. The RWQCBs grant such certifications on behalf of the SWRCB. Accordingly, Table 1-1 has been amended in accordance with this request as follows:

San Francisco Bay Regional Water Quality Control Board (RWQCB)	The RWQCB would implement the Section 401 Certification on the SWRCB's behalf. It is the Water Board's practice to cover all impacts to Waters of the State in a single permit that includes Clean Water Act Section 401 certification as well as Waste Discharge Requirements (WDRs) issued pursuant to its authority under the Porter-Cologne Water Quality Control Act (Water Code §13000 et seq.).

A4-40 The references section of the Revegetation Plan developed by WRA Environmental Consultants on behalf of the Applicant does not identify any source from 1999, or any source readily identifiable with Item C.7 of the Response to RWQCB CAO No. 99-018 as described in this comment. The County has no knowledge of works not listed in the references section of the Revegetation Plan that may have informed its development. However, page 1 of Appendix F of the WRA Revegetation Plan acknowledges that "[t]hese designs still retain a conceptual nature due to the fact that these reclamation activities will take place concurrent with and in a manner consistent with the Restoration Plan under the jurisdiction of the RWQCB."

A4-41 The County acknowledges the comment. County staff can accept the additional information pertaining to the *Permanente Creek Long-Term Restoration Plan*.

A4-42 The RWQCB raises an issue concerning the proposed access road treatment within PCRA Subarea 1, specifically, that treatment would involve road in-sloping. The RWQCB believes the closure plan should provide greater detail regarding how runoff collected on the inboard side of the road would be conveyed to Permanente Creek, given that such a design can sometimes generate concentrated and erosive flows. The RPA does not specifically identify the location and manner in which runoff from the inboard side of the road would be discharged. However, the erosion control monitoring, maintenance and performance standards outlined in RPA (pg. 103), in addition to the mitigation measures proposed in Section 4.10, *Hydrology and Water Quality* (pgs. 4.10-41 through 4.10-46), of the Draft EIR both provide sufficient assurance that

if the access road treatment creates a condition that threatens water quality (such as concentrated/erosive flow), the condition would be detected and remedied. A variety of methods would be available to address erosive flows, should they occur in PCRA Subarea 1, including installation of natural velocity dissipaters (e.g., riprap, large wood or willow logs), installation of cross drains, road re-grading, and/or other CASQA approved BMPs. As discussed in the RPA, monitoring would occur during the wet season and continue until such time that reclamation standards have been achieved. As described in Mitigation Measure 4.10-2b, BMPs that show sign of failure or inadequate performance shall be repaired or replaced with a more suitable alternative. The lack of detail on the manner and location that stormwater discharge would leave the PCRA Subarea 1 access road does not prevent an adequate analysis in the Draft EIR because the impact has been identified on a broader scale, and the proposed mitigation measures contain sufficient performance standards to assure that potential issue areas would be detected and addressed.

A4-43 Comment about the RWQCB's regulation of tributaries to Permanente Creek as waters of the State is noted. The County contracted with independent third party technical experts to evaluate the efficacy of the proposed reclamation activities, including activities that would be undertaken in the PCRA, and analyzed related impacts in the Draft EIR. Where the Project would cause potential significant adverse impacts, the County imposed mitigation measures that would avoid or substantially reduce those impacts where it was feasible to do so. The County determined that the PCRA Reclamation Activities, including the proposed use of grouted riprap pads to dissipate energy, would not cause a significant impact to erosion and sedimentation in Permanente Creek (See Draft EIR Section 4.10.5, Impact 4.10-3 on page 4.10-47).

CEQA Guidelines section 15204(c) states, "Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments." In turn, CEQA Guidelines Section 15086(c) requires responsible agencies to support their comments with "specific documentation." The County recognizes the RWQCB's subject matter expertise with respect to water quality issues and Permanente Creek and its role as a responsible agency under CEQA. The County will be conditioning the Reclamation Plan Amendment to provide revised plans that show the redesign of rip-rap energy dissipaters consistent with the Association of Bay Area Governments standard for the 25-year storm for all discharge points.

A4-44 If a permit or other authorization is required from the RWQCB to implement the Project, including authorization of the placement of armoring within PCRA Subarea 6 or any other location, the Applicant would be required to obtain the necessary approval before proceeding. The County suggests that the RWQCB coordinate directly with the Applicant as to the specific needs for any permit required to be issued by the RWQCB.

The stated preference for basin outlet designs is noted.

A4-45 In response to comment A4-45, the following text on page 4.4-12 has been revised:

> Within the Project Area, the PCRA contains stream and wetland habitat that are considered wetlands under the CWA and the Porter-Cologne Act, and so are subject to the jurisdiction of the USACE, RWQCB, and CDFG. The settling ponds noted above are not considered waters of the U.S. or of the State.

A4-46 In response to comment A4-46, the following text on page 4.4-30 has been revised:

> (a) Have a substantial adverse effect on any state or federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

A4-47 In response to comment A4-47, the following text on page 4.4-42 has been revised:

> Installation of outfall pipes or energy dissipaters discharging water from two proposed sediment basins are constructed within a drainage identified as T13 in the wetland delineation would result in significant impacts on federal and state potentially jurisdictional waters or wetlands. These direct impacts would be mitigated to less-than-significant levels through implementation of Mitigation Measures 4.4.8a and 4.4.8b.
>
> > **Mitigation Measure 4.4-8a: Wetland Identification and Avoidance.** A qualified wetland biologist shall physically delineate all federal and state waters and wetland features mentioned above and indentified in the 2008 wetland delineation (WRA, 2008). This shall occur before any PCRA activities begin, and when feasible, reclamation activities shall completely avoid these areas. Silt fence shall be installed between jurisdictional waters or wetlands and areas sprayed with hydroseed to prevent filling of wetlands with tackifier or other hydroseed material. Use of hand-seeding or working with hand tools may be required to avoid equipment impacting wetlands.

Additionally, text of page 4.4-42 has been revised as follows:

> A qualified wetland biologist shall prepare a ~~wetland~~ Mitigation and Monitoring Plan (MMP) for impacts to wetlands and waters under state or federal jurisdiction. The MMP shall outline the anticipated mitigation obligations for temporary and permanent impacts to waters of the state and/or U.S., including wetlands, resulting from PCRA activities. The MMP shall include:
>
> - Baseline information;
> - Anticipated habitat enhancements to be achieved through compensatory actions, including whether mitigation will occur within the Project Area along Permanente Creek or at an offsite location, as well as ~~including~~ mitigation site location and hydrology;

- When possible, a preference for mitigation within the Permanente Quarry property, for impacts to both jurisdictional waters and wetlands;

- Performance and success criteria for habitat enhancement of Permanente Creek or other waterways to compensate for impacts to Other Waters, including:

  - A replanting plan for appropriate native riparian woody vegetation, including but not limited to arroyo willow, white alder, California wild rose, and snowberry, bigleaf maple, western creek dogwood, and Oregon ash;
  - An 80% overall revegetation planting success for all mitigation areas over a ten-year period;
  - A minimum overall mitigation ratio of 1.1:1 acres for permanent impacts and 1:1 acres for temporary impacts;
  - Plantings that are self-reliant, exhibit average or better health and vigor and have observable growth in stems and leaves at least two years prior to the end of the ten-year monitoring period;
  - Visual inspection of all revegetation sites during each growing season, with qualitative and quantitative measures of plant cover and performance;
  - Observations of total percent plant cover in the planting area, natural recruitment of native species, and establishment of new non-native species; and
  - Annual monitoring reports submitted to CDFG and RWQCB documenting revegetation conditions, including recommendations to adapt maintenance and replacement of failed plantings.

The text revisions identified above recognize the potential for onsite mitigation. Specific areas that would be restored along Permanente Creek have not been defined at this time. The location of mitigation plantings depend on a number of different site-specific factors and for example include the suitability of substrate to support plantings, the presence of suitable hydrology, topography, and shading. As a result of these specific conditions, defining specific locations for mitigation plantings is beyond the scope of the Draft EIR analysis.

A4-48 Comment noted. The following text has been added as a footnote in Draft EIR Table 4.10-5 (page 4.10-19):

> On July 14, 2010, the California Regional Water Quality Control Board adopted Resolution No. R2-2010-0100, which amended the designated beneficial uses in the Basin Plan. This resolution added the beneficial uses of groundwater recharge, the preservation of rare and endangered species, and warm freshwater habitat to Permanente Creek. The resolution has been submitted to the Office of Administrative Law and the U.S. EPA for review and approval.

A4-49 The requested change (as shown below) has been made in the first paragraph of Draft EIR Section 4.10.1.4, *Regulatory Setting*, *Waste Discharge Requirements*, after it continues on page 4.10-24:

> For other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the State (such as isolated wetlands, creek banks above OHW, or seasonal, intermittent, and ephemeral streams that lack a hydrologic nexus to navigable waters), WDRs are required and are issued exclusively under state law.

A4-50 This comment suggests that the Draft EIR should be recirculated based on its recommendation that additional sampling, characterization, and analysis occur before certification of the Final EIR.

CEQA and the CEQA Guidelines require recirculation of a Draft EIR for an additional round of agency and public review and comment only if significant new information is added after the close of the public comment period (Pub. Res. Code §21092.1; CEQA Guidelines §15088.5). "Information" can include revisions in the project or the environmental setting as well as additional data or other information (CEQA Guidelines §15088.5). CEQA Guidelines Section 15088.5(a) provides four examples of "significant new information" requiring recirculation, including:

(1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.

(2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.

(3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it.

(4) The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded (*Mountain Lion Coalition v. Fish & Game Commission*, 214 Cal.App.3d 1043 (1989)).

Comments provided by the RWQCB do not rise to the recirculation threshold level required by CEQA because they do not provide significant new information about issues that pertain to the proposed RPA or the Draft EIR's analysis of its direct, indirect, and cumulative effects. Comments about surface water and groundwater water sampling are addressed in Response A4-5. Comments about the characterization of wastes in the WMSA and EMSA are addressed in Response A4-4 and A4-5. The purpose of the EIR is to determine the extent of direct, indirect, and cumulative impacts that would be caused by the proposed Project and alternatives. The EIR is not required to investigate whether there are hazardous materials in the overburden stock piles or if past or present activities have caused groundwater impacts in the Project Area. The County appreciates the RWQCB's offer to participate in subsequent meetings about the Project.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

February 22, 2012

Rob Eastwood
Santa Clara County Planning Office
70 W. Hedding Street
7th Floor, East Wing
San Jose, CA 95110

Subject: Lehigh Permanente Quarry Reclamation Plan Amendment
SCH#: 2010042063

Dear Rob Eastwood:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on February 21, 2012, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. A5-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2010042063
Project Title Lehigh Permanente Quarry Reclamation Plan Amendment
Lead Agency Santa Clara County

Type EIR Draft EIR
Description Note: Review per lead

Amendment of the existing/approved 1985 Reclamation Plan for a 20 year period. Reclamation Plan area consists of 1,238.7 acres.

Lead Agency Contact

Name Rob Eastwood
Agency Santa Clara County Planning Office
Phone 408 299 5792 **Fax**
email
Address 70 W. Hedding Street
7th Floor, East Wing
City San Jose **State** CA **Zip** 95110

Project Location

County Santa Clara
City Cupertino
Region
Lat / Long 37° 19' 12.15" N / 122° 6' 23.5" W
Cross Streets Stevens Creek Boulevard/Foothill Expressway
Parcel No. multiple
Township **Range** **Section** **Base**

A5-1

Proximity to:

Highways I-280
Airports San Jose International
Railways
Waterways Permanente Creek
Schools Lincoln ES
Land Use

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Growth Inducing; Landuse; Cumulative Effects; Other Issues

Reviewing Agencies Caltrans, Division of Aeronautics; Department of Conservation; Department of Fish and Game, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Resources, Recycling and Recovery; California Highway Patrol; Resources Agency; Caltrans, District 4; Regional Water Quality Control Board, Region 2; Air Resources Board, Major Industrial Projects; Department of Toxic Substances Control; Native American Heritage Commission

Date Received 12/23/2011 **Start of Review** 12/23/2011 **End of Review** 02/21/2012

Note: Blanks in data fields result from insufficient information provided by lead agency.

3.2.5 Comment Letter A5: California State Clearinghouse

A5-1 Comment noted.

Letter A6

Regional OpenSpace | Midpeninsula Regional Open Space District

Mr. Rob Eastwood
Santa Clara County Planning Office
County Government Center
70 W. Hedding Street, 7th Floor, East Wing
San Jose, CA 95110

February 17, 2011

RE: The Lehigh Permanente Quarry Reclamation Plan Amendment Draft Environmental Impact Report (SCH#2010042063)

On behalf of Midpeninsula Regional Open Space District (District), I would like to provide the following comments on the Draft Environmental Impact Report (DEIR) for the Lehigh Permanente Quarry Reclamation Plan Amendment. The District has previously submitted numerous comment letters on various recent proposals related to the Permanente Quarry, as referenced in our May 17th, 2011 letter regarding the scoping of the subject DEIR.

East Materials Storage Area (EMSA)

The proposed EMSA remains extremely problematic. The District does not believe that Lehigh or the County have shown that this area is in fact a pre-existing use area associated with the quarry. We concur with the County Geologist's conclusion, as presented to the Board of Supervisor's for the public hearing related to existing non-conforming use (vested right), that the area proposed for mine waste at the EMSA was never a part of the quarry operations. It instead was developed and used for industrial manufacturing related to Kaiser's magnesium and aluminum plant operations. Many maps identify this location with the name "Permanente Metals" given to the magnesium and aluminum plant operations. In fact one natural gas source was shared by the metals manufacturing plants and the cement plant, as noted in the historic resources section of the DEIR, again testament to this location being a manufacturing plant facility, subject to a use permit, as opposed to an existing non-conforming quarry operation.

A6-1

Quarry related overburden and waste dumped at the EMSA are in fact a very recent phenomenon, beginning in 2006, that correctly resulted in the County's 2008 Notice of Violation that this was not an allowed use. We believe that the record shows that the EMSA, until very recently, was never a part of quarry operations, and therefore cannot be "vested". Instead, development of the proposed EMSA area is clearly subject to a County use permit. A6-1

The addition of the EMSA as a "quarry operation" and inclusion in the Reclamation Plan Amendment is characterized in the DEIR as a "significant and unavoidable" visual impact. The proposed visual impacts related to the EMSA are simply staggering. The huge stepped waste pile proposed is vastly out of character with the surrounding topography, the hillside protection zone district, the County scenic ridge easement, valley view shed protection policies, and park protection policies. Within the historic context, the value of the visual resources at stake is well documented and recognized. This new unnatural waste pile will form the new background to the County scenic easement granted by Kaiser long ago in recognition of the visual importance of Permanente Ridge, and the strong community and County support behind its protection. A6-2

The 1985 Reclamation Plan stressed the importance of reclaiming a small pile of quarry waste at the time known as the east materials area (Area C). The scale of this pile is dwarfed by the proposed EMSA, but at the time was recognized as a visual impact to be immediately remedied. This allowed for quarrying to the west of this old waste pile, "while maintaining a knoll as a visual buffer between the quarried area and the Santa Clara Valley area". The 1985 Mitigated Negative Declaration (MND) for the 1985 Reclamation Plan states that "The existing ridgeline will be maintained by means of the (scenic) easement agreement and conditions of this reclamation plan to insure neither the quarry pit nor materials storage area will be visible towards the north and east." It further states that "The Permanente ridgeline and its easement dedication will insure no exposure of the quarry or its material area towards the north and northeast." One has to ask why the existing visual impact of the quarry is so much greater than the County initially envisioned. One also has to question the construction of the proposed EMSA which dwarfs this prior area of concern and also moves the huge pile of proposed quarry waste up to 5000' **closer** to the valley floor! A6-3

The DEIR project baseline is established as 2007, the year following Lehigh's initiation of dumping in the EMSA and one year prior to the County's Notice of Violation to Lehigh for unauthorized use of this area. Since Lehigh had initiated quarry waste disposal by 2007, the DEIR assumes the entire 6,500,000 tons of waste have been already piled in the proposed EMSA. This is clearly problematic, and inappropriate. The EMSA is in fact a new project, initiated in a new area, subject to a County Use Permit. A6-4

The DEIR concludes that alternatives which would not construct the EMSA (no project alternative) , or the removal of the EMSA at final reclamation (Alternative 1) are "least preferred" , since the lack of or lower height of the reclaimed EMSA would not provide visual screening for the existing Cement Plant site. This assumes the EMSA is built, it is not. The cement plant operates under a use permit issued and regulated by the County. This issue illuminates the overlap of the historic manufacturing plant facilities area (part of which is proposed to be buried by the EMSA waste) and the "quarry operations" proposed. A6-5

If the construction of a quarry waste dump is being done to screen the cement plant operations, isn't that more appropriately completed under a use permit amendment for the existing cement plant? It is also clear from a review of the cement plant site and the DEIR's supporting documents that substantial waste material is also being placed outside of the footprint of the proposed EMSA, in other areas around the cement plant. While also highly visible from the surrounding area, we assume that this ongoing operation is also intended to visually screen existing cement plant structures and features. Are these new fills a part of a use permit amendment for the plant? It is appropriate that all new fills proposed to visually screen the permitted cement plant, be reviewed and regulated under the cement plant use permit. A6-5

It is absurd for the DEIR to conclude that not building the new unprecedented visual impact associated with the proposed EMSA would result in a greater visual impact because the public will be able to then see the cement plant facility which already exists, and has been highly visible for decades. The County has had a history of failures with regard to scenic protection associated with the quarry and cement plant. This is an opportunity to finally get it right. The County should not be misled to use this Reclamation Plan Amendment process to mitigate past visual protection failures with a new much larger impact, the EMSA. A6-6

The visual analysis that is included in the DEIR also clearly shows that the proposed EMSA is far larger in extent and much higher than that necessary to visually screen a portion of the existing cement plant operations from the surrounding communities. The EMSA is proposed as a quarry waste dump to accommodate the substantial deepening of the existing quarry proposed under the Reclamation Plan Amendment. Any other characterization is simply disingenuous. The incredibly significant visual impact associated with the proposed EMSA cannot be understated. A6-7

Regarding the visual impacts associated with the proposed project, the no project alternative is clearly preferred since the EMSA would not be constructed. The DEIR is incorrect in the assumption that reclamation of the EMSA would have to wait 25 years to occur. The County could order this immediately to resolve the existing violation. A6-8

The visual simulation presented in the DEIR also appears to be overly optimistic, and paints a prettier, greener picture than what would actually likely exist. The proposed EMSA is a waste rock dump. Waste rock is a very difficult material to revegetate, the time involved in revegetation will likely be much longer than presented. The greening of the site as depicted is also misleading. Much of the initial growth will be grass. As is evident from the top of the WMSA visible from the valley floor, the grass is brown for over half of the year, a significant contrast to the surrounding evergreen hillsides and ridges. It would also likely have erosion rills and surficial slippage, exposing bare patches of ground. The look will be more like the look of any nearby garbage landfill, unnaturally stepped and brown for most of the year, with sparse woody vegetation, not exactly compatible with scenic hillside protection. A6-9

In addition to the visual impacts discussed above, the proposed EMSA is also a source of significant impact, related to air quality, requiring mitigation. As an immediate neighboring property, in public trust, we are opposed to the ongoing and proposed dust impacts associated with the EMSA construction. The air quality assessment presented in the DEIR attempts to characterize dust and associated known toxic substances related to the quarry waste disposal by assessing the existing operations in the EMSA. The existing operation is occurring further away from the park/open space properties, and at a smaller scale than the proposed full EMSA. This is not a fair representation or analysis. A detailed analysis for air quality impacts should be conducted at the shared property line to characterize potential impact to the recreating public and our nearby Foothill Field Office facility. Additionally, a long-term continuous air quality monitoring station should be established at this location. The PG&E Trail located within the Rancho San Antonio Open Space Preserve is often heavily impacted by dust generated by the quarry and cement plant operations, that leaves a layer of dust on vegetation. The quantification and analysis of air quality impact to the Open Space Preserve, including the Field Office located within is not well studied or characterized in the DEIR. A6-10

The EMSA is identified in the DEIR as a new source area for selenium, adding to the existing quarry related water quality impacts to Permanente Creek. Water quality and biological resources per the DEIR would incur significant and unavoidable environmental impacts associated with the proposed project. The DEIR discusses project alternatives and concludes the extended time frame to reclamation of the EMSA would increase water quality impacts. A6-11

An additional alternative should be analyzed in the DEIR, an alternative that allows no further placement of waste within the EMSA and the immediate removal of all material that has been recently placed there, and **immediate** site restoration. Further, the alternative overburden disposal should have been included in the DEIR. These alternatives would **avoid** the significant and "unavoidable" impacts identified in the DEIR related to the EMSA. The alternatives presented in the DEIR, including the Preferred Project, attempt to address the Project's significant impacts when Lehigh is finished making them, as opposed to avoidance of impacts or immediate mitigation of existing impacts. Per CEQA and the stated DEIR objectives, alternatives considered must be capable of eliminating or reducing significant environmental effects. The removal of the EMSA would eliminate and/or reduce the significant and unavoidable impacts identified in the DEIR. Per CEQA this alternative is also feasible, capable of being accomplished in a successful manner. A6-12

In fact, the County agreement with Lehigh to continue dumping in the EMSA, following the County's notice of violation states that there is no assurance that the quarry waste will remain if the quarry continues to place it under the agreement. In other words, Lehigh can continue dumping quarry waste at their own risk, knowing they may need to remove it. The alternatives noted above appear superior to the alternative presented in the DEIR since they would remove/ stop an additional source of water quality impact from an operation that is already out of compliance for water quality impacts, would not create additional dust impacts, and would not further substantially degrade visual resources.

Toxics/ Hazardous Materials

Section 4.9 of the DEIR states that "in some cases, past industrial or commercial activities on a site could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination." It further states that "at sites where contamination is suspected or known to have occurred, the site owner is required to perform a site investigation and perform site remediation, if necessary."

The proposed EMSA is a significant concern regarding potential toxic substances associated with the old magnesium and aluminum plant locations. These obvious potential toxic concerns do not appear to have been investigated or evaluated in the DEIR. The quarry waste dumping proposed, particularly around the old graded metals manufacturing building pads and the down-slope edge of proposed EMSA waste is of most concern. Geotechnical fill placement details show that the former metals manufacturing area is proposed to have keyways excavated for the foundation support of the proposed EMSA waste pile. Given the magnesium and aluminum plants that existed in this location from 1941 through the 1990, it is necessary to investigate potential toxics within the existing soil. The potential health risk to mine workers, the surrounding community (including adjacent parkland), surface water, groundwater, and wildlife must be evaluated if toxics are encountered. We are surprised that quarry related disturbance has been allowed to take place, and continues to take place in this location, given the history of the site, without such an investigation. This issue was also raised by others during the DEIR scoping process.

A6-13

EIR scope/ Baseline

We propose that the DEIR not use the artificial date (2007) to begin its analysis, but instead utilize the prior Reclamation Plan and associated maps and plans as the benchmark starting point. This may help explain why Lehigh at this late date has taken the exceptionally desperate and aggressive approach of beginning to place waste material right out in front of the surrounding communities and adjacent park/ open space preserve land. It's possible that Lehigh and their predecessors may have excavated a larger area than previously identified on the mining plans associated with the prior reclamation plan. Another possible indicator of this is that the WMSA, the only dumpsite identified in 1985, has also grown larger and taller that initially envisioned/proposed. The proposed EMSA appears to be the only convenient spot left to dump without filling the existing quarry pit, or hauling the waste material generated offsite. This bold desperate move by the Quarry has unfortunately been aided by past poor County oversight, as documented by the State Division of Mines and Geology, and the recent unsupported Board of Supervisor's "vested" determination.

The baseline utilized in the DEIR certainly should not grandfather the new use of the EMSA just because Lehigh chose to initiate dumping there, knowing full well that the Reclamation Plan Amendment was required. This simply doesn't pass the straight face test.

A6-14

We have submitted numerous letters on the various iterations of reclamation plan amendments that have spun out of Lehigh and the County recently in an attempt to address quarry non-compliance issues. These issues are not uncommon for a quarry which has been operated intensively for 80 years. There are limitations on available resources and accessible product, and places to dump the waste generated. In fact, the DEIR states that "continued mining in the quarry is becoming infeasible from a geotechnical standpoint" and that regarding the status of the mineral designation, given 100 years of mining, "the reserves of limestone that feasibly can be extracted are approaching their limits." The recent proposal for a new south quarry pit also seems to substantiate this concern.

We have previously asked for an analysis of where quarry operations actually are in comparison with where the quarry operation was envisioned to be under the prior reclamation plan. This is essential at the quarry pit location, as well as for the proposed EMSA, and is necessary to understand existing conditions, cumulative, and future likely conditions/ impacts. It is particularly important with regard to the depth and area of the existing quarry pit versus the dimensions of record from the 1985 Reclamation Plan. This should clearly be shown.

A6-15

The EMSA is also very confusing. The DEIR assumes its built, and even states in section 4.7 that "much of the stockpiling activity has already occurred," yet the visual analysis regarding the visual impact from the PG&E trail at Rancho San Antonio OSP states that that "although the existing overburden deposits are not a dominant feature in the landscape, the substantial increase in the height of the overburden deposit during construction could block views of the scenic mountains behind the EMSA." It appears through on-site review using the visual analysis presented in the DEIR that much more quarry waste is proposed to be dumped at the EMSA than currently exists. This needs to be rectified for an adequate environmental assessment of potential impacts. The DEIR should clearly detail what is on the ground now at the EMSA to give reviewers a better understanding of the levels of potential impacts being discussed.

A6-16

This should include all contours and cross-sections at the quarry pit and EMSA as they currently exist, the 1985 reclamation plan final topography and cross-sections, and any proposed new changes in topography. While some contours and cross sections are presented in the DEIR they are often of differing, past dates (2007, 2009 etc.) and the original Reclamation Plan contours and cross-sections are not presented at all. It also appears that the quarry has undergone some substantial changes in the intervening years. The DIER should have an analysis of actual existing conditions compared with the conditions proposed under the former Reclamation Plan and proposed future conditions.

A6-17

Water quality/ Biological Resource Impacts

The existing selenium-related impacts to Permanente Creek water quality are of serious concern. Permanente Creek exits the Lehigh property and flows through Rancho San Antonio County Park/ Open Space Preserve. The existing selenium related water quality impacts are thus transferred from their

A6-18

origin on the Lehigh property, to these public recreation facilities, then downstream through residential areas, and finally to the San Francisco Bay. Selenium levels that exceed water quality standards have been noted at both the Lehigh property and also in samples taken from downstream park/open space land.

Lehigh's proposal contained in the Reclamation Plan Amendment is to substantially deepen the existing quarry pit. There are significant problems associated with this related to water quality, particularly selenium. The main source of selenium identified in the Reclamation Water Quality assessment by SES is through groundwater inflow. The deepening of the quarry will substantially increase the volume of groundwater inflow into the quarry pit per the DEIR. To deepen the quarry groundwater will need to be pumped out, as currently occurs. The quarry currently does not have permits or regulatory approval to discharge the groundwater that is currently being intercepted, pumped, and discharged into Permanente Creek, with pollutants in excess of water quality standards. The DEIR proposes not only to allow the existing pollution to continue for another 20-plus years, but proposes to add additional volume, stating that water treatment costs would be too high, and treatment is therefore infeasible. A6-18

The quarry pit is a vested part of quarry operations and the operator has the right to quarry there. Fortunately, there is no vested right to pollute water, particularly when that water flows downstream to public resources. The quarry simply needs to stop polluting water as the cost of doing business. We question and strongly disagree with the DEIR assertion that water treatment is infeasible and that the significant and unavoidable water quality pollution impacts would instead simply be allowed to continue, and likely worsen, well into the future.

The two other main sources of selenium pollution identified in the DEIR are runoff from the quarry walls, and runoff from the WMSA. As proposed, the deepening of the quarry pit would extend and increase the quarry wall source, again increasing the source area for selenium. The WMSA is also identified as a significant source of selenium. One has to question the rationale of not only waiting to address the WMSA source of selenium pollution until phase III of the project, while at the same time proposing to build a new substantial source, the EMSA, during phase I. There is a significant ongoing impact that these proposed new changes will add to. This must be addressed within the cumulative impacts analysis in the DEIR.

While the long-term water quality mitigation proposed appears promising, as stated in the DEIR, it must be viewed as speculative until actual implementation and monitoring determine success or not. Avoiding new or expanded sources seems prudent, particularly when water quality standards are already being exceeded. There is no clear understanding of the existing level of impact since the water pollution findings have only recently been discovered. The trend of the selenium pollution is unclear (rising, stable, decreasing). Given the substantial area of recent disturbance, and assumed increase in groundwater pumping due to the quarry floor lowering, it is perhaps best to assume that it could get worse, even if everything were to stop today. There is no need to wait and see while pollution is occurring. Immediate water treatment, avoidance of new practices that could add to the ongoing pollution, and immediate reclamation/ mitigation of existing sources appears necessary. The Project as proposed in the DEIR does not meet the stated project objective of protecting water quality, and does not avoid or eliminate residual hazards to the environment. A6-19

Vegetated Buffer

We are in favor of the concept of maintaining a vegetated buffer as proposed within the DEIR. We are however, nervous with including this in the reclamation plan amendment. Our concern is that this reclamation plan amendment is necessary to account for disturbance areas that Lehigh and their predecessors have routinely disturbed well outside of the area approved. We want to be sure that this buffer area is somehow formally dedicated for no disturbance. Inclusion of the buffer into a reclamation plan could also be viewed as an approval to disturb (and then reclaim) consistent with the rest of the quarry operations. The County should be certain that this is not the case. Given the quarry history of disturbance out of bounds, there needs to be some formal assurance that this buffer area is actually an area where no disturbance will occur. A6-20

Recreation

We believe that impacts to recreation are substantially greater than identified in the DEIR, in particular the impact of the EMSA. The visual impact of the proposed project is determined to be significant and unavoidable, since it assumes the presence of the EMSA. The 2006 dawning of the EMSA began a significant period of recreational impact. Quarry operations that had until then been separated by a ridgeline from the main public recreation areas of the Rancho San Antonio County Park and adjacent Open Space Preserve, were compromised by new noise, dust, and visual impact. Ranch San Antonio is our most heavily utilized Preserve, with an annual visitation of approximately 500,000 recreationalists. The District has fielded many complaints from our visitors regarding the new quarry operations that have been undertaken immediately adjacent to the Park/Preserve. The EMSA quarry waste pile is immediately evident to visitors, as a new backdrop, upon entry into the Park/Preserve. The view from the PG&E Trail has been compromised by dumped quarry waste, and is projected to grow in height obscuring the scenic ridgeline views beyond. The current view from the scenic Anza Knoll within the County Park is simply staggering given the new quarry waste dump that has leapt up over the past few years. It is not possible to separate the recreational impact from the visual impact. The recreational impact of the Project has to also be characterized as significant and unavoidable. Again, as with many comments before, the EMSA is the reason for the significant impact. The Project rationale that since the EMSA was begun the year before the DEIR established baseline, it is assumed built, attempting to grandfather the impacts as "existing" and are therefore determined to be unavoidable. In reality the EMSA is not constructed, and the impacts or possible alternatives associated with its construction have never been reviewed or addressed under CEQA, by the County, or by the public. The potential impacts are in fact avoidable, if not built. A6-21

Flooding/ Hydrology

This section is simply unacceptable as presented in the DEIR. The Santa Clara Valley Water District has estimated that a 100-year flood on Permanente Creek would potentially inundate 3,170 parcels including homes, businesses, schools, public institutions, and road/ highway infrastructure, with an A6-22

estimated $48,000,000 in damages for a single event. This is a huge potential impact if adequate detention through the Project is not feasible. The Lehigh property is quite large when compared to the detention facilities currently being investigated by the Water District. The Project must identify adequate flood water detention built into the reclamation plan.

A6-22

Thank you for the opportunity to provide comments on the subject DEIR. Please feel free to contact me by email at mbaldzikowski@openspace.org or by phone at 650 691-1200 if you have any questions regarding this or any prior comment letters.

Sincerely,

Matt Baldzikowski

Matt Baldzikowski
Resource Planner III

Cc: District Board of Directors
Stephen E Abbors, District General Manager
Erin Garner, Chair, State Mining and Geology Board
Jim Pompy, Director, Office of Mine Reclamation
George Shirakawa, President, County of Santa Clara Board of Supervisors

3.2.6 Comment Letter A6: Midpeninsula Regional Open Space District

A6-1 On February 8, 2011, the County Board of Supervisors determined that the geographic extent of the Quarry's vested rights includes all areas that were owned by the Quarry operators as of 1948, to include parcels pre-1948 and not include parcels post-1948, as displayed on Exhibit 45 to the Staff Report (Santa Clara County Board of Supervisors, 2011, Santa Clara County Board of Supervisors, 2011a). The EMSA is included in the vested rights area.

The use of the property as a site of a former aluminum plant and incendiary materials manufacturing facility is described in the cultural resources discussion in Draft EIR Section 4.5.1.4, page 4.5-9 et seq. As described therein, a magnesium plant was constructed on the site in 1941. It covered a 30-acre area adjacent to the Cement Plant. By 1947, the production of magnesium had ended and the company began to produce aluminum on the site. In 1950, a new foil mill was installed for the manufacturing of aluminum foil, and aluminum extruded products were manufactured there until 1990, when the plant was closed. However, the former aluminum plant and incendiary materials manufacturing facility site are not within the Project Area. See, for example, Draft EIR Section 4.4.1.2, page 4.4-17 ("The former aluminum plant building at the north east corner of the site outside the Project Area…"). See also Master Response M1(A) pertaining to vested rights.

A6-2 The commenter expresses concern about the visual impacts to the local topography from the EMSA. As the commenter notes, the Draft EIR found that visual impacts during the construction phase would be significant and unavoidable (Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*). Regarding impacts pertaining to the Design Review Combining Zoning District, Santa Clara Valley Viewshed (d1), see Response A1-6. Regarding the scenic easement, the EIR does not analyze issues related to conformity of existing conditions or proposed reclamation with the easement because easement is an existing legal agreement between the applicant and the County. See Master Response M4(D)

A6-3 As described in Master Response M4(D), the elevation and characteristics of the ridgeline subject to the scenic easement changed after the agreement was executed. This EIR does not analyze issues related to conformity of existing conditions with the easement because the easement is an existing legal agreement between the Applicant and the County.

Draft EIR Sections 2.6.1 and 2.7.2 (pages 2-10 and 2-16, respectively) explain that, with implementation of the Project, the EMSA's final contours would be achieved and native vegetation and oak woodland habitats would be established that would be consistent with the surrounding area and topography." Although the overburden stockpile would, as stated in the comment, be closer to the valley floor than envisioned

in the 1985 Reclamation Plan, completion of the proposed reclamation of the EMSA, including revegetation, would improve views of the EMSA relative to baseline conditions (see, for example, Aesthetics, Visual Quality, Light and Glare Impact 4.1-2 (page 4.1-41)).

A6-4 The County's rationale for selecting June 2007 as the analytical baseline in the Draft EIR is explained in Master Response M2(B). The comment incorrectly characterizes the baseline for purposes of the EMSA. Draft EIR Figure 4.1-3 provides photographs of views of the EMSA taken from or near Cristo Rey Drive at the Hammond-Snyder Loop Trail in 2007 and 2008 (Photos 1 through 5), and a view from I-280 east of the SR 85 interchange in 2007 (Photo 6). The materials present in the EMSA at that time are part of the baseline condition; by comparison, the materials added to the EMSA since that time are not part of the baseline, and the impacts associated with their reclamation are analyzed as part of the Project. Stated another way, the Draft EIR does not assume that the entire capacity that could be accommodated by the EMSA is an existing condition. As noted in Response A6-1, the County Board of Supervisors determined that the EMSA was in the vested rights area. For this reason, no use permit is required to reclaim this area.

A6-5 As noted in Response A6-6, the Draft EIR does not assume for purposes of analysis that the EMSA has reached its maximum capacity. As noted in Response A6-1, the historic manufacturing plant uses of the site are located near, but not within the Project Area. These historic facilities would not be "buried" by the EMSA as suggested in the comment. As described in Draft EIR Section 2.6.1 (page 2-10), the purpose of the EMSA is to provide overburden storage for the Permanente Quarry's surface mining operation. It is not, as stated in the comment, "being done to screen the cement plant operations." The fact that it also serves this end is incidental to the primary surface mining purpose.

As discussed in Master Response M4(B), the County and OMR made a determination in 2007 that the Cement Plant is distinct from the surface mining operation. Consistent with this determination, the Cement Plant is not within the Project Area and would not be reclaimed as a part of the Project. The Cement Plan operates under a separate Use Permit issued by the County. Accordingly, issues associated with the placement of waste materials around the Cement Plant are not properly within the scope of the Project or this EIR.

A6-6 Disagreement with the conclusions reached in the Draft EIR about the visual consequences that would result with and without the EMSA are noted. As suggested in Response A6-5, the EMSA stores overburden associated with mining activities that have occurred outside the boundaries of the approved reclamation plan. As described in Draft EIR Section 4.1, *Aesthetics, Visual Quality, and Light and Glare* (page 4.1-41 et seq.), the EMSA, WMSA, and Quarry pit all would be shaped and revegetated such that formerly mining areas comprised of patches of exposed rock partially covered with

grey stockpiles of overburden deposits would be reclaimed to eventually appear largely natural. Monitoring and maintenance of revegetation efforts would continue until reclamation is certified as complete.

A6-7 The commenter expresses the opinion that the proposed EMSA is far larger in extent and higher than necessary to visually screen a portion of the existing Cement Plan operations from the surrounding community. Although screening of the Cement Plant is not a Project objective as listed on Draft EIR page 2-9, per the description of the EMSA on Draft EIR page 2-10, "Reclamation in this area has also been designed to visually screen onsite operations from public viewers." However, the fundamental purpose of the EMSA, as described on page 2-10, is that it was "designed to accept total overburden placement of approximately 6.5 million tons (approximately 4.8 million cubic yards), and to provide overburden storage for the Quarry until approximately 2015, depending on the rate of mining as dictated by market factors." Regardless, the Draft EIR examines visual impacts resulting from construction of the ESMA in Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*, and finds that impacts during construction of the EMSA and until reclamation has become established would be significant and unavoidable (Impacts 4.1-1 and 4.1-5).

A6-8 Visual impacts from the No Project Alternative are discussed on Draft EIR pages 4.1-50 to 4.1-51 (Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*.) The analysis of the No Project Alternative does not assume that reclamation of the EMSA would have to wait 25 years to occur. As stated on page 4.1-50, "reclamation activities associated with the No Project Alternative would be similar to the Project, but 7 years later than under the Project." The commenter suggests that the County order immediate reclamation of the EMSA to resolve the existing violation; comment noted.

A6-9 The visual simulations in Draft EIR Figures 4.1-4 through 4.1-7 are based on the revegetation performance standards established in the RPA and described in Draft EIR Section 2.7.11.2 (page 2-33 et seq.). The RPA provides specific guidance on soil composition and depth, species planting palette, and revegetation success criteria. The RPA further includes specifications for revegetation maintenance activities (including weed control), and monitoring (including performance standards describing the minimum targets to species richness and percent cover for hydroseeded and planted areas, weed control, and adaptive management provisions). As such, the simulations assume that successful implementation of the RPA, including the vegetation performance standards, will occur. The visual simulations presented in Draft EIR Figures 4.1-4 and 4.1-7 show the Project Area at various stages of reaching the RPA performance standards.

Figures 4.1-4a and 4.1-7a show the EMSA at the completion of construction (i.e. the end of Phase 1). At this point, revegetation would not have reached the performance standards established in the RPA, and the Project Area thus appears as a grayish-brown mass, without established vegetation. Figures 4.1-4b and 4.1-7b show the EMSA five

years after the completion of Phase 1 (i.e., five years after the completion of construction in the EMSA). Based on the Project description, at this point in time reclamation planting would conform to revegetation performance standards, although the plants would consist mostly of hydroseeded plantings and young, not fully grown shrubs and trees. Nevertheless, the planted shrubs would be mature enough within five years to result in a noticeable change in the texture of the EMSA faces compared to the bare or hydroseeded slopes, as shown in the simulations. Figures 4.1-4c and 4.1-7c show the EMSA 20 years after the completion of Phase 1 (i.e., five years after the completion of construction in the EMSA.) At this point revegetation would be well established and meet performance standards established in the RPA.

Figures 4.1-5a and 4.1-6a show the WMSA at completion of Phase 2. Per the Project description (Draft EIR Table 2-2, *Reclamation Phasing and Related Activities*), reclamation would commence in the WMSA in Phase 2, but final reclamation would not be achieved. Revegetation would not have reached the performance standards established in the RPA, and the Project Area in the simulations thus appears as a grayish-brown mass, without established vegetation. Figures 4.1-5b and 4.1-6b show the WMSA at completion of Phase 3. As stated in the Draft EIR (page 2-24), during Reclamation Phase 3, "Revegetation [in the WMSA] would consist of a minimum of 6-12 inches of topsoil medium over remaining areas of overburden, and in other WMSA areas according to the slopes, exposures and type of vegetation. Following installation of erosion controls, the WMSA would be reseeded with native plants. Maintenance and monitoring would begin and continue until the reclamation standards achieved." As such, the visual simulations show that at the completion of Phase 3, the WMSA would be perceptibly more covered with vegetation, although the vegetation would not have reached maximum development. Figures 4.1-5c and 4.1-6c show the WMSA 20 years after the completion of Phase 3, at which point vegetation would be well established and would meet the RPA performance standards.

A6-10 The air quality analysis in the Draft EIR analyzes the incremental change (as measured from baseline conditions) that would be attributable to the Project. As described on pages 4.3-18 and 4.3-19 of the Draft EIR, that analysis includes all emission-generating activities including the continuation of overburden placement at the EMSA as well as subsequent reclamation and revegetation. As part of the Project, the Applicant has committed to a number of particulate emission control measures that would reduce ongoing (existing) emissions as well as the incremental emissions associated with the Project. With implementation of those measures, the total particulate matter emissions from the quarry would decrease compared to baseline conditions (see Tables 4.3-3 and 4.3-4 on page 4.3-20 of the Draft EIR). Consequently, there would be no new or worsened impact with regard to particulate matter emissions associated with the Project and no mitigation is warranted under CEQA. Further, the health risk assessment prepared for the Draft EIR specifically examined acute health risks for recreational users of the Rancho San Antonio Open Space Preserve, which also applies to users of the PG&E trail and the Foothill Field Office facility, who could be exposed to Project emissions for a

short time while they are close to the Project site. As described on page 4.3-31 of the Draft EIR, the analysis found that impacts in the Rancho San Antonio Open Space Preserve would decrease as a result of the implementation of the Project and therefore would be less than significant. Although the commenter's request to have a long-term air quality monitoring station established at the Foothill Field Office facility does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

A6-11 The commenter correctly asserts that the Draft EIR identifies the EMSA as a source of selenium in the Project Area, and that some impacts to biological and hydrological resources were found to be significant and unavoidable. The commenter's conclusion regarding impacts to water quality from the alternatives is partially correct; although the time frames of some alternatives would increase some water quality impacts, others would be less than or similar to those of the Project. Per the alternatives impact analysis on pages 4.10-51 et seq., under Alternative 1, "Impacts to hydrology would be similar to those described under the Project analysis except that under Alternative 1, the EMSA would remain intact and not undergo reclamation until 2023, thereby extending the amount of time that limestone remains exposed and selenium is discharged to the surface water. However, by removing the EMSA altogether by 2027, there is no potential that the EMSA would leach selenium to the environment over the long term…While Alternative 1 could reduce the potential for long term selenium leaching to surface water due to coverage of exposed slopes, the drainage issues due to the larger area and higher slopes in addition to the longer interim periods that the WMSA and EMSA remain in an unreclaimed state could result in more severe impacts to water quality."

For Alternative 2, impacts would be "similar to those described under the Project. Alternative 2 would result in the reclamation of the ESMA sooner than under the proposed Project, thereby reducing the potential for selenium discharges to Permanente Creek from the EMSA. Grading and overburden placement activities associated with the CMSA could result in similar potential water quality impacts as would be realized with the Project." The No Project Alternative "would extend the period of time that reclamation would begin on the EMSA and WMSA, thereby increasing the potential for selenium to leach out of the stockpiled materials and enter the Permanente Creek in stormwater runoff. Discontinued use of the EMSA would lessen the water quality impacts associated with selenium because no new selenium-containing material would be added; however, water quality impacts associated with selenium leaching from existing overburden material at that location could continue without immediate reclamation…impacts related to drainage and water quality would, overall, be greater than those under the proposed Project."

A6-12 The Draft EIR already analyzes an alternative that would prohibit further placement of overburden in the EMSA and require immediate initiation of reclamation activities in that area: Alternative 2, the Central Materials Storage Area Alternative, is described in

Draft EIR Section 3.3.1.2. Page 3-10 of the description of Alternative 2 states that reclamation "activities would begin immediately upon reclamation plan amendment approval and no new materials would be stockpiled in that area."

The Draft EIR also analyzes an alternative that would result in the removal of all materials that have been placed in the EMSA: Alternative 1, the Complete Backfill Alternative, is described in Draft EIR Section 3.3.1.1 (page 3-5 et seq.). As described therein, the final (reclaimed) contours in the EMSA would be comparable to what is shown in Figure 5 of the 1985 Reclamation Plan. Removal of mining overburden from the EMSA would abate the notice of violation related to mining related use of this area, remove an existing source of selenium and thereby preclude its mobilization into downstream waterways, and return views from the valley floor and beyond to a pre-mining condition.

The comment correctly notes that, to be considered fully in an EIR, an alternative must have the potential to avoid or substantially lessen any of the significant effects of the project. This requirement is discussed in Draft EIR Section 3.2.4 (page 3-4) as a component of the alternatives development and screening process. Note, however, that CEQA does not give lead agencies the discretion to require alternatives to or mitigation of existing significant environmental effects for which the Project now under consideration is not the source of the existing problem, as the comment seems to suggest. Further, the comment incorrectly concludes that the removal of the EMSA would eliminate or substantially reduce impacts that would be caused by the Project. As analyzed on a resource by resource basis throughout Draft EIR Chapter 4 and as summarized in Draft EIR Section 5.2 (page 5-3 et seq.):

- The Project was preferred over the alternatives for Aesthetics, Visual Quality, Light, and Glare; and Recreation.
- Alternative 2 was preferred with respect to Biological Resources.
- The Project and Alternative 2 were equally preferred with respect to Hydrology and Water Quality.
- The Project and the No Project Alternative were equally preferred for Energy Conservation.
- The Project was slightly preferred for Air Quality and GHG emissions over Alternative 1 and Alternative 2, but would not be as environmentally advantageous in this respect as the No Project Alternative, which was most preferred for Air Quality and GHG emissions.
- Alternative 1 was most preferred among the alternatives related to Geology and Soils and Mineral Resources.
- Alternative 2 and the No Project Alternative were equally preferred for Noise.

As explained in Master Response M3(A), approval of the Project would abate the June 2008 NOV for conducting surface mining operations outside the boundary of the approved reclamation plan.

A6-13 This comment makes the assertion that reclamation activities associated with the EMSA would be constructed in soils that may have been contaminated from past activities related to the manufacturing of magnesium and aluminum at the site. As noted in Response A6-1 and stated in Draft EIR Section 4.4.1.2 on page 4.4-17, the former manufacturing plant building is outside the Project Area, including the EMSA footprint. The County has reviewed the Applicant's reclamation plan application materials and can find no reference or figures showing any EMSA construction proposed for the former metals manufacturing area. As this comment provides no substantiating evidence to the contrary, the County maintains that the Draft EIR adequately assesses the potential impacts related to hazards and hazardous materials (Draft EIR Section 4.9, page 4.9-1 et seq.), as it relies on regulatory agencies' records, existing hazardous materials use in the Project Area, and site-specific historical conditions.

A6-14 As discussed in Master Response M2(B) pertaining to baseline, there is no uniform, inflexible rule regarding establishment of baseline, and a lead agency has considerable discretion to decide how the existing physical conditions without the project can most realistically be measured. Draft EIR Section 4.0 (page 4.0-3 et seq.) identifies the actual existing physical conditions to provide a point of comparison of pre-Project conditions (the baseline) and post-Project conditions to ensure that changes caused by the proposed reclamation activities are seen in context and any and all potential significant environmental effects can be identified and analyzed accurately. For the purposes of analyzing the Project in the Draft EIR, and for reasons described in detail on pages 4.0-3 and 4.0-4 of the Draft EIR, the County has determined that the appropriate date for establishing the baseline for purposes of evaluating the Project's environmental effects is June 2007, the date the County first issued a NOP to evaluate the environmental effects associated with amendment of the Applicant's existing, approved reclamation plan. See Master Response M2(B).

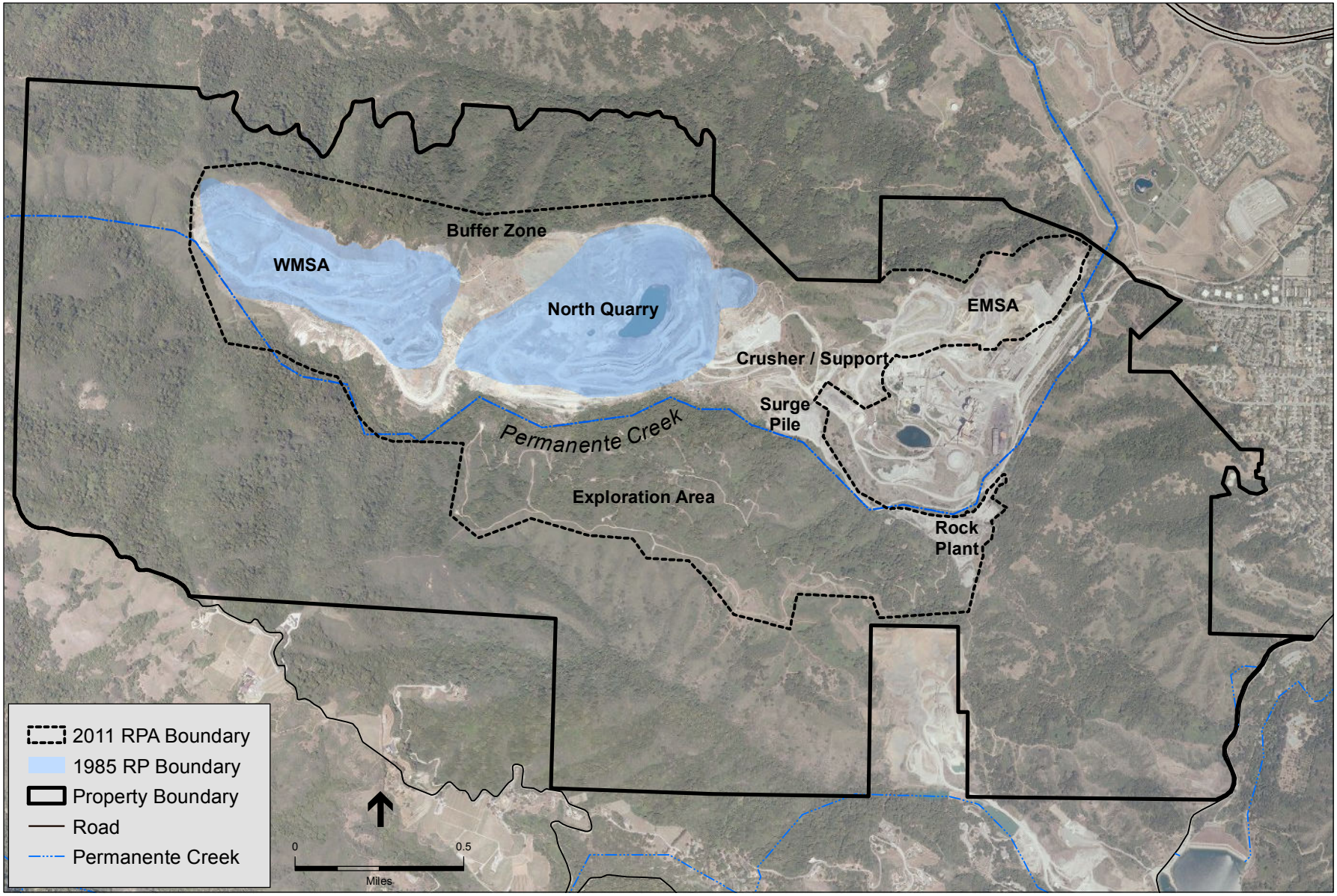
A6-15 The District's active participation in the scoping process for the various reclamation plan amendment proposals is documented in the Scoping Report that was included in the Draft EIR as Appendix A. See Scoping Report Table 2 on pages 4 and following, which reflects letters received relating to the 2007 RPA from Matt Baldzikowski; relating to the EMSA RPA from Ana Ruiz; and relating to the 2010 reclamation plan amendment proposal from Matt Baldzikowski, Ana Ruiz, and Stephen E. Abbors. The District's input relating to the proposed Reclamation Plan Amendment that is the subject of the Draft EIR is acknowledged. See, for example, Draft EIR pages 4.1-13 and 4.1-15 citing Matt Baldzikowski as the source of information.

A comparison of the proposed Reclamation Plan Amendment boundary with the approved 1985 Reclamation Plan boundary was provided as Figure 1.0-5 in the Reclamation Plan Amendment. A similar figure was not provided in the Draft EIR because the Draft EIR evaluates the significance of Project-related changes relative to actual physical conditions in the environment, not to physical limits established by prior approvals. However, a figure comparing approved and proposed reclamation boundaries for the Permanente Quarry is provided as **Figure 3-3** in this Final EIR for informational purposes and in response to this comment. In it the actual extent of operations current as of the mapping capability can be seen in relation to the reclamation plan boundaries.

A6-16 The commenter requests clarification regarding Quarry waste that would be added to the existing EMSA stockpile, as compared to what is currently on the ground. As described in Chapter 2, *Project Description*, it is anticipated that overburden would continue to be added to the EMSA through approximately 2015: "[The EMSA] is designed to accept total overburden placement of approximately 6.5 million tons (approximately 4.8 million cubic yards), and to provide overburden storage for the Quarry until approximately 2015, depending on the rate of mining as dictated by market factors." During implementation of the Project, activities in the EMSA would include the following (Draft EIR page 2-16): "To achieve final contours, overburden would be moved using heavy, earth-moving equipment, and graded. Final elevations in the EMSA would be a maximum of 900 feet amsl, and overall slope angles would not exceed 2.6H:1V. These slopes would be comprised of 2H:1V inter-bench slopes, interrupted by 25-foot wide benches spaced at 40-foot vertical intervals in accordance with engineering design requirements for stability and suitability for future open space use. Fill slopes would conform to the surrounding hillside topography and natural contours."

As explained on Draft EIR page 4.1-20, the baseline for the analysis for impacts aesthetics, visual quality, and light and glare is June 2007. Documentation establishes that, by 2007, some materials storage already had occurred in the EMSA. Draft EIR Figures 4.1-3a and 4.1-3b show photographs of the EMSA taken in 2007 and 2008, to represent baseline conditions. The visual effects of the addition of overburden to the EMSA, in conjunction with grading and contouring activities associated with Project, are depicted in the visual simulations in Figures 4.1-4a, b, and c, as well as Figures 4.1-7a, b, c. By comparing the baseline photos in Figure 4.1-3a and 4.1-3b with the visual simulations in Figures 4.1-4a, b, and c, and Figures 4.1-7a, b, c, one can see the physical environment condition that would be subject to change as a result the Project or alternatives. Thus the Draft EIR provides a full disclosure of potential visual impacts that have resulted from placement of overburden between June 2007 and today, as well as future visual impacts that would result from overburden placement under the Project.

A6-17 Contours and cross sections of the Quarry pit and EMSA are provided in Appendix 4.A of the Geotechnical Evaluations and Design Recommendations (Revised) prepared by Golder Associates in November 2011 for the Applicant. These recommendations were



SOURCE: Lehigh Southwest Cement Company, 2011

Lehigh Permanente Quarry Reclamation Plan Amendment Final EIR

Figure 3-3

Comparison of Proposed Reclamation Amendment Boundary with the Approved 1985 Reclamation Plan Boundary

submitted to the County as Appendix C to the December 7, 2011 Reclamation Plan Amendment and were reviewed by the County and its consultant. A copy of the 1985 Reclamation Plan was submitted as Appendix I to the December 7, 2011 Reclamation Plan Amendment. In it, contours for the Quarry pit and storage areas are shown in Figure 5 and the Quarry pit design is provided in Figure 6. Figures comparing approved and proposed contours and cross sections were not provided in the Draft EIR because, as noted in Response A6-15, the Draft EIR evaluates the significance of Project-related changes relative to actual physical conditions in the environment, not to physical limits established by prior approvals.

Consistent with CEQA, the Draft EIR analyzes direct, indirect and cumulative effects of the Project by evaluating the significance of Project-related changes relative to actual physical conditions in the environment as of the baseline date. What constitutes "actual physical conditions" is described in Draft EIR Section 4.0.2.2 (page 4.0-3 et seq.) and in each of the resource-specific sections of Chapter 4. For example, the discussion of the regional and local setting in the aesthetics section describes the existing visual character of Project Area and surrounding viewpoints by reference to a series of photographs taken from representative public vantage points and specifics of the analytical baseline in Section 4.1.2 (page 4.1-20 et seq.). The EIR does not include an analysis of existing conditions relative to the conditions proposed under the 1985 Reclamation Plan because such an analysis is not relevant to the evaluation of Project-specific impacts.

The comment is correct that surface mining operations in the Project Area have resulted in substantial changes in the configuration of the Quarry pit and other components that would be reclaimed under the Project. Impacts associated with these mining-related changes are considered in the Draft EIR in the context of the cumulative effects analysis (See, for example, Draft EIS Section 6.1.2.1, page 6-7, which describes surface mining at the Permanente Quarry as a cumulative project).

A6-18 Please refer to Master Response M5 regarding selenium and Master Response M6 regarding groundwater. In regards to the comment on whether the Applicant has permits or regulatory approval to discharge water from the Quarry, the current discharge from the Quarry pit is an operational discharge that has been approved by the Regional Water Quality Control Board-San Francisco Bay Region (RWQCB) under Order No. R2-2008-0011, NPDES Permit No. CAG982001, General Waste Discharge Requirements for Discharges of Process Wastewaters from Aggregate Mining, Sand Washing, and Sand Offloading Facilities to Surface Waters. The Applicant is subject to the provisions of this permit that require water monitoring, sampling, and reporting. Under this permit, the RWQCB could choose enforcement action if the Applicant is in violation with this discharge authorization. The County understands that the RWQCB and the Applicant are working on an individual permit tailored specifically to its ownership that would cover discharges from the Project Area as well as other areas of the site.

A6-19 This comment suggests that the effectiveness of the long term water quality mitigation is speculative, and consequently the County should require immediate reclamation of the site and mitigation of existing sources. The County respectfully disagrees that the long term water quality mitigation proposed for the Project is speculative. The Project would reclaim the Quarry pit, storage areas (such as the EMSA), and other operational areas, that could contribute to the discharge of sediment and metals, including selenium, to Permanente Creek. Reclamation would include covering reactive materials, constructing stable slopes and installing drainage controls. As part of the reclamation, the Draft EIR prescribed Mitigation Measure 4.10-1b (page 4.10-41 et seq.) which requires the Applicant to develop a verification and water quality monitoring program to ensure the effectiveness of the stormwater quality controls throughout and after reclamation and provide data to refine and re-evaluate water quality projections before reclamation is complete (see Draft EIR, Impact 4.10-1, page 4.10-29 et seq). With regard to verification of mitigation measure implementation and effectiveness, the commenter is referred to the Mitigation, Monitoring, Reporting, and Compliance Program, which will be included with the County's Findings of Fact and Conditions of Approval for the Project, for details regarding how the required mitigation measures would be enforced and monitored. Under CEQA, an EIR is not a tool for requiring mitigation of existing conditions.

A6-20 The District's support for inclusion of vegetated buffer areas in the Project Area is noted. As described in Draft EIR Section 2.6.9 (page 2-13), the Project, if approved, would add approximately 212 acres primarily of undeveloped, steep, thickly-vegetated hillside areas to the existing approximately 5.2 acres of buffer area, for a total of approximately 217.2 acres of land within the Project Area to maintain a physical separation between the sights, sounds, and other characteristics of the Quarry's activities and other land uses. As described in Draft EIR Section 2.7.10 (page 2-33), these areas would be established primarily through mapping, although signs and fencing would be provided in some parts of the Project Area to prevent access that would pose risks to persons entering the area. The areas where fencing currently is located and would remain are shown in Draft EIR Figure 2-2 (page 2-4).

As discussed in Master Response M3(A), public and private parties are entitled to a presumption that they will comply with applicable requirements. In any event, the County will be conducting annual inspections in satisfaction of its compliance authority and other duties under SMARA.

A6-21 The commenter expresses the view that the analysis in Section 4.16, *Recreation*, underestimates impacts to recreation resulting from visual impacts from the presence of the EMSA. The potential for the Project to directly affect existing or future recreational opportunities is analyzed under Impact 4.16-1. As stated on Draft EIR page 4.16-5, "Recreational opportunities at the existing parks, open space preserves, and trails surrounding the Project Area include hiking, biking, riding horses, and other activities. The Project would not cause direct effects on recreational opportunities at these nearby

areas, as construction, operation and maintenance activities would not interfere with access to nearby recreational areas or deteriorate park facilities. The same recreational opportunities that were available in 2007 (and currently) at the existing parks, open space preserves, and recreational trails in the vicinity of the Project Area would continue to exist and be available to the public; Project impacts would therefore be less than significant." The analysis of indirect impacts to recreational users, including degradation of views, is further discussed in the analysis on page 4.16-5: "Indirect effects on the quality of recreational opportunities while active reclamation activities are in progress include degradation of views from the increased presence of construction equipment, and increased levels of dust and noise in the vicinity of the Project…However, effects to views (including construction dust) from recreational areas are addressed in Section 4.1, *Aesthetics*…"

The impact to which the commenter is referring, i.e., visual impacts to recreational areas, is analyzed in detail in Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*. Visitors to recreational areas are identified as a key viewer group on page 4.1-9, including visitors to the RSA Preserve/Park and Fremont Older Open Space Preserve. Descriptions of views from recreational areas begin on Draft EIR page 4.1-13, and Figure 4.1-2 includes six photographs depicting views from within affected parks. Figure 4.1-3 shows additional views from recreational areas from 2007 and 2008, and Figure4.1-7 shows the existing view from the Hammond-Snyder Loop Trail within the RSA Preserve/Park, as well as visual simulations of the Project at completion of Phase 1, five years after completion of Phase 1, and 20 years after completion of Phase 1. As discussed under Impacts 4.1-1 and 4.1-5, construction of the Project would have a significant and unavoidable adverse effect on views from select locations within the RSA Preserve/Park during the implementation of active reclamation activities. However, as discussed under Impacts 4.1-2 and 4.1-6, monitoring and maintenance of the Project would not have a substantially adverse effect on the recreational viewsheds from within the RSA Preserve/Park, or any other recreational area.

A6-22 Please refer to Master Response M7 regarding offsite flooding.

3.3 Responses to Written Comments from Organizations

From: Cathy Helgerson <sharpset1@aol.com>
Date: Mon, 20 Feb 2012 16:28:23 -0500 (EST)
To: <Rob.Eastwood@pln.sccgov.org>, <sharpset1@AOL.com>
Subject: Lehigh SCC Planning Commission EIR Reclamation Comments Cont.

Hello,

Sorry the other attachment did not take for some reason am sending it again please let me know if you receive this.

This goes with the original comments and photos

Thanks
Cathy Helgerson
408-253-0490
20697 Dunbar Dr.
Cupertino, Ca. 95014
CAP - Citizens Against Pollution

County of Santa Clara Planning Commission

Written Comments continuation from the Public on Permanente Quarry Reclamation Plan Amendment Drift Environmental Impact Report (DEIR), address 24001 Stevens Creek Blvd., Cupertino, Ca. 95014; Zoning District: HS; Parcel Size: 627.97 acres; Supervisorial District4; APN: 351-09-011,012,013.

This is a continuation of the public comments verbally and written at the Santa Clara County Planning Commission and Board of Zoning Adjustments on February 2, 2012. Please add extended comments to the original paperwork submitted that included photographs of the EMSA and Lehigh Cement Plant. O1-1

Comments Submitted by: Cathy Helgerson, 20697 Dunbar Drive, Cupertino, Ca. 95014, Phone No: 408-253-0490.

I Cathy Helgerson have been a citizen of Cupertino, Ca. and Santa Clara County for over 30 years I would like to submit further comments at this time pertaining to the DEIR as follows:

The EIR should have included the Lehigh Southwest Cement Plant and does not we the citizens are upset about that. The pollution from the Cement plant has a great deal to do with the continued pollution of the surrounding areas air, water and soil which needs to be included in the proposed Reclamation Plan. How can there be any reclamation of any kind without assurance that there will be no further pollution allowed on to any reclaimed areas? The Mid Regional Peninsula Open Space District has written and also make it very clear that the pollution at the Lehigh Cement and Quarry is destructive to the vegetation and to the wildlife that inhabit the region so how can Santa Clara County leave out these important facts in their DEIR. O1-2

I will mention again that there needs to be a complete cleanup under a Government EPA Region 9 Directed Super Fund Site Authorization and this needs to begin immediately in order to protect the public from any further exposure from the pollution being emitted 24/7 by the Lehigh Southwest Cement and Quarry and the Steven Creek Quarry. I am still waiting to hear from the EPA they are in the process of a Preliminary Assessment the results of their inquiry should be available any day now. O1-3

There is a perfect example of pollution to an area that the City of Cupertino first thought of putting senior housing on property owned by them next to highway 85 this prospect was shot down because of public uproar against it due to the pollution that would have come from the highway and the Lehigh Cement Plant that would harm the senior residences. They then decided that they wanted to put in a fancy dog park that would cost the city hundreds of thousands of dollars but first they decided to do a soil sample test and soon found out that the property was full of lead and that the clean up would cost over $100,000.00 thousands dollars this soon squelched this idea. I myself mentioned at a meeting about this that what are they going to do when the pollution comes back will they need to clean up the site again and the pollution would come back. I now see nothing being done with this property and that there are no senior cottages or dog park being put in so I presume that they have decided to leave the property as is. I myself think there should be a clean up especially because this property is right next to apartments that people with small children live in so my question is what is this lead pollution and other pollutants doing to the young and old alike? This is a perfect example of the pollution in Cupertino but O1-4

what really bugs me is that the City of Cupertino will not do any tests of the air, water and soil pertaining to Lehigh Cement or the Quarry and I still have to ask why? I hope this is a good example of the pollution that is being emitted by the Cement Plant and the Quarry and I would like to also add that the Steven Creek Quarry is also a contributor to the pollution and is also being looked at by the EPA Superfund Division. Lehigh is only a few miles away from the Steven Creek Quarry and the Dust and Pollution from Lehigh is also going over the Stevens Creek Quarry the Steven Creek Reservoir and the Mid Peninsula District open space areas the EPA Superfund Site work will clean the land but the work needs to be started right away.

O1-5

O1-6

The Reclamation Plan item 4.10.1.3 Groundwater Hydrology page 4.10-16 mentions that within the Project Area, groundwater flows through two general formations (or mediums): bedrock, and a small portion of the Santa Clara valley aquifer that intersects the Quarry site. It is stated that ground water discharges to the Quarry pit. Adjacent to the Project Area, the typically perennial reaches of Permanente Creek (i.e., upstream and downstream of the Quarry Pit) are maintained primarily by groundwater discharging directly to the stream channel during the dry season, as well as by dewatering discharges from the Quarry pit. The water discharging from the Quarry pit has high levels of selenium pollution and is subject to waste water violations which have not been addressed by the State Water Resource Board with any real enforcement and this will need to be addressed in this Reclamation plan.

O1-7

O1-8

It is extremely evident that the WMSA, EMSA, Quarry and other parts of the project areas construction have destroyed trees, landscape grasses, plants, shrubs and harmed animals and their habitat initially and for generations without anyone seeming to care. The past history of the old Reclamation Plan went for years without implementation and Santa Clara County did nothing to make sure that what was supposed to take place took place. The massive trees that were destroyed will never return in any way for they depended on the limestone rock formations to secure the strong roots that held them up and not any old or new reclamation plan will do very little to return this land to it's original beauty. The animals that made this beautiful property home are dead or displaced without again much concern for their well being this is a violation of regulations that should have been enforced again why was this not enforced?

O1-9

Table 4.10-4 page 4.10-15 Overburden Leach Ability by Modified CAM Wet shows Arsenic, Lead, Mercury, Selenium, Vanadium, and other pollutants levels taken back in 7/1/09 which need to be updated. These pollutants are serious and can not be overlooked and the cumulative effect will need to be taken into consideration if not the public will suffer. Who decides what levels are acceptable and how much pollution can the public take into their bodies we are all sick or will become ill and still they say we can tolerate whatever level they decide not acceptable and this must stop the public demands it. The pollution turns into a chemical cocktail of gases, metal and chemicals and becomes even more lethal and still we are told it is ok below the limits without even taken into account that people are getting sicker and sicker who will stop this injustice the public wants to know? The EIR overlooks all of the real dangers to the public and we are supposed to decide what Project or Project Alternatives are best without a EPA Declared Superfund Site there is no good Reclamation Plan.

O1-10

O1-11

ES.1, ES.2, ES.3, ES.4 Proposed Project Description – ES.4.1 Overview Applicant states that the 1985 Reclamation plan is amended under this new Project Proposal but we must view the past history of the original plan that was not adhered to how can we expect Lehigh to honor their agreements in the future can anyone tell me? The Santa Clara County who should have been the overseer was away far from taking charge and until the public contacted them about the EMSA did not even know what was going on so how can we even trust that a Reclamation will ever take place what is the public supposed to do? This seems very strange to me because they are supposed to inspect yearly so it seems someone looked the other way this is not acceptable to the public and should not take place again. There are and have been all kinds of violations at the Lehigh Southwest Cement and Quarry and the Stevens Creek Quarry and Santa Clara County does not impose fines and site them why is that?

O1-12

ES.2 Project Objectives – Note: We must not allow the continued mining of Limestone at the Lehigh Southwest Cement and Quarry. The mining of limestone and cement processing has been allowed to continue since 1903 this continued mining has destroyed the Cupertino Foothills, the open space areas at the sight and around it and contaminated the air, water and soil in all of the Silicone Valley and the surrounding areas including the San Francisco Bay which is a serious violation of many laws. There can not be any Project or an alternative at all that includes the continued mining and making of cement this must be a requirement in any Proposed Reclamation Plan. I ask instead that the EPA Region 9 Superfund Site Division decide to make Lehigh Southwest Cement and Quarry and the Stevens Creek Quarry and the surrounding areas affected by the pollution a Major Superfund site with cleanup to commence immediately before any Reclamation can even be considered. My dream is that the land the Lehigh Southwest Cement Plant and grounds, the Quarry and the Stevens Creek Quarry should be turned into a State or Federal Park for all the people to enjoy for all time this would benefit many generations to come. There are many ways that this could be done and the public would be more than happen to help with that project.

O1-13

They state what " Reclamation" means the combined process of land treatment that minimizes water degradation lets start with that there are multiple NOVs sited against them with the State Water Resource Board 17 or more and none of these have been resolved no fees or fines have been paid and the public waits to see justice done. The State Water Board has mentioned high levels of selenium waste water coming from the existing pit continually and the Permanente Creek being used for a dumping ground for this pollution again no one is sited fees or fines are not imposed or paid and the pollution continues. There is all kinds of pollution going into our water but the State Water Board stated at a meeting with the Los Altos Hills and the public that they are only concerned with selenium and that the water companies are responsible for the quality of our water this is absurd and something needs to be done right away. The ponds at Lehigh are full of pollution that is emptying into the Permanente Creek and our water shed. Their sanitation process is polluted and filthy they do their own sanitation and are not part of the San Jose Sanitation Department the pictures taken by the State Water Board can testify to the pollution on the sites so why is this not stopped? It is time to stop allowing companies like Lehigh to pollute and get away with it we need the EPA Superfund Site declared and the clean up needs to begin immediately.

O1-14

There is nothing being done to control the dust coming off of the sites via the EMSA , WMSA or with the piles of Petrolium coke, the kiln emissions and other locations at the cement factory and at the quarry the public wants to know why? Sprinkling of any piles that promote dust and pollution needs to be contained and are not this should be part of the Proposed Reclamation plan there should be no continued pollution allowed and how can there be a Reclamation if the land is continually allowed to be polluted the public would like this matter addressed? O1-15

The Air Pollution at the Quarry, EMSA, WMSA, Kiln and the Cement plant is a great health hazard to the public Lehigh has an NOV filed against them with the Federal EPA and this is still pending which stated they have no legal Title V Permit in operation and that they are not operating under the Best Available Technologies and that they are in violation of the PSD's so why are they still open? Santa Clara County stating that the Title V Permit has nothing to do with the Reclamation is again ridiculous and foolish both should tie into one another and the public demands that is does. Mercury emissions coming from the plant are high and the BAAQM District does nothing to make the public fee that it is protected we are still waiting to see what the truth is about the Mercury levels that are being spewed all over the valley who will find out the truth? The NOX, SO2 and CO2 levels are high and I have questioned the drying of the Petrolium coke with the NOX and SO2 gases this should not be allowed because there is no monitor on the Petrolium coke pipes and it is suspected that the levels of these emissions registering low because of this process so the public is lied to. The gases are transporting the dust and pollution all over the valley and no one seems to want to take care of this problem. The Reclamation plan can not be implemented at all without the stopping of the ongoing pollution from the Cement Plant and the Quarry how could it be? There are many pollutants being released from the Cement Plant and also in the air from the Quarry and the storage areas so why is nothing being done? Arsenic has also been detected and we are sure that Chromium 6, Vanadium and Lead is also being into the air, water and soil but we need to find out from the EPA Superfund Site declaration what on because it seems the other agencies will not do their jobs. The EPA labs are well equipped to determine any pollution and can test for all of the pollutants we need to demand that they do and there should be no suspect of any kind of tampering with any reports or records of any kind from anyone. O1-16

There is definitely damage to the aquatic or wildlife habitat and the Mid Peninsula District can testify to that they have sent letters addressing the pollution problem to the BAAQMD and to the Santa Clara County without much success it would seem no one wants to correct the problems why is that? How can their letters and concerns be overlooked by anyone and they will be responsible in the future for determining if Lehigh or anyone else has access to any more open space for mine drilling we the public hope they never do. O1-17

The dangerous flooding , erosion and other adverse effects from surface mining operations is ongoing and is a health and safety issue the applicant has been in violation continually but again no one is doing anything about it why not? There is supposed to be a suitable Reclamation imposed in order to allow the land to be used for future open space functions this can not be so if the areas is not free of dangerous pollution. The EMSA and the WMSA contains pollution that has been tested by Santa Clara County but they refuse to do anything about it why not? Under the EMSA there was once an aluminum plant and an ammunitions factory that polluted the area and I have asked Santa Clara County to test the soil they O1-18 O1-19

refused continually why is that are they not concerned about the safety of the water going into the Permanente Creek and our water shed it would seem not why not? O1-19

The vested rights have been an issue and the public fought and lost the pleading with Santa Clara County this was a terrible injustice and should be rectified but who will impose justice? This included the Permanente Road that was given to Lehigh without any real consideration again the public resisted and wanted the road to remain public and we were turned down and the citizens lost the revenue that could have been earned by the sale of the road to Lehigh this again was an injustice who will stop this ongoing lack of consideration for what the public asks for? The bridge also remains to be a safety hazard and is old and with cracks in the concrete and there has been not inspection by Santa Clara County to make sure that the trucks, cars and people going over the bridge are safe who will do something about this continued lack of consideration for the publics safety certainly not Lehigh the public wants to know why? This should also be part of the Proposed Reclamation plan and it is not so when will that be considered? There are many buildings on the site that are old rundown and dilapidated again nothing is being done even thou Lehigh and Heildelberg are very rich and can upgrade or build a new Cement Plant that would help control the pollution why are they not doing so? The public does not want a Cement Plant and wants the quarry shut down in order to stop the continued ongoing pollution of our cities and towns. The Cement plant should be looked at with the same high pollutions restrictions as a new plant so as to keep the public safe how can they be allowed to pollute more because they are an old plant? This makes no sense if they state that the levels are unattainable then they need to shut down the plant and the Quarry. O1-20 O1-21

ES.4.1 Overview - It is stated that the proposed reclamation would not preclude future extraction activities within the Project Area but does not foreclose the possibility of future mining in the other unincorporated areas of the Applicant's 3,510 acre ownership. This would include the exploration area south of the new pit with many trees that would be cut down 10,000 to begin with and 30,000 trees after they mine 600 acres as was the case in with the old pit. Lehigh needs to mine a new pit and we as the public can not be so blind as to see what will happen if they are given that right no one will be able to live here in the valley the buffer of trees that has keep the pollution from climbing will be gone for ever we need to stop this disaster. O1-22

ES.4.2 Project Components (bullet 1) states that the existing pit would be backfilled with the WMSA overburden material which does not include the EMSA this is not acceptable to the public both the WMSA and the EMSA should be used to fill the existing Quarry and mining should stop. The material overburden and whatever should be tested to make sure that there is no pollution it would seriously seem there is and if so there needs to be more top soil added to the top of the land in order to make sure that the public is not contaminated with pollution. The land can only be used for certain things after that and can not be used for buildings of homes and schools which would result in contamination of the public. My hope is the EPA Superfund Department will make this all known and clear to all concerned how the clean up will take place. O1-23

(bullet 2) Reclamation of the approximately 172.6 acre WMSA, which is an existing overburden storage area located west of the Quarry pit. Final WMSA elevation and contours would be returned roughly to

pre-mining contours by transporting most of the materials currently stored in the WMSA into the Quarry pit and by processing the remaining materials for commercial use.

Note: It states that the contours would be returned roughly to pre-mining conditions this just does not seem correct to me there needs to be specifications how will that work? What does roughly mean I suspect not very good and we are subject to an ugly landscape which will be used for nothing at all this would be a terrible shame. O1-24

(bullet 3) Inclusion of the approximately 75.2 –acres EMSA within the reclamation plan boundary and reclamation of the area, including the creation of a permanent overburden storage area imposed.

Note: What is this permanent overburden storage area it was stated in a program that the EMSA would be moved west of the area new but it does not look like this will be at all what is going on? The public does not want the EMSA permanent or otherwise the EMSA needs to be put into the old pit and the mining needs to end so that the public is protected from the pollution. The area needs to be returned to the natural state that will be appreciated by the people looking at the scenic view from miles away and at the site. O1-25

(bullet 4, 5 & 6) Crusher, Surge Pile and Rock Plant – These areas need to be cleaned up and dismantled and removed right away and I hope the EPA Super Fund District can start the clean up that will be needed to clean up these areas of pollution. O1-26

(bullet 7) Reclamation of approx. 19.5-acres Exploration Area located south of Permanente Creek that has been subject to mining-related exploratory activities but not mineral extraction. Note: I believe this area is the area that was tested in order to purpose a new mine to be mined looking at the limestone in the ground for future use. This application was pulled back as noted earlier in my comments and is illegal it should have been part of the EIR. I would like to add that there was also going to be a bridge over the Permanente Creek in the new pit application this bridge would allow a great deal of pollution to be discharged into the Permanente Creek and should not be allowed. O1-27

(bullet 8) Note: Reclamation here of approx. 49.2 acres of disturbance within the PCRA would also have to be considered for testing by the EPA Superfund Dept. to make sure that there is no pollution from the limestone mining. The Permanente Creek would have to be cleaned due to the pollution from selenium and other contamination that has continued over many decades. O1-28

(bullet9) Designation of approximately 599.3 acres of vegetated buffer area where no mining operations would occur Note: This area has been contaminated by the dust from the mining at and around the pit by the quarry and the cement plant this needs to be examined and determined again by the EPA Superfund Site Division prior to any reclamation of any kind see (bullet8). O1-28

The time frame mentioned on page ES-5 under Table ES-1 Reclamation Phasing and Related Activities is alarming extending out to the year 2030. Footnote mentions dates could be subject to market demand which leads us to vision another quarry in the making nothing leads us to believe in any way that it should take till the year 2030 to complete the 3 phases why would it? The public demands that the O1-29

Reclamation be started after the EPA Superfund Division completed the clean up and that all the regulations pertaining to a Superfund Site have been implemented. This should all be coordinated with the State Mining Board and State and Federal Funds used for the clean up as well as Lehigh Southwest Cement and Quarry money. This does not exclude Santa Clara County from paying for the clean up as well. The cleanup will change many if not all of the design of the Proposed Reclamation plans and alternatives and it is foolish to think that a plan can be approved at this time as we wait for the EPA Superfund Division to finish their Preliminary Assessment and provide a report to the public.

O1-29

ES.5 Alternatives

ES.5.1 Alternative 1: Complete Backfill Alternative – under Executive Summary ES-4 the problem with this Alternative is that the EMSA would be backfilled into the Quarry upon the conclusion of mineral extraction activities which has not been determined. Lehigh refuses to divulge how much limestone is left in the existing quarry stating that it will reveal information to their competitors this is ridiculous the public wants to know how much limestone is left to mine? It states that the EMSA was designed to accept total overburden placement of approximately 6.5 million tons (approximately 4.8 million cubic yards) and to provide overburden storage for the surface mining operation until approximately 2015, when contouring and revegetation would occur . Under Alternative 1, the approximately 4.8 million cubic yards of overburden stored in the EMSA would be returned to the Quarry Pit during reclamation Phase 2. Note: Table ES-1 states that Phase 2 will not take place until the year 2021 THIS IS NOT ACCEPTABLE the EMSA needs to be moved as soon as possible it is stated further in the next paragraph that removal of mining overburden from the EMSA would abate the notice of violation related to mining related use of this area, remove an existing source of selenium and thereby preclude its mobilization into downstream waterways, and return views from the valley floor and beyond to pre-mining conditions. ES-5 goes on to say that removing the EMSA also would not meet an objective of the Project, which is the screening of view of and noises associated with the industrial uses occurring at the Cement Plant from the valley floor and recreational area in the vicinity of the Project Area.

O1-30

Note: This is totally absurd there has never been any such objective it is an excuse so as not to move the EMSA which is causing a great deal of pollution to the community in the air, water and with the soil. We must also consider what pollution is under the EMSA as stated in the beginning of my original comments. The view from Stevens Creek Blvd. example at Stelling Blvd. and Stevens Creek Blvd. is in the picture I gave you with my original comments the EMSA can be seen for miles even further out on highway 280 as we come up the freeway as far back as Wolf Rd. The original view was a small hill covered with grass and it blended in with the hillsides this is not the case now I mentioned this to Santa Clara County when Lehigh started to destroy the hill and I also contacted the State Conservation Department who would do absolutely nothing about what was taking place at Lehigh to stop the destruction. Santa Clara County was not even aware of what was taken place until I called and complained and even then they allowed Lehigh to put up the EMSA with my complaints and with the complaints of the community which went unheard. We now have to look at a monstrosity a disaster that has taken place and destroyed the view it's is illegal and no one will do anything about it can anyone tell me why?

ES.5.2 Alternative 2: Central Materials Storage Area Alternative – Page ES-6 - This seems to be more of a problem it is stated that the overburden will be moved to the west edge of the EMSA further removed approximately 52.2 acres from the closest viewers and air quality - noise-sensitive receptors I am very concerned that they will cut down more trees to move the EMSA to the west and it does not look as if there will be enough room for all of the overburden. It is stated that this would accommodate overburden generated by mining of the Quarry pit during reclamation Phase 1 and then would be reclaimed. Well this is again upsetting another area to be reclaimed seems like we need another Reclamation plan for this area if this should be included now. The moving of the EMSA is a good thing but not like this we do not need another problem. The real issue is that dumping on the EMSA no matter where it is should be stopped immediately without delay. The overburden should only be put into the quarry and the mining stopped so that the total clean up can begin with the EPA Superfund Site movement which will be the most beneficial to the community that will save lives now and in the years to come.

O1-31

ES.5.3 No Project Alternative: There again can not be a Reclamation plan without a full clean up of all lands in the Project and surrounding the Project including the Lehigh Southwest Cement Plant. The SMARA requirements mandate that the Project Area be reclaimed in compliance with all regulatory criteria Lehigh has been out of compliance continually with issues related to Orders to Comply/Notices of Violations (NOV's) issued by the County in 2006 and 2008 related to deviations from the 1985 Reclamation Plan (i.e., engaging in mining activities outside the approved reclamation boundary) with no penalties or fines paid to the county this is illegal. Under the No Project Alternative, the proposed Reclamation Plan would not be approved, these NOVs would not be abated, and the Applicant would remain in violation of SMARA and County requirements because an approved reclamation plan would not encompass all mining-related operations and disturbances. This would result in no additional placement of overburden at the EMSA.

It is stated that in order to address the existing NOVs, a SMARA-compliant reclamation plan would have to be developed, approved following its evaluation under CEQA, and implemented by the Applicant. This plan would be similar to the proposed reclamation plan which would include the EMSA overburden. The issue again that needs to be addressed is the probability of an EPA imposed Super Fund Site which needs to take place in order to clean up the polluted lands that have been allowed to continue for over 70 years. It is stated that under the No Project Alternative, the principal difference compared to the Project is not whether reclamation would begin, but rather when reclamation would begin. There can be no delay with the reclamation after the EPA Super Fund Site clean up has been done and no one right now can possibly know how long that will take. The State Mining Board should be included in the decision making and Santa Clara County should be under the limitations set by them and the EPA Superfund Site plan.

O1-32

The baseline (11-year average) annual limestone production rate for the Quarry is reported by the Applicant to be 2,600,000 metric tons (ALG, 2011), the total limestone production under reclamation Phase 1 is estimated by the Applicant to be 42,300,000 metric tons (ALG, 2011). This, under the No Project scenario in which mining would continue at the baseline rate, it would continue at the baseline rate, it would take approximately 16 years to reach the same total production as would be reached in 9

O1-33

years . Note: The problem here and should be noted is how much limestone is left in the existing quarry to mine we the public need to know? The other issue is that the application for a new pit was pulled back and it is suspected that the Santa Clara County board instructed Lehigh to retract the permit and submit it at a later date this is unacceptable and probably illegal. The new pit has everything to do with the continued mining of the Lehigh Cement and Quarry operations and should be included in the Proposed Reclamation plan. This is a deliberate plot to keep the citizens in the dark as to the new pit and its danger to the community which is illegal. The calculations above more then imply that there will be limestone production and mining continued whether it be 16 years or 9 years really does not matter what matters is where is this limestone coming from and the public needs to know. If as in the past I have been told by Santa Clara County that Lehigh has mentioned they have hardly any limestone of any quality left in the old pit and then they changed their story and stated they had 5 to 10 years left it is very difficult for anyone to really know what is left in the old pit to mine. The baseline average of 11-years which it is stated in foot notes at bottom of ES-7 states that baseline production average over the 11-year period from January 1, 2000, to December 31, 2010, which includes periods of relatively high production as well as relatively low production at the Permanente Quarry is in response to changing market demands is not based on any projections into the future and can not be used to say that this will be on average of 2,600,000 metric tons annually. Even with these calculations how can we presume that this is what will be coming from the existing pit and not the new pit application that has yet to be submitted by Lehigh. The Phase 1 estimated use 42,300,000 metric tones is more implications of the new pit and not limestone being pulled from the old pit and I suspect that the new pit which is estimated at 200 acres will be eventually elevated to 600 acres and more over 26 years if not longer there can not be a new pit mined this would truly be devastating.

O1-33

The new pit application prospect should have been added to the now Proposed Reclamation plan and there should have been a Proposed Reclamation plan for that new pit submitted as well at this time so that the public can take all of the details into account at once. To leave this out of the EIR report is failure on the part of Santa Clara County to again meet the needs of the citizens of Santa Clara County especially the health, safety and well being of the public this should not be overlooked by anyone including the State Mining Board and the EPA. The public opposes a new pit and that is why the Santa Clara County instructed Lehigh to pull the application because they thought it would hold up the Proposed Reclamation Plan. This information could have held up the now Proposed Reclamation plan but maybe it should have we do not want a new pit and we want the Lehigh Cement Plant and Quarry to be shut down and the pollution of our communities stopped immediately. I want to know what is left in the old quarry to be mined what are the calculations and how long does Lehigh think it will take to mine it? I also want to know about the new application for the new pit how many acres will it be for and its projection for future expansion? I need to know how many trees will be cut down for the 200 acres and what ever the future holds for expansion and how does that affect the trees that will be destroyed at that time? I want answers and so does the public and to hold back information is illegal.

O1-34

Similar to the Project table on page ES8 table ES-2 “No Project” Phasing and Related Activities cover 25 from 2012 to 2037 this is to long the public can not wait that long and that is why we need the EPA and a Super Fund declared in order to clean up the mess and start the Reclamation immediately. The new

O1-35

Proposed Reclamation should take very little time if the quarry and the cement plant are shut down the EPA can escalate clean up and so could those in charge of the Reclamation which would be a wonderful thing it would stop the pollution and also save lives of humans and animals alike. The property could be used for open space activities and the public could enjoy the possibility of a State or Federal Park that could be used by generations to come this is what the public wants and this needs to happen. O1-35 O1-36

ES.6 Environmentally Superior Alternative – mentions that the Proposed Project is the best alternative and I disagree completely because of what was mentioned originally regarding a major Super Fund Site needs to be declared and clean up must begin immediately. I have also stated that no Project Proposal of any can be allowed that does not include the complete shutdown of the Lehigh Southwest Cement and Quarry the public demands it. O1-37

ES.7 Areas of Controversy and issues to be Resolved – (bullets 16) The comments of the public on these topics must be taken into serious consideration especially when over 200 people have submitted these complaints and comments in order for any solution to take place. The topics describe the seriousness of the issues and each and every issued should not be overlooked. O1-38

(Bullet 1) The Project Description needs to address the new proposed pit and it does not. Timeframes are to far out and extended. The Reclamation can not proceed without the declaration of the EPA Superfund Site Clean up there is nothing in the Proposed initial Project or the alternatives that mentions any clean up of the pollution and this is unacceptable. The Limestone alone has a great deal of Mercury in it and this location for mining should have never been allowed the public continues to suffer. O1-39 O1-40 O1-41

(Bullet 2) Alternatives – The alternatives need to be looked at with regard to full impact and they are not again no mention of the clean up of the pollution and contamination to the Lehigh Southwest Cement Plant, the Quarry and the surrounding grounds. There is not even any full clean up of the Permanente Creek which has been so highly polluted by not only selenium but other contaminants this is not acceptable. CEQA will need to do their job and work with the EPA to stop the pollution of our communities this must be added to any plan. O1-42

(Bullet 3) Aesthetics and Visual Resources etc. – The ridgeline views have been violated as stated in the comments and the scenic view has been completely destroyed without any fees or fines paid the public needs to know why can anyone tell us? The continued violations that take place at night are completely overlooked and there is no nighttime surveillance of any kind by the BAAQMD, Santa Clara County or anyone else this is and has been completely over looked even after I have asked for night time surveillance to take place. The plant can not operate without nighttime lighting and noise this is a disturbance to the people that live around the plant this goes completely overlooked. There has not even been any testing of any kind to determine if Lehigh is over the allowed noise level restrictions this has yet to be determined and should be. The lights that are a problem must also be shielded so as to not harm the residence homes with the night time lights this is not being done why not? O1-43

(Bullet 4) Air Quality etc. – There has been ongoing problems with air pollution of all kinds and this includes odors of all kinds especially a smell of cement in the air continually that includes a taste in a person's mouth with the problem of breathing that no one seems to take into account and do anything O1-44

about why not? The diesel truck and the truck trips over 100,000 thousand per year from Lehigh alone which does not include the diesel truck trips from the Stevens Creek Quarry down the Stevens Canyon Rd. that intersects Stevens Creek Blvd. going to Foothill Blvd. The pollution is not even registered from these trucks daily and it could be the monitor at the Monta Vista Park that the diesel trucks drive by has not even been a benefit to anyone at all why is that? It seems it is to hard to determine what pollution is what is it the trucks or the cement plant is anyone's guess but who will look into this funny situation I would like to know? Health related issues of course are played down and cancer is on the rise one person out of 2 is getting cancer no one seems to care where is the pollution coming from the public is soon to find out. The dust is everywhere all over our homes, cars and we are eating it and breathing it in and still the BAAQMD will do nothing to protect the public why not? The most serious of pollutants is Mercury and the levels are high Lehigh Cement and Quarry are unable to control their emission and yet they are still allowed to continue their dirty work why is that? The Health Risk Assessment is a lie and should be an embarrassment to the BAAQMD but it is not it has been stated by many that there needs to be an updated correct risk assessment done and no one seems to be able to enforce that requirement why not? There is no way that 1 out of 1 million persons is getting cancer and dying from it here in the valley it is a lot more than that and lets not leave out the fact that many are getting sick an suffering as well all of this is played down by the BAAQMD and the State Cancer Registry as well. The fact that cancer is at epidemic levels is stated and noted by the EPA is evident so why is the CDC not doing anything about it I am trying to find out?

O1-44

(Bullet 5) Biological Resources including Permanente Creek we should not leave out the Stevens Creek Reservoir, Stevens Creek Creek, recharge ponds and our aquifer which is full of Mercury and other pollution. Young people are eating the fish that the catch out of the Stevens Creek Reservoir that is being polluted by the Stevens Creek quarry and the Lehigh Southwest Cement and Quarry no one seems to care or want to clean up the mess why not? The Santa Clara Water District is dishonest and knows about the high levels of Mercury and Selenium in the Steven Creek Reservoir but will do nothing to clean it up why? The impact on the fish, amphibians, etc. is evident and no one will do anything about it even after I complain to the universe no agency will stop the pollution I can only hope now that the EPA Region 9 Superfund Division will declare Lehigh and the Stevens Creek Quarry a Superfund Site and help to stop the pollution by getting the clean up started.

The cutting down of over 10 thousand trees initially and later probably up to 30 thousand later after the new pit has been mined that will probably go up to 600 acres is again overlook and the fact that these trees have been a buffer against the pollution seems again to be over looked. The Mid Peninsula Regional Open Space District has complained about the pollution for years to Santa Clara County and the County has done nothing to stop it why not? The animals that have been displaced by this pollution and mining seems not to matter to anyone why not?

O1-45

(Bullet 6) Cultural Resources – The limestone is historical and dates back to the prehistoric era it is a historical land mark but no one seems to care why not? Once the limestone is mined and gone it will never be there again and the trees that used this rock to secure their roots will not be able to do so this is a terrible shame. The Reclamation can not replace these magnificent trees that have been their for decades providing clean air to breath and providing a forest for the animals that inhabit this land it is

foolish to think it can ever be returned to it's natural state Lehigh has shown us no progress in the past so why should we believe them now? The human remains must be left alone and this should be honored and is not why not? O1-46

(Bullet 7) Geology and Soils- The San Andres Fault is 2 miles away from the Lehigh Cement Plant and Quarry and there are other Fault lines around and intersecting the areas it is foolish to think that mining can not effect and cause the next major earth quake in Cupertino and in the surrounding areas including San Francisco this would be a major disaster. O1-47 The Quarry itself is a risk to the workers that work there land slides and other problems have been evident why is no one doing anything about it? There was even a shooting up at the Quarry the man who shot the people that worked there was ill he had lung problems and had throat surgery I suppose he felt he had nothing to loose especially if he was ill and dying. The workers wear no masks or respirators of any kind and the trucks they work on have no closed in compartments to secure them from the dust that they must inhale each day at work so they are ill. The question is who will find out what is really going on and help these workers so they do not become ill from the pollution can anyone tell me? O1-48

(Bullet 8) Greenhouse Gas Emissions – Lehigh Southwest Cement and Quarry is a strong contributor to with CO2 emissions Greenhouse Gas Emissions along with Sulfur Dioxide and Nitrogen Dioxide gas emissions which is the cause of the global warming we are now experiencing each year. Lehigh should not be allowed in any way to take part in the Cap and Trade system it would be a disaster to our community and the public would be up in arms especially once they truly understood what is Cap and Trade not a good system. We need to close down Lehigh Southwest Cement and Quarry and the Stevens Creek Quarry in order to stop the pollution that is killing us and it has to be done now. O1-49

(Bullet 9) Hazards and Hazardous Materials – The public is subjected to the ongoing release of pollution which is not limited to asbestos, selenium, mercury, petroleum coke, radioactive materials, toxic materials we must also take into consideration Vanadium which is not regulated by the EPA and get Vanadium regulated so the pollution will stop. There has also been not mention here of Chromium 6 which is very dangerous and I have found out is very similar to Vanadium so why is Vanadium not regulated can anyone tell me? The NOX and SO2 emissions need to be looked at as well has I have stated the problems with them who sets the regulation levels and who says we can tolerated the levels they set this is crazy to believe that there is no cumulative effect and that the gases are not killing us. The dust hooks onto the gases from the kiln, plant and quarry and is spread all over the Silicone Valley polluting our air, water and soil who will stop the pollution I want to know? The BAAQMD can not be trusted to do their job it is evident and I ask again who will help the people who are suffering? The EPA need to be a true enforcement agency and also make sure the agencies like the BAAQMD and the State Regional Water Board are doing their jobs and if they are not something needs to be done about it. The paying of fines is not enough the companies that pollute are rich and paying fines does not seem to bother them at all they just go out and pollute over and over again this need to stop. They need to stop the pollution and if they do not then the people responsible should be put in jail and the enforcement agency needs to make sure that the laws and rules that govern our land are enforced so that the public is protected. O1-50

(Bullet 10) Hydrology and Water Quality, including toxic releases etc. – The State of California Water Resource Board has sited Lehigh for over 16 water violations with a NOV and this has been going on for over 2 years with anything being done and the public wants to know why? The health risks to the public are played down by the agencies and this should be a crime. The State Water Resource Regional Board seems now to think that they are not responsible for our water quality and have mentioned at a meeting with the Los Altos Hills council members and the public that the water companies are the only ones responsible for the water quality and that they are only concerned now of the selenium in the water I was totally alarmed and shocked by this information. I have been talking to their representative over and over again and this was never relayed to me I can not tell you how alarming this is for me and the public and I will be investigating this on my own. Lehigh so far has paid no fees or fines and no one has been put in jail and the public wants to know why? The SCWRB is dragging their feet and this needs to stop my only hope now is in the EPA but only time can tell. O1-51

(Bullet 11) Land Use and Planning etc. – Who will protect the land and the open space around the now owned property by Lehigh I can not leave this up to any agency or the Mid Peninsula Regional Open Space District and neither should the public because the land can be turned over to Lehigh at any time. They can apply and then who decides if they will get more land to use for their mining this could go on for hundreds of years until finally there is no beautiful open space and the trees will be chopped down and the air, water and soil will be polluted beyond repair we can not let this happen. O1-52

(Bullet 12) Noise and Vibration, etc. – The diesel trucks coming in and out of Lehigh Cement Plant and also the dump trucks and other earth moving vehicles are a great problem to the public and the workers who work at the plant. The diesel trucks are polluting in to the air and they are leaking cement, dust, dirt rocks from the trucks that are causing all kinds of pollution onto the streets and into the air around the condos next door and into the neighborhoods this needs to stop. The noise and vibration can no longer be ignored as it has been and the EPA needs to do their job and stop this violation and so far has not the public wants to know why? The public would also like to know why Santa Clara County continues to do nothing at all about this problem are they not concerned about the health and wellbeing of the citizens in Santa Clara County it sure would seem like they are more concerned about the tax revenue and that is not acceptable. O1-53

(Bullet 13) Recreation, etc. – The Mid Peninsula Regional Open Space District has written letters and complained continually about the pollution coming from the Lehigh Southwest Cement and Quarry and the Steven Creek Quarry and Santa Clara County has done nothing to stop the pollution the public would like to know why? The pollution is evident the trees and land is covered with the dust and the people trying to enjoy the land are continually polluted by the pollution coming from these polluters and no one is doing anything about it why not? O1-54

(Bullet 14) Transportation and Traffic etc. – The Lehigh Southwest Cement and the Quarry including Steven Creek Quarry do not seem to care about the hours of operation they can operate when ever they please and no one is stopping them. They can spew dust all over the roads and into the air and no one cares about that it is evident anyone can see the pollution on the roads and along the road way and on the trees as well again nothing is being done about that. I call and complain and it does no good the O1-55

BAAQMD will not site them any more what is the public to do? If they were to site them they would pay a fee or fine and go off and pollute again no one can stop these criminal polluters I know I have tried over and over again. They say they sprinkle the roads but only if they are told to and if they are caught not doing it the roads and trees can testify to the pollution you can see it all around. We are told that California needs cement processing which seems to be more important than human and animal life how can that be this must end. O1-55

(Bullet15) Utilities and Service Systems etc. – The Lehigh Cement plant can not operate without releasing waste water from the quarry and the ponds this is evident and the selenium and other pollutants should not be allowed to contaminate the Permanente Creek and our water shed this must stop immediately. The dispose of their own sewage another problem and who know how much pollution they are releasing because of that we have counted on the State Water Resource Board to monitor that but they are not doing their job and neither is Santa Clara County. The sewage from Lehigh is not monitored by the San Jose Sewage Department either no pipe is coming from Lehigh that is going down to San Jose and so who really knows if they are dumping into the Permanente Creek who will find out the public wants to know? O1-56

(Bullet16) Cumulative Effects, including with respect to the cement plant and the Permanente Creek Flood Protection Project Cumulative Effects page 6-8 under 6.Cumulative Impacts mentions NOV's and the failure of Lehigh Cement Plant to comply on March 26, 2010 with storm water protection requirements nothing has been done to correct this problem to this date. A subsequent notice of violation was issued by the Regional Board on February 18, 2011, related to non-storm water discharges at the Cement Plant again nothing has been done to correct the problem. On April 29, 2011, the Regional Board issued a complaint alleging that a pipe outfall (discharge) to Permanente Creek had not been disclosed despite a requirement to have done so, and, on June 10, 2011, the Cement Plant become subject to a Porter-Cologne Water Quality Control Act Section 13267 Investigative Order related to water quality concerns (RWQCB, 2011). Note: These problems have never been corrected and the public would like to know why can anyone tell me? The State Water Regional Control Board representative at a Los Alto Hill city meeting mentioned that they taking 18 more months to work on issues pertaining to Lehigh the public would like to know why? I am extremely concerned that while the agencies are dragging their feet and giving all kinds of excuses and allowing Lehigh to be in criminal violations of laws and regulations we the public are suffering continued contamination from pollution of our air, water and soil and nothing seems to be done about it. The public can and should not allow any more time to pass and the EPA Region 9 Superfund Site Division should be coming in to declare Lehigh Southwest Cement and Quarry and the Stevens Creek Quarry as Declared Superfund Sites and begin to shut down these facilities in order to start a complete clean up of the sites. This clean up would include the Steven Creek Reservoir, Stevens Creek Creek, Permanente Creek, Recharge Pond behind the 7/11 on Bubb Rd., and the wells in Cupertino operating and on operational about 15 miles around the declared Super Fund Sites. O1-57

Page 6-9 under 6. Cumulative Impacts – Air Quality the Lehigh Cement Plant has been operating without a legal Title V Permit and the Federal EPA has issued a NOV against the plant this NOV has still to be enforced and the public wants to know why nothing is being done? I have made many phone calls to the

local EPA Region 9 and to the Federal EPA and all I get is this NOV is in litigation and is confidential and they can not give me any information about it this is unacceptable but what can I or the public do about this can anyone tell me? The emissions from the Lehigh Cement Plant are a major health problem to the community and lies are being told by Lehigh and the Bay Area Air Quality Management District and no one seems to want to do anything about it can anyone tell me why? The monitor for Mercury the carbon injection systems is not providing any real time information that should be delivered directly to the BAAQMD and to the EPA Region 9 District the report is just e-mailed to the BAAQMD and they take Lehigh's word for it. Lehigh calibrates it's own equipment not only for the Mercury monitor but also the monitors for the NOX and SO2 emissions coming from the kiln this is like the fox watching the chicken coup soon to eat the chickens. We can not trust them to report the truth especially when it would prove they are telling lies about the amount of Mercury they are releasing into the air on to the poor people that must be subject to this pollution 24/7 hrs. a day. They have heard them lie and say they are reducing the Mercury emissions 90% and the news papers and news media has reported it without any proof seems no one wants the truth to be told and it should be. The carbon injection system is not lowering the Mercury emissions and is also responsible for more Mercury going into the finished product of cement and finally concrete. The concrete will eventually be recycled as it is now at the Stevens Creek Quarry with more Mercury in it which will be ground up into a power and distributed to the companies that will buy it and the public will be subjected to more Mercury contamination. The pollution from the Quarry is washing into the Steven Creek Reservoir and eventually ends up in the aquifer which in turn is pulled up by the water companies and sold to the public. The water is not cleaned by any process and is not tested for everything that could be in it that is harming the public.

O1-57

O1-58

There is no way that that Lehigh can reduce the Mercury 90% and whatever they are disbursing out into the air will have a cumulative effect on the population which is causing cancer and other health afflictions this must stop and so closing down the Lehigh Cement Plant and Quarry and the Stevens Creek Quarry is the only way to stop the pollution.

The hexavalent Chromium 6 emissions at the Steven Creek School which were 2 miles from the Permanente Cement Plant where done North East of the Cement Plant and the wind was not directly blowing in that direction so the levels I believe were below levels of concern. The BAAQMD installed the monitoring equipment at the school and they also calibrated the machine themselves this is unacceptable to the public the EPA should have been in complete control of the testing and was not it is hard to believe that the levels were below concern. I spoke to the EPA Region 9 staff and asked if they could do the testing at the Monta Vista HS in Cupertino this school is Southwest of the Cement Plant which could have brought in a more accurate reading but the EPA refused. I thought this was strange because in other states that did testing they did it with multiple school locations so why did they allow it in other places this was not done in Cupertino. My son Jason attended Monta Vista HS and would come home telling me that during football practice the pollution was so bad that he and the other boys could not even breath so I determined that the best place for the monitor should have been Monta Vista HS. The Monta Vista Park monitor that has been installed to monitor the pollution is a joke and it is not even monitoring Mercury which they should be. There has been no real determination of what is going on at

Monta Vista Park and I can only hope the EPA will eventually find out what is really happening in Cupertino and stop the pollution.

Note: The PM 2.5 particulate levels of pollution coming from Lehigh Cement and Quarry and the Steven Creek Quarry have not been looked at by the BAAQMD who should have been monitoring this all along this is a strong Significant level of impact to take into account See pg. ES-14 Table ES 3. I can only hope that the EPA will do their own testing to find out what is really going on here in Cupertino and the surrounding areas. O1-58

Table ES-3 – 4.10-5 Groundwater discharge form the Quarry pit after backfilling and reclamation is complete would adversely alter surface water flows to Permanente Creek – it is stated that this is less than significant and that Mitigation Measures are not required I beg to argue this and this needs to be changed. 4.10-6 -The Project would alter the existing drainage pattern of the site, which could result in increased stormwater ponding, accumulation of selenium, and flooding. Stated this is Significant – Note: the pollution from selenium and other pollutants need to be stated as Highly Significant and needs to be controls set in motion to keep the pollution in check. This should be across the board no matter what program is established. O1-59

Table ES-4 Resource Area Hazards and Hazardous Materials states that there is No Preferences with the Project or all the Alternatives why is that can anyone tell me? This seems to be a serious matter and it is not being seriously considered why not? I have brought up especially under the EMSA that the pollution from the ammunitions plant and the aluminum plant be tested and cleaned up so why is this whole matter being left out of the programs all together can anyone tell me? Santa Clara County must take this area and the whole of the Lehigh Southwest Cement and Quarry and the Stevens Creek quarry into consideration for the complete investigation into Hazards and Hazardous Materials that exist it is what the public feels is a necessity and it should happen right away. O1-60

Conclusion: It is difficult for any person to really know what the total impact of the EIR and the Proposed Reclamation will at this time accomplish because there needs to be a full investigation and a EPA Superfund Site declared at the Lehigh Southwest Cement and Quarry and the grounds which needs to take place immediately. I can not understand and I am sure the public can not understand how all the problems surrounding the facilities have been allowed to continue and still are allowed to continue and so the question remains what will the Governments do about controlling the pollution in our communities? O1-61

I ask that the Santa Clara County Representatives and the Board review my comments and work with the EPA to establish a Super Fund Site at the Lehigh Southwest Cement and Quarry and the Stevens Creek Quarry so as to insure the future health and wellbeing of the generations to come.

Thank you

3.3.1 Comment Letter O1: Citizens Against Pollution (CAP)

O1-1 Comment noted. Responses to the commenter's letter submitted at the February 2nd public meeting are provided in the responses to Letter P4; responses to the commenter's oral comments are provided in responses PH-8 through PH-14.

O1-2 As discussed in Master Response M4(B), OMR and the County made a determination in 2007 that the Cement Plant is distinct from the surface mining operation. Consistent with this determination, the Cement Plant is not within the Project Area and would not be reclaimed as a part of the Project. Accordingly, issues associated with pollution from the Cement Plant are not properly within the scope of the Project or this EIR.

Regarding the comment requesting assurance that there will be no further pollution allowed within reclaimed areas, as discussed in Master Response M3(A), public and private parties are entitled to a presumption that they will comply with applicable requirements. In any event, the County will conduct annual inspections in accordance with its compliance oversight duties under SMARA.

Moreover, the County has prepared a Mitigation, Monitoring, Reporting and Compliance Program (MMRCP), which will be included with the County's Findings of Fact and Conditions of Approval for the Project. This will ensure effective, enforceable implementation of the mitigation measures imposed by the County pursuant to the EIR for the Project.

Regarding concerns posed by the Midpeninsula Regional Open Space District (MROSD), the commenter is referred to Letter A6 from the MROSD, and responses A6-1 through A6-22

O1-3 The commenter suggests the Project Area be cleaned up as part of the USEPA Superfund Program. At this time, the Project Area is neither an active Superfund site nor under investigation by the USEPA as a potential Superfund site.[1] Superfund is a federal program to clean up uncontrolled or abandoned hazardous waste sites in the United States. Sites included on the EPA's National Priorities list are cleaned up to protect the environment and public health. Information about the Superfund program can be found at http://www.epa.gov/superfund/. The Superfund Cleanup Program was created in 1980, when Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in response to growing concerns about health and environmental threats from hazardous waste sites created by abandoned, accidentally spilled, or illegally dumped hazardous substances. When the U.S. EPA learns of a potential hazardous waste site, it collects information, inspects the area, and communicates with community members to evaluate the potential risks. Some sites don't require any action at all; others may be cleaned up by state agencies or other programs. Certain among the remaining sites, i.e., those that meet certain requirements,

[1] http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/vwsoalphabetic?openview, accessed on March 28, 2012.

merit action by the Federal government. CERCLA authorizes the EPA to require those responsible for the contamination (who are called "potentially responsible parties" or PRPs) to pay for site studies and cleanup work. Sometimes the EPA pays for cleanups from a pool of money called the Superfund and then seeks reimbursement of the fund from PRPs. Superfund money comes mainly from taxes on chemical and petroleum industries. The desire expressed in this comment that clean-up work associated with the Superfund Program be initiated right away is noted; however, the Project Area's potential eligibility as a Superfund site would be addressed outside of the CEQA process, as a separate process governed by EPA rules and regulations. This EIR does not address Superfund issues.

As discussed in the Draft EIR Chapter 2, *Project Description*, this EIR is an informational document intended to disclose to the public and decision-makers the potential environmental impacts of the Project, per the requirements of the California Environmental Quality Act (CEQA), and to satisfy the reclamation requirements of the Surface Mining and Reclamation Act of 1975, and its implementing regulations (collectively, SMARA), as well as the County's surface mining ordinance (Santa Clara County Code § 4.10.370) and Surface Mining and Land Reclamation Standards. This EIR does address the Project's potential to contribute to hazards and hazardous impacts, per the CEQA Guidelines Appendix G checklist as well as the County of Santa Clara's checklist, in Section 4.9, *Hazards and Hazardous Issues*.

O1-4 The commenter expresses concern about hazardous pollution in the soil within the Project Area, citing past projects that have been proposed in the vicinity of the site. The Draft EIR addresses hazardous materials, including soil and groundwater contamination, in Section 4.9, *Hazards and Hazardous Materials*. Soil samples collected at the Project site did not contain significant levels of lead (see Table 2 in Draft EIR Appendix E). The Draft EIR found that impacts from the Project would be less than significant, and thus does not require mitigation requiring clean-up of the site. See also Response A4-5 and Response A4-7. Project effects on human health are analyzed in the health risk assessment in Section 4.3, *Air Quality*.

O1-5 Regarding testing of water, see Draft EIR section 4.10, *Hydrology and Water Quality*. Regarding hazardous material in soils, see Draft EIR Section 4.9, *Hazards and Hazardous Materials*. Regarding health risks posed by implementation of the Project and an analysis of impacts to air quality, the commenter is referred to Draft EIR Section 4.3, *Air Quality*. Emissions associated with operation of the adjacent Cement Plant are not included in the Project air quality analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status (see also Master Response M4). However, emissions from these Cement Plant truck trips were included in the cumulative health risk analysis as noted on page E-16 of Draft EIR Appendix E.

O1-6 Operation of Stevens Creek Quarry is identified in Draft EIR Chapter 6, Table 6-1 (page 6-3) as cumulative project number 6 and the location of Stevens Creek Quarry is shown in Draft EIR Figure 6-1, *Cumulative Projects*. The Draft EIR for the Project evaluates the incremental impacts of the Project in combination with the effects of continued operation of the Stevens Creek Quarry in the analysis of cumulative impacts to air quality (Draft EIR Section 6.2.3). See Response O1-3 regarding Superfund cleanup.

O1-7 Please refer to the Draft EIR, Impact 4.10-1 and 4.10-2. The Reclamation Plan Amendment proposes to reclaim the EMSA, WMSA and the Quarry pit. Once reclaimed, discharges of selenium to Permanente Creek would be reduced to below surface water quality objectives in the Basin Plan. The current discharge of selenium-containing water to Permanente Creek is an existing condition that would be remedied by the proposed Project. Please refer to Master Response M5 regarding selenium.

O1-8 The RWQCB has cited the Quarry on several occasions for violating water quality standards. The commenter is referred to Master Response M3(B), which contains a history and discussion of RWQCB citations. The RWQCB's exercise of its enforcement authority under the Water Code is separate from and independent of the County's analysis of potential environmental effects of the proposed RPA: the RWQCB is empowered to initiate, pursue, and resolve enforcement actions against Lehigh for activities at the site regardless of whether the EIR is certified and regardless of whether the Project is approved. Nonetheless, as analyzed in Draft EIR Section 4.10 (page 4.10-1 et seq.) implementation of the Project would improve water quality conditions for all concerns once reclamation is complete.

O1-9 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A). Regarding concerns about County enforcement of past violations of the Reclamation Plan, see Master Response M3(A).

O1-10 Several different types of tests were conducted to characterize rock materials present in the Quarry and overburden material placed in the EMSA and WMSA. The tests included determining the total metals and selenium content of the rocks and the leachability of general minerals and other constituents from these materials. Draft EIR Table 4.10-4 (page 4.10-15) provides results of overburden leachability tests by the California Assessment Manual (CAM) Waste Extraction Test (WET). This test estimates how much of a certain metal could leach out of a particular geologic material. In the case of the tests shown on the table, the geologic materials were greywacke, limestone, fault breccias, greenstone, metabasalt, and chert. These tests were performed in July 2009. The comment states that these tests need to be updated. Because it is very unlikely that the concentrations of metals in the rock materials have changed in since 2009, it is not necessary to update these tests. Please refer to responses A4-4 and O3-9.

O1-11 The agencies responsible for setting standards and thresholds for criteria air pollutants for the Bay Area include the U.S. Environmental Protection Agency, the California Air Resources Board, and the Bay Area Air Quality Management District (BAAQMD). The specific roles of these agencies are described in Section 4.3.1.2, *Regulatory Setting*, of the Draft EIR. Toxic air contaminants are regulated under both state and federal laws. In California, the California office of Environmental Health Hazard Assessment (OEHHA) is the agency with primary responsibility for identifying and establishing risk factors and thresholds for toxic air contaminants. The health risk assessment for the Draft EIR was conducted in accordance with technical guidelines such as toxicity values developed by federal, state, and regional agencies, including OEHHA's *Air Toxics Hot Spots Program Guidance*, and the BAAQMD's *Health Risk Screening Analysis Guidelines*.

O1-12 Regarding the comment questioning whether Lehigh will honor the agreements in the EIR, see response O1-2. Regarding past violations at the Quarry and County enforcement of 1985 Reclamation Plan requirements, see Master Response M3(A).

O1-13 The comments requesting that mining be stopped at the Quarry, and that the Lehigh Permanente Quarry and Stevens Creek Quarry be converted to a state or federal park, are noted. Although these comments do not address the adequacy or accuracy of the Draft EIR, the County will consider them as part of its decision-making process on the Project. See Master Response M2(A). Regarding the USEPA Superfund Program, see Response O1-3.

O1-14 Regarding violations issued by the County and the RWQCB, see Master Response M3. Regarding selenium issues in the Project Area, see Master Response M5. Regarding concerns of the Santa Clara Valley Water District and RWQCB, see responses to Letter A3 and A4, respectively. Regarding concerns about water quality in the Project Area, see Draft EIR Section 4.10, *Hydrology and Water Quality*. Regarding the USEPA Superfund Program, see Response O1-3.

O1-15 With regard to dust control from the EMSA, WMSA, and other Quarry-related activities, as noted in footnote "a" of Tables 4.3-3 and 4.3-4, the only emission control that was in place during the baseline period consisted of watering unpaved roads for dust control. For the Project, as noted on page 4.3-19 of the Draft EIR, the Applicant has committed to the following additional emission control measures to be implemented as part of the Project:

- Water active areas consistent with a dust mitigation plan submitted to the BAAQMD in 2010;
- Use an Overland Conveyor System, powered by electric motors, to move 75 percent of the waste rock from the WMSA to reclaim the Quarry pit; and
- Water conveyor transfer points and screens associated with the proposed Overland Conveyor System.

As explained in the Draft EIR, emissions associated with operation of the Cement Plant are not included in the Project air quality analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. However, Cement plant operations are described for purposes of the cumulative effects analysis in Draft EIR Section 6.1.2.1. See Master Response M4(B).

O1-16 There is an existing Federal EPA NOV against the Quarry operator associated with the Cement Plant. While the Cement Plant is required to operate under a Title V permit, it, is not part of the Reclamation Plan and is not the subject of this EIR. Air pollution generated by the Project, including NO_x, SO_2, and CO_2, is described and analyzed in Draft EIR Section 4.3, *Air Quality* (page 4.3-1 et seq.) and/or Section 4.8, *Greenhouse Gas Emissions* (page 4.8-1 et seq.) The Draft EIR provides a health risk assessment in Section 4.3; additional discussion of health risks from mercury and hexavalent chromium is provided in Response A2-2. As discussed on Draft EIR page 4.3-14, emissions associated with operation of the adjacent Cement Plant are not included in the Project air quality analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. Consequently, the commenter's concerns regarding mercury and hexavalent chromium emissions from the Cement Plant are noted, but do not question the methods, adequacy, or conclusions of the Draft EIR for the Project and so are not addressed further (see also response to Comment A2-2). Regarding the USEPA Superfund Program, see Response O1-3.

O1-17 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of the public record in its decision-making process on the Project. See Master Response M2(A). Regarding impacts to aquatic or wildlife habitat, see Section 4.4, *Biological Resources*.

O1-18 Regarding impacts from erosion and flooding, see Section 4.7, *Geology, Soils and Seismicity*, and Section 4.10, *Hydrology and Water Quality*. Regarding health and safety issues associated with the Project, see the health risk assessment in Section 4.3, *Air Quality*, and the analysis in Section 4.9, *Hazards and Hazardous Materials*. Regarding past notices of violation, see Master Response M3.

O1-19 As discussed in Response A4-5, the use of the property as a site of a former aluminum plant and incendiary materials manufacturing facility is described in the cultural resources discussion in Draft EIR Section 4.5.1.4, page 4.5-9 et seq. As described therein, a magnesium plant was constructed on the site in 1941. It covered a 30-acre area adjacent to the Cement Plant. By 1947, the production of magnesium had ended and the company began to produce aluminum on the site. In 1950, a new foil mill was installed for the manufacturing of aluminum foil, and aluminum extruded products were manufactured there until 1990, when the plant was closed. However, the former aluminum plant and incendiary materials manufacturing facility site are not within the

Project Area. See, for example, Draft EIR Section 4.4.1.2, page 4.4-17 ("The former aluminum plant building at the north east corner of the site outside the Project Area…").

Issues related to hydrology and water quality are discussed and analyzed in Draft EIR Section 4.10 (page 4.10-1 et seq.). In considering adoption of the Reclamation Plan, the County Planning Commission will evaluate if the proposed Reclamation Plan is consistent with findings under SMARA that prescribe that reclamation plans meet water quality requirements. Mitigation measures are recommended to avoid or substantially reduce identified significant impacts where it is feasible to do so.

O1-20 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of the public record in its decision-making process on the Project. See Master Response M2(A). For additional information on the Quarry's vested right to mine, see Master Response M1(A).

O1-21 The County acknowledges the commenter's request that a bridge and buildings in the vicinity of the Project Area, as well as the Cement Plant, be included in the Project description. For additional information pertaining to the Project description, see Master Response M4. The commenter's request that that the Quarry and Cement Plant cease operation does not address the adequacy or accuracy of the Draft EIR; however, the County will consider the comment as part of the public record in its decision-making process on the Project. See Master Response M2(A).

O1-22 As described in Draft EIR Chapter 2 (page 2-1 et seq.) and explained in Master Response M4(C), the Project does not include the excavation of a new quarry pit. The Draft EIR discloses the fact that the Applicant has previously submitted plans to the County showing the excavation of a new quarry pit. However, these past submittals have been withdrawn and no proposal to excavate a new pit currently is under County consideration. Because a new quarry pit is not proposed as part of the current Project, related impacts are not evaluated as part of the Project in the Draft EIR.

As a related point, Master Response M2(C) explains why a new quarry pit is not considered in the Draft EIR to be a reasonably foreseeable future project for purposes of the cumulative analysis. The description of the physical location and specifications of any such proposal lack the necessary certainty and definition to allow for meaningful review of environmental impacts under CEQA. Any attempt to analyze the environmental effects of a potential future pit would by necessity be predicated on a series of "ifs" and guesswork that would render the attempt to analyze potential environmental impacts speculative and unsubstantiated.

As affirmed in Draft EIR Section ES.4.1 (page ES-3), any future proposal to excavate a new quarry pit at the site not only would require authorization from the County in accordance with SMARA and CEQA, but also would likely require permits or other

approvals from federal, state, regional, and local agencies with jurisdiction over environmental resources.

O1-23 The commenter expresses support for filling the Quarry pit with backfill from the EMSA. The commenter is referred to the analysis for Alternative 1: Complete Backfill Alternative, in which overburden materials stored in the EMSA would be backfilled into the Quarry. Regarding Project impacts on soil toxicity, see Section 4.9, *Hazards and Hazardous Materials*.

O1-24 Final reclamation elevations are provided Chapter 2, *Project Description*, within the description of each Project component in Section 2.7, *Amended Reclamation Plan Implementation*. Figures 2-4, 2-5, and 2-6 show final contours of the Project Area.

O1-25 This comment has been addressed. See Response O1-23.

O1-26 This comment has been addressed. See Response O1-3.

O1-27 The Draft EIR describes the Exploration Area in Draft EIR Chapter 2, *Project Description*, Section 2.6-8 (page 2-12), which states that the 2010 reclamation plan amendment proposal, which has been superseded by the Project, included a proposal to expand quarrying activities to a new area south of Permanente Creek. The current Project does not contain such a component. The exploratory activities that informed prior proposals consisted of an exploratory drilling program in several locations within an approximately 284-acre area to study the feasibility and geologic context for the proposed South Quarry. The exploratory work is "surface mining operations" under SMARA (Pub. Res. Code §2735), and the current Project provides for reclamation of the area affected by those activities. Reclamation activities in the Exploration Area are described in Section 2.7.9.

The Project does not include a new bridge over Permanente Creek. Consequently, no such bridge is analyzed in the EIR.

O1-28 This comment has been addressed. See Response O1-3.

O1-29 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the comment will be included in the public record to be considered by the County Planning Commission in evaluating approval of the Reclamation Plan. See Master Response M2(A). See also Response O1-3 regarding the EPA Superfund program, and Master Response M1(C) regarding the financial assurances cost estimate.

O1-30 As disclosed in Draft EIR Section 2. 7.3 (page 2-19 et seq.), mineral extraction from the Quarry pit is expected to conclude and final reclamation of the Quarry pit to occur during the 20-year term of the Reclamation Plan Amendment. Reclamation activities in the Quarry pit would occur during each of the three phases of proposed reclamation. Reclamation of the west wall of the Quarry pit would occur during Phase 1, with

remaining reclamation of the Quarry pit to occur in Phase 2 and Phase 3. Excavation of the Quarry pit would conclude during Reclamation Phase 1. See Draft EIR page 2-19, which explains that surface mining would continue in the Quarry pit during Reclamation Phase 1, and page 2-20, which explains that Reclamation Phase 2 would begin when Quarry pit extraction is complete. As shown in Draft EIR Table 2-2 (page 2-14), Reclamation Phase 1 is scheduled to conclude in 2020, and Reclamation Phase 2 is scheduled to begin in 2021.

The comment explains that the EMSA must be removed as soon as possible. As explained in Response A6-12, the Draft EIR analyzes an alternative that would prohibit further placement of overburden in the EMSA and require immediate initiation of reclamation activities in that area: Alternative 2, the Central Materials Storage Area Alternative, is described in Draft EIR Section 3.3.1.2. Page 3-10 of the description of Alternative 2 states that reclamation "activities would begin immediately upon reclamation plan amendment approval and no new materials would be stockpiled in that area." The Draft EIR also analyzes an alternative that would result in the removal of all materials that have been placed in the EMSA: Alternative 1, the Complete Backfill Alternative, is described in Draft EIR Section 3.3.1.1 (page 3-5 et seq.). As described therein, the final (reclaimed) contours in the EMSA would be comparable to what is shown in Figure 5 of the 1985 Reclamation Plan.

The comment notes that removal of mining overburden from the EMSA would abate the NOV issued by the County in 2008. Abatement of the violation could be achieved in many ways, including, but not limited to, removal of mining overburden from the EMSA. Approval of the proposed Reclamation Plan Amendment also would abate the violation.

As described in Response A6-5 and in Draft EIR Section 2.6.1 (page 2-10), the purpose of the EMSA is to provide overburden storage for the Permanente Quarry's surface mining operation. Its purpose is not, as suggested in this comment, to screen of view of and noises associated with the Cement Plant from the valley floor and recreational area in the vicinity of the Project Area. The fact that it also serves these ends is incidental to the primary surface mining purpose.

Impacts of the proposed reclamation of the EMSA and other Project alternatives to air quality, water quality, and soils are analyzed in draft EIR Sections 4.3 (page 4.1-1 et seq.), 4.10 (page 4.10-1 et seq.), and 4.7 (page 4.7-1 et seq.), respectively. The aspect of the comment relating to what may be present beneath the EMSA is addressed in Response O1-9.

Baseline views of the EMSA are described in Draft EIR Section 4.1.2.2 (page 4.1-23) and shown in Figure 4.1-3 (pages 4.1-21 and 4.1-22). As analyzed in Draft EIR Section 4.1 (page 4.1-1 et seq.) implementation of the Project, when complete, would improve visual quality and substantially reduce impacts to views from the surrounding areas.

As discussed in Master Response M3(A), the Draft EIR acknowledges that the storage of surface mining overburden materials in the EMSA, which is outside the approved Reclamation Plan boundary, is a violation of SMARA. Also as described in Master Response M3(A) and earlier in this Response O1-30, approval of the proposed Project, or Alternative 1: Complete Backfill Alternative, or Alternative 2: Central Materials Storage Area Alternative would abate the 2008 NOV.

O1-31 Opposition to Alternative 2 is noted. The impacts of Alternative 2 as perceived by viewers and to air resources and noise are analyzed in Draft EIR Section 4.1.6.2 (page 4.1-50), Section 4.3.6.2 (page 4.3-33), and Section 4.13.7.2 (page 4.13-27), respectively.

As analyzed in Draft EIR Section 4.4.6.2 (page 4.4-46), implementation of Alternative 2 would result in the same potential impacts to biological resources as the proposed Project. Following the implementation of measures identified as part of the Project (including proposed tree replacement activities described in the Revegetation Plan prepared by WRA and attached to the proposed Reclamation Plan Amendment as Appendix B) and mitigation measures recommended in Section 4.4.5, implementation of Alternative 2 would not conflict with local Santa Clara County policies, including a tree removal ordinance (this is discussed on page 4.4-32 of the Draft EIR) and would have a less than significant impact related to the loss of native oak woodland habitat as defined by Oak Woodlands Conservation Law (see Impact 4.4-4, Draft EIR page 4.4-39).

If Alternative 2 were approved, then the approved 1985 Reclamation Plan would be amended to reflect the activities that would occur under Alternative 2, which are described in Draft EIR Section 3.3.1.2 (page 3-9 et seq.).No additional reclamation plan amendment proposal or approval would be required to implement Alternative 2.

The stated concern about the availability of sufficient capacity to accommodate the overburden that would be generated by continued mining of the Quarry pit during Reclamation Phase 1 is noted. If Alternative 2 were approved and the Applicant thereafter stored overburden outside the boundaries of the approved plan, then the County could and would enforce SMARA as described in Master Response M3(A).

For the reasons provided in Response O1-30, the preference expressed in this Comment O1-31 that the storage of overburden materials in the EMSA "be stopped immediately without delay" would occur Alternative 2.

Information about the U.S. EPA's Superfund Cleanup Program is provided in Response O1-3.

O1-32 Under the proposed Reclamation Plan Amendment, Alternative 1 and Alternative 2, all areas of the Applicant's ownership that have been subject to surface mining operations would be reclaimed in accordance with the requirements of SMARA. As proposed, the

Project would be implemented in three phases over an approximately 20-year period, at the conclusion of which final reclamation (i.e., certified compliance with reclamation standards) would be achieved. The Draft EIR analyzes direct, indirect, and cumulative impacts of the Project and alternatives on a resource by resource basis relative to actual physical conditions as the existed under baseline conditions. The SMARA and CEQA standards that apply to the proposed work do not require cleanup outside the Project Area, for example, on the Cement Plant site. The Comments suggesting that the Cement Plant site should be reclaimed as part of the Project are responded to in Master Response M4(B). The status of the Applicant's compliance with SMARA and laws enforced by the RWQCB is discussed in Master Response M3(A) and (B), respectively.

The comment misconstrues what would occur under the No Project Alternative. As described in Draft EIR Section 3.3.1.3 (page 3-14), the No Project Alternative analyzed assumes that a SMARA-compliant reclamation plan would be implemented that would be substantially similar in scope and level of activity to that proposed as the Project, including reclamation of the EMSA. To emphasize, the principal difference between the No Project Alternative and the proposed Project is not *whether* reclamation would begin, but rather *when* reclamation would begin.

SMARA does not require or anticipate that a determination must be made as to the likelihood that the EPA would declare the Applicant's ownership a Superfund site. Instead, as explained in Master Response M1, the purposes of SMARA relate to the elimination of hazards to public health and safety; reclamation of mined lands to a usable condition; and encouragement of the production and conservation of minerals (Pub. Res. Code §2712). OMR has reviewed the proposed Reclamation Plan and determined that it satisfies these basic requirements (Department of Conservation, 2012). CEQA does not require the Draft EIR to address the likelihood that the EPA would declare the Applicant's property a Superfund site.

O1-33 This Comment inquires about the amount of limestone that remains in the existing Quarry. The Reclamation Plan Amendment (page 26) states, "[t]he total anticipated production of aggregate and limestone is estimated at 35-45 million tons. The maximum anticipated depth of the North Quarry excavation is 440 feet msl."

The County addresses comments relating to whether the impacts associated with the excavation of a new quarry pit should be evaluated as part of the Project in Master Response M4(C). Comments that suggest that the excavation of a new quarry pit should be considered a reasonably foreseeable future project, and so be analyzed in the cumulative effects analysis, are addressed in Master Response M2(C). These issues also are addressed in response to Comment O1-22.

No excavation of a new quarry pit would be allowed unless and until all requirements of CEQA and SMARA are satisfied. Any future proposal to excavate a new pit would require the County to make a discretionary decision to approve or deny a reclamation plan, financial assurances and, depending on where on the site the new effort were

proposed, possibly also a conditional use permit. Future discretionary decisions would trigger CEQA, which calls for public participation in the environmental review process. The opposition to the excavation of any new area expressed in the comment is noted.

O1-34 Aspects of this Comment relating to potential future proposals for a new quarry pit and relating to the remaining capacity of the Quarry pit to supply marketable materials are addressed in Response O1-33. Opposition to the excavation of any future proposal for a new quarry pit and to the continued operation of the Cement Plant is noted. As shown in Draft EIR Table 2-2 (page 2-14), the Applicant expects to conclude mineral extraction in the Quarry pit in 2020.

No application for a new pit is pending before the County. As explained in Master Response M2(C), there is insufficient data and other information for the County to evaluate the potential environmental impacts of any future proposal, should there be one, in any meaningful way. In the event that an application for a new pit is filed at some point in the future, environmental review of the proposal would evaluate impacts on a resource by resource basis, including with respect to trees and other biological resources.

O1-35 The desire for reclamation activities to begin immediately in the Project Area is noted. As explained in Section 2.7.1 of the Draft EIR (page 2-14) reclamation activities would begin immediately in the Project Area if the Project were approved. As stated on page 2-14, "Reclamation Phase 1 (shown in Figure 2-4) would begin with Project approval… Phase 1 would include stabilization, removal and restoration activities along Permanente Creek to address water quality concerns, beginning immediately upon Project approval…. Reclamation of the Exploration Area also would occur in Phase 1."

O1-36 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

O1-37 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A). See also Response O1-3 regarding the EPA Superfund program. See Master Response M4(B) regarding shut down of the Cement Plant and Quarry.

O1-38 The areas of controversy and issues to be resolved identified in Draft EIR Section ES.7 are analyzed on a resource-by resource basis in Draft EIR Chapter 4, *Environmental Analysis*.

O1-39 This comment and similar ones suggesting that the Project Description be supplemented to include a new proposed pit are addressed in Master Response M4(C). For the reasons provided in Master Response M4(C), the County has made no change to the Draft EIR in response to this comment.

O1-40 See Response O1-3.

O1-41 As disclosed in Draft EIR, mercury occurs naturally in the various rock types and groundwater found in the Project Area. See Draft EIR pages 4.10-8 and 4.10-14. See also, Draft EIR Table 4.10-4, page 4.10-16, which provides information about the potential for mercury to leach from overburden materials into waters. Based on the best available information, the analysis of potential impacts related to mercury concluded the concentrations of mercury measured in runoff from the EMSA and within Permanente Creek cannot reliably be distinguished from background (or natural) concentrations (Draft EIR page 4.10-32). Mercury concentrations generally meet the RWQCB Basin Plan Benchmarks for surface water in Permanente Creek. Considering the generally low background concentrations of mercury in the overburden, limestone material, and in surface water, and given that the low source concentrations would be further reduced through reclamation source control and dilution through the future drainage systems, mercury in sediments migrating offsite were determined likely to be low. The comment provides no data or other information stating or suggesting that the analysis in the Draft EIR is inadequate or inaccurate.

O1-42 The impacts of alternatives are analyzed on a resource-by-resource basis in Chapter 4, *Environmental Analysis*, at the end of each resource section. Potential impacts to Permanente Creek from the alternatives are addressed in Section 4.4, *Biological Resources* (page 4.4-45 et seq.) and/or Section 4.10, *Hydrology and Water Quality* (page 4.10-21 et seq.) The Cement Plant and other areas of the site that are not within the project reclamation area are not part of the proposed project and therefore not analyzed as a project impact in the Draft EIR. Operations of the Permanente Cement Plant are considered as part of the cumulative scenario. See Master Response M4(B).

O1-43 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the comment will be included in the public record to be considered by the County Planning Commission in evaluating approval of the Reclamation Plan. See Master Response M2(A).

Regarding impacts to aesthetics and visual resources, including impacts to scenic viewsheds and nighttime lighting, the commenter is referred to Section 4.1, *Aesthetics, Visual Resources, and Light and Glare*. Regarding impacts from noise, the commenter is referred to Section 4.13, *Noise*. Regarding Quarry compliance with state and local regulations, including notices of violation, see Master Response M3.

O1-44 Emissions or odors associated with operation of the adjacent Cement Plant are not included in the Project air quality analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. With regard to emissions from trucks, please see the response to Comment P3-1. The public health impacts of particulate matter emissions associated with the Project are addressed in the Draft EIR (see Section 4.3.5.1, *Criteria Air Pollutants*, for PM10 and PM2.5, and Section 4.3.5.2,

Toxic Air Contaminants (Health Risk), for an assessment of cancer risk and acute and chronic health effects from fugitive dust and PM2.5). Please see the response to Comment A2-2 for details regarding the health risk of mercury. The health risk assessment questioned by the commenter is the risk assessment prepared by AMEC for the Cement Plant and is not a matter relevant to the risk assessment that was prepared for the Project and included in the Draft EIR. Finally, the commenter makes a general statement about cancer rates and actions by the BAAQMD, the Centers for Disease Control, and the State Cancer Registry. This matter is not relevant to the methods of analysis in the Draft EIR, its adequacy, or its conclusions.

O1-45 The commenter states that contamination of the Steven's Creek Reservoir and Watershed should be included in the Draft EIR analysis. However, such a review is beyond the scope of the Draft EIR analysis, which only analyzes impacts associated with the Reclamation Plan Amendment for Permanente Quarry. An analysis of potential mercury and selenium contamination within Permanente Creek, along with several other contaminants, is included in Section 4.10, *Hydrology*. Based on the findings of this analysis, impacts on aquatic special-status species from Project-related selenium contamination in Permanente Creek are considered significant and unavoidable. As described in Master Response M5, the County has further evaluated the interim selenium impact as well as the feasibility of the provision of an on-site water treatment facility to address this impact.

The commenter also states that tree removal, including 10,000 trees initially and up to 30,000 later "after the new pit has been mined", will contribute to pollution in the area. It is not clear where these numbers are referenced from, as the Project would remove only approximately 3.4 acres of oak woodland (approximately 170 oak trees) – primarily as the result of reclamation-related backfilling and slope stability measures on the northern portions of the Quarry pit and WMSA (WRA, 2011). Further, as described on Draft EIR page 2-34, as part of the reclamation plan, the Applicant would plant oak plantings totaling 6.5 acres and over 1,700 trees and Grey Pine woodland plantings totaling 21.5 acres and over 8,600 trees. Comments regarding any new quarry pit or mining operation are considered outside the scope of this document, as the proposed Project only considers the RPA. Any air pollution generated by the project that will be significantly greater than baseline conditions has been addressed in Sections 4.3 *Air Quality* and 4.8 *Greenhouse Gas Emissions*.

O1-46 As described in Draft EIR Section 4.5 (page 4.5-1), cultural resources include human remains; however, as disclosed in Draft EIR Section 4.5.2 (page 4.5-23), no human remains have been identified in the Project Area. Although there is no indication that the Project Area has been used for human burials, the possibility cannot be discounted entirely. In the event that human skeletal remains are encountered, Mitigation Measure 4.5-4 (Draft EIR, p. 4.58-29) establishes a response protocol that, if the remains are Native American, would preclude further disturbance of the site except as authorized by the County Coordinator of Indian Affairs.

O1-47 Comment noted. Regarding impacts related to earthquakes, see Draft EIR Section 4.7, *Geology, Soils, and Seismicity*. The San Andreas Fault is included in the seismic context (page 4.7-12); in Table 4.7-5, Faults in the Project Site Vicinity (page 4.7-15); and in the discussion of local faults (page 4.7-15 et seq.). Impact 4.7-2 (page 4.7-37 et seq.) analyzes the impact of a major earthquake in the region, as well as the effect of a large earthquake on the San Andreas Fault. Impacts are determined to be less than significant.

O1-48 Comment noted. The existing surface mining operation and Cement Plant operation are not part of the proposed Project, and as such are not analyzed in the Draft EIR. See Master Response M4(B).

O1-49 See Draft EIR Section 4.8, *Greenhouse Gas Emissions*, regarding greenhouse gas emissions and climate change. Regarding the commenter's request that the Quarry and the Steven's Creek Quarry be shut down, comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the comment will be included in the public record to be considered by the County Planning Commission in evaluating approval of the Reclamation Plan. See Master Response M2(A).

O1-50 The information provided in this comment does not provide any basis upon which to conclude that the analysis provided in the Draft EIR of potential impacts related to hazards and hazardous materials or health risk is inaccurate or inadequate. Specific pollutants identified in the comment are addressed generally below. A response to aspects of this comment relating to enforcement also is provided.

Asbestos

The potential for naturally-occurring asbestos to be present in minerals in the Project Area is discussed in Draft EIR Section 4.7 (see, e.g., Section 4.7.1.2, beginning on page 4.7-8, which specifically relates to naturally occurring asbestos, crystalline silica, and trace metal concentrations). As noted in that section, asbestos has not been detected in numerous samples representative of the onsite geologic materials found at the Permanente Quarry. Accordingly, the Draft EIR determines that asbestos is not an issue of concern in this EIR.

Metals, including Selenium, Mercury, Chromium VI, and Vanadium

The potential for release of trace metals, primarily selenium, into surface or groundwater is discussed in Section 4.10 (page 4.10-1 et seq.). The analysis in the Draft EIR concludes that implementation of the Project, once complete, would improve selenium-related water quality relative to baseline conditions. However, during the interim period after Project approval and before reclamation activities are complete, Project-related selenium releases within the Project Area would contribute to elevated selenium concentrations in receiving waters and, thereby, cause a significant unavoidable impact. As discussed in Response O1-19, the County has continued to work since the publication of the Draft EIR to find a way to lessen the significance of Impact 4.10-2 (Draft EIR, page 4.10-42 et seq.). Subsequent efforts to reduce interim

impacts associated with Project-related contributions of selenium are discussed in Master Response M5. Water quality concerns relating to mercury are addressed in Response O1-41.

Potential impacts related to exposure to trace metals as toxic air contaminants (TACs) are discussed in Draft EIR Section 4.3 (page 4.3-1 et seq.). For example, potential toxic air contaminant risks (health risks) "associated with the Project include various metals within fugitive dust (such as mercury and chromium)…." (Draft EIR Section 4.3.5.2, page 4.3-21 et seq.). Table 4.3-7 (page 4.3-27) identifies the estimated cancer risk for fugitive dust. The discussion of TAC-related impacts concludes that the Project's incremental contribution, both individually and cumulatively, would be less than significant. Selenium is not a toxic air contaminant, so related emissions are not analyzed with respect to air quality impacts.

As explained on page 4.3-4 of the Draft EIR, the U.S. EPA conducted outdoor air monitoring at the Stevens Creek Elementary School, which is located approximately 1.5 miles east-northeast of the Cement Plant) from June through September 2009 to assess hexavalent chromium level exposure from the Cement Plant. The U.S. EPA determined that levels of hexavalent chromium at the school were below levels of concern for short-term and long-term exposure during the monitoring period. Hexavalent chromium also is considered in the Draft EIR as a TAC.

Draft EIR Table 4.7-3 (page 4.7-10) provides estimated total metals content within rock samples, while Table 4.10-3 (page 4.10-13) provides mined material and overburden constituent concentrations. Accordingly, vanadium was included in the Draft EIR's health risk assessment analysis (see Draft EIR Appendix B, Table 7).

Petroleum Coke

As discussed previously, operations of the Cement Plant are not a component of the proposed Project. Petroleum coke considerations may be relevant to the Cement Plant, but are not relevant to the evaluation of potential environmental impacts of the proposed Reclamation Plan Amendment. Radioactive materials

Radioactive materials would not be transported, handled, used, or stored in connection with the proposed Project. Thus, any discussion of them would not be relevant to the evaluation of potential environmental impacts of the proposed Reclamation Plan Amendment.

Criteria Pollutants, including NOx and SO2

Impacts related to Project-related emissions of NO_x and SO_2 are analyzed in Draft EIR Section 4.3 (page 4.3-1 et seq.). No evidence has been provided in this comment that would support a conclusion that the analysis is either inadequate or inaccurate with respect to these pollutants.

Enforcement

For the reasons provided in Master Response M3(A), public agencies are entitled to a presumption that they will regularly perform their duties, including enforce compliance in accordance with their authority. No basis has been provided that would support a conclusion that the agencies listed will not enforce regulations under their oversight. The EPA does not have jurisdiction over the proposed Reclamation Plan Amendment or the Draft EIR. Consequently, the suggestion that the EPA act as an enforcement agency in the context of the proposed Project is not, in fact, workable.

O1-51 This comment has been addressed. See responses O1-8 and O1-14.

O1-52 As described in Draft EIR Section 4.11 (page 4.11-1 et seq.), the County has land use jurisdiction over the Project Area. As explained in Master Response M1(A), Lehigh has a vested right to engage in surface mining activities on certain parcels within its ownership, but not on others.

O1-53 Noise and vibration caused by the Project are addressed in Draft EIR Section 4.13, *Noise*. Pollution from diesel trucks, including health risks, is addressed in Draft EIR Section 4.3, *Air Quality*. Regarding County implementation of County-regulations on noise and air pollution, see Master Response M3.

O1-54 The Mid Peninsula Regional Open Space District submitted a letter commenting on the Draft EIR, dated February 17, 2011. A copy of that letter is contained in this document as Letter A6. For responses to the comments contained in Letter A6, see responses A6-1 through A6-22.

O1-55 The concerns expressed about hours of operation and existing truck traffic, apparently including Cement Plant truck traffic, are not caused by the Project. The comment expresses general opposition to current activities but provides no basis to conclude that the Draft EIR is inadequate or inaccurate. Accordingly, the County has made no change to the EIR in response to this comment.

O1-56 Regarding selenium-related issues, see Master Response M5. Existing wastewater treatment in the Project Area, as well as changes proposed under the Project, is discussed in Draft EIR Section 4.18, *Utilities and Service Systems*. As stated on page 4.18-1, "The Project Area is not connected to a municipal wastewater conveyance system for sewage disposal. The Quarry office has a septic system, and portable toilets with hand-wash stations are located throughout the Project Area. United Disposal regularly empties the portable toilets stationed in the Project Area. Use of these facilities does not generate substantial amounts of wastewater." As discussed in the impacts analysis on pages 4.18-4 et seq., the Project would have no impact pertaining to exceeding wastewater treatment requirements, the need for the construction of new wastewater treatment facilities or expansion of existing facilities, or a determination by the wastewater treatment provider that it has inadequate capacity to serve the Project's projected demand.

O1-57 This comment has been addressed. See responses O1-8 and O1-3.

O1-58 This comment raises questions regarding emissions of mercury from the Lehigh Cement Plant, questions the effectiveness of the Cement Plant's mercury emission controls, and claims that the air quality sampling done for hexavalent chromium at the Stephens Creek School was inadequate. As discussed on page 4.3-14, emissions associated with operation of the adjacent Cement Plant are not included in the Project air quality analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. Consequently, the commenter's concerns regarding mercury and hexavalent chromium emissions from the Cement Plant are noted but do not question the methods, adequacy, or conclusions of the Draft EIR for the Project and are not addressed further (see also response to Comment A2-2). With regard to the potential impact of PM2.5 from the Project, Table ES-3 on page ES-14 identifies that the impact would be significant prior to mitigation, but would be mitigated to a less-than-significant level with implementation of Mitigation Measures 4.3-31 and 4.3-3b (or alternatively, Mitigation Measure 4.3-3c). The BAAQMD recently completed one year of ambient air quality monitoring in Cupertino, and those results are now available on the BAAQMD website at http://www.baaqmd.gov/Divisions/Engineering/Title-V-Permit-Programs/Title-V-Permits/Santa-Clara/A0017/Lehigh-Southwest-Cement-Company.aspx. With regard to particulate matter (PM), the BAAQMD found that "Cupertino PM levels were among the lowest in the Bay Area, and have not exceeded the 24-hour PM2.5 NAAQS nor the 24-hour PM10 NAAQS, with levels similar to Redwood City and Gilroy." The commenter's desire for the USEPA to do its own testing for PM2.5 is noted, but is outside the scope of this EIR.

O1-59 Impact 4.10-5 was determined to be less than significant because perennial or near-perennial flow would resume after reclamation in the reach adjacent to the Quarry pit that currently runs dry. Permanente Creek flows are not predicted to increase more than 1 cfs (remaining under the 4.5 cfs allowable limit). Please refer to analysis of this impact in Draft EIR Section 4.10, *Hydrology and Water Quality*, page 4.10-50. Impact 4.10-6 states that there could be a significant impact if, during periods of intense rainfall or high rainfall years, the groundwater level beneath the surface of the reclaimed Quarry pit were to rise above the 990-foot amsl level, resulting in reduced infiltration or flooding and excess stormwater runoff. There would also be a potential for accumulated selenium. The analysis determined that Impact 4.10-6 was significant and could be mitigated to a less than significant impact through engineered drainage features that would reduce the potential for ponding. Please refer to the impact analysis of Impact 4.10-6 in the Draft EIR, page 4.10-50. Lastly, the discharges from the Quarry pit following reclamation would be monitored by the Applicant under provisions of an individual NPDES permit tailored specifically to its ownership that would cover discharges from the Project Area as well as other areas of the site. The current discharge from the Quarry pit is an operational discharge that has been approved by the Regional Water Quality Control Board-San Francisco Bay Region (RWQCB) under

Order No. R2-2008-0011, NPDES Permit No. CAG982001, General Waste Discharge Requirements for Discharges of Process Wastewaters from Aggregate Mining, Sand Washing, and Sand Offloading Facilities to Surface Waters.

O1-60 Analysis of the hazardous impacts of the alternatives, as compared to the Project, is provided in Draft EIR Section 4.9, *Hazards and Hazardous Materials*, page 4.9-17 et seq. The three project alternatives would all involve similar types of reclamation activities as the Project, and use of the same types and quantities of hazardous materials for operation of equipment and vehicles. The routine transport, storage, and disposal of hazardous materials and the potential for accidents to result in a release would be identical to the Project. None of the alternatives would result in significantly greater or less potential for hazardous impacts to occur. Therefore, Table ES-4 states "No Preference" with respect to hazards and hazardous materials.

O1-61 Regarding the EPA Superfund Program, see Response O1-3.

COMMITTEE FOR
GREEN FOOTHILLS

February 21, 2012

Gary Rudholm
Santa Clara County Planning Department
70 W. Hedding St.
East Wing, 7th floor
San Jose, CA 95110

Re: Lehigh-Hanson Permanente Quarry Draft Environmental Impact Report
State Clearinghouse No. 2010042063

Dear Mr. Rudholm:

The Committee for Green Foothills ("CGF") submits these comments in response to the Lehigh-Hanson Permanente Quarry Reclamation Plan Amendment ("RPA") Draft Environmental Impact Report ("EIR").

Aesthetics, Visual Quality, and Light and Glare:

According to the timeline described in the RPA and the EIR, although the WMSA will eventually be removed and the material used to backfill the Quarry pit, those activities will not commence until approximately 2021, when mining in the Quarry pit ceases. That means that for about the next 9 years, the WMSA will remain as it is currently. Since the EIR acknowledges that the WMSA is visible from public viewing areas, including scenic viewpoints, the visual quality impacts would be reduced if interim revegetation were implemented on the WMSA during those 9 years. CGF understands that Lehigh has already begun this revegetation process, but it should be included in the EIR as part of the mitigation measures for aesthetics and visual impacts. O2-1

The EIR states that lights in the WSMA are visible at night from the valley floor and from as far away as Interstate 680 (EIR at 4.1-8). However, the only mitigation measure proposed for light and glare impacts is Mitigation Measure 4.1-7, which states that no night lighting shall be allowed on the EMSA where it would be visible from public locations on the valley floor. EIR at 4.1-49. Since the EIR acknowledges that lights elsewhere in the Project area, including the WMSA, are also visible from the valley floor, the EIR should include mitigation for those impacts as well. O2-2

Hydrology and Water Quality:

The impacts to water quality in the Project area may be divided into two categories: interim impacts that would occur during the period of reclamation, and post-reclamation impacts. Since reclamation is not projected to be completed until 2030, this means that the interim impacts could continue for nearly 20 years. Thus, interim impacts may be significant even if relatively minor in scope, due to their prolonged duration. O2-3

Water quality testing has shown that current levels of selenium in Permanente Creek have exceeded the RWQCB benchmark level of 5 µg/l. Specifically, selenium concentrations upstream of the Project area ranged from 1.7 to 11 µg/l, while concentrations downstream of the Project area ranged from 13 to 81 µg/l. In addition, monitoring of the runoff from the EMSA demonstrated selenium concentrations ranging from 7.1 to 38 µg/l; from the WMSA, of 29 µg/l, and from "wall washing" in the Quarry pit, of 14 µg/l. EIR at 4.10-9 (Table 4.10-2). In the Quarry pit itself, the water collected in the bottom of the pit demonstrated selenium concentrations of 82 µg/l (EIR at 4.10-34). The runoff from the EMSA and WMSA discharges into Permanente Creek, and the Quarry pit O2-4

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O2-4

water is pumped into the creek during dewatering. (Although the dewatering operations are not part of the RPA project, they should be considered as part of the cumulative impacts analysis, as discussed below.) O2-5

These current selenium levels can reasonably be expected to continue during part of the Project timeline. According to the EIR, the reclamation process on the EMSA, as part of which the limestone material that creates the selenium runoff will be covered over with non-limestone material and with topsoil and vegetation, will begin in 2015; the final reclamation on the WMSA (after the materials are processed to remove remaining limestone and the non-limestone materials are used to backfill the pit) will not begin until approximately 2026. This means that the runoff from these areas can be expected to continue to contain high levels of selenium for years to come. O2-6

The EIR acknowledges that interim Project activities will contribute selenium, total dissolved solids (TDS), and sediment to Permanente Creek. EIR at 4.10-42. However, the mitigation measures proposed for this impact relate primarily to sediment management (e.g., silt fencing, erosion control blankets, fiber rolls, etc.; see EIR at 4.10-45), which may be effective in mitigating TDS and sediment impacts, but will not mitigate dissolved selenium in the runoff water. Some measures may be expected to address selenium impacts, including covering limestone with non-limestone materials in temporary stockpiles and on haul roads; however, impacts from selenium runoff are still expected to remain significant. The impacts of selenium on wildlife are well-documented and include severe fetal deformities as well as increased mortality. O2-7

The EIR mentions the availability of technologies that can effectively and consistently reduce selenium levels to below the RWQCB benchmark of 5 µg/l, but states that implementing such technologies would be infeasible because "a water treatment system sized to handle the flows from the WMSA, Quarry pit, and EMSA" was estimated to have a total installed cost of $86 million, with additional yearly operating and maintenance costs of $2.8 million. EIR at 4.10-46. However, apparently no analysis was made of whether a smaller or less extensive selenium-reducing water treatment system might be feasible. Such a system, although it obviously would not completely mitigate all selenium-laden discharges to below 5 µg/l, might very well have a significant mitigating effect. Considering the potentially serious consequences of selenium contamination of the creek, and the nearly 20-year period during which Project-related selenium impacts are expected to be significant, any mitigation is better than none. The final EIR should contain an analysis of whether a smaller-scale water treatment system designed to partially reduce selenium concentrations in Project runoff, Quarry pit water, and other discharges into Permanente Creek, would be feasible. O2-8

Cumulative Impacts:

The EIR's analysis of cumulative impacts to water quality is inadequate. Because the greatest impact to the water quality of Permanente Creek comes not from the RPA activities but from the actual mining activities, especially the dewatering of the quarry pit, this means that the cumulative impacts to water quality are severe and should be addressed in the EIR. Instead, the cumulative impacts section of the EIR contains only one mitigation measure related to hydrology or water quality, and that one addresses only potential downstream flooding (EIR at 6-25). O2-9

Although the EIR acknowledges that the ongoing discharges to the creek from the Quarry pit contain selenium, TDS and other constituents, and that this constitutes a significant and unavoidable impact, the EIR merely asserts that once reclamation is complete (i.e, once mining activities have ceased and the pit has been backfilled), benchmark standards are expected to be met. EIR at 6-23 and 6-24. However, significant impacts occurring during the timeline of the Project (a period of 20 years) must still be addressed. The final EIR should include mitigation measures specifically addressed to the cumulative impacts to water quality in Permanente Creek from the selenium, TDS and sediment due to the combined effect of the Project and the other uses in the area, particularly the ongoing mining. O2-10

Thank you for the opportunity to comment on the EIR. Please let us know if you have any questions on this matter.

Sincerely,

Alice Kaufman
Legislative Advocate, Committee for Green Foothills

3.3.2 Comment Letter O2: Committee for Green Foothills

O2-1 The commenter suggests that interim reclamation activities in the WMSA begin prior to 2021, as mitigation for aesthetics and visual impacts. Section 4.1, *Aesthetics, Visual Quality, and Light and Glare* concludes that impacts to viewsheds from which the WMSA is visible (i.e., views from Maisie's Peak, SR 85, Foothill Boulevard, Stevens Creek Boulevard, De Anza Boulevard, and other major roadways) would be less than significant during construction of the Project (see analysis under Impacts 4.1-1, 4.1-3, 4.1-4, and 4.1-5). The County does not have the discretion under CEQA to impose mitigation measures for a less than significant impact. However the suggestion for interim revegetation will be included in the public record to be considered by the County Planning Commission in evaluating approval of the Reclamation Plan

O2-2 Draft EIR Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*, page 4.1-8, describes the existing visual setting with respect to night-lighting. The description of baseline conditions in the Project Area includes the information that "lights in the WMSA are visible at night from the valley floor and from as far away as Interstate 680." However, Impact 4.1-7 analyzes whether the Project would create a *new* source of substantial light or glare that would adversely affect day or nighttime views in the area. For the WMSA, "…the hours of operation and intensity of existing operations is not expected to change during Project implementation, compared to baseline conditions. Surface mining activities currently may take place in the Project Area 24 hours per day, 365 days per year…" Because the Project would not change the amount of night-lighting at the WMSA, it would not create a significant impact warranting mitigation.

O2-3 The County concurs with the commenter's assertion that impacts to water quality during the period of reclamation could be significant. The Draft EIR recognizes that reclamation is not projected to be completed until 2030, and that interim impacts could continue for nearly 20 years. For example, please see Draft EIR Impact 4.10-2 (page 4.10-42 et seq.), which discusses interim reclamation activity contributions to concentrations of selenium, TDS, and sediment in Permanente Creek. The Draft EIR finds that impacts to water quality in Permanente Creek from selenium run-off would be significant and unavoidable during the interim period until final reclamation is complete. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O2-4 The comment restates from the Draft EIR the selenium concentrations detected in surface water, wall washing samples, and discharge from the Quarry pit. Comment noted.

O2-5 The comment concludes that Quarry pit dewatering should be included in the cumulative analysis. See Response O2-9.

O2-6 The comment restates the overall basis for Impact 4.10-2 presented in the Draft EIR. As discussed in the Draft EIR (page 4.10-42 et seq.), during the period between the beginning of reclamation in Phase 1 and the completion in Phase 3, selenium would

continue to be discharged to Permanente Creek. Interim water quality issues are analyzed in Impact 4.10-2, and determined to be significant and unavoidable. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O2-7 The Best Management Practices (BMPs) developed for Mitigation Measure 4.10-2a (page 4.10-44) not only include controls for sediment, but also involve the management of runoff to reduce the potential for selenium to enter the surface water. Because selenium is produced when the limestone rock undergoes oxidation, one of the prime objectives of Mitigation Measure 4.10-2a is to reduce the exposure of limestone surfaces in order to reduce the potential that runoff would contact the limestone. For instance, the mitigation measure requires certain BMPs to ensure that limestone material is not exposed and cannot contribute selenium-bearing runoff to surface water. The BMPs from Mitigation Measure 4.10-2a that directly address selenium runoff reduction are summarized below. Also, please see Master Response M5 for additional information regarding selenium.

1) Segregating limestone materials from the non-limestone materials (breccia, graywacke, chert, and greenstone) by way of operational phasing to ensure that non-limestone materials are placed beneath and are covered by non-limestone materials.

2) Providing cover on active haul roads with non-limestone materials where exposed limestone surfaces are present. Requiring that roads undergoing dust control by watering have fiber rolls or equivalent runoff protection installed along the road side to reduce runoff and avoid drainage to Permanente Creek.

3) Diverting all runoff generated from disturbed active and inactive reclamation areas to temporary basins, the Quarry pit, or temporary vegetated infiltration basins, away from drainage pathways entering Permanent Creek.

4) Requiring that drainage of the non-limestone materials be diverted directly to sediment control facilities and natural surface drainages.

5) Installing up-gradient berms where limestone fines or stockpiles are placed, to protect against stormwater run-on, and installing ditches and down-gradient berms to promote infiltration rather than run-off.

6) Replacing the limestone rock and materials that are currently used in the existing BMP ditches and cover or otherwise separating runoff from limestone rock in the existing sediment pond embankments.

7) Covering large limestone surfaces that would remain exposed during the rainy season with interim covers composed of non-limestone rock types to reduce oxidation of limestone.

8) Reconstructing or relining all existing stormwater conveyances and checking dam structures that are constructed or lined with limestone rock using non-limestone material (greenstone, breccias, greywacke, metabasalt), available at the Quarry.

O2-8 The Draft EIR based the analysis of selenium treatment on assumed flow rates approaching 7 cubic feet per second and considered commercially available treatment technologies that have been demonstrated to remove selenium effectively and consistently to below 5 µg/L (4-day Basin Plan Objective). These technologies include ferrihydrite adsorption (iron co-precipitation), ferrous hydroxide, ion exchange, or fluidized cell reactors. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O2-9 Draft EIR Section 6.2.10, second paragraph, identifies water quality as a primary cumulative impact. Specifically, the analysis under cumulative impacts to hydrology and water quality (Draft EIR page 6-23 et seq.) identifies interim Project-related water quality conditions as a significant and unavoidable impact and states that during Project implementation there would be ongoing discharges from the Quarry pit, from EMSA stormwater runoff, and from other portions of the Project Area. These discharges could contain selenium, total dissolved solids (TDS), and other constituents that discharge into Permanente Creek. Through the implementation of BMPs, the Project's incremental contribution to sedimentation would not be cumulatively significant. However, because the BMPs would not be fully effective in preventing selenium-bearing discharges from entering Permanente Creek, the Project's incremental contribution to water quality impacts from selenium would be both individually and cumulatively significant (Draft EIR page 6-24). See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

Once reclamation is complete, compliance with the various measures to stabilize slopes in the EMSA, manage storm water runoff, cap the EMSA and former WMSA with non-limestone materials, and revegetate these areas, selenium discharges would be substantially reduced and the impact to water quality would not be cumulatively considerable.

O2-10 The Draft EIR acknowledges that during the period of time that reclamation would be underway, described in the Draft EIR as the interim period, there would be a significant and unavoidable impact to surface water quality. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

The cumulative analysis in Chapter 6 of the Draft EIR clearly explains the cumulative effect. As stated in the cumulative analysis, implementation of BMPs during Project activities, when considered in combination with the impacts of other projects in the cumulative scenario, the Project's incremental contribution to sedimentation would not be cumulatively significant. However, because the BMPs, presented in detail as Draft EIR Mitigation Measure 4.10-2a and 2b, would likely not be fully effective in preventing selenium-bearing discharges, Total Dissolved Solids (TDS), and sediment from entering Permanente Creek, the Project's incremental contribution to water

quality impacts from selenium would be both individually and cumulatively significant (Draft EIR page 6-24). As discussed in Impact 4.10-2 in the Draft EIR, treatment was considered as a mitigation measure to reduce selenium concentrations over the interim period before final reclamation is achieved. The Draft EIR also maintains that once the reclamation is complete, the water quality impacts would be less than significant because the source and mechanisms that contribute to the current levels of selenium, TDS and sediment would be managed through measures outlined in the RPA. These measures include removal of the WMSA, backfill of the Quarry pit, recontouring and vegetation of erosive slopes, covering selenium-bearing material with a non-limestone bearing cover, and installation of desiltation basins.

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Rob Eastwood, Principal Planner
County of Santa Clara
Department of Planning and Development
County Government Center, East Wing
70 West Hedding Street, 7th Floor
San Jose, California 95110

February 21, 2012

Dear Mr. Eastwood,

Please find appended our comments on behalf of the Sierra Club regarding the County of Santa Clara's Draft Environmental Impact Report (DEIR) covering the Lehigh Permanente Quarry Reclamation Plan Amendment.

We appreciate this opportunity to participate in this process and look forward to further opportunities to assist the County in shaping this important project.

Sincerely,

Michael J. Ferreira
Conservation Chair
Loma Prieta Chapter
Sierra Club

Cc: Ginny Laibl – Chair, Loma Prieta
Melissa Hippard – Vice Chair
Gary Latshaw, AQ Committee
Reed Zars, Counsel
Ellen Medlin, Counsel

Sierra Club's February 21, 2012 Comments Regarding
County of Santa Clara Planning Department's December 21, 2011
Draft Environmental Impact Report -- Lehigh Permanente
Quarry Reclamation Plan Amendment

A. HYDROLOGY SECTION COMMENTS:

1. The DEIR's Hydrology Section fails to describe what should be its core objective: ensuring compliance with all water quality standards in all reaches of Permanente Creek during all periods of mining, reclamation and post-reclamation activities proposed in Lehigh's December 2011 Reclamation Plan Amendment.

Currently, Permanente Creek is an "impaired" stream under Section 303(d) of the Clean Water Act due to excessive concentrations of selenium and chronic toxicity. In a supplemental EIR, the County should first begin with the objective of ensuring that the water quality in all reaches of Permanente Creek meets all water quality standards during all of the mining, reclamation and post-reclamation activities proposed in Lehigh's December 2011 Reclamation Plan Amendment. This is an inescapable legal obligation under SMARA, the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act. Second, the County should fully analyze and describe what measures will be necessary during all mining, reclamation and post-reclamation phases to achieve this objective. Unless and until an EIR can demonstrate immediate and consistent compliance with this objective neither the EIR nor the Reclamation Plan Amendment should be approved.

O3-1

2. The DEIR correctly concludes that Lehigh's continuous discharge of toxic quarry pit wastewater into Permanente Creek is a significant reason why Permanente Creek is in violation of selenium and chronic toxicity water quality standards.

According to the Hydrology Section in the County's DEIR at pp. 4.10-31 and 32:

> The effect of the ongoing Quarry pit dewatering discharges (which enter the creek between SW-1 and SW-2) on existing Permanente Creek water quality is indicated by the samples collected at SW-2 (the downstream location in Permanente Creek), where dissolved selenium concentrations ranged from 13 to 81 µg/l. A Quarry pit water sample in January 2010 had a dissolved selenium concentration of 82 µg/l (Golder, 2011), indicating that dewatering is a significant factor with respect to selenium concentrations in the creek.

O3-2

3. Unfortunately, and without reasoned analysis or demonstrating compliance with the law, the County's DEIR concludes that the toxic pit wastewater discharges to Permanente Creek will continue and will be unavoidable.

According to the County's DEIR at p. 4.10-47, treatment measures sufficient to reduce discharges of selenium into Permanente Creek to concentrations below the 5 µg/l selenium standard would cost "approximately $86 million [to construct], and cost approximately $2.8 million per year to operate and maintain." Without further explanation, the County concludes, "[d]ue to the high estimated costs, this potential mitigation was determined to be infeasible. As a result of these factors, the County has determined the impact to water quality in Permanente Creek from selenium runoff would be significant and unavoidable during the interim period until final reclamation is completed."

O3-3

As an initial matter, if approval of Lehigh's Reclamation Plan Amendment will result in "unavoidable" violations of law, obviously the Amendment should not be approved. Said differently, Lehigh's Reclamation Plan Amendment may only be approved if it assures compliance with all law. The current DEIR provides no such assurance. Furthermore, because there appear to be serious factual and analytical flaws in the DEIR regarding the necessary measures to assure Lehigh's discharges into Permanente Creek do not violate the law, the DEIR should be supplemented.

The County's selenium treatment cost estimate, which resulted in a finding of infeasibility, is based on assumptions set forth in footnote 14 on DEIR p. 4.10-47:

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14 This treatment system assumes treatment of the selenium primarily in the form of selenate as well as treatment to meet conventional pH, D.O., BOD, and TSS discharge limitations. These are Class 5 cost estimates (+100%, -50%) as defined by the Association of the Advancement of Cost Estimating International, and include a 25 percent contingency. The cost estimates also assume that stormwater detention facilities would be constructed to divert and equalize the runoff into a storage impoundment, thereby resulting in an equalized flow of 8 cfs or 3,590 gpm and limiting the size of the treatment system.

The County's cost estimate appears to be based on flawed flow values. The County assumed that an "equalized" flow of 8 cubic feet per second (cfs) from the quarry pit and the East and West Materials Storage Areas would need to be treated, when 1-2 cfs appears closer to the annual average, selenium-contaminated flow rate coming from the pit and lands that drain into the pit.

First, Lehigh's November 2011 (rev.1) "Hydrologic Investigation," generated by Golder Associates, Inc., Attachment E to the Reclamation Plan Amendment, determined a cumulative pit inflow of approximately 37 million cubic feet for a nine-month period.

4.6.3.3 North Quarry

Table 4.7 is a summary of the water balance for the North Quarry from February 2009 to mid-October 2009. The primary goal of estimating the water balance for the North Quarry was to provide a calibration point for the numerical groundwater flow model.. Using the data provided by Lehigh, the groundwater inflow into the North Quarry was estimated from the following formula:

$$V_{GW} = V_{PIT} + V_{PUMPED} + V_{EVAP} - V_{PRECIP} - V_{RUNOFF}$$

Where:

V_{GW} is the total volume of groundwater entering the pit
V_{PIT} is the change in volume of the water in the pit
V_{PUMPED} is the volume of water pumped out of the pit
V_{PRECIP} is the volume of water from direct precipitation into the pit
V_{EVAP} is the volume of water lost to evaporation based on the surface area of the pit water
V_{RUNOFF} is the volume of water from runoff using the catchment area of the North Quarry and a runoff coefficient of 0.3

Figure 4.18 is a semi-log plot of the various components of inflow calculated from the water balance estimated for the North Quarry. Over the available period of record, the total amount of inflow into the North Quarry was 37,395,000 ft^3 (858 acre-ft), with a range of flow from 210 gpm to 5,700 gpm. The total surface water runoff that entered the North Quarry from February 2009 to mid-October 2009 was estimated to be 7,729,000 ft^3 (177 acre-ft), with a range of inflows from 0 to over 8,800 gpm. The total estimated amount of groundwater that entered the North Quarry was 29,412,000 ft^3 (675 acre-ft), with a range of inflows from about 210 gpm (5^{th}-percentile) to 1,480 gpm (95^{th}-percentile), and a geometric mean of 687 gpm. From early September to mid-October, the North Quarry water level remained constant at 738 feet amsl while the daily pumping rate remained steady at 211 gpm; therefore, suggesting that the ambient groundwater seepage into the North Quarry is about 0.47 cfs (211 gpm) during the dry season.

O3-3

37 million cubic feet of water over nine months represents an average flow of approximately 1.6 cfs. The Golder Associates analysis also concluded that ground water represented approximately 75% of the pit inflow during the nine-month period (approximately 29 million cubic feet) and surface runoff represented 25% of the pit inflow during the same time (approximately 7.7 million cubic feet).

Second, Lehigh's December 2011 Strategic Engineering & Science, Inc. (SES) Reclamation Water Quality Report at p. 15 (supported by SES Appendix C at p. C-5) predicts that approximately 39,133,000 cubic feet of ground water and surface runoff flows into the pit in an average year. This represents an average flow of 1.24 cfs, or 555 gpm. See SES spreadsheets at SES Appendix C.1, summing "Water Entering Pit Lake" column that includes both ground water inflow, and all other water inputs. SES p. C-6.

In sum, the DEIR's assumption of an "equalized" flow of 8 cfs from the quarry pit and EMSA/WMSA areas into Permanente Creek appears suspect. Because the cost of treatment is directly related to flow, this means the cost analysis is also suspect. In a supplemental EIR the County should fully analyze and describe what measures will be

necessary, during all mining and reclamation phases, to ensure pit and related discharges to Permanente Creek assure compliance with all in-stream selenium and other standards.

O3-3

4. The County's DEIR also fails to assure that water in all reaches of Permanente Creek will be in compliance will all applicable stream standards.

In addition to its failure to demonstrate Lehigh's discharges of contaminated pit wastewater will comply with stream water quality standards, the DEIR also fails demonstrate that contamination from mined soils, rock, sediments and rubble in Permanente Creek, and mined soils, rock, sediments and rubble that continue to slump and erode into Permanente Creek, will be managed to assure compliance with water quality standards.

The DEIR at p. 4.10-47 states:
"Sediment yield downstream from Permanente Creek has been estimated to be chronically about 3.5 times higher than it would be under natural basin conditions (Nolan and Hill, 1989), potentially contributing to flooding and other adverse effects downstream, and potentially compromising downstream beneficial uses as established in the Basin Plan. Currently, pre-and post-SMARA slopes within the PCRA are eroding into Permanente Creek. In addition, the pre-and post-SMARA slopes and mining disturbances with the seven areas of PCRA areas may be delivering selenium and high TDS to Permanente Creek."

O3-4

The DEIR should be supplemented to include a thorough analysis of the contribution of streambed and bank sediments to water quality violations in Permanente Creek. After such an analysis, the DEIR should only suggest approval of Lehigh's Reclamation Plan Amendment if it describes mitigation measures that assure immediate and permanent compliance with all water quality standards.

5. The DEIR also fails to describe how polluted floodwaters from the Lehigh site will be controlled and treated to assure that water in all downstream reaches of Permanente Creek will be in compliance will applicable stream standards.

The DEIR's hydrology section that starts at p. 4.10-48 states that the on- and off-site flooding impacts from the mining site due to a 100-year storm event will be "significant and unavoidable." Although the necessary retention facility could be designed, the DEIR states that "as of the time that this EIR was published, it is unknown if a basin or other detention measure of sufficient size could be feasibly constructed onsite to reduce this impact to less that significant levels." p. 4.10-48.

O3-5

Similar to our concern above, we believe that any County approval of continued mining at the quarry should be contingent on Lehigh first demonstrating that it can retain the flows and pollution from a 100-year storm event on-site. Large floods originating from the Lehigh facility have caused significant damage downstream in the past, and in the future threaten to flush many additional tons of sediment and related pollution into the

lower reaches of Permanente Creek and the Stevens Creek by-pass. A supplemental DEIR should describe and analyze all measures necessary to assure all floodwaters from the Lehigh site are retained on-site, and that all floodwaters discharged from the site into Permanente Creek comply with all stream water quality standards. O3-5

6. Lehigh's related Financial Assurance Cost Estimate (FACE) fails to include those measures necessary to attain and maintain water quality standards in Permanente Creek, and fails to require sufficient bonding to ensure performance of such measures.

Related to the County's failure to describe in the DEIR all measures necessary for Lehigh to attain and maintain water quality standards in Permanente Creek, Lehigh's January 23, 2012 Financial Assurance Cost Estimate (FACE) fails to include the costs of performing those measures. Nowhere in Lehigh's FACE are the costs associated with reducing pit wastewater discharges into Permanente Creek to below 5 µg/l of selenium, or ensuring the water quality in all reaches of Permanente Creek meet water quality standards, or ensuring all floodwaters are retained on-site and are discharged in full compliance with stream water quality standards. There should be no bonding approval until the full costs of water quality compliance are calculated and covered. O3-6

B. GENERAL COMMENTS:

1. The DEIR has a development timeline with milestones that do not provide sufficiently small time increments. For example, Table 2-2 (page 2-14) has phase 1 staring in 2012 and ending in 2020, but there are no end dates for the components of Phase 1. Given the desire to establish public confidence and a managerial mechanism for tracking progress, at least quarterly start and end date times should be given for the first five years, and annually thereafter. Clearly, it is reasonable that the schedule, which extends to 2030, is subject to revision. But that revision should be done in a transparent manner. The timeline should be updated at least annually with detailed milestones for the following five years. O3-7

2. The specifics of the method of providing the financial assurances should be specified. At the public hearing in Cupertino, the statement was made that the financial assurance was $47.8 million. Consistent with the comments above, this amount appears to be significantly underestimated. Whatever the final amount, it must be well documented and well secured. O3-8

3. The DEIR describes how the quarry pit will be backfilled with approximately 60 million tons of material currently stockpiled in the West Materials Storage Area (WMSA). The WMSA backfill in the quarry pit is then anticipated to be saturated almost completely with ground water and that water is then anticipated to begin flowing underground into Permanente Creek. The DEIR fails to describe the chemical composition and leachability of the millions of tons of WMSA materials, however, and therefore is fatally flawed. This material should not be dumped into the quarry pit, to O3-9

become a potential toxic legacy for the foreseeable future, without first being comprehensively cored and analyzed.

O3-9

4. The DEIR discusses vertical, but not horizontal expansion of Lehigh's mining operation. According to Lehigh's most recently revised Reclamation Plan Amendment (Nov. 2011), no further surface disturbances are planned. Once the quarry is mined to a depth of 440 feet mining will cease and comprehensive and permanent reclamation will begin. The DEIR should be clear that no further mining will be allowed. If further mining may be allowed at the site in the future, the full impacts of such mining should be described now – not later.

O3-10

5. To maximize public health the Health Risk Assessment air pollution modeling should be supplemented with more extensive measurements. In particular, "hot spot" locations should be monitored, and the measurements expanded to include chemical analyses of the particulates. The modeling and measurements performed thus far do not include the chemical analysis of the particulates.

Iris Environmental also concluded the need for more measurements in the report they prepared for Los Altos Hills and Los Altos "TECHNICAL MEMORANDUM – REVIEW OF DOCUMENTS PERTAINING TO THE LEHIGH SOUTHWEST CEMENT PERMANENTE PLANT." On page 21:

> The Facility has implemented several mitigation measures which are intended to reduce mercury emissions such that the acute hazard indices are below 1.0 by 2011 as demonstrated in the 2011 scenario. The performance of these mitigation measures should be monitored on an ongoing basis to ensure the assumed reduction in mercury emissions is occurring. It cannot be assumed reductions observed in initial or pilot testing will continue under various operating conditions or as the systems age.

O3-11

Although the Iris report did not include the reclamation efforts, it accurately reflects the technical need to ascertain the chemical composition of the particulates. While the quotation explicitly states the desire for measurements of mercury, the presence of chromium VI, benzene, arsenic, and other toxic chemicals should also be measured. In the absence of such measurements, assessment of public health relies on simulations which don't represent the complete complexity of the terrain or the meteorology.

3.3.3 Comment Letter O3: Sierra Club

O3-1 It is not the objective of the Draft EIR to ensure compliance with all water quality standards in all reaches of Permanente Creek during all periods of mining, reclamation, and post reclamation. The objective of the Draft EIR is to perform the necessary impact analyses to determine whether the Project would result in any significant effects to the environment as required under CEQA. Through the RPA, the Draft EIR assumes future compliance with applicable local, state and federal water quality laws and regulations that are intended to ensure protection of water quality in Permanente Creek. The Project, as described in the Draft EIR Chapter 2, *Project Description*, involves the reclamation of the WMSA, Quarry pit, EMSA, Permanente Creek corridor, and other operational areas. Reclamation measures outlined in the RPA are expected to reduce the current levels of selenium in Permanente Creek after the completion of reclamation (see Draft EIR Impact 4.10-1, page 4.10-29 et seq.). Specifically, the Project would reduce oxidation of selenium-bearing rock, manage and control runoff, route runoff into desiltation basins and reduce selenium inputs into the groundwater. As described under Draft EIR Impact 4.10-1, modeling of post-reclamation conditions indicates that selenium concentrations in the runoff leaving the Project Area would be greatly reduced compared with existing conditions and be below RWQCB Basin Plan objectives.

The current discharge from the Quarry pit is an operational discharge that has been approved by the Regional Water Quality Control Board-San Francisco Bay Region (RWQCB) under Order No. R2-2008-0011, NPDES Permit No. CAG982001, General Waste Discharge Requirements for Discharges of Process Wastewaters from Aggregate Mining, Sand Washing, and Sand Offloading Facilities to Surface Waters. The Applicant is subject to the provisions of this permit that require water monitoring, sampling, and reporting. Under this permit, the RWQCB could choose enforcement action if the Applicant is in violation with this discharge authorization.

O3-2 This comment reiterates the conclusion from the Draft EIR Impact 4.10-1 (page 4.10-29 et seq.) regarding ongoing dewatering from the Quarry pit contributions to selenium concentrations in Permanente Creek. However there has been no evidence that the water discharged from the Quarry pit is characterized as "toxic" using current regulatory definition of toxicity. Moreover, the combination of groundwater and surface water discharged from the Quarry is not considered or classified as "wastewater." Permanente Creek is listed by the RWQCB under Section 303(d) of the CWA for not meeting its Basin Plan water quality standards for selenium, toxicity and Diazinon and the Draft EIR acknowledges that the Quarry pit discharge contributes to the concentration of selenium measured in the creek. However, as discussed under Draft EIR Impact 4.10-1, with implementation of Mitigation Measures 4.10-1a and 4.10-1b, post-reclamation conditions in the EMSA, WMSA, and Quarry pit would have a less than significant impact with respect to increased selenium concentrations in Permanente Creek to levels exceeding baseline conditions and the RWQCB Basin Plan objectives.

O3-3 This comment questions the analysis, and in particular the flow rate calculations, that led the County to conclude that a water treatment facility for selenium was not feasible. Since release of the Draft EIR, the County has undertaken further technical analysis to determine the feasibility of installing an on-site water treatment facility that could treat selenium in stormwater discharges to levels below 5 µg/L. The study reviewed available options considering constraints of the Project site, flow rates, flow volumes, seasonal variation, selenium speciation and biogeochemistry as well as schedule and constructability. In consideration of the results of this feasibility study, the County has revised Mitigation Measure 4.10-2 to require Lehigh to conduct further characterization and design studies including construction and testing of a pilot-scale treatment facility to establish whether a full-scale treatment facility onsite is feasible. Feasibility in this context includes not only technological feasibility but also economic, legal, social, or other considerations pursuant to CEQA Guidelines section 15091(a)(3). Please refer to Master Response M5 subpart D for additional details regarding the selenium treatment system feasibility study.

O3-4 The Project, as described in Draft EIR Chapter 2, *Project Description*, is the reclamation of a large quarry operation that has, in the past, contributed to sediment discharges to Permanente Creek; the Project is intended to repair, restore, and revegetate areas of the site that are responsible for erosion, sedimentation and the discharge of selenium. It is not a requirement that the Draft EIR assure that water quality in all reaches of Permanente Creek would be in compliance with all applicable stream standards. The Draft EIR, prepared under the requirements of CEQA, assumes that the Project would comply with local, state, and federal laws regulating water quality. The Draft EIR evaluated the proposed Project and determined that the proposed reclamation measures would improve the current conditions and reduce discharges of sediments and other material into Permanente Creek, including selenium. These impacts are analyzed in Draft EIR Section 4.10, *Hydrology and Water Quality* (Impacts 4.10-1, 2, and 3). There is no need to perform an analysis of "the contribution of streambed and bank sediments to water quality violations in Permanente Creek" because the measures proposed by the RPA would improve water quality compared to baseline condition and reduce the discharge of bank sediments.

O3-5 Regarding offsite flooding resulting from Project activities, please refer to Master Response M7. As described in Master Response M7, the Project includes a detention basin located at final grade of the reclaimed Quarry pit floor, Basin 40A. Basin 40A is designed to attenuate the 100-year peak flows to reduce downstream flooding. As a combined desiltation/detention facility, the basin would reduce offsite peak flows while reducing sediment discharges into Permanente Creek. Impacts would be less than significant with implementation of Mitigation Measure 4.10-4.

O3-6 The FACE for the proposed RPA is discussed in Master Response M1(C). The County approved an Interim FACE, which is dated January 23, 2012 (EnviroMINE, 2011a), that has been reviewed and approved by the County and OMR. On January 26, 2012,

the County directed the Applicant to post a Financial Assurance (FA) equal to the amount determined by the Interim FACE. Lehigh submitted performance bonds that increased the previous FA to a total of $47,727,786.00. Both the County and OMR reviewed and approved the performance bonds submitted for this purpose. Once a reclamation plan amendment is approved, the Applicant must submit a revised FACE based on the approved RPA. In this way, the County and other stakeholders may be assured that the FACE will be sufficient to ensure performance of the reclamation of lands in the PCRA and elsewhere in the Project Area.

The Draft EIR concluded that interim reclamation activities within the Project Area would contribute concentrations of selenium, TDS, and sediment in Permanente Creek, which for selenium only would be a significant and unavoidable impact (see Impact 4.10-2, Draft EIR, page 4.10-42 et seq.). A range of mitigation measures to treat selenium has been evaluated in the EIR, and related costs included in the FACE. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

Similarly, the analysis of Impact 4.10-4 (Draft EIR page 4.10-48 et seq.) concluded that the Project would cause a significant and unavoidable impact related to alteration of the existing drainage pattern of the site, which could result in increased stormwater runoff rates and on- or offsite flooding. As stated on page 4.10-49, "Implementation of Mitigation Measure 4.10-4 would provide the necessary facilities to reduce offsite stormwater discharge to Permanente Creek during the 100-year storm event. However, as of the time that the Draft EIR was published, it was unknown if a basin or other detention measure of sufficient size could be feasibly constructed onsite to reduce this impact to less than significant levels. Subsequent analysis and detention basin design now supports a conclusion, and the Santa Clara Valley Water District (Comment Letter A3) and the County agree, that Basin 40 A, which is described and analyzed in Master Response M7, would attenuate 100-year flows. If the County approves a reclamation plan amendment that includes Basin 40A, then the Applicant would be required to submit a revised FACE based on the approved RPA, including costs associated with Basin 40A.

Once the full costs of reclamation-related water quality compliance are calculated, they will be included in a revised FACE.

O3-7 Consistent with its authority under SMARA, the County would review annual reports prepared by the Applicant pursuant to Public Resources Code Section 2207, conduct annual mine inspections within six months of receiving the annual report and in any event at least once each calendar year, and respond to any complaints of non-compliance with SMARA as any such complaint arises. The County would enforce the mitigation monitoring reporting and compliance plan consistent with CEQA and in accordance with the timeframes established for each monitoring event in the plan. These mechanisms provide sufficient structure to monitor the Applicant's progress and

that no additional reporting structure is required. Accordingly, no change has been made to the Draft EIR in response to this comment.

O3-8 The commenter requests additional information pertaining to financial assurances. See Master Response M1(C), which provides information on how the financial assurances cost estimate was determined and its adequacy to ensure that reclamation could be performed in accordance with the proposed RPA.

O3-9 Please refer to response A4-4**.** Draft EIR Section 4.10, *Hydrology and Water Quality*, provides thorough analysis regarding 1) the composition and leachability of the material from the WMSA that would be used for backfill, and 2) the quality of subsurface flow that would discharge from the Quarry pit (see Impact 4.10-1, page 4.10-29). A summary of such analysis is provided below.

Composition of WMSA Material

As discussed in Draft EIR Section 4.10, rock materials in the Quarry and the overburden material, such as that in the EMSA and WMSA, were characterized by using several different types of tests. The tests used to characterize the overburden and Quarry rock included laboratory analysis of onsite materials for total metals and selenium and for the leachability potential of metals, selenium, and general minerals. For these tests, composite rock samples were prepared by combining portions from samples obtained at the previously proposed South Quarry, south of Permanente Creek. Geologic conditions were initially characterized by Geocon Consultants, Inc. (Geocon) in 2009 for the purposes of geochemical testing of representative geologic rock units and those data were in turn used by Golder for its 2010 Hydrologic Investigation (Golder Associates, 2011). Geocon conducted a peer review, a geologic site reconnaissance of the North Quarry, and reviewed several boring logs. Based on this work, Geocon described the following major rock types on the Quarry site: greywacke, limestone and dolomitic limestone, fault breccia, greenstone, metabasalt, and chert. Geocon prepared six composite rock samples, representative of each of the six major rock types. The number of samples collected for each composite sample was based on the observed variability within a rock type. Geochemical analysis included acid base accounting (ABA), elemental analysis, and static leach testing. The California modified Waste Extraction Test (WET) was used to characterize the metal leaching potential of the rock and soil samples. The WET test is a 48-hour leach test conducted on a crushed rock sample (minus 2 mm) using a 10-to-1 liquid-to-solid ratio. Sample results from this testing are provided in Table 4.10-3 and 4.10-4 of the Draft EIR (pages 4.10-13 and 4.10-15, respectively).

Wall washing samples also were collected from the Quarry pit wall to evaluate metal and selenium leaching potential under field scale conditions. Wall washing was performed at six sampling locations on exposed faces within the North Quarry. The test involved washing an approximately 1-meter square area of rock face with a known volume of water. The wall washing rinsate was collected and submitted for chemical

analysis. This is discussed in the Draft EIR, Section 4.10, and one sample event is provided in Table 4.10-2 (page 4.10-9). SES Table 7, provided in Appendix F of this document, includes all wall washing analytical data. Please see the Draft EIR, Table 4.10-2, page 4.10-9, which includes a table showing dissolved concentrations of constituents washed from high grade limestone as well as total recoverable concentrations of the constituents washed from each of the rock types listed in the table.

Quality of Subsurface Water

Infiltrating surface water and groundwater would fill the backfilled Quarry pit and eventually reach a level where it discharges into Permanente Creek. However, the groundwater level is not expected to reach a level of discharge for an estimated 14 years after backfilling begins; during that time, groundwater and infiltrated surface water would remain contained in the backfill. Within that 14-year period, it is reasonable to expect that groundwater chemistry would equilibrate and resemble existing groundwater water quality because of the long residence time of the water under submerged conditions in the pit. When groundwater begins to flow out of the Quarry pit backfill and into Permanente Creek, the water quality modeling projects that selenium concentrations would range between 10 and 15 µg/L, which exceeds the Basin Plan Water Quality Objective of 5 µg/L as a 4-day average but is below the 1-hour maximum of 20 µg/L and the MCL (50 µg/L) (see Draft EIR Table 4.10-7, page 4.10-39). However, that predicted concentration is based on available data and modeling and does not account for the backfill treatment proposed for the Quarry pit in the RPA. The proposed treatment for the quarry backfill is described in the Draft EIR (Impact 4.10-1, page 4.10-38-39 and Master Response M6). The reclamation treatment involves in-situ (in place) conditioning of the backfill by mixing organic material within a certain depth range. Decomposition of the organic matter enhances the necessary chemical reducing conditions needed to minimize the mobility of selenium in groundwater. The treatment of the backfill as described in the RPA is expected to further reduce the predicted concentrations of selenium by a factor of 3 to reach the Basin Plan Water Quality Objective of 5 µg/L (see Draft EIR Table 4.10-7, page 4.10-39). Mitigation prescribed by the Draft EIR (page 4.10-41) requires the applicant to develop and implement a verification water quality monitoring program, under the oversight of the County and RWQCB, to ensure that concentration of selenium and other metals following reclamation remain at or below Basin Plan Water Quality Objectives or other discharge limits that may be imposed.

O3-10 The Draft EIR is clear that approval of the Project "would not preclude future extraction activities within the Project Area," and "does not foreclose the possibility of future mining in other unincorporated areas of the Applicant's 3,510-acre ownership" (Draft EIR Section ES.4.1, page ES-3). The Applicant has a vested right to conduct surface mining activities in the Quarry pit, WMSA, EMSA, crusher/Quarry office support area, Surge Pile, and Rock Plant, and it is reasonable to assume that the Applicant will exercise its vested rights to their lawful extent. The proposed

Reclamation Plan Amendment addresses mining to the vertical and lateral extents shown on the plan, and will reclaim the site based on that extent of mining. If any additional mining is subsequently proposed beyond the confines of the Reclamation Plan, and specifically to the extent that the additional mining would preclude reclamation of the site per the proposed Reclamation Plan, a new Reclamation Plan and CEQA review would be required. However, no such additional mining is proposed at this time and therefore is not addressed in this EIR.

O3-11 The commenter suggests that additional ambient air quality monitoring be conducted in the community, including chemical analysis of particulate matter, to supplement the risk assessment modeling that was done for the Draft EIR for the Project. The basis for this suggestion is predicated on the commenter's misunderstanding that modeling done to date does not include the chemical analysis of the particulates. The risk assessment modeling in the Draft EIR for the Project includes chemical analysis of the particulates. Emission estimates for the Project included particulate matter-generating activities such as material loading and unloading, material storage, blasting, traffic on unpaved roads, and wind erosion. The concentration of various toxic air contaminants (TACs) within onsite fugitive dust was based on material sampling (McCampbell Analytical, October 4, 2010 and ALG, November 29, 2010), which is summarized in Table 2 of Draft EIR Appendix E. The TAC content was used to estimate the speciated fugitive dust emissions (including arsenic, mercury, chromium VI, and 16 other TACs) as a function of the PM10 emissions. The resultant speciated emissions were then included in the modeling as part of the health risk assessment for the Project. (While the commenter also included benzene in their list of suspected particulate matter constituents, benzene is highly volatile and would not exist as a component of particulate matter.)

From: Sean Hungerford <shungerford@hthjlaw.com>
Date: February 21, 2012 3:55:24 PM PST
To: Rob Eastwood <rob.eastwood@pln.sccgov.org>
Cc: Mark Harrison <mharrison@hthjlaw.com>, "Marvin.Howell@hanson.biz" <Marvin.Howell@hanson.biz>, Marina Rush <Marina.Rush@pln.sccgov.org>
Subject: Permanente Quarry Reclamation Plan - Draft EIR Comments

Dear Mr. Eastwood,

Attached are comments from Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc. regarding the draft environmental impact report for the Permanente Quarry reclamation plan amendment project, with attachments.

Thank you.

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Letter O4

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January 24, 2012

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Re: Permanente Quarry Reclamation Plan Amendment
Draft Environmental Impact Report Comments

Dear Mr. Eastwood:

These comments are submitted by Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc. (collectively, "Lehigh"), the operator and owner of the Permanente Quarry. The purpose of this letter is to provide Lehigh's comments on the Draft Environmental Impact Report ("DEIR") for the proposed amendment to the Quarry's reclamation plan (the "project").

Lehigh would like to begin by expressing its gratitude to the County of Santa Clara Planning Department, its staff members and consultants for their efforts. Lehigh recognizes the great deal of work and attention to detail that was required to prepare the DEIR, and appreciates the County's thoroughness and professionalism throughout the process.

The County has performed admirably in describing the environmental impacts of this complex reclamation project, and Lehigh believes the DEIR meets CEQA's requirements. There are, however, aspects of the DEIR that would benefit from clarification which Lehigh is uniquely situated to provide. We are taking this opportunity to present our formal comments on the DEIR to ensure that this information is part of the public record before the County.

We have organized our comments to follow the general order in which language and concepts are introduced in the DEIR.

Project Description

Section 2.1

With respect to the Exploration Area, the Final EIR should clarify that only a small portion of this 284-acre area has been disturbed by exploration. The DEIR offers the impression to readers that exploratory disturbance covers the entire 284 acres: "…approximately 284-acres located south of Permanente Creek that have been disturbed by prior exploratory activities…" (DEIR, § 2.1, p. 2-1.) In fact, exploratory disturbance covers only approximately 19.5 acres, as noted in the Amendment. O4-1

Section 2.7.8

Minor formatting corrections also are needed for Tables 2-6, 2-7 and 2-9, which contain text that extends beyond the printable portion of the pages. O4-2

Section 2.8.3

Table 2-17 ("Proposed Five-Year Performance Standards for Revegetation in the PCRA") should be corrected to show the performance standards listed in the December 13, 2011 version of the Reclamation Plan Amendment ("Amendment"). The correct standards are shown in Table 21 of the Amendment and Table 18 of Appendix B, the Revegetation Plan. O4-3

Alternatives

Section 3.3.1.1

The DEIR recognizes that the Complete Backfill Alternative would not meet certain project objectives such as screening cement plant facilities, and also would increase air emissions and releases of toxic air contaminants. We agree with the DEIR, and write to summarize the adverse consequences of this alternative:

- The scale of additional heavy equipment use under the Complete Backfill Alternative deserves greater emphasis. This alternative would excavate and move an additional 6.5 million tons of overburden from the EMSA to the main pit. The excavators, bulldozers, and off-road haul trucks generating noise and air emissions would be concentrated in that part of the Quarry that is nearest to sensitive receptors. Noise, air and health risks impacts from toxic air contaminants would notably increase.

- Members of the community have expressed strong support for the screening benefits of the EMSA, which, when complete, would replace views of the cement plant facility with a vegetated hillside. As the DEIR correctly notes, under Complete Backfill Alternative the screening function of the EMSA would be lost. (See DEIR, § 3.3.1.1, p. 3-9.) The public would likewise be visually exposed to an extended period of construction activity as EMSA stockpiles

O4-4

are excavated and hauled to another part of the Quarry. Because tree and shrub replanting would be delayed in the area of the former stockpiles, the visual benefits of revegetation would also be delayed, and extend the length of time that the public would view an unvegetated hillside. The Complete Backfill Alternative, in short, presents short and long-term and visual impacts that exceed the visual impacts of the project.

- The proposed project is superior to the Complete Backfill Alternative in its treatment of water quality issues. The project includes a thoroughly analyzed plan for reducing runoff containing selenium to levels at or beneath the regulatory benchmarks, by covering disturbed areas with non-limestone rock types and adding a growth media and vegetation. The removal of the EMSA, which is a key feature of the Complete Backfill Alternative, would require a longer period to achieve the same result. Moreover, the earthwork and ground disturbance required to excavate and relocate 6.5 million tons of overburden stockpiles increases the potential for both sedimentation and selenium mobilization over a significantly longer period than the project. As a result, the potential for interim water quality impacts would increase under this alternative.

O4-4

Overall, the Complete Backfill Alternative poses adverse environmental impacts that equal or exceed the project impacts in nearly every category. We agree fully with the conclusion reached in the DEIR that the Complete Backfill Alternative has equal or greater environmental impacts than the project, and does not qualify as the environmentally-superior alternative. (DEIR, § ES.6, p. E-8.)

Aesthetics

Section 4.1.5

The DEIR's discussion of aesthetics deserves clarification on the visual impacts of ongoing surface mining operations, versus the beneficial effects of reclamation to be gained by the project.

The DEIR adopted a very conservative approach to aesthetics that tends to overstate impacts by including the visual effect of ongoing mining activities. Although we understand the County's need for a conservative approach, we nonetheless want to ensure that the distinction between mining and reclamation remains clear.

O4-5

California law makes a clear legal distinction between "surface mining operations" and "reclamation." Surface mining operations means the process of mineral extraction and expressly includes "production and disposal" of overburden. (Pub. Resources Code, § 2735.) Reclamation is, in contrast, the "process of land treatment that minimizes…[the] adverse effects from surface mining operations." (Pub. Resources Code, § 2733.)

The disposal and stockpiling of overburden, accordingly, is part of Lehigh's surface mining operation. As correctly described in the Project Description that precedes the Aesthetics chapter of the DEIR, Lehigh has a confirmed vested right to stockpile overburden in the EMSA,

is already engaging in this activity, and no discretionary approval is being requested relating to the continuation of this activity:

> However, because the County has determined that mining operations are a legal nonconforming use (i.e., a vested right) in the Project Area, the potential environmental impacts related to surface mining in the Project Area generally are not analyzed as part of the Project evaluated in this EIR…

(DEIR, § 2.3.1, p. 2-5.)

The DEIR's aesthetic and visual impacts discussion could create confusion by suggesting that Lehigh's placement of overburden in the EMSA, which is ongoing as part of the surface mining operation, is part of the project to be approved by the County and analyzed under CEQA. For example: O4-5

> The increased prominence and extent of disturbed areas, and the creation of a new distinctly unnatural landform would be particularly noticeable immediately following the completion of construction…

(DEIR, p. 4.1-46.)

Under this approach, the DEIR conservatively evaluated the adverse visual impacts of overburden stockpiling for significance under CEQA, and found the visual impact of this activity in the short term to be significant and unavoidable. (See DEIR, Impacts 4.1-1, 4.1-3, 4.1-5.) The Cumulative Impacts discussion similarly identified significant and unavoidable cumulative impacts after combining the EMSA construction together with a proposed flood protection project by the Santa Clara Valley Water District. (DEIR, § 6.2.1, p. 6-14.)

Clarifying the visual impacts analysis to observe the distinction between mining and reclamation would allow the Final Environmental Impact Report ("FEIR") to focus more closely on the overwhelming visual benefits from implementation of approval of the Amendment. Because overburden stockpiling is an existing condition, and implementation of the reclamation project will result only in significant improvement to the visual appearance of the EMSA, the significance determination should be revised in the FEIR to clarify that the visual impacts of reclamation are not significant.

Biological Resources

Section 4.4.5

The DEIR states that potentially significant biological impacts are significant and unavoidable because mitigation could not completely eliminate the possibility of adverse effects on biological organisms. (DEIR, § 4.4.5, p. 4.4-37.) Again, we recognize this is a conservative approach which tends to overstate impacts. We are commenting to offer additional context, and O4-6

make certain that the current baseline aquatic conditions in Permanente Creek are clearly stated for the record.

The existing, baseline conditions in Permanente Creek appear to provide ample habitat for aquatic organisms. Appendix D of the Amendment contains the results of a Biological Resources Assessment (WRA, 2011), which evaluated conditions in the creek, and found that a community of biological organisms presently exists. The assessment included the results of detailed surveys of benthic macro-invertebrates and amphibians in the creek, and did not report any apparent toxicological effects. The assessment also included the results of bioassay testing, a standard technique designed to gather evidence on the acute toxicity of water to biological organisms (in this case, the test introduced creek water samples to a tank holding fathead minnows and assesses survivability). The tests resulted in a 100 percent survival rate, meaning the subjects did not exhibit acute toxicological effects. O4-6

The record therefore demonstrates that a community of biological organisms presently exists in Permanente Creek under existing water quality conditions. From this baseline condition the project's effects will improve long-term water quality and aquatic habitat in the creek.

Geology, Soils and Seismicity

Section 4.7

The record also should have a clear distinction between modern and historic mining practices. The DEIR's Geology, Soils and Seismicity section indicates that mining operations resulted in the placement of fill material in Permanente Creek. (See DEIR, § 4.7.1.4, p. 4.7-19.) Any such activity, however, occurred prior to California's enactment of the Surface Mining and Reclamation Act of 1975 ("SMARA"). (Pub. Resources Code, § 2710, *et seq.*) The modern, post-SMARA operation of the Quarry has not included these activities. The record should also be clear that Lehigh, in establishing a new set of reclamation standards and activities for the Permanente Creek Reclamation Area ("PCRA"), has embraced a higher standard of responsibility for addressing the historical conditions in Permanente Creek than it is required to assume under SMARA. O4-7

Greenhouse Gas Emissions

Section 4.8.5

We comment to clarify that certain mitigation alternatives described under Mitigation Measure 4.8-1b may not be available. The DEIR lists "Replacement of on-road and off-road vehicles and construction equipment with lower GHG-emitting engines, such as electric or hybrid" as one of the options to reduce greenhouse gas emissions. (DEIR, § 4.8.5, p. 4.8-13.) To our knowledge, there currently are no electric or hybrid engines on the market for these classes of heavy equipment. However, because other mitigation alternatives remain available, the non-availability of electric or hybrid engines should not prevent Lehigh from meeting the mitigation requirements of this section. O4-8

Hydrology and Water Quality

Section 4.10.5 (Flood Risk)

Impact 4.10-4 indicates that the project will create a significant risk of downstream flooding from backfilling of the Quarry pit, which will increase runoff. This represents a very conservative approach because, even after backfilling, Permanente Creek flows at Lehigh's property line during the 100-year storm will remain below the 100-year flood level, and have not been shown likely to place downstream people or structures at significant increased risk of flooding.

The increase in runoff that will occur after backfilling is relatively small. After backfilling, the 100-year storm flow in the creek at Lehigh's downstream property line has been calculated at 1,075 cfs. (Attachment 1, Chang Consultants' December 16, 2011 letter, p. 2) This is 405 cfs less than the flood level predicted by the Federal Emergency Management Agency for the creek at this location, which is 1,480 cfs. As further context, the 100-year flows in the creek also will be less than pre-mining conditions because runoff will travel longer flow routes before entering the creek than under the original topography. (Attachment 2, Chang Consultants' February 14, 2012 letter, p. 2.)

Criteria (g) and (h) of the DEIR's significance criteria (listed in § 4.10.3, p. 4.10-27) reflect the importance of FEMA's 100-year flood level as the benchmark for assessing flood risk, and post-backfilling creek flows will remain below this level. Criterion (d) also lists a significant impact as one that would "substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite." (DEIR, § 4.10.3, p. 4.10-27.) The DEIR presents no evidence that the relatively small increase in post-reclamation flows will result in downstream flooding. To the contrary, because creek flows will remain below the 100-year flood benchmark, there is affirmative evidence that the project will not significantly increase downstream flooding risks.

O4-9

Section 4.10.5 (Effects of Mining Versus Reclamation)

Impact 4.10-2 states that the interim water quality impacts of the project would be significant and unavoidable because ground-disturbing activities during the reclamation period could cause or contribute to runoff containing selenium. The analysis should more narrowly focus on the effects of reclamation activities that will result from project approval, independent from any ongoing mining operations, for the same reasons noted in the Aesthetics section above. Again, we understand that the DEIR has taken a conservative approach which tends to overstate the impacts of the project by including the effects of ongoing mining in the analysis. We believe this should be clearly stated on the record, and noted in the FEIR.

O4-10

Section 4.10.5 (Feasibility of Treatment Plant)

The DEIR correctly concludes that any technologies having the capability of treating runoff to reduce selenium discharges to levels below the regulatory benchmarks cannot be feasibly implemented at the Quarry. Lehigh concurs that the application of treatment systems in

O4-11

this case would be infeasible, based on all "economic, environmental, social, and technological factors." (Pub. Resources Code, § 21061.1.) The record should be clear on this point, and include the following:

Technological, Environmental and Legal Factors

- The interim water treatment technology described in the DEIR (anaerobic bioreactors) has not been demonstrated to treat the highly variable flows and water quality that is characteristic of stormwater at the Permanente Quarry, and achieve target concentrations of less than 5.0 µg/L for selenium on a consistent basis. Biological water treatments such as anaerobic bioreactors, while generally capable of this level of performance under favorable operational parameters, are sensitive to the consistency of the influent flow volume and water quality. Large variations in storm flows and changes in the concentrations of selenium, which characterize the Quarry site in this case, can upset the treatment system and affect reactor performance. The technology may not be adaptable under these site conditions to achieve the desired reductions in runoff-based selenium. (See Attachment 3, SES Technical Memorandum, February 14, 2012, p. 3.)

O4-11

- The Quarry's layout, configuration and topography are not suited for an active water treatment system of this type. An anaerobic bioreactor system would consist of a central plant reactor facility which would receive stormwater runoff from all disturbed areas, which at the Quarry consist of over 600 acres spread across a distance of roughly two and a half miles. The system would require a series of large detention basins spaced in intervals in the EMSA, WMSA and main pit to collect stormwater from each area, together with new drainage features to route flows to each basin. The system also would require new infrastructure (likely a series of lift systems and pipes) to enable Lehigh to deliver stormwater runoff captured in the basins to a central reactor facility. There are few if any locations available for installing the basins and infrastructure necessary to support such a treatment system, in light of the steep terrain and the slope stability concerns that mark some areas. It also is doubtful that such a treatment system can be designed to accommodate the highly dynamic physical environment present here in which most operational areas of the Quarry will be substantially reconfigured under the reclamation plan amendment through excavation and backfilling. Design and construction simply may not be achievable for this site. (Attachment 3, p. 3-4.)

- The timing requirements for designing and building an active water treatment system negatively affect feasibility. Designing, permitting and building an $86 million treatment facility represents a major undertaking that would require months of study before it can be determined whether any design for this type of system can be successfully adapted to the Quarry considering the site configuration and evolving terrain. Assuming that a design can be achieved, it would take a period of years to design the system, obtain the necessary permits, and build the system even without encountering engineering obstacles and assuming that permits can be obtained in a timely manner. (Attachment 3, p. 4.) During this period, however, the interim need for water treatment will diminish, because by as early as 2025 the pit is scheduled to be backfilled and the long-term reclamation strategy for water quality (i.e., backfilling the main pit and covering disturbed areas) will be in full implementation. In short, the design and

construction of such a treatment system represents a lengthy, complex and extremely costly undertaking that if eventually built would have a relatively short operational life.

- An active water treatment system cannot be legally implemented at this time under the current orders of the agency primarily in charge of water quality. The Regional Water Quality Control Board (RWQCB) is the governmental agency responsible for regulating the Quarry's water discharges. The RWQCB has asserted jurisdiction over the Quarry and issued orders requiring Lehigh to investigate the source of selenium and develop a RWQCB-approved solution for managing water quality. Because the RWQCB's investigation and compliance process remains pending, and the RWQCB has not approved the size, manner, cost and functionality of water treatment using anaerobic bioreactor technology and may be nowhere near doing so at this time, this proposed mitigation measure is currently in conflict with the authority and orders of the RWQCB.

- An active water treatment system represents potentially large environmental impacts which cannot yet be analyzed. The potential for sedimentation and runoff is an example. In this regard, a treatment system would require a series of large basins, accompanied by upslope grading to route flows to basins, and infrastructure to deliver runoff to a central reactor facility. These activities mean a large amount of grading and earth movement, which exacerbates water quality concerns at a site that is already concerned over sedimentation and runoff. Other potential impacts relate to hazardous materials and the electrical demands of a treatment system. These potential impacts underscore that an active water treatment system is itself a major project that is capable of generating its own set of distinct environmental impacts. These impacts cannot be ascertained, however, until the system is actually designed.

O4-11

Economic Factors

- The costs of an anaerobic bioreactor system treatment system, as noted in the DEIR, are exceedingly high. CH2M Hill provided the County with an estimate, contained in the DEIR, that it would cost $86 million to install a water treatment system, and an additional $2.8 million in annual operation costs. This means a unit cost of selenium removal of approximately $116,000 per pound of selenium (assuming a $113 million present value of the system, 17 years of treatment operations, and 40 lb/year of selenium removed). (Attachment 3, p. 4.) Also, although not mentioned in the DEIR, additional costs would likely be required to fund the environmental review needed to obtain the permits for the system, as well as to dismantle and remove the system and related infrastructure at the time of final reclamation.

- Against these costs, the treatment system would be operational only for a relatively short time. The DEIR identified the treatment system as a possible interim measure to mitigate pre-reclamation water quality impacts. The need for a system would therefore diminish and eventually be eliminated as backfilling and reclamation progresses. Backfilling is scheduled to be complete as early as 2025 under the current project schedule. (See Amendment, Table 2, Phasing Timeline.) Considering the time requirements of design and construction, and current schedule for backfilling and reclamation, the treatment system (as noted, a $113 million present value) could be rendered unnecessary in the time of less than 20 years after it becomes operational.

Conclusion

Lehigh, again, appreciates the Planning Department's hard work in preparing the Draft Environmental Impact Report. We will be prepared to answer questions and concerns as needed during the Planning Commission's final hearing on the Amendment.

Very truly yours,

Marvin Howell
Director of Land Use and Planning

cc: Kari Saragusa, President, Lehigh Hanson
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December 16, 2011

Mr. Marvin Howell
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P.O. Box 639069
San Diego, CA 92163-9069

Subject: Permanente Quarry Reclamation Plan – Permanente Creek Impacts

Dear Mr. Howell:

This letter addresses whether post-reclamation flows from the Quarry pit at the Permanente Quarry will increase flood hazards in Permanente Creek downstream of Lehigh's property. The County of Santa Clara has requested additional information on whether final reclamation, including backfilling the existing Quarry pit that currently functions as a retention basin, will increase peak 100-year storm flows in Permanente Creek to levels that exceed the peak 100-year flow rate calculated by the Federal Emergency Management Agency (FEMA).

FEMA's May 18, 2009, *Flood Insurance Study, Santa Clara County, California* (FIS), provides 100-year flow rates and tributary drainage areas at various locations along Permanente Creek. The attached Table 6 is from the FIS and shows that the 100-year flow rate and drainage area downstream of Permanente Road are 1,480 cubic feet per second and 3.40 square miles, respectively.

To compare post-reclamation flow rates against the FEMA 100-year flows, the drainage basin boundary was defined using USGS quadrangle mapping that would have existed in the late 1970's, when the FEMA analysis was performed. The attached exhibit entitled "Reconstruction of FEMA Drainage Basin" contains a delineation based on the 1971 Cupertino USGS map and 1968 Mindego Hill USGS map. The Cupertino map covers the easterly portion of the area and the Mindego Hill map covers the westerly portion. The downstream-most point corresponds to the "Downstream of Permanente Road" location from Table 6. The delineated drainage basin matches the FEMA area of 3.40 square miles and shows that the quarry pit was included within the drainage basin. O4-12

Second, a hydrologic analysis was conducted to determine the post-reclamation 100-year storm flows. The analysis follows the unit hydrograph method from the Santa Clara County *Drainage Manual.* The following describes the input parameters. The backup data and results are attached.

- Rainfall Pattern: The 24-hour, 5-minute rainfall pattern given in Appendix D of the *Drainage Manual* was used. The 100-year, 24-hour precipitation value was determined using the Return Period-Duration-Specific (TDS) equation and is 7.63 inches.

- Drainage area: The post-reclamation drainage basin was delineated from the base topography prepared for the site (flown in 2007 and 2008 with field adjustments in 2009), the proposed Reclamation Plan Amendment grading representing the final site configuration, and the most recent USGS quadrangle mapping.

- Hydrologic soil groups: The hydrologic soil group was determined from "Figure 1, Soil Texture and Mean Annual Precipitation Depths for the Santa Clara Basin" in SCVURPPP's May 2004, *C.3. Stormwater Handbook.* The soil type at the site is entirely within group B.

- Curve Number: The curve number was based on the shrub land category (CN = 62 for poor cover, soil group B, and AMC II). A poor cover condition was assumed, which will generate conservative (higher flow rate) results. The CN was adjusted to AMC II-1/2 (CN = 71) in accordance with the *Drainage Manual*. The initial abstraction was equal to 0.2[(1000/CN) – 10] inches (or 0.82 for the final condition). O4-12

- SCS Lag: The SCS lag was calculated using the formula in the *Drainage Manual*. The flow lengths, elevations, effective slope, and the centroid were obtained from the topographic mapping. The watershed roughness was assigned a value of 0.070 to represent a drainage basin with minimal urbanization. The duration of the unit hydrograph was calculated based on 1/4 the lag time.

This input data was entered into a HEC-1 model (attached), which provided a 100-year flow rate of 1,075 cfs. In comparison, the FEMA 100-year flow rate is 1,480 cfs.

The results of the analyses show that FEMA's existing floodplain analyses includes the footprint of the Quarry pit within the drainage basin, but did not assume any retention from the Quarry pit. A post-reclamation hydrologic analysis based on the Santa Clara County criteria shows, accordingly, that the 100-year flow rate from the site will not exceed the FEMA flow rate. Therefore, the Quarry pit backfilling will not adversely increase the 100-year flow rates nor floodplain from FEMA. These results are corroborated by information provided by Jim Schaaf from Schaaf & Wheeler, who helped prepare the existing FEMA analyses. He indicated that the FIS analyses were based on the USGS mapping. It is likely that the FEMA study would have ignored storage effects from the pit. When performing large-scale hydrologic analyses using USGS mapping, it would not be typical to include storage from something like the quarry, particularly given the relatively small size in comparison the overall watershed.

Please let me know if you have questions.

Sincerely,

Wayne W. Chang, M.S., P.E.

Enclosures

Table 6 – Summary of Discharges, continued

Flooding Source and Location	Drainage Area (sq mi)	Peak Discharges (cfs) 10-Percent Annual Chance	2-Percent Annual Chance	1-Percent Annual Chance	0.2-Percent Annual Chance
PERMANENTE CREEK, continued					
Downstream of Miramonte Avenue	8.9[6]	370	760	890	1,030
Downstream of Permanente Road	3.40	760	1,260	1,480	1,960
Downstream of Portland Avenue	8.10	1,340	2,050	2,050	2,050
Downstream of U.S. Highway 101	15.80[2]	1,350	1,400[1]	1,400[1]	1,400[1]
Upstream of confluence with Hale Creek	9.20[2]	440[3]	840[3]	980[3]	1,110[3]
Upstream of Interstate Highway 280	7.60	1,250	2,160	2,570	3,480
Upstream of Portland Avenue	8.10	1,340	2,220	2,700	3,440
Upstream of Tributary, 700 feet upstream of Interstate Highway 280	3.90	860	1,460	1,720	2,310
Upstream of U.S. Highway 101	15.80[2]	1,350	2,250[4]	4,000[4]	7,100[4]
PERMANENTE DIVERSION					
At confluence with Stevens Creek	8.90[5]	1,230	1,280	1,390	1,550
At Grant Road	8.60	1,200	1,240[1]	1,340[1]	1,490[1]
Downstream of Carmel Terrace	8.20	1,075[1]	1,075[1]	1,075[1]	1,075[1]
Downstream of Diversion Structure	8.10	1,190	1,610	1,610	1,610
PROSPECT CREEK					
Upstream of confluence with Calabazas Creek	1.40	[6]	[6]	635	[6]
PURISSIMA CREEK					
At corporate limits	1.25	147	320	402	588
At Interstate Highway 280	0.30	37	82	104	153
At Viscaino Road	0.70	88	182	227	320
SAN FRANCISQUITO CREEK					
At Alma Street	40.60	4,350	7,050	8,280	9,850[1]
At U.S. Geological Survey gage	37.10	4,050	6,700	7,860	10,500
Downstream of Chaucer Road	41.60	4,350	6,000[1]	6,000[1]	6,200[1]

O4-12

[1]*Decrease in flow rate based on capacity restrictions*

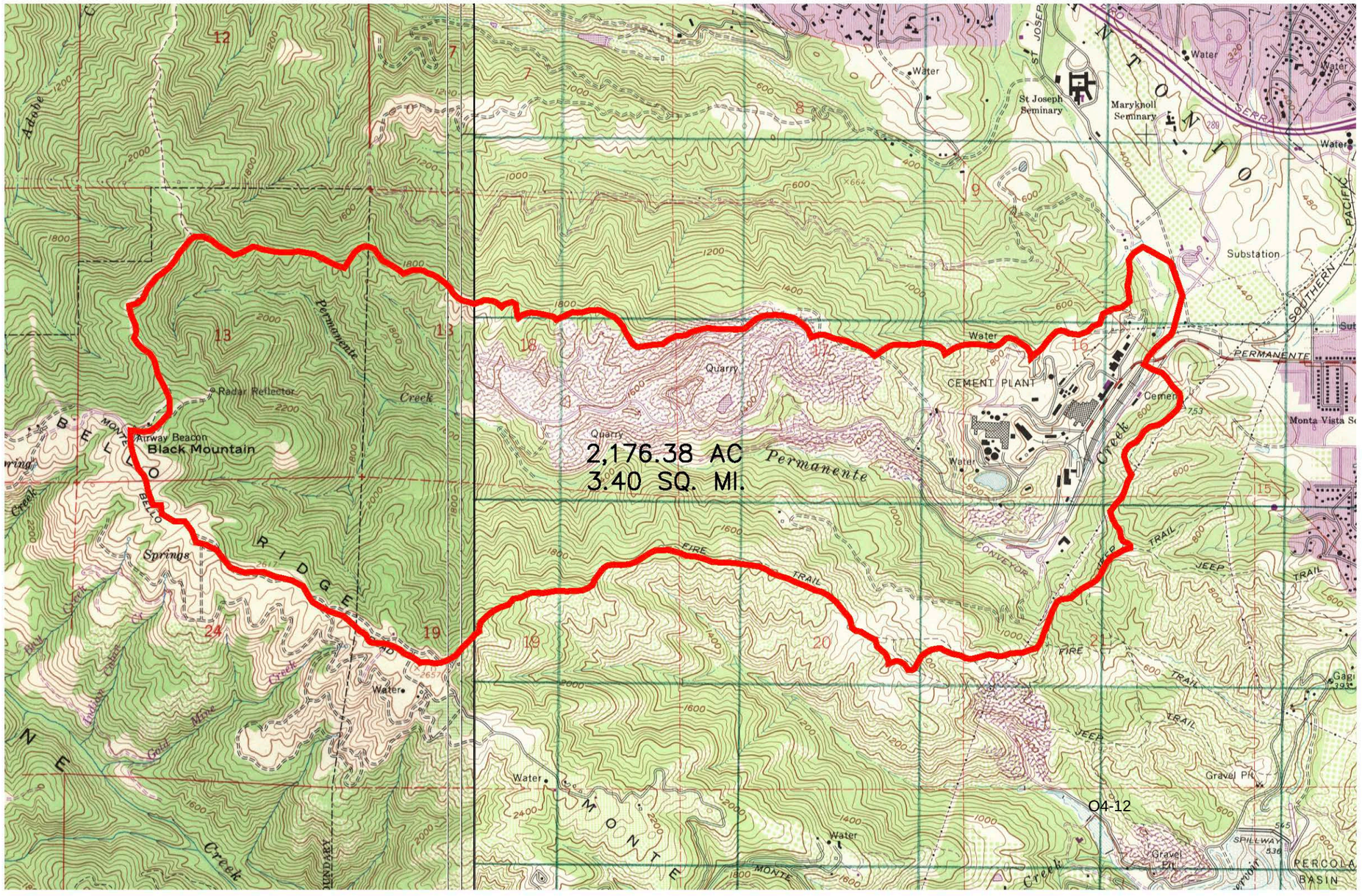
[2]*Decrease in flow rate due to storage along channel*

[3]*High flows affected by Permanente Diversion*

[4]*Flow influenced by spill from adjoining watercourse*

[5]*Low flows continue down Permanente Creek*

[6]*Data not available*



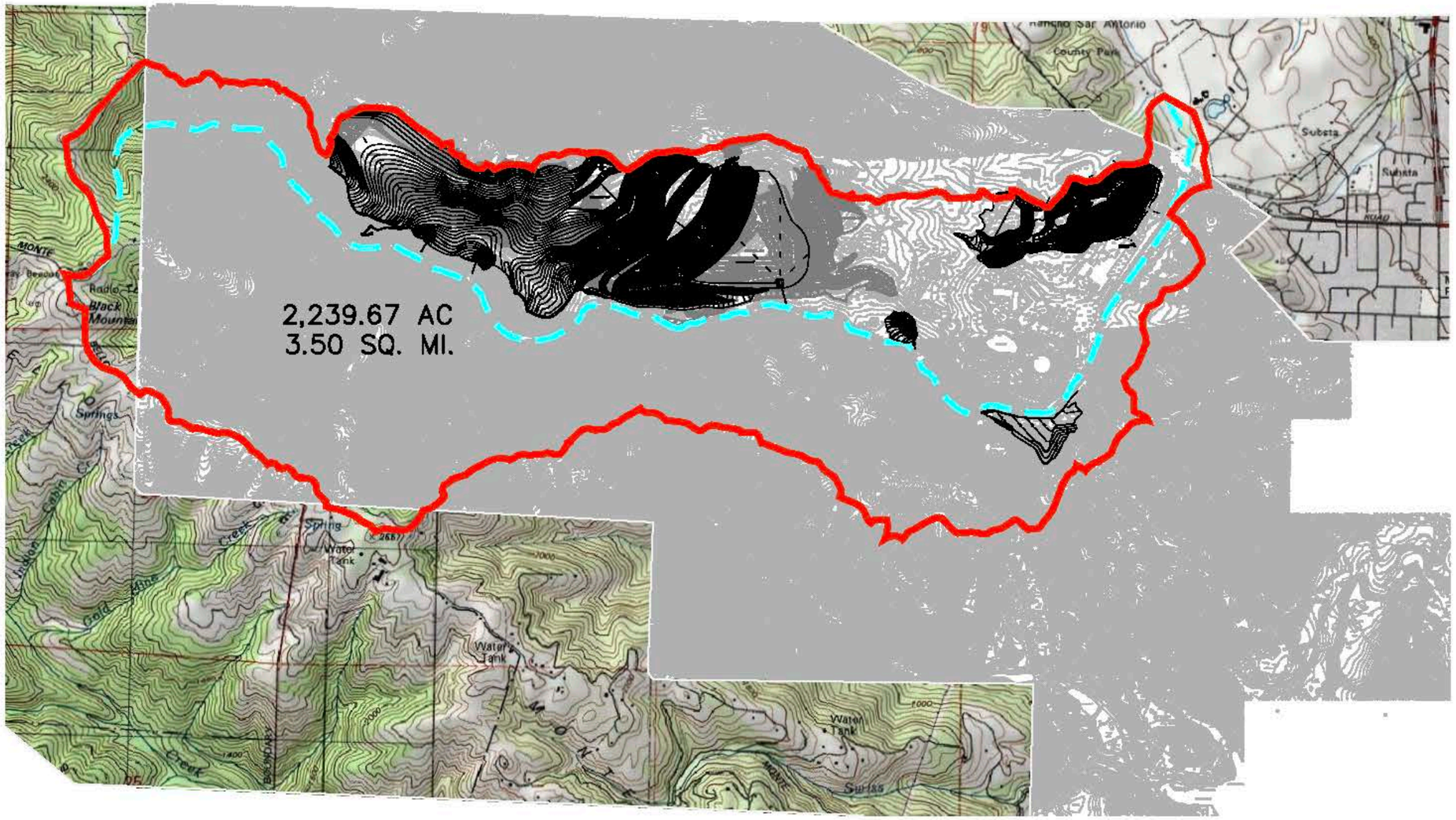
GRAPHIC SCALE

0 2000

1 INCH = 2,000 FEET

NOTE:
PERMANENTE CREEK WATERSHED BOUNDARY WAS DELINEATED USING 1968 MINDEGO HILL USGS MAP AND 1971 CUPERTINO USGS MAP. THE WATERSHED AREA HEREON MATCHES THE FEMA WATERSHED AREA. THEREFORE, THE DELINEATION REVEALS THAT THE QUARRY FOOTPRINT WAS INCLUDED IN THE LATE 1970'S FEMA FLOODPLAIN STUDY.

RECONSTRUCTION OF FEMA DRAINAGE BASIN



GRAPHIC SCALE

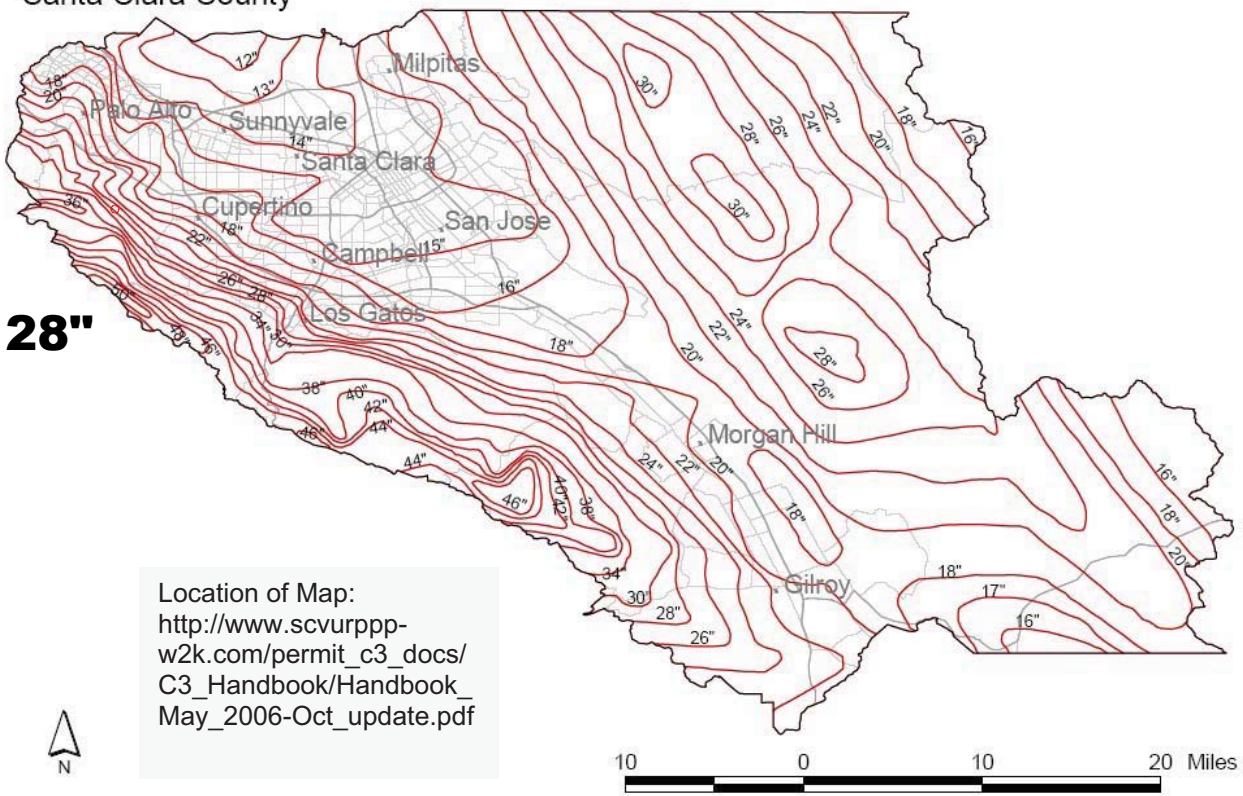
0 2000

1 INCH = 2,000 FEET

NOTE:
PERMANENTE CREEK WATERSHED BOUNDARY WAS DELINEATED BASED ON THE POST-RECLAMATION CONDITIONS, PROJECT'S TOPOGRAPHIC MAPPING, AND CURRENT USGS MAPS. THE BLUE LINE IS THE PERMANENTE CREEK FLOW LINE.

POST-PROJECT DRAINAGE BASIN

Figure A-2
Mean Annual Precipitation Map
Santa Clara County



SOURCE: Santa Clara Valley Water District, Mean Annual Precipitation Map, San Francisco & Monterey Bay Region, 1998

Figure A-2: Mean Annual Precipitation, Santa Clara County

PRECIP = 28"

3.3-72

O4-12

100-Year Return Period Rainfall

Duration	A	B	MAP, in	x, in	I, in/hr
5	0.269993	0.003580	28	0.3702	4.443
10	0.315263	0.007312	28	0.5200	3.120
15	0.421360	0.006957	28	0.6162	2.465
30	0.553934	0.009857	28	0.8299	1.660
60	0.626608	0.019201	28	1.1642	1.164
120	0.732944	0.036193	28	1.7463	0.873
180	0.816471	0.051981	28	2.2719	0.757
360	0.776677	0.101053	28	3.6062	0.601
24-hour	0.814046	0.243391	28	7.6290	for UH calc

Initial Abstraction

0.82 for CN 71

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Lag

N	L, mi	Lc, mi	S, ft/mi	D, hours	Lag, hours
0.07	5.14	2.53	465.87	0.27	1.06

D was selected to be 1/4 basin lag

Table E-1: Curve Numbers for AMC II

Land Use Type	Hydrologic Condition	Hydrologic Soil Group A	B	C	D
Open Water (100% Impervious)	good				
	fair				
	poor				
Low Density Residential (25% Impervious)	good	35	48	66	70
	fair	44	58	71	74
	poor	64	68	78	79
High Density Residential (50% Impervious)	good	35	48	65	70
	fair	44	58	71	74
	poor	64	68	78	79
Commercial/Industrial (80% Impervious)	good	35	48	65	70
	fair	44	58	71	74
	poor	64	68	78	79
Bare Rock/Sand/Clay (Imperviousness Varies)					
Quarries/Gravel Pits (0 % Impervious)	good	0	0	0	0
	fair	0	0	0	0
	poor	0	0	0	0
Deciduous Forest (0% Impervious)	good	27	30	41	48
	fair	35	48	57	63
	poor	48	66	74	79
Evergreen Forest (0% Impervious)	good	37	43	62	70
	fair	45	57	69	80
	poor	58	71	85	90
Mixed Forest	good	32	36	51	59
	fair	40	52	63	72
	poor	53	68	80	85
Shrub Land (0% Impervious)	good	27	43	60	68
	fair	35	51	65	72
	poor	48	62	72	78
Orchards (1% Impervious)	good	39	52	66	71
	fair	43	65	76	82
	poor	57	73	82	86
Vineyards (1% Impervious)	good	64	70	77	80
	fair	67	75	82	85
	poor	71	80	87	90
Grassland (0% Impervious)	good	38	50	69	76
	fair	48	60	74	80
	poor	58	70	80	84
Pasture/Hay (0% Impervious)	good	34	50	69	76
	fair	44	60	74	80
	poor	64	70	80	84
Row Crops (1% Impervious)	good	64	70	77	80
	fair	67	75	82	85
	poor	71	80	87	90
Small Grains (0% Impervious)	good	48	58	70	74
	fair	49	59	71	75
	poor	50	60	71	75
Fallow (1% Impervious)	good	64	68	78	79
	fair	70	77	84	86
	poor	77	86	91	94
Urban Recreational (10% Impervious)	good	34	48	66	70
	fair	44	58	71	74
	poor	64	64	78	79

Assume poor cover to be conservative (i.e., higher runoff)

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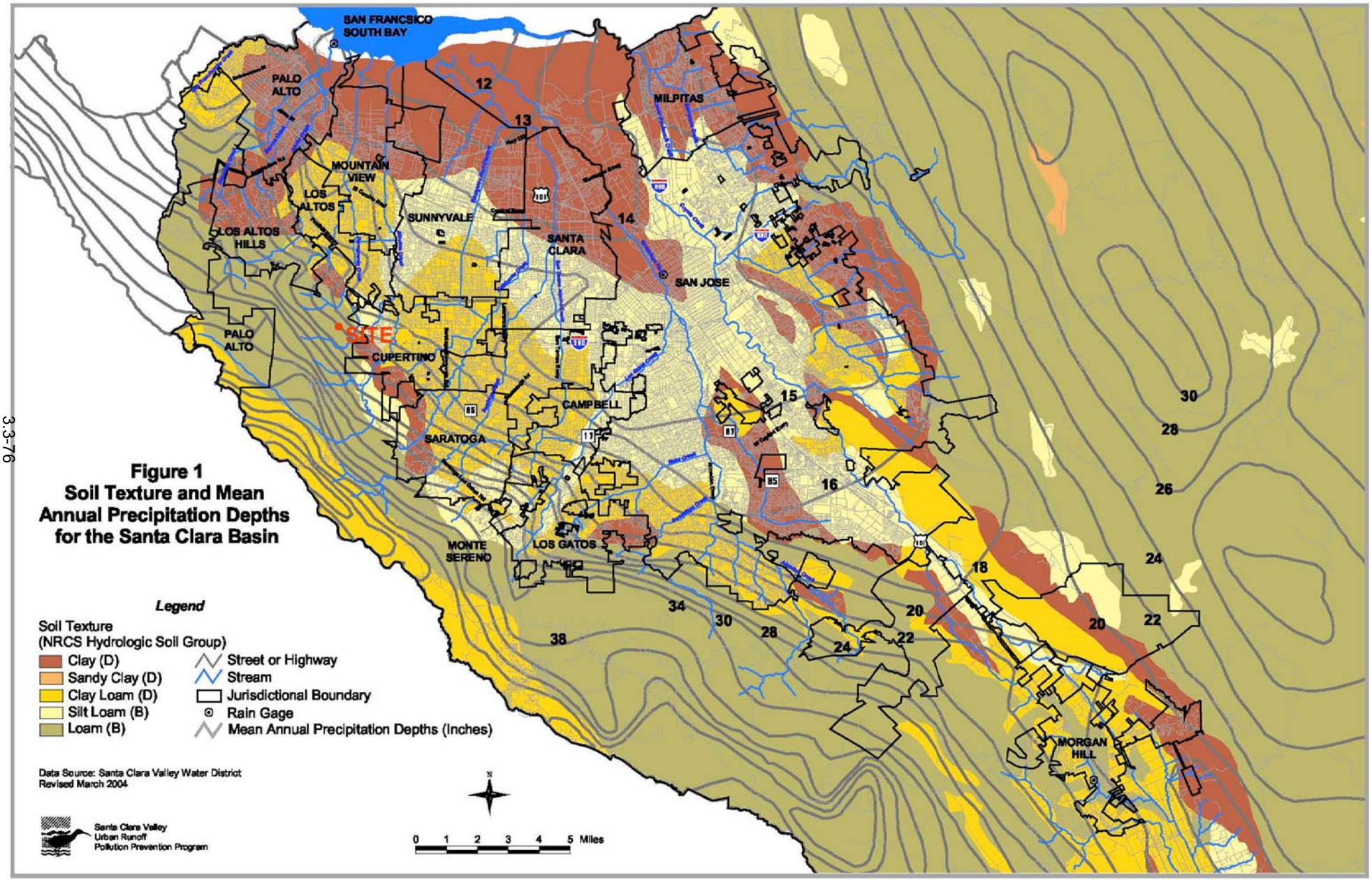
Table E-2: Conversion of AMC II Curve Numbers to Other AMC Values

AMC II	AMC I	AMC III	AMC II-1/4	AMC II-1/2	AMC II	AMC I	AMC III	AMC II-1/4	AMC II-1/2
100	100	100	100	100	61	41	78	65.5	70
99	97	100	99.5	100	60	40	78	64.5	69
98	94	99	98.5	99	59	39	77	63.5	68
97	91	99	97.5	98	58	38	76	62.5	67
96	89	99	97	98	57	37	75	61.5	66
95	87	98	96	97	56	36	75	61	66
94	85	98	95	96	55	35	74	60	65
93	83	98	94.5	96	54	34	73	59	64
92	81	97	93.5	95	53	33	72	58	63
91	80	97	92.5	94	52	32	71	57	62
90	78	96	91.5	93	51	31	70	56	61
89	76	96	91	93	50	31	70	55	60
88	75	95	90	92	49	30	69	54	59
87	73	95	89	91	48	29	68	53	58
86	72	94	88	90	47	28	67	52	57
85	70	94	87.5	90	46	27	66	51	56
84	68	93	86.5	89	45	26	65	50	55
83	67	93	85.5	88	44	25	64	49	54
82	66	92	84.5	87	43	25	63	48	53
81	64	92	84	87	42	24	62	47	52
80	63	91	83	86	41	23	61	46	51
79	62	91	82	85	40	22	60	45	50
78	60	90	81	84	39	21	59	44	49
77	59	89	80	83	38	21	58	43	48
76	58	89	79.5	83	37	20	57	42	47
75	57	88	78.5	82	36	19	56	41	46
74	55	88	77.5	81	35	18	55	40	45
73	54	87	76.5	80	34	18	54	39	44
72	53	86	75.5	79	33	17	53	38	43
71	52	86	75	79	32	16	52	37	42
70	51	85	74	78	31	16	51	36	41
69	50	84	73	77	30	15	50	35	40
68	48	84	72	76	25	12	43	29.5	34
67	47	83	71	75	20	9	37	24.5	29
66	46	82	70	74	15	6	30	19	23
65	45	82	69.5	74	10	4	22	13	16
64	44	81	68.5	73	5	2	13	7	9
63	43	80	67.5	72	0	0	0	0	0

For AMC II = 62, AMC II-1/2 = 71


SAN FRANCISCO SOUTH BAY
PALO ALTO
MOUNTAIN VIEW
LOS ALTOS
LOS ALTOS HILLS
SUNNYVALE
SANTA CLARA
MILPITAS
SAN JOSE
SITE
CUPERTINO
CAMPBELL
SARATOGA
MONTE SERENO
LOS GATOS
MORGAN HILL
12
13
14
15
16
18
20
22
24
26
28
30
34
38
Figure 1
Soil Texture and Mean Annual Precipitation Depths for the Santa Clara Basin
Legend
Soil Texture
(NRCS Hydrologic Soil Group)
Clay (D)
Sandy Clay (D)
Clay Loam (D)
Silt Loam (B)
Loam (B)
Street or Highway
Stream
Jurisdictional Boundary
Rain Gage
Mean Annual Precipitation Depths (Inches)
Data Source: Santa Clara Valley Water District
Revised March 2004
Santa Clara Valley Urban Runoff Pollution Prevention Program
N
0 1 2 3 4 5 Miles

```
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*               JUN   1998             *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   15DEC11  TIME  22:36:22  *
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*                                  *
*    U.S. ARMY CORPS OF ENGINEERS  *
*    HYDROLOGIC ENGINEERING CENTER *
*          609 SECOND STREET       *
*       DAVIS, CALIFORNIA 95616    *
*           (916) 756-1104         *
*                                  *
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X     X  X       X              X
XXXXXXX  XXXX    X        XXXXX  X
X     X  X       X              X
X     X  X       X     X        X
X     X  XXXXXXX   XXXXX        XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

O4-12

HEC-1 INPUT PAGE 1

```
         LINE      ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

                   *DIAGRAM
*** FREE ***
              1    ID   PERM CREEK
              2    ID   FEMA CONDITIONS
              3    ID   100-YEAR FLOW RATE
              4    ID   MEAN ANNUAL PRECIPITATION = 28"
              5    ID   SOIL TYPE B
              6    ID   COUNTY OF SANTA CLARA HYDROGRAPH METHOD
              7    ID   THIS ANALYSIS IS BASED ON POST-PROJECT CONDITIONS
              8    IT       5       0       0     300
              9    IO       5       2

             10    KK   BASIN
             11    IN       5
             12    PB    7.63
             13    PI  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015   0.001
             14    PI  0.0015  0.0015  0.0014  0.0014  0.0014  0.0014  0.0014  0.0014  0.0014   0.001
             15    PI  0.0014  0.0014  0.0014  0.0014  0.0030  0.0030  0.0030  0.0030  0.0030   0.003
             16    PI  0.0030  0.0030  0.0030  0.0030  0.0030  0.0030  0.0062  0.0062  0.0062   0.006
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             31    PI  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026   0.002
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             42    BA    3.50
             43    LS    0.82      71
             44    UD    1.06
             45    ZZ
```

O4-12

Letter O4

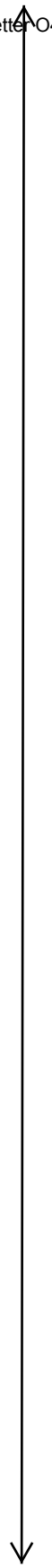
SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT
LINE (V) ROUTING (---->) DIVERSION OR PUMP FLOW

NO. (.) CONNECTOR (<----) RETURN OF DIVERTED OR PUMPED FLOW

10 BASIN

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION



O4-12

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*            VERSION 4.1               *
*                                      *
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

```
                     PERM CREEK
                     FEMA CONDITIONS
                     100-YEAR FLOW RATE
                     MEAN ANNUAL PRECIPITATION = 28"
                     SOIL TYPE B
                     COUNTY OF SANTA CLARA HYDROGRAPH METHOD
                     THIS ANALYSIS IS BASED ON POST-PROJECT CONDITIONS

  9 IO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          2  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT          HYDROGRAPH TIME DATA
                      NMIN          5  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1   0  STARTING DATE
                     ITIME       0000  STARTING TIME
                        NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      2   0  ENDING DATE
                    NDTIME        0055  ENDING TIME
                    ICENT          19  CENTURY MARK

                  COMPUTATION INTERVAL     .08 HOURS
                       TOTAL TIME BASE   24.92 HOURS

          ENGLISH UNITS
               DRAINAGE AREA         SQUARE MILES
               PRECIPITATION DEPTH   INCHES
               LENGTH, ELEVATION     FEET
               FLOW                  CUBIC FEET PER SECOND
               STORAGE VOLUME        ACRE-FEET
               SURFACE AREA          ACRES
               TEMPERATURE           DEGREES FAHRENHEIT
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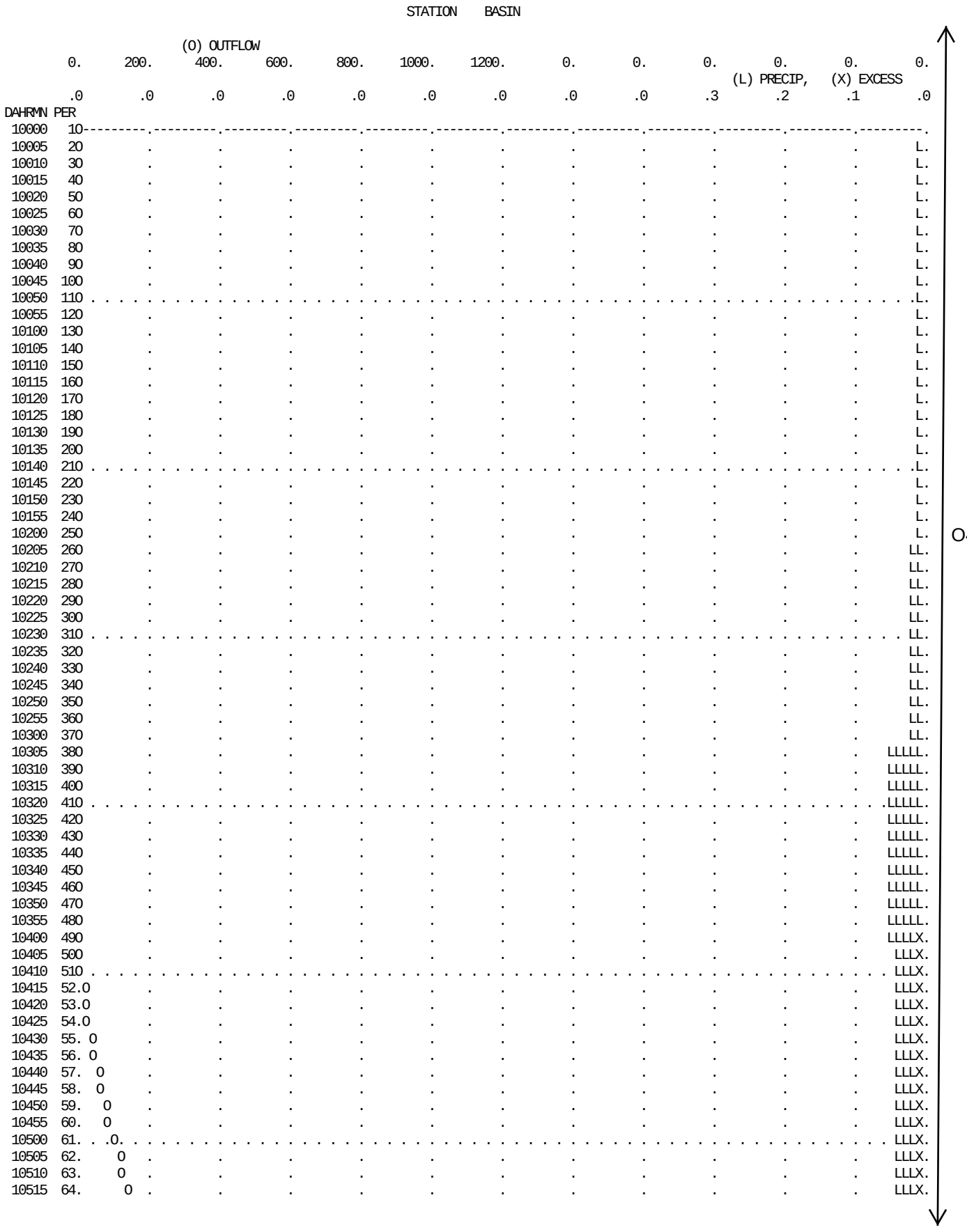
O4-12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(L) PRECIP, (X) EXCESS
.0 .0 .0 .0 .0 .0 .0 .0 .0 .3 .2 .1 .0
DAHRMN PER
10000 10
10005 20
10010 30
10015 40
10020 50
10025 60
10030 70
10035 80
10040 90
10045 100
10050 110
10055 120
10100 130
10105 140
10110 150
10115 160
10120 170
10125 180
10130 190
10135 200
10140 210
10145 220
10150 230
10155 240
10200 250
10205 260
10210 270
10215 280
10220 290
10225 300
10230 310
10235 320
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10300 370
10305 380
10310 390
10315 400
10320 410
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10330 430
10335 440
10340 450
10345 460
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10355 480
10400 490
10405 500
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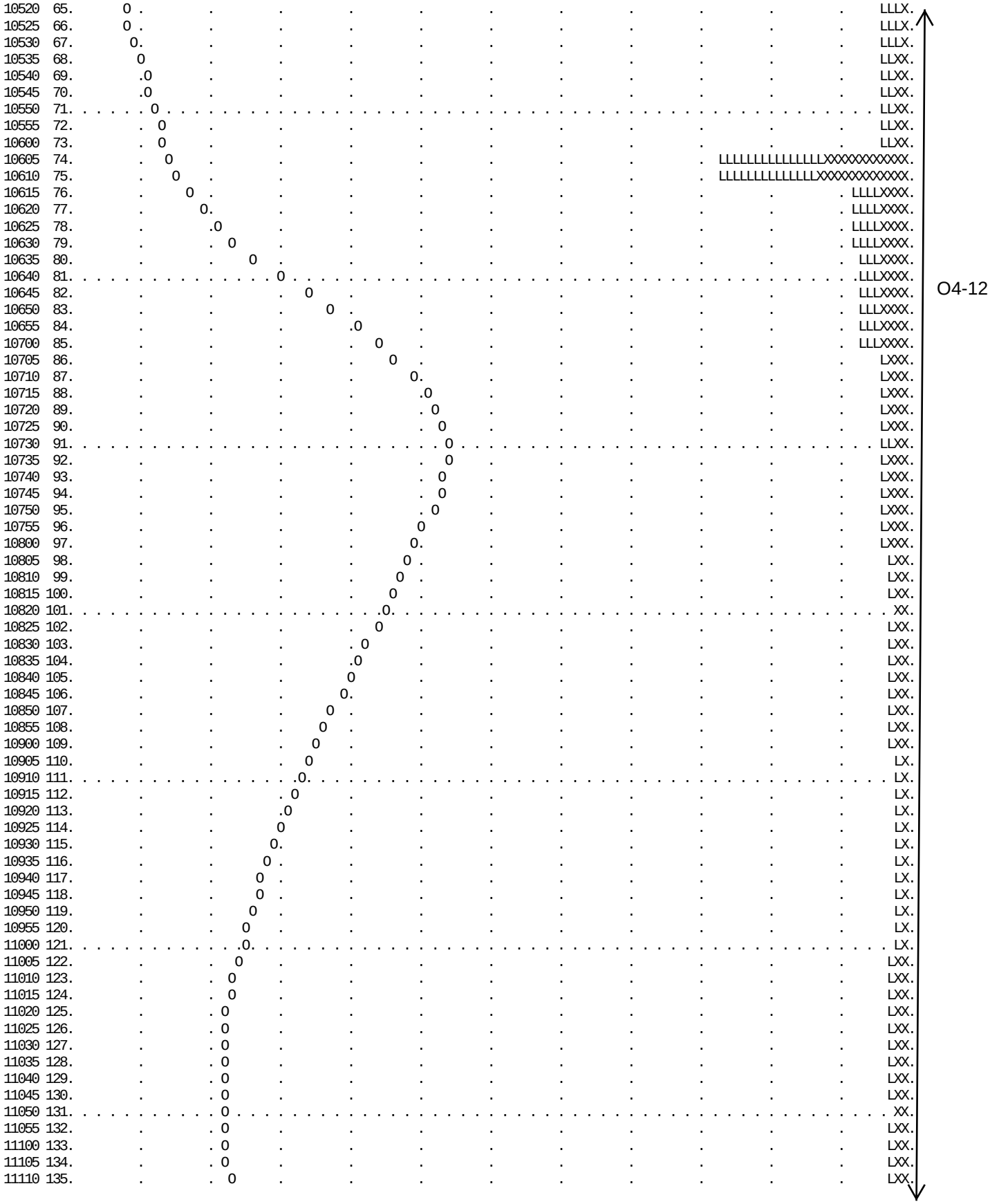
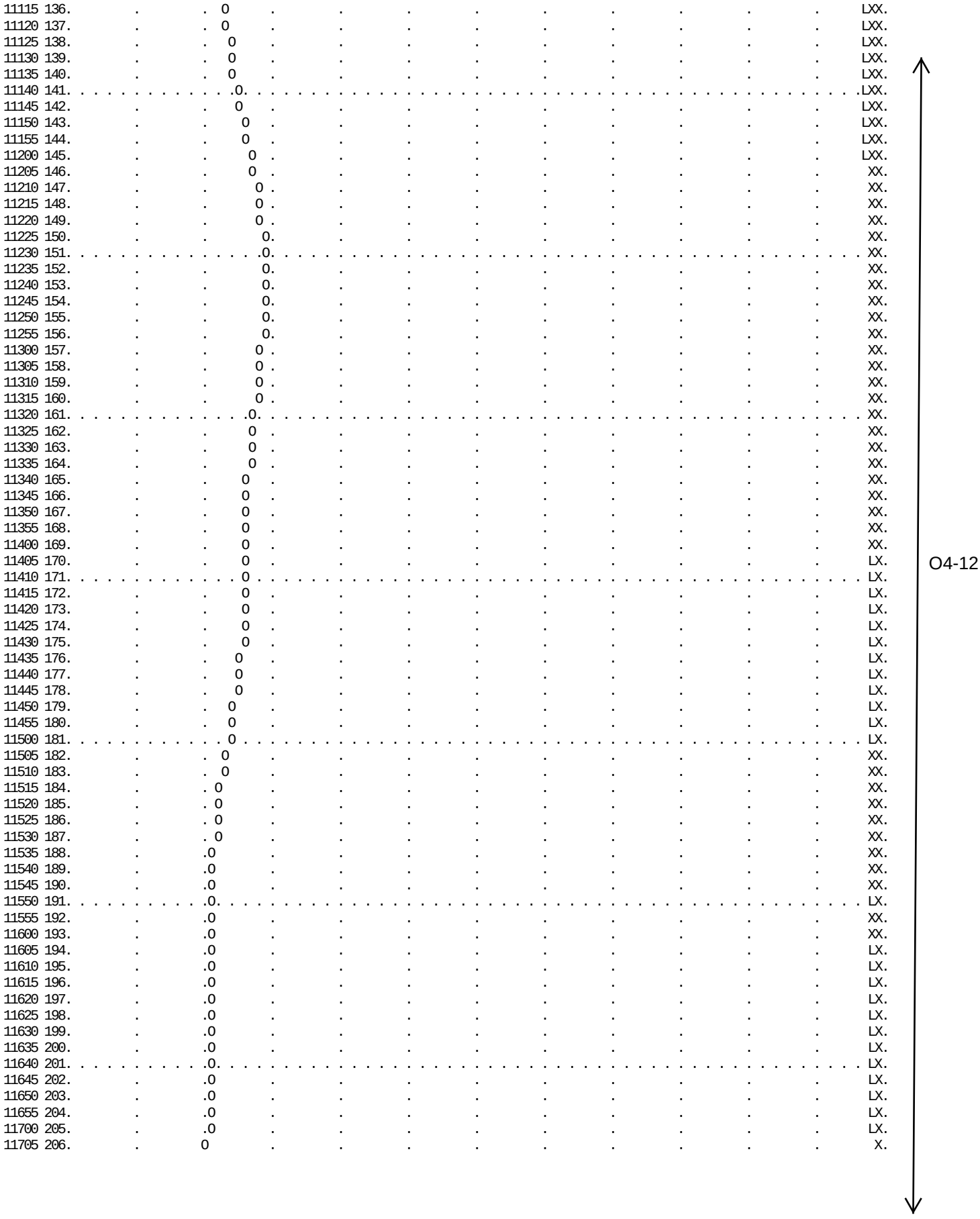
O4-12


O4-12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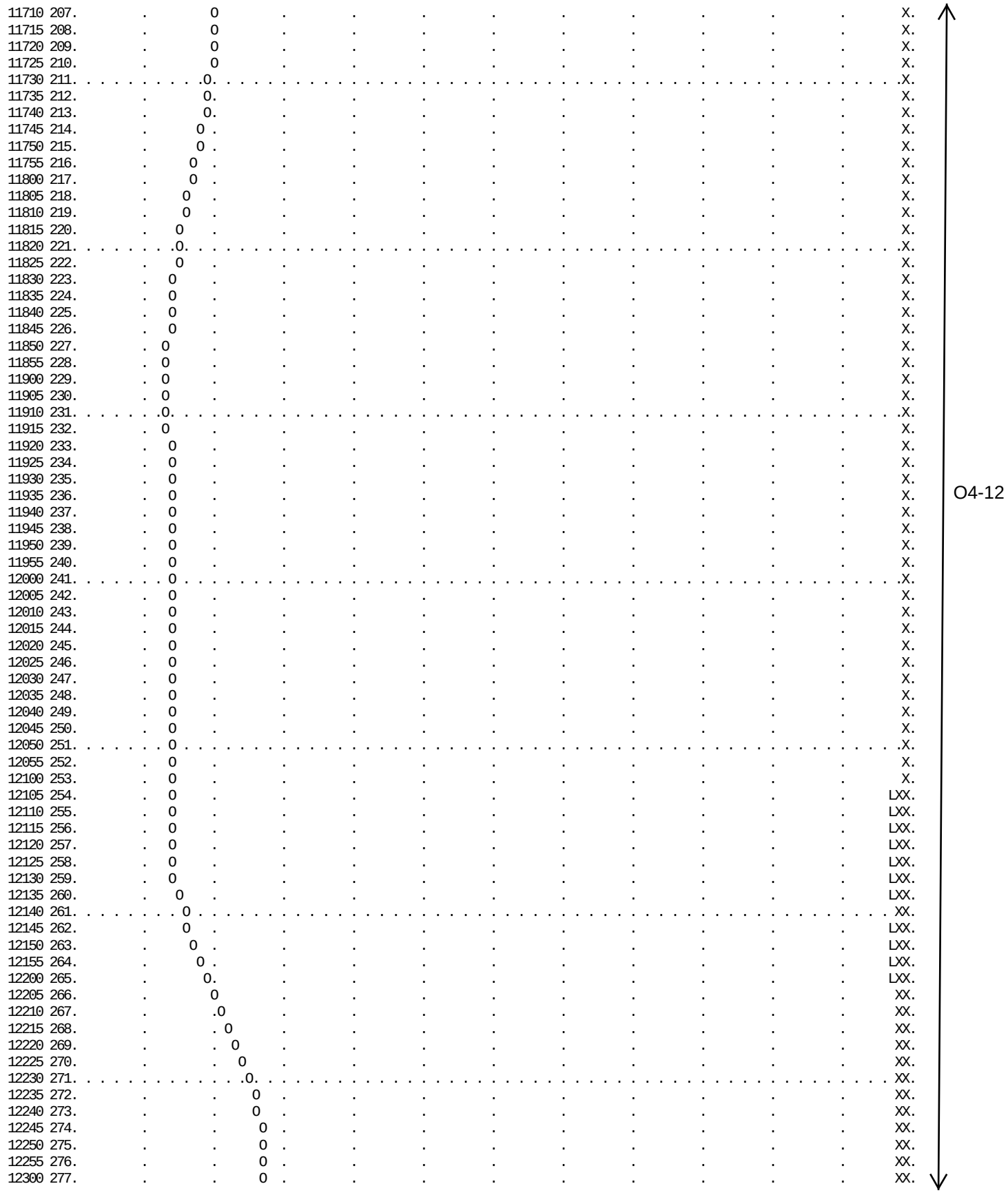
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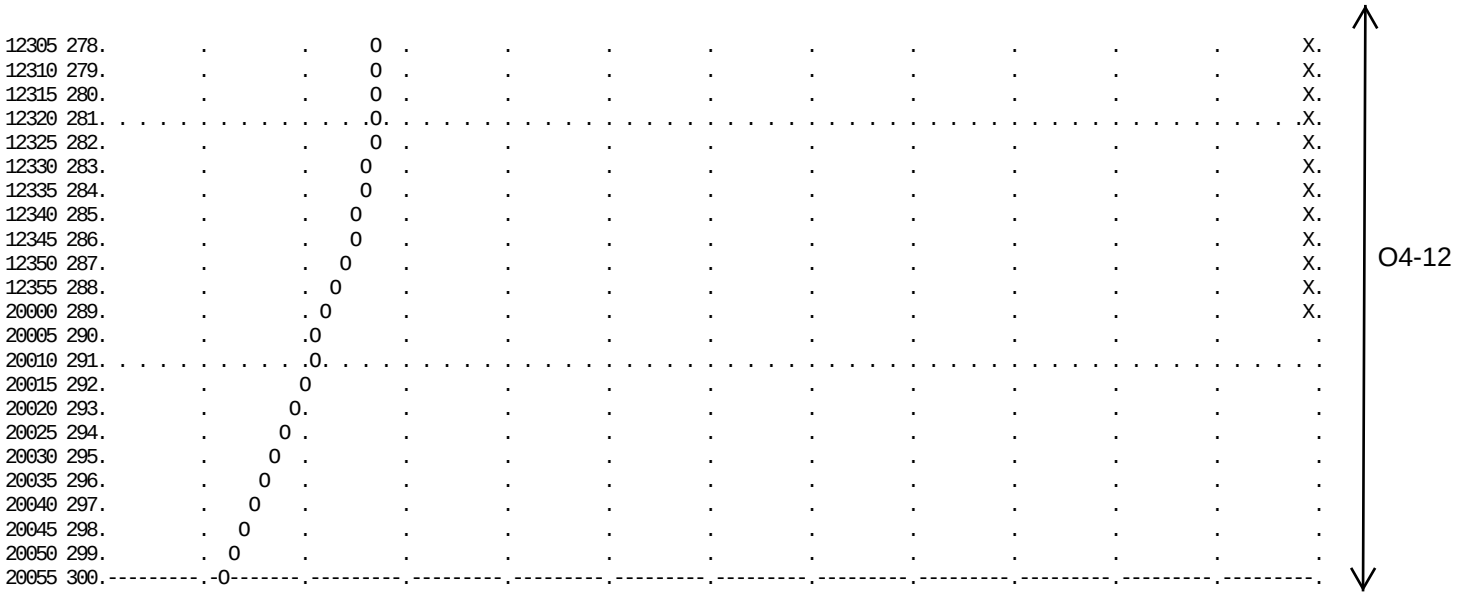
12300 277.

O4-12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20020 293.
20025 294.
20030 295.
20035 296.
20040 297.
20045 298.
20050 299.
20055 300.
O4-12

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	BASIN	1075.	7.58	668.	393.	379.	3.50		

*** NORMAL END OF HEC-1 ***

O4-12

ChangConsultants
Civil Engineering◦Hydrology◦Hydraulics◦Sedimentation

P.O. Box 9496
Rancho Santa Fe, CA 92067-4496
T: 858.692.0760
F: 858.832.1402
wayne@changconsultants.com

February 14, 2012

Mr. Marvin Howell
Hanson Aggregates Pacific Southwest, Inc.
P.O. Box 639069
San Diego, CA 92163-9069

Subject: Permanente Quarry Reclamation Plan – Supplemental Hydrologic Analyses

Dear Mr. Howell:

This letter contains supplemental hydrologic analyses performed for the Permanente Quarry. The analyses were used to assess a post-reclamation detention scenario, and to compare post-reclamation flows with pre-quarry flows.

Under current conditions, water stored in the main pit can be pumped into Permanente Creek at a rate of 4.5 cubic feet per second (per the December 2011, *Draft Environmental Impact Report).* A hydrologic analysis was performed to estimate the detention volume needed to attenuate the 100-year post-reclamation discharge from the North Quarry to 4.5 cfs. The attached exhibit contains the post-reclamation drainage map from the December 12, 2011, *Drainage Report for the Permanente Quarry.* There are three major drainage basins defined by the magenta boundaries. A detention analysis has been performed for the easterly drainage basin (315.32 acres) that is tributary to the pit floor. The attached results (nqwmsapd.out) show that approximately 108 acre-feet of volume would be needed to detain the post-reclamation 100-year flow of 235 cfs to 4.5 cfs. If the basin footprint was about 5 acres, the depth would need to be nearly 22 feet. O4-13

My December 16, 2011 letter to you contained a hydrologic analysis which showed that the post-reclamation 100-year flow rate in Permanente Creek near the quarry (1,075 cfs) is less than the FEMA 100-year flow rate (1,480 cfs). An additional hydrologic analysis has been performed to assess potential changes in flow rate generated by the post-reclamation project footprint in comparison to historic, pre-quarry conditions. Flow rate (or storm runoff) is affected by precipitation, drainage area, soil type, land use (impervious versus pervious cover), and travel time/rainfall intensity. For a given storm event, the precipitation is the same regardless of the site condition, e.g., the 100-year precipitation does not change for historic versus post-reclamation conditions. The overall drainage area also does not change. My understanding is that the soil type will be similar since the post-reclamation grading and fill will be done using on-site material. The impervious/pervious cover will be essentially the same particularly after revegetation.

The primary difference will be in the travel time of flow through the site. Under post-reclamation conditions, the travel lengths will tend to be longer because the flow will occur along benches and the perimeter road. The easterly drainage area on the exhibit provides an example of this. The post-reclamation flow follows a longer path from the top of the drainage area to the bottom (light blue dashed line) in comparison to the historic flow path, which followed a straighter line down the hillside (represented by the orange dashed line). Hydrologic conditions are such that a shorter flow path or time is associated with higher rainfall intensity than a longer flow path or time. By lengthening the flow path, the rainfall intensity and flow rate will be reduced. The attached analysis (nqwmsaph.out) was performed for the easterly drainage area assuming the flow path along the orange line and yields a 100-year flow rate of 344 cfs. In comparison, the post-reclamation analysis based on the light blue flow path has a 100-year flow of 235 cfs. Therefore, the longer flow paths created by the post-reclamation landform will reduce the off-site flow rate in comparison to historic pre-quarry conditions.

O4-13

Please let me know if you have questions.

Sincerely,

Wayne W. Chang, M.S., P.E.

Enclosures

Letter O4

O4-13

3.3-89

3 AC
300
310
302
69.89 AC
2.56 AC
312
3.33 AC
304
40C
204
40B
100
200
29.64 AC
202
21.63 AC
PAD ELEVATION = 1700'
PAD ELEVATION 1750'
CENTROID
315.32 AC
44.45 AC
PAD ELEVATION = 990'
40A
102

LEGEND:

- MAJOR DRAINAGE BASIN BOUNDARY
- MINOR DRAINAGE BASIN BOUNDARY
- OVERLAND FLOW PATH
- 3.62 AC DRAINAGE BASIN AREA
- 100 NODE NUMBER
- 40A PROPOSED DESILTATION BASIN

NOTE:
THE DESILTATION BASINS ARE TEMPORARY AND WILL BE ALLOWED TO FILL ONCE THE VEGETATION ESTABLISHES. THE HYDROLOGIC ANALYSES WERE BASED ON THE FINAL POST-RECLAMATION CONDITIONS.

SCALE: 1" = 300'

0 150 300 600

NORTH QUARRY & WEST MATERIALS STORAGE AREA

PROPOSED CONDITION RATIONAL METHOD WORK MAP

NQWMSAPD.OUT

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*               JUN  1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   02FEB12  TIME  19:44:19  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

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X     X  XXXXXXX   XXXXX          X
X     X  X       X     X        XX
X     X  X       X              X
XXXXXXX  XXXX    X        XXXXX  X
X     X  X       X               X
X     X  X       X     X         X
X     X  XXXXXXX   XXXXX         XXX
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O4-13

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT PAGE 1

```
         LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

                       *DIAGRAM
*** FREE ***
              1        ID   WEST MATERIALS STORAGE AREA & NORTH QUARRY
              2        ID   PROPOSED CONDITIONS
              3        ID   100-YEAR FLOW RATE
              4        ID   COUNTY OF SANTA CLARA HYDROGRAPH METHOD
              5        ID   DETENTION VOLUME FOR 4.5 CFS OF OUTFLOW
              6        IT       5       0       0     300
              7        IO       5       2

              8        KK WMSA-NQ
              9        IN       5
             10        PB    7.63
             11        PI  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015   0.001
             12        PI  0.0015  0.0015  0.0014  0.0014  0.0014  0.0014  0.0014  0.0014  0.0014   0.001
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             14        PI  0.0030  0.0030  0.0030  0.0030  0.0030  0.0030  0.0062  0.0062  0.0062   0.006
             15        PI  0.0062  0.0062  0.0062  0.0062  0.0062  0.0062  0.0062  0.0062  0.0055   0.005
             16        PI  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055   0.005
             17        PI  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053   0.005
             18        PI  0.0053  0.0053  0.0345  0.0345  0.0103  0.0103  0.0103  0.0103  0.0094   0.009
             19        PI  0.0094  0.0094  0.0094  0.0094  0.0053  0.0053  0.0053  0.0053  0.0053   0.005
             20        PI  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0033  0.0033  0.0033   0.003
             21        PI  0.0033  0.0033  0.0033  0.0033  0.0033  0.0033  0.0033  0.0033  0.0025   0.002
             22        PI  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025   0.002
             23        PI  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034   0.003
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             25        PI  0.0041  0.0041  0.0041  0.0041  0.0031  0.0031  0.0031  0.0031  0.0031   0.003
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             28        PI  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023   0.002
             29        PI  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026   0.002
             30        PI  0.0026  0.0026  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023   0.002
             31        PI  0.0023  0.0023  0.0023  0.0023  0.0013  0.0013  0.0013  0.0013  0.0013   0.001
             32        PI  0.0013  0.0013  0.0013  0.0013  0.0013  0.0013  0.0017  0.0017  0.0017   0.001
             33        PI  0.0017  0.0017  0.0017  0.0017  0.0017  0.0017  0.0017  0.0017  0.0018   0.001
             34        PI  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018   0.001
             35        PI  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015   0.001
             36        PI  0.0015  0.0015  0.0037  0.0037  0.0037  0.0037  0.0037  0.0037  0.0037   0.003
             37        PI  0.0037  0.0037  0.0037  0.0037  0.0030  0.0030  0.0030  0.0030  0.0030   0.003
             38        PI  0.0030  0.0030  0.0030  0.0030  0.0030  0.0030  0.0015  0.0015  0.0015   0.001
             39        PI  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015
             40        BA  0.4927
             41        LS    0.82      71
             42        UD     .30

             43        KK  DETAIN
             44        RS       1    STOR      -1
             45        SV       0     108
             46        SQ       0     4.5
             47        SE     100     101
             48        ZZ


                 SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    8     WMSA-NQ
              V
              V
   43      DETAIN

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
```

O4-13

```
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*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN  1998               *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   02FEB12  TIME  19:44:19  *
*                                      *
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```
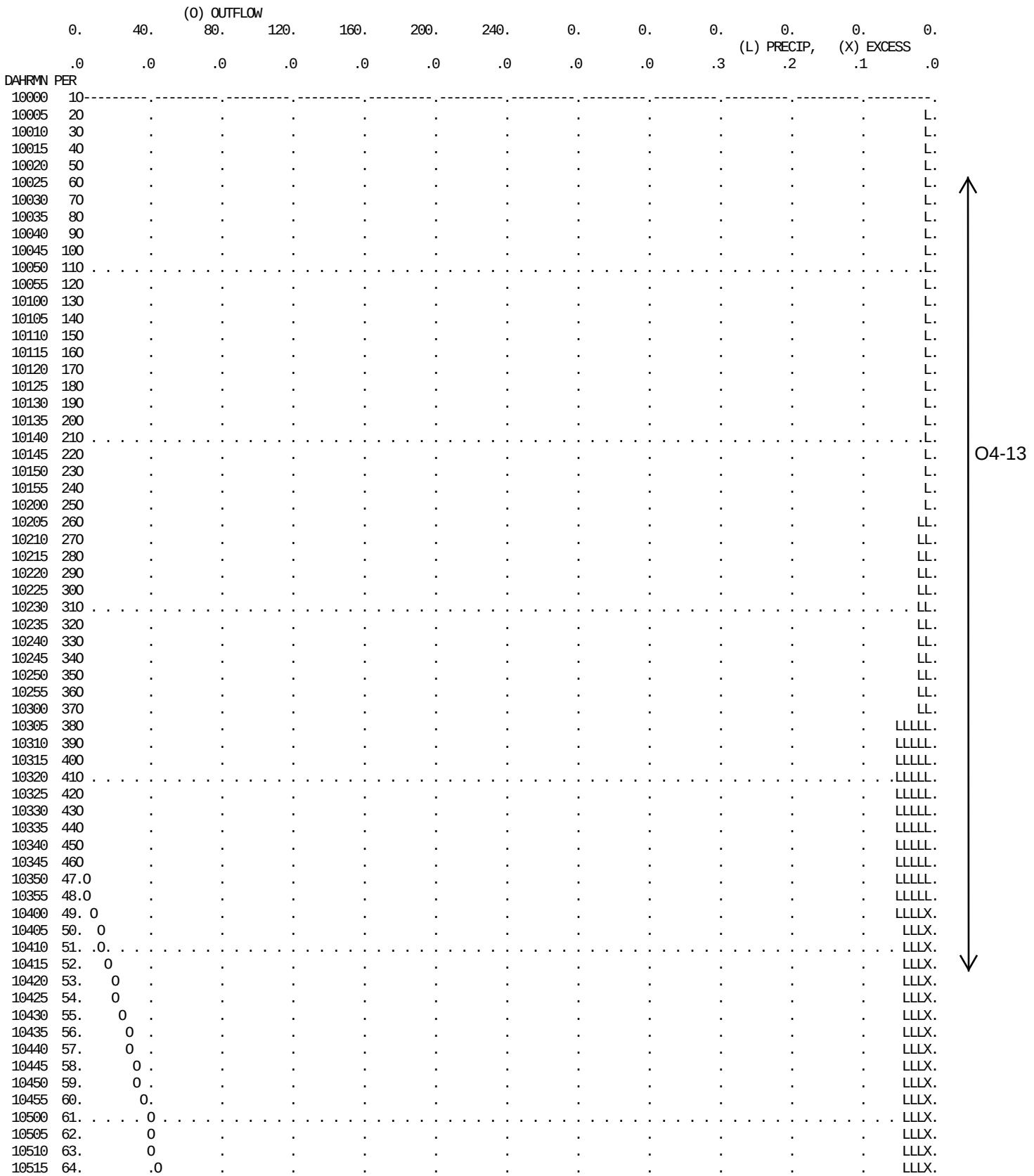
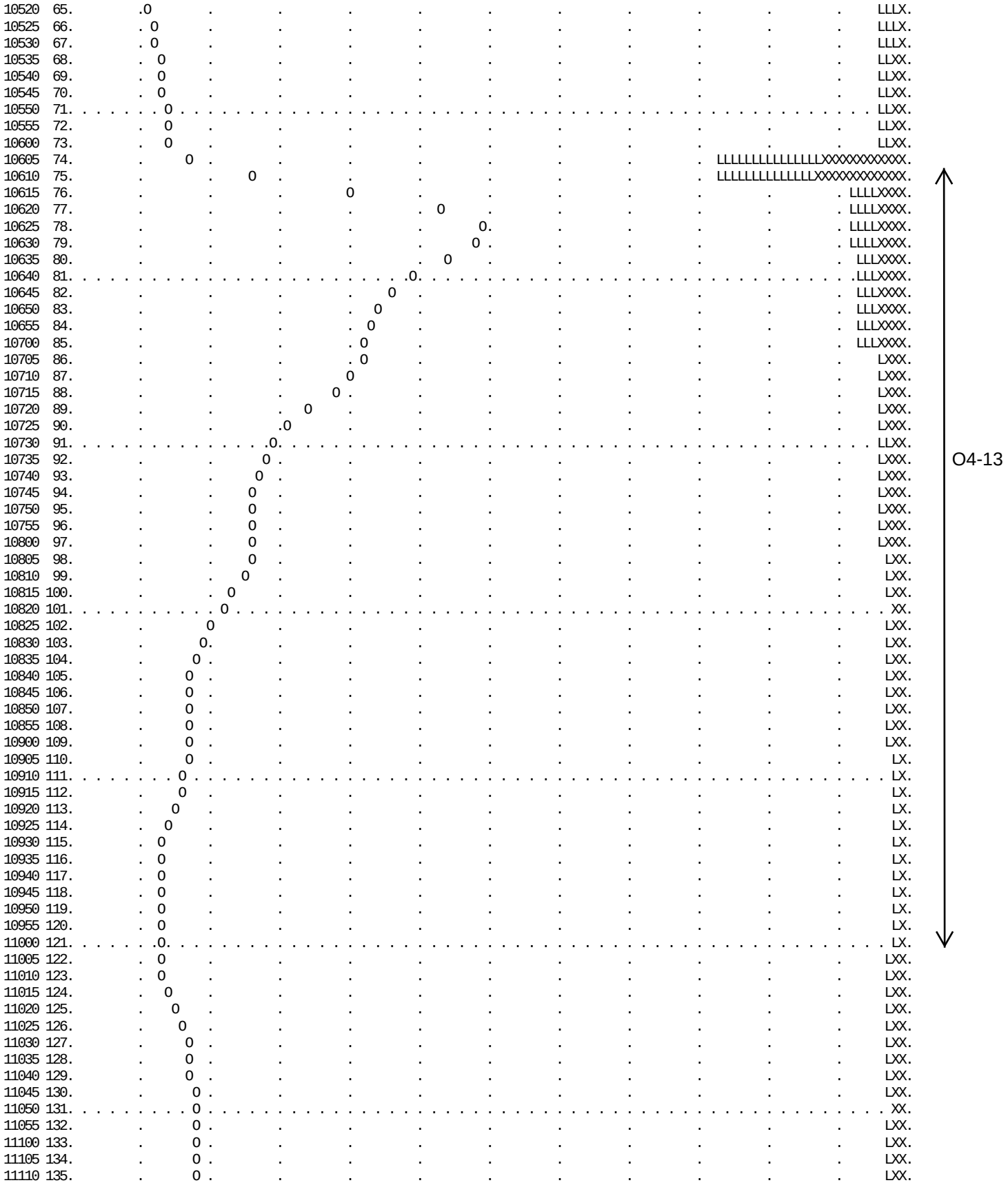

```
                    WEST MATERIALS STORAGE AREA & NORTH QUARRY
                    PROPOSED CONDITIONS
                    100-YEAR FLOW RATE
                    COUNTY OF SANTA CLARA HYDROGRAPH METHOD
                    DETENTION VOLUME FOR 4.5 CFS OF OUTFLOW

  7 IO         OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          2  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT         HYDROGRAPH TIME DATA
                     NMIN          5  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME       0055  ENDING TIME
                   ICENT          19  CENTURY MARK

                 COMPUTATION INTERVAL     .08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

       ENGLISH UNITS
            DRAINAGE AREA         SQUARE MILES
            PRECIPITATION DEPTH   INCHES
            LENGTH, ELEVATION     FEET
            FLOW                  CUBIC FEET PER SECOND
            STORAGE VOLUME        ACRE-FEET
            SURFACE AREA          ACRES
            TEMPERATURE           DEGREES FAHRENHEIT
```

O4-13

STATION WMSA-NQ



O4-13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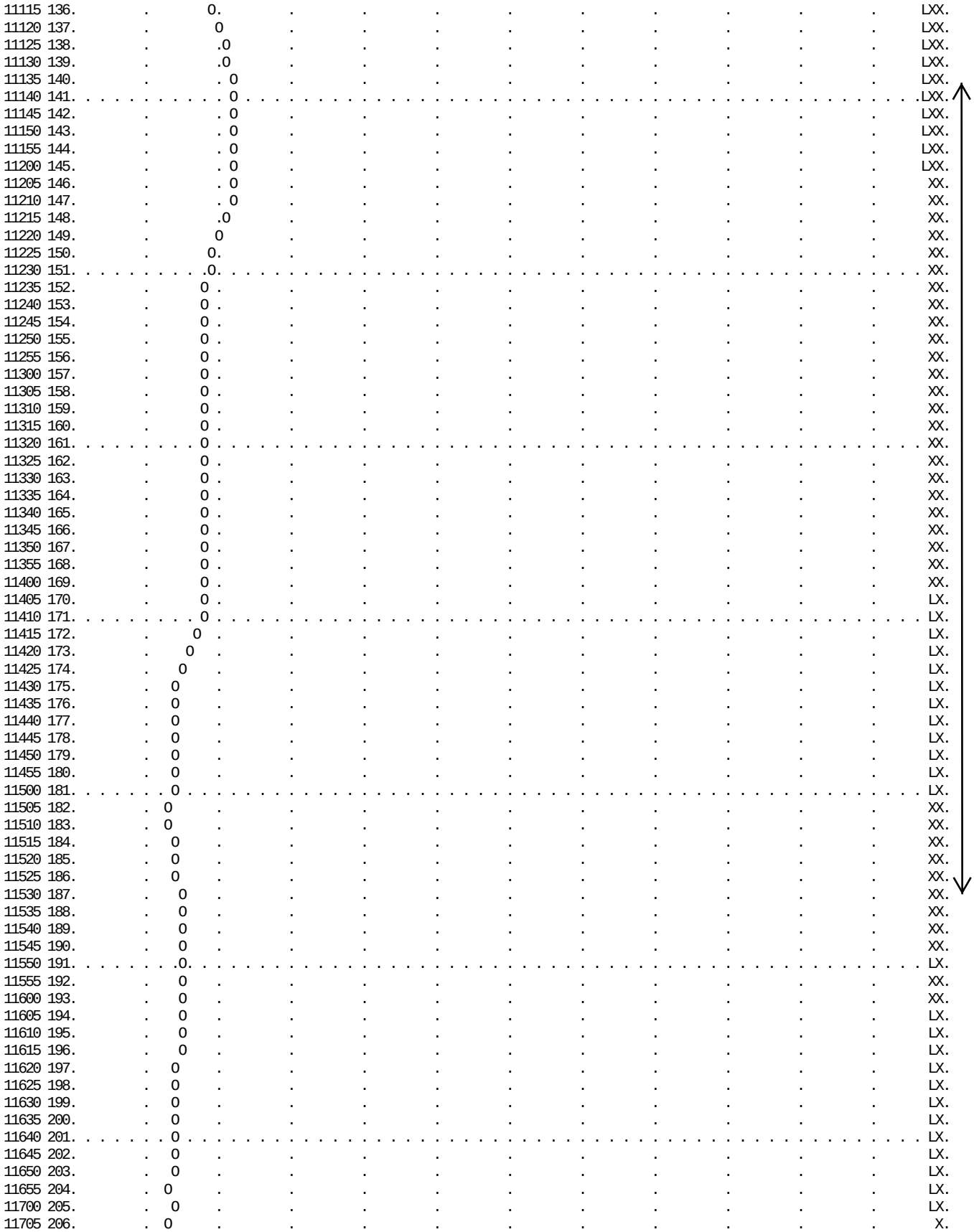
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11135 140. . . 0 . . . . . LXX.
11140 141. . . . . 0 . . . . . LXX.
11145 142. . . 0 . . . . . LXX.
11150 143. . . 0 . . . . . LXX.
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11210 147. . . 0 . . . . . XX.
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11410 171. . . . . 0 . . . . . LX.
11415 172. . 0 . . . . . LX.
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11425 174. . 0 . . . . . LX.
11430 175. . 0 . . . . . LX.
11435 176. . 0 . . . . . LX.
11440 177. . 0 . . . . . LX.
11445 178. . 0 . . . . . LX.
11450 179. . 0 . . . . . LX.
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11520 185. . 0 . . . . . XX.
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11545 190. . 0 . . . . . XX.
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11600 193. . 0 . . . . . XX.
11605 194. . 0 . . . . . LX.
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11615 196. . 0 . . . . . LX.
11620 197. . 0 . . . . . LX.
11625 198. . 0 . . . . . LX.
11630 199. . 0 . . . . . LX.
11635 200. . 0 . . . . . LX.
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11645 202. . 0 . . . . . LX.
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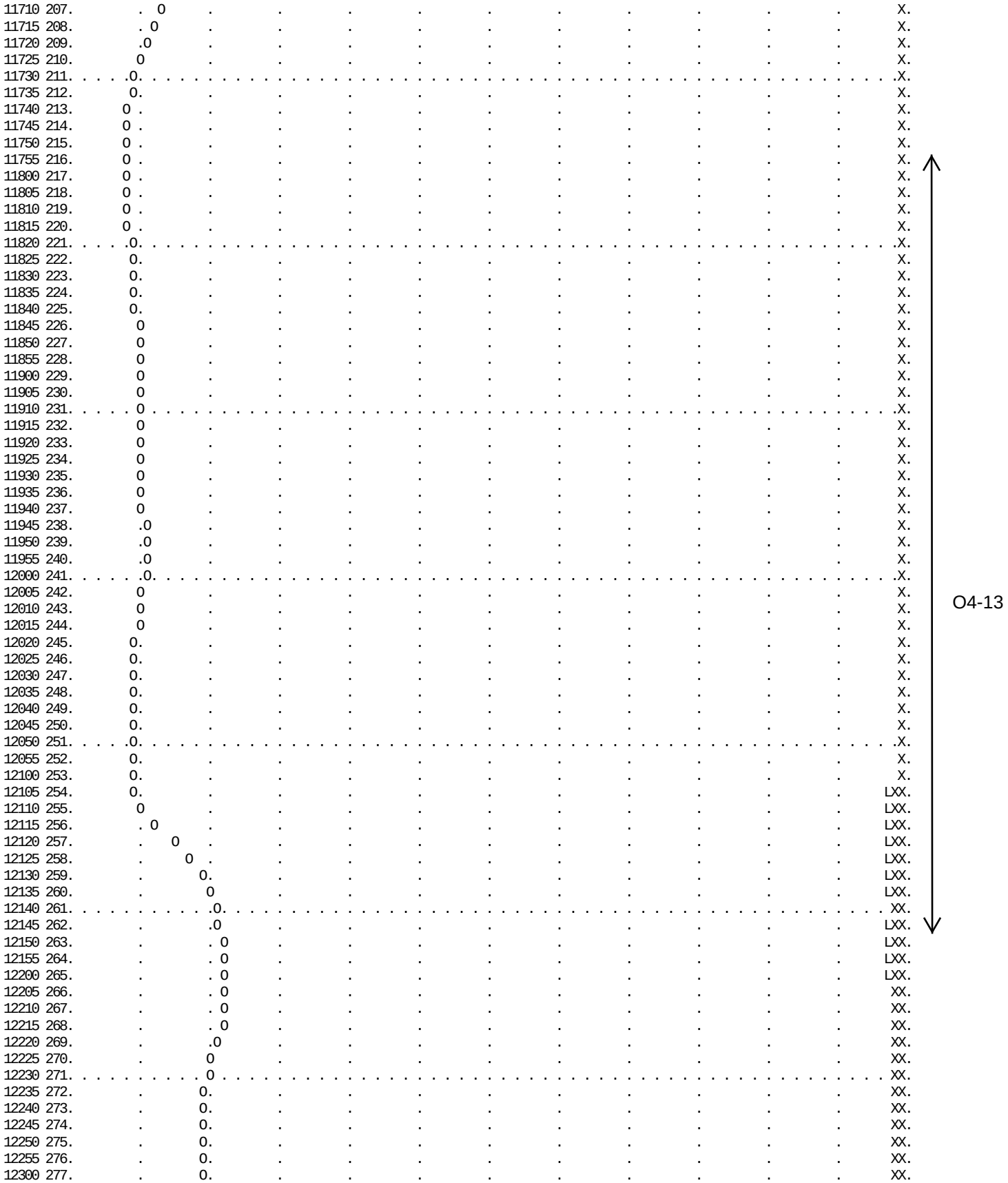
11705 206. . 0 . . . . . X.

O4-13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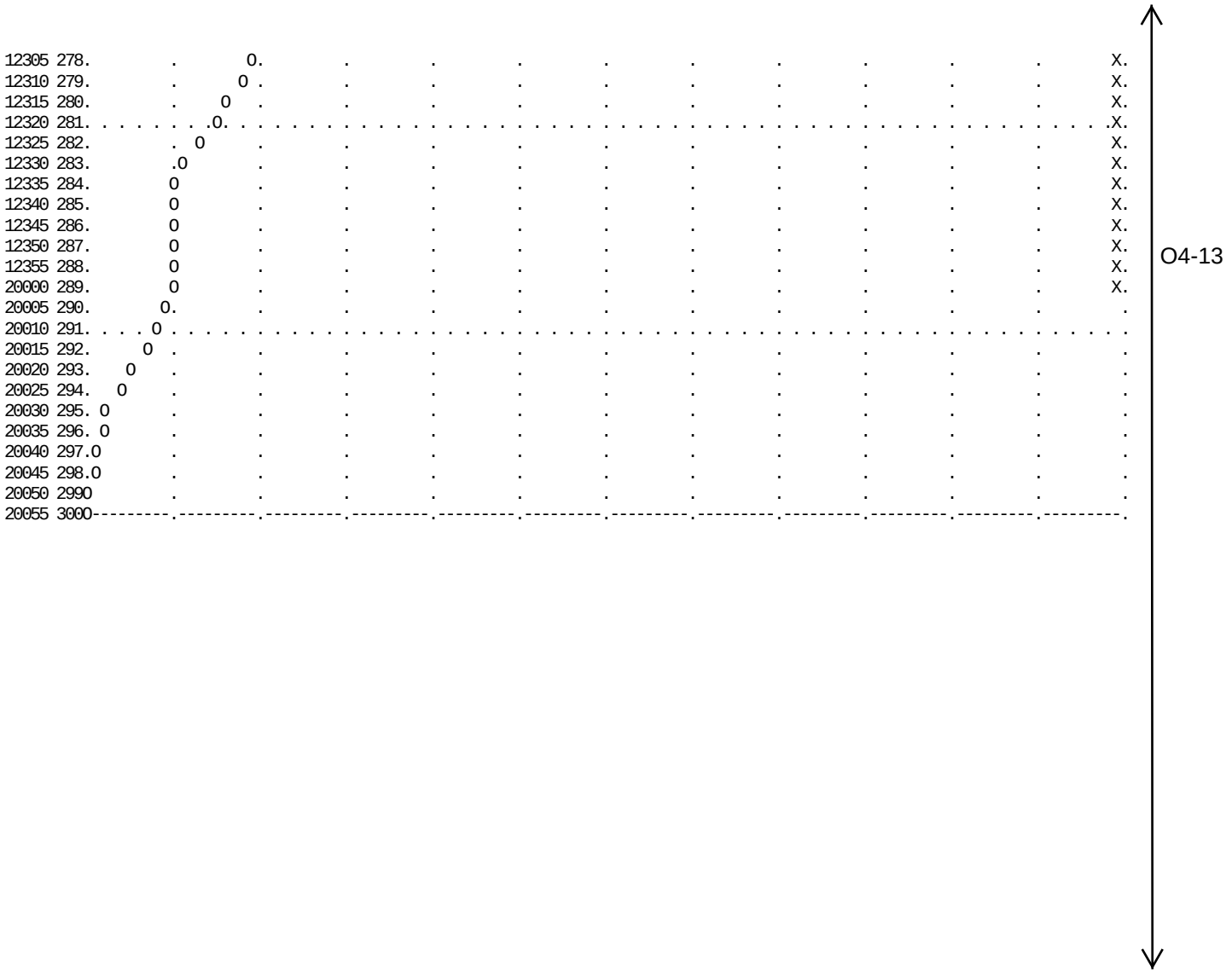
O4-13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20010 291.
20015 292.
20020 293.
20025 294.
20030 295.
20035 296.
20040 297.
20045 298.
20050 2990
20055 3000
O4-13

STATION DETAIN

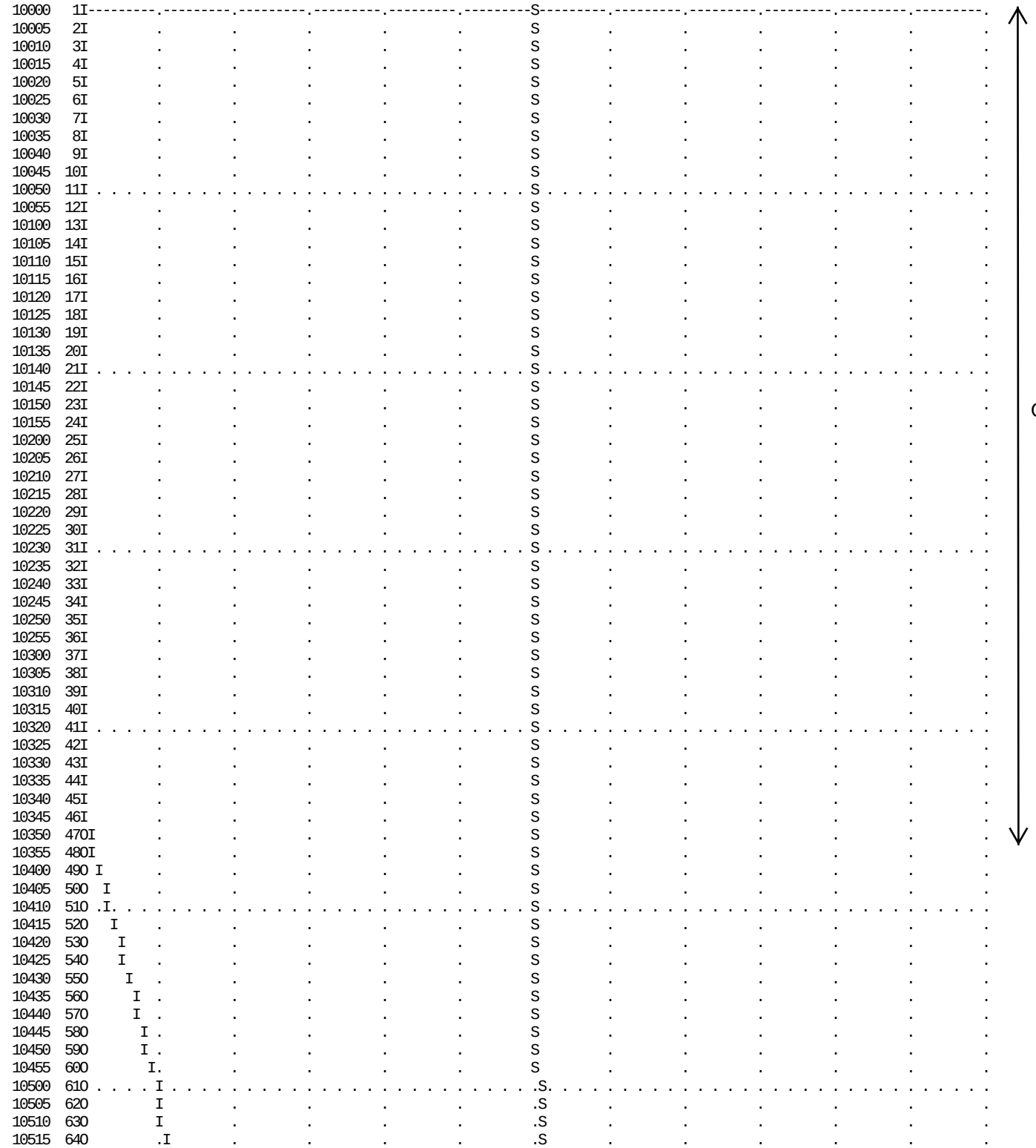
(I) INFLOW, (O) OUTFLOW

0. 40. 80. 120. 160. 200. 240. 0. 0. 0. 0. 0. 0.

(S) STORAGE

0. 0. 0. 0. 0. 0. 0. 40. 80. 120. 0. 0. 0.

DAHRMN PER



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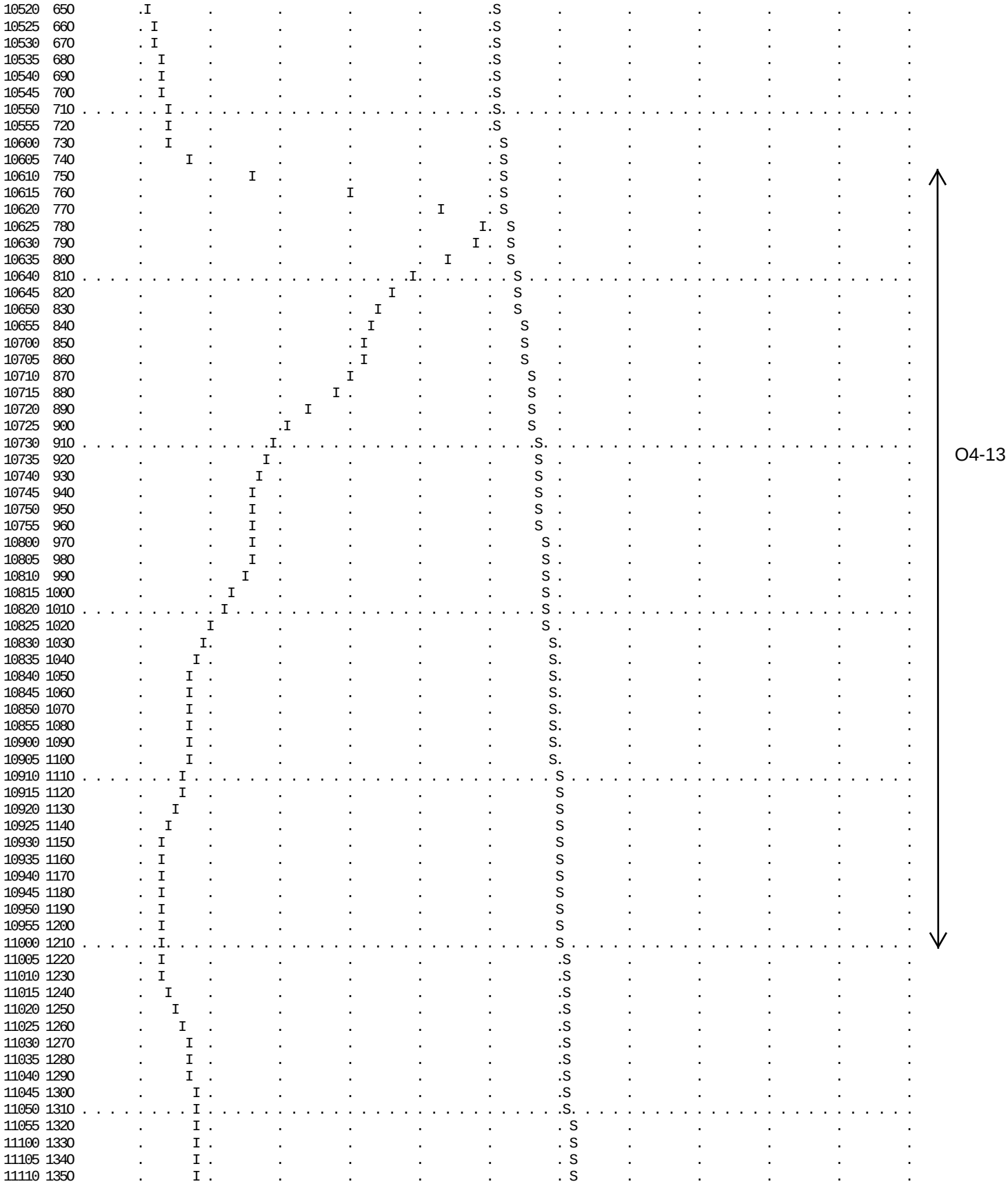
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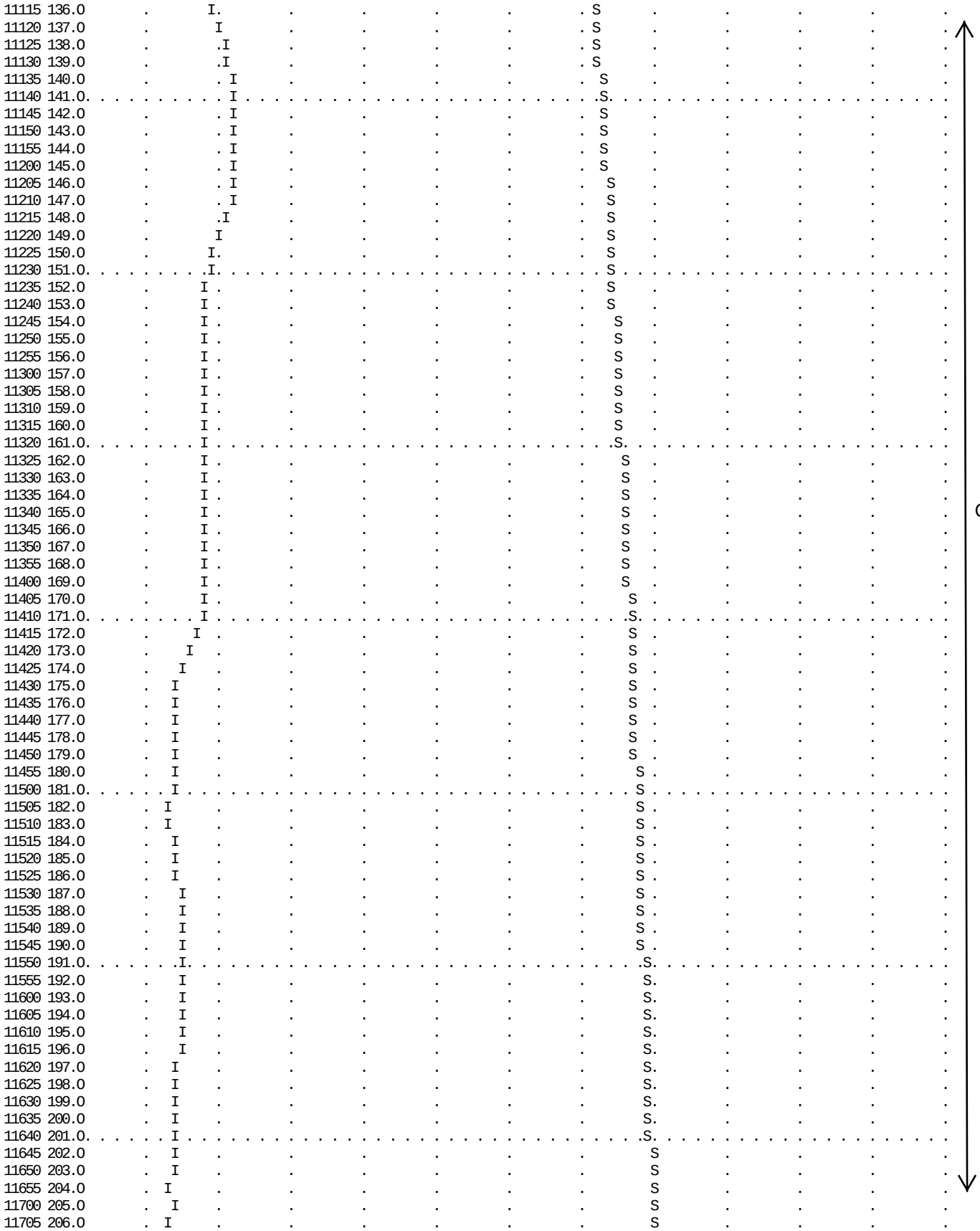
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11705 206.0

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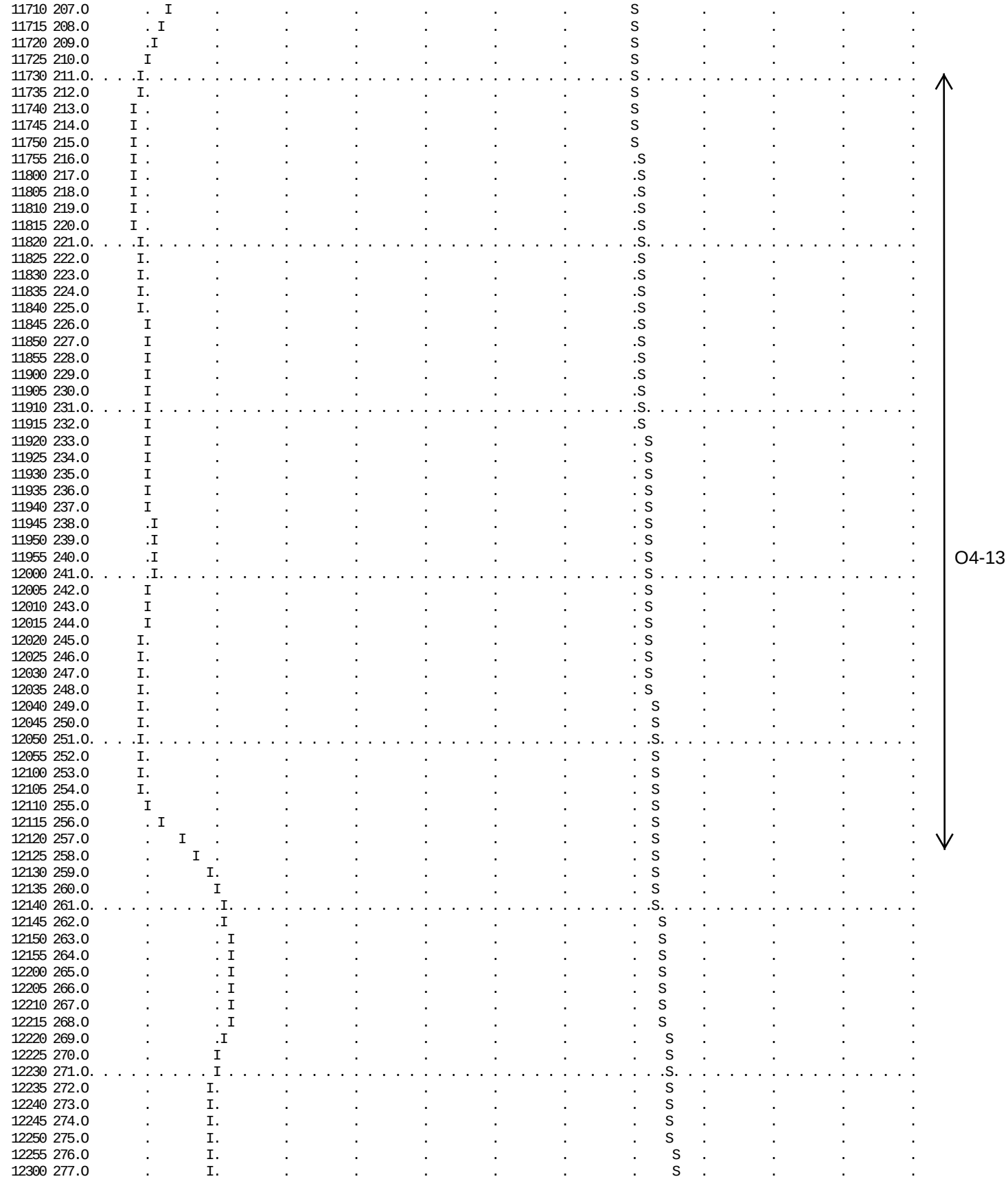
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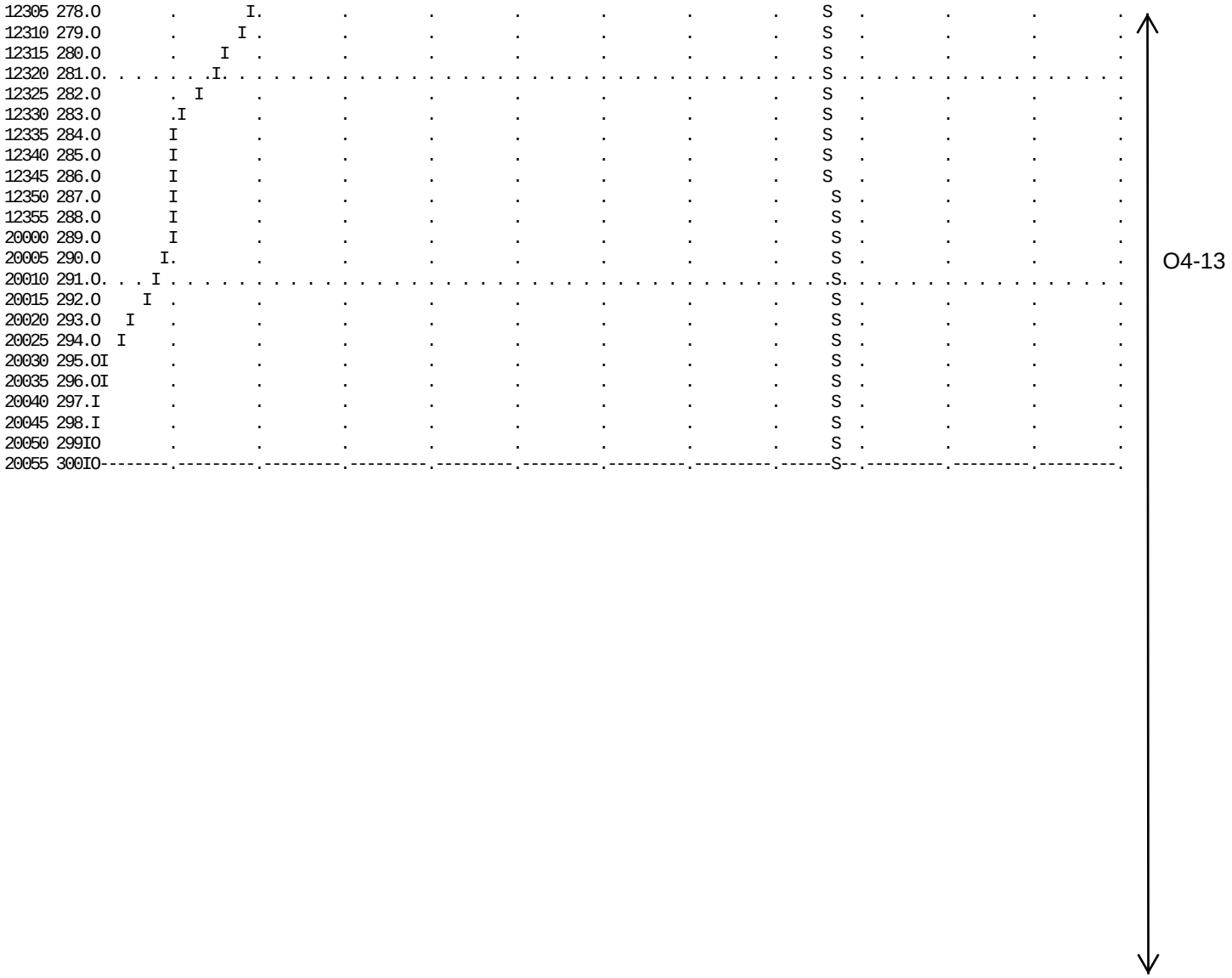
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12355 288.O
20000 289.O
20005 290.O
20010 291.O
20015 292.O
20020 293.O
20025 294.O
20030 295.O
20035 296.O
20040 297.I
20045 298.I
20050 299IO
20055 300IO
O4-13

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
	HYDROGRAPH AT									
+		WMSA-NQ	235.	6.42	98.	56.	54.	.49		
	ROUTED TO									
+		DETAIN	4.	24.58	4.	2.	2.	.49		
+									100.99	24.67

O4-13

*** NORMAL END OF HEC-1 ***

NQWMSAPH.OUT

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*               JUN  1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   02FEB12  TIME  19:59:13  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

```
X     X  XXXXXXX   XXXXX          X
X     X  X       X     X        XX
X     X  X       X              X
XXXXXXX  XXXX    X        XXXXX  X
X     X  X       X               X
X     X  X       X     X         X
X     X  XXXXXXX   XXXXX         XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

O4-13

HEC-1 INPUT PAGE 1

```
         LINE          ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

                       *DIAGRAM
*** FREE ***
              1        ID   WEST MATERIALS STORAGE AREA & NORTH QUARRY
              2        ID   PROPOSED CONDITIONS
              3        ID   100-YEAR FLOW RATE
              4        ID   COUNTY OF SANTA CLARA HYDROGRAPH METHOD
              5        ID   LAG BASED ON HISTORIC FLOW PATH DOWN HILLSIDE
              6        IT       5       0       0     300
              7        IO       5       2

              8        KK WMSA-NQ
              9        IN       5
             10        PB    7.63
             11        PI  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015   0.001
             12        PI  0.0015  0.0015  0.0014  0.0014  0.0014  0.0014  0.0014  0.0014  0.0014   0.001
             13        PI  0.0014  0.0014  0.0014  0.0014  0.0030  0.0030  0.0030  0.0030  0.0030   0.003
             14        PI  0.0030  0.0030  0.0030  0.0030  0.0030  0.0030  0.0062  0.0062  0.0062   0.006
             15        PI  0.0062  0.0062  0.0062  0.0062  0.0062  0.0062  0.0062  0.0062  0.0055   0.005
             16        PI  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055  0.0055   0.005
             17        PI  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053   0.005
             18        PI  0.0053  0.0053  0.0345  0.0345  0.0103  0.0103  0.0103  0.0103  0.0094   0.009
             19        PI  0.0094  0.0094  0.0094  0.0094  0.0053  0.0053  0.0053  0.0053  0.0053   0.005
             20        PI  0.0053  0.0053  0.0053  0.0053  0.0053  0.0053  0.0033  0.0033  0.0033   0.003
             21        PI  0.0033  0.0033  0.0033  0.0033  0.0033  0.0033  0.0033  0.0033  0.0025   0.002
             22        PI  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025  0.0025   0.002
             23        PI  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034  0.0034   0.003
             24        PI  0.0034  0.0034  0.0041  0.0041  0.0041  0.0041  0.0041  0.0041  0.0041   0.004
             25        PI  0.0041  0.0041  0.0041  0.0041  0.0031  0.0031  0.0031  0.0031  0.0031   0.003
             26        PI  0.0031  0.0031  0.0031  0.0031  0.0031  0.0031  0.0032  0.0032  0.0032   0.003
             27        PI  0.0032  0.0032  0.0032  0.0032  0.0032  0.0032  0.0032  0.0032  0.0023   0.002
             28        PI  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023   0.002
             29        PI  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026  0.0026   0.002
             30        PI  0.0026  0.0026  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023  0.0023   0.002
             31        PI  0.0023  0.0023  0.0023  0.0023  0.0013  0.0013  0.0013  0.0013  0.0013   0.001
             32        PI  0.0013  0.0013  0.0013  0.0013  0.0013  0.0013  0.0017  0.0017  0.0017   0.001
             33        PI  0.0017  0.0017  0.0017  0.0017  0.0017  0.0017  0.0017  0.0017  0.0018   0.001
             34        PI  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018  0.0018   0.001
             35        PI  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015   0.001
             36        PI  0.0015  0.0015  0.0037  0.0037  0.0037  0.0037  0.0037  0.0037  0.0037   0.003
             37        PI  0.0037  0.0037  0.0037  0.0037  0.0030  0.0030  0.0030  0.0030  0.0030   0.003
             38        PI  0.0030  0.0030  0.0030  0.0030  0.0030  0.0030  0.0030  0.0015  0.0015   0.001
             39        PI  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015  0.0015
             40        BA  0.4927
             41        LS    0.82      71
             42        UD     .13
             43        ZZ
```

O4-13

```
             SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    8     WMSA-NQ

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
```

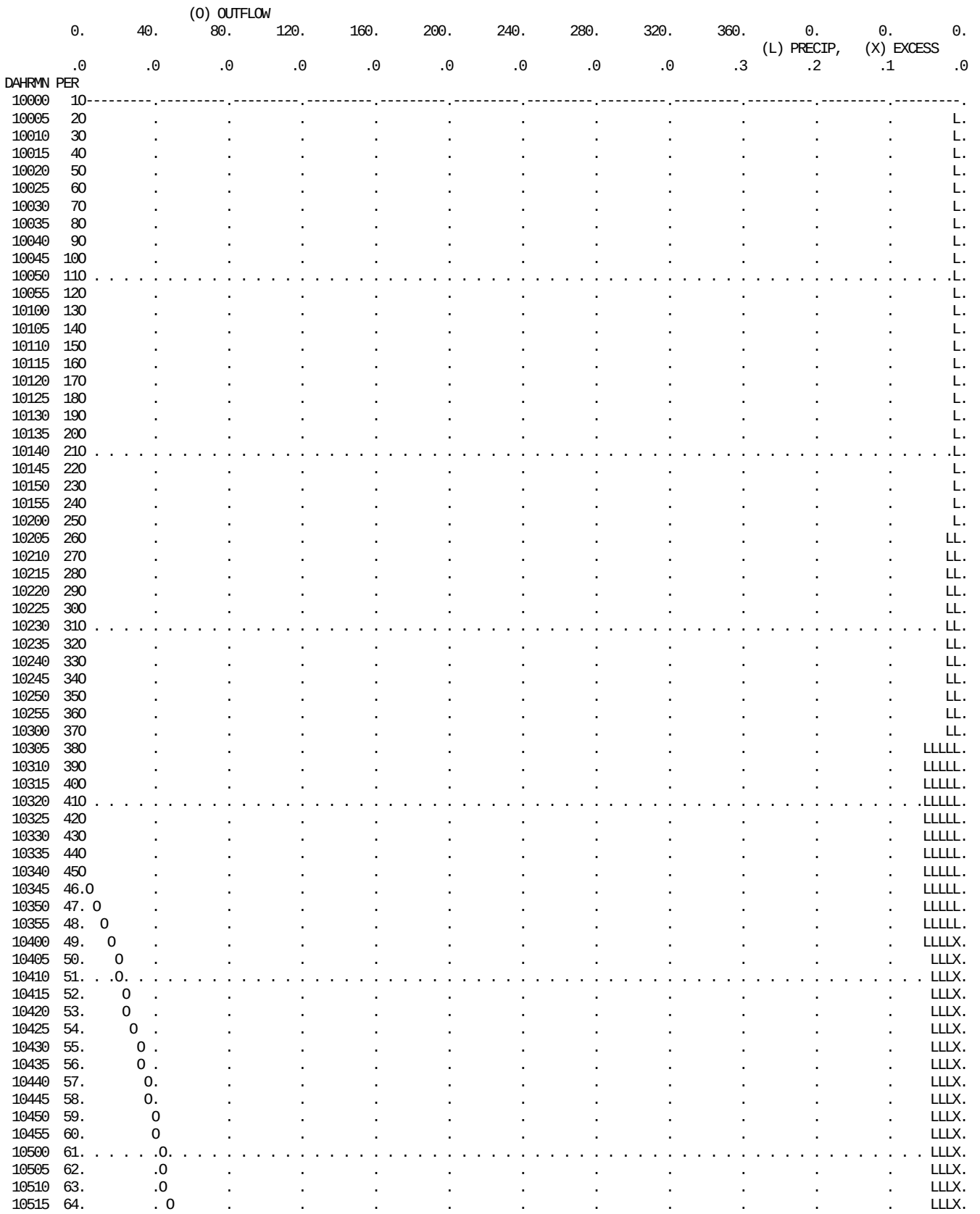
```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN  1998               *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   02FEB12  TIME  19:59:13  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

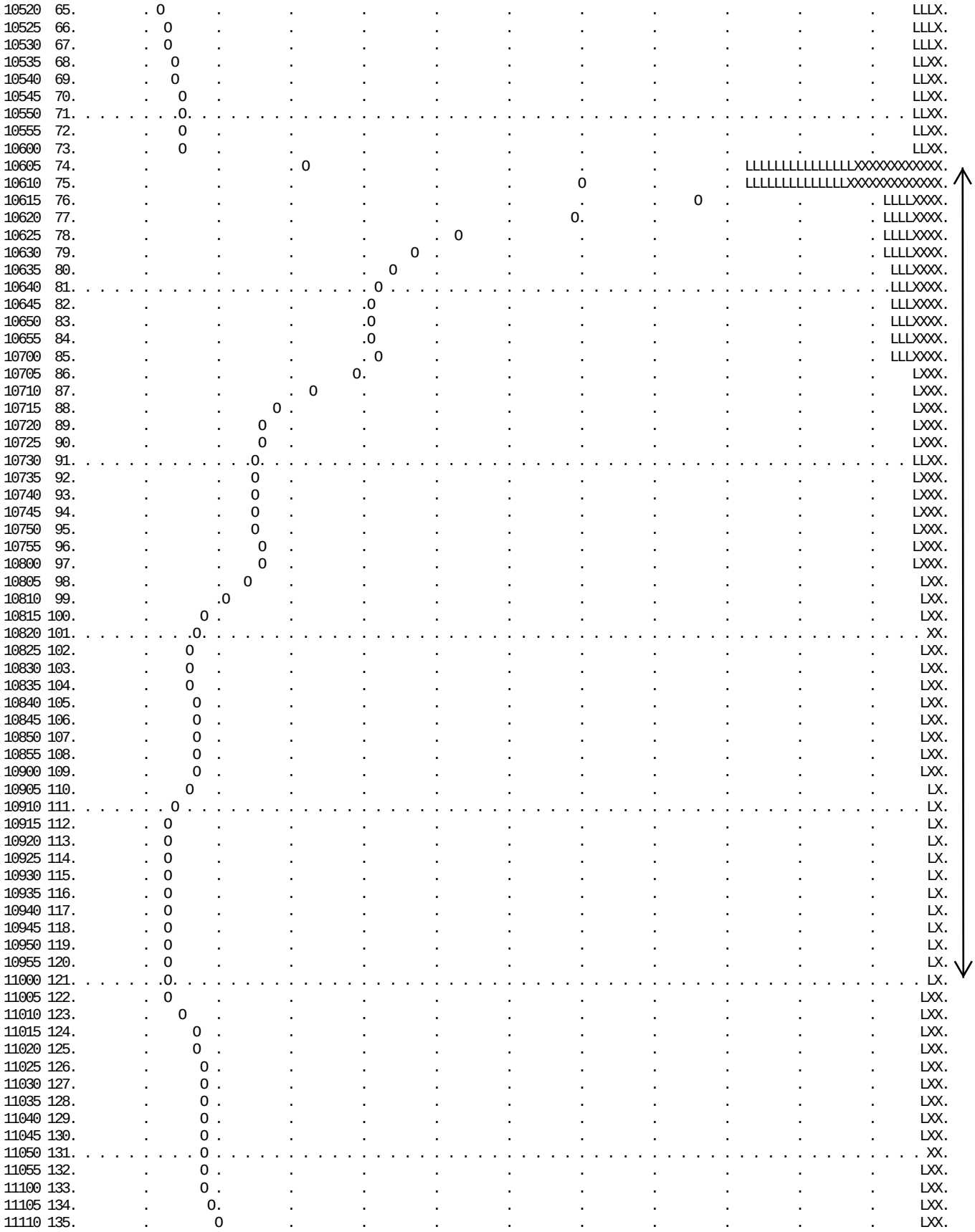
```
                    WEST MATERIALS STORAGE AREA & NORTH QUARRY
                    PROPOSED CONDITIONS
                    100-YEAR FLOW RATE
                    COUNTY OF SANTA CLARA HYDROGRAPH METHOD
                    LAG BASED ON HISTORIC FLOW PATH DOWN HILLSIDE

  7 IO         OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          2  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT         HYDROGRAPH TIME DATA
                     NMIN          5  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME        0000  STARTING TIME
                       NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME        0055  ENDING TIME
                   ICENT          19  CENTURY MARK

                 COMPUTATION INTERVAL     .08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

       ENGLISH UNITS
            DRAINAGE AREA         SQUARE MILES
            PRECIPITATION DEPTH   INCHES
            LENGTH, ELEVATION     FEET
            FLOW                  CUBIC FEET PER SECOND
            STORAGE VOLUME        ACRE-FEET
            SURFACE AREA          ACRES
            TEMPERATURE           DEGREES FAHRENHEIT
```

O4-13

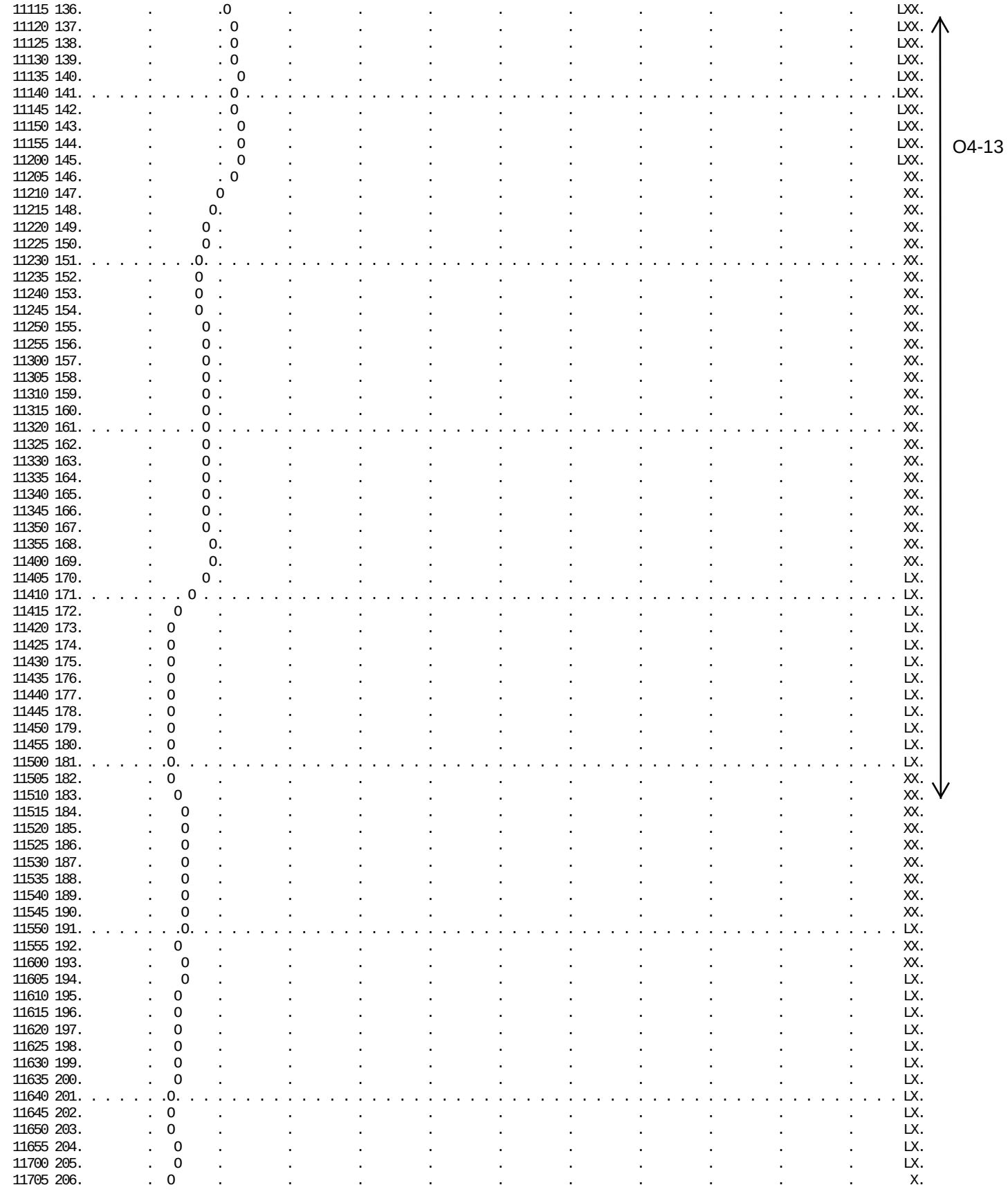
STATION WMSA-NQ



O4-13



O4-13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11200 145. . . 0 . . . . . LXX.
11205 146. . . 0 . . . . . XX.
11210 147. . 0 . . . . . XX.
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11650 203. . 0 . . . . . LX.
11655 204. . 0 . . . . . LX.
11700 205. . 0 . . . . . LX.
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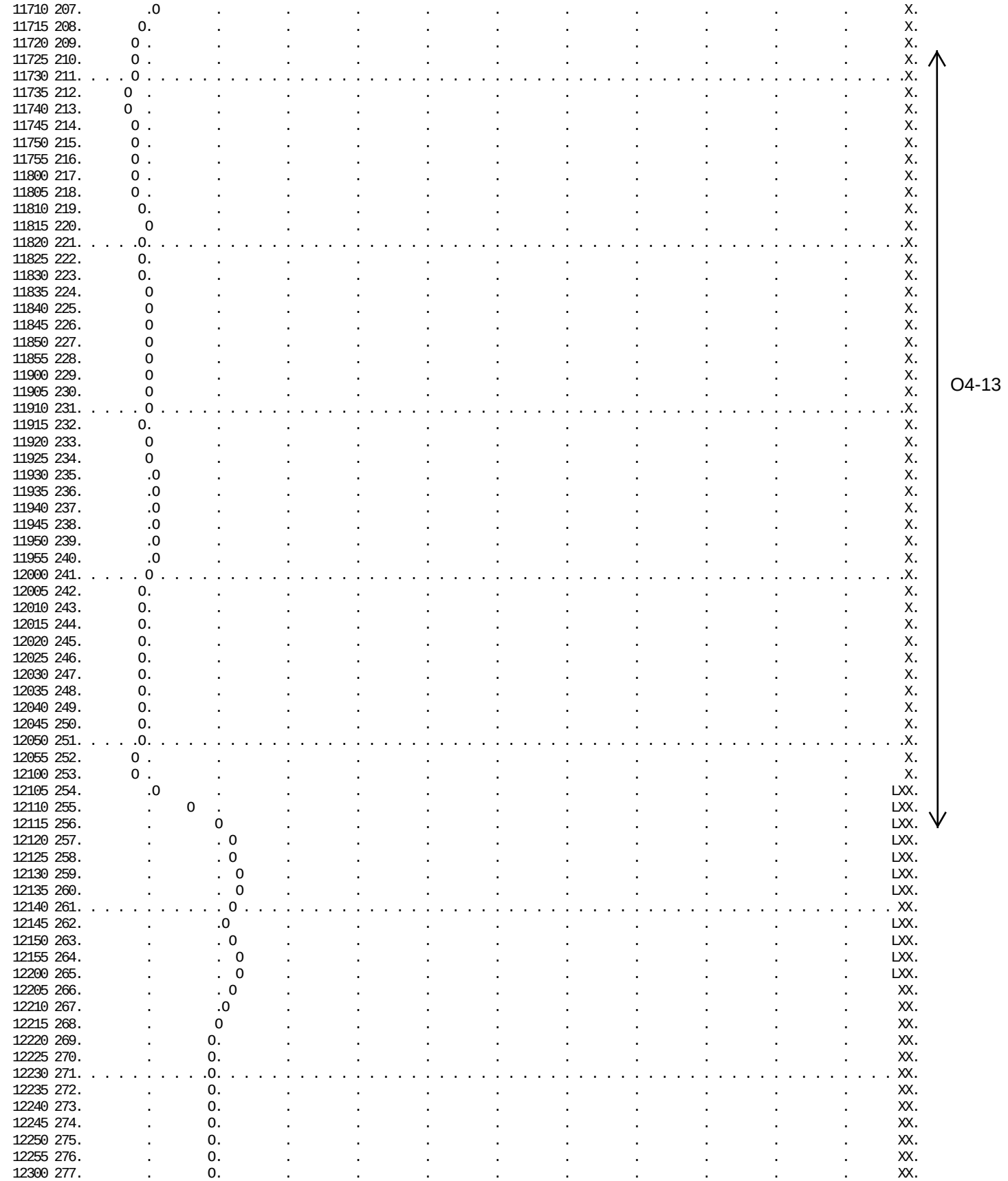
O4-13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12035 248. 0. . . . . X.
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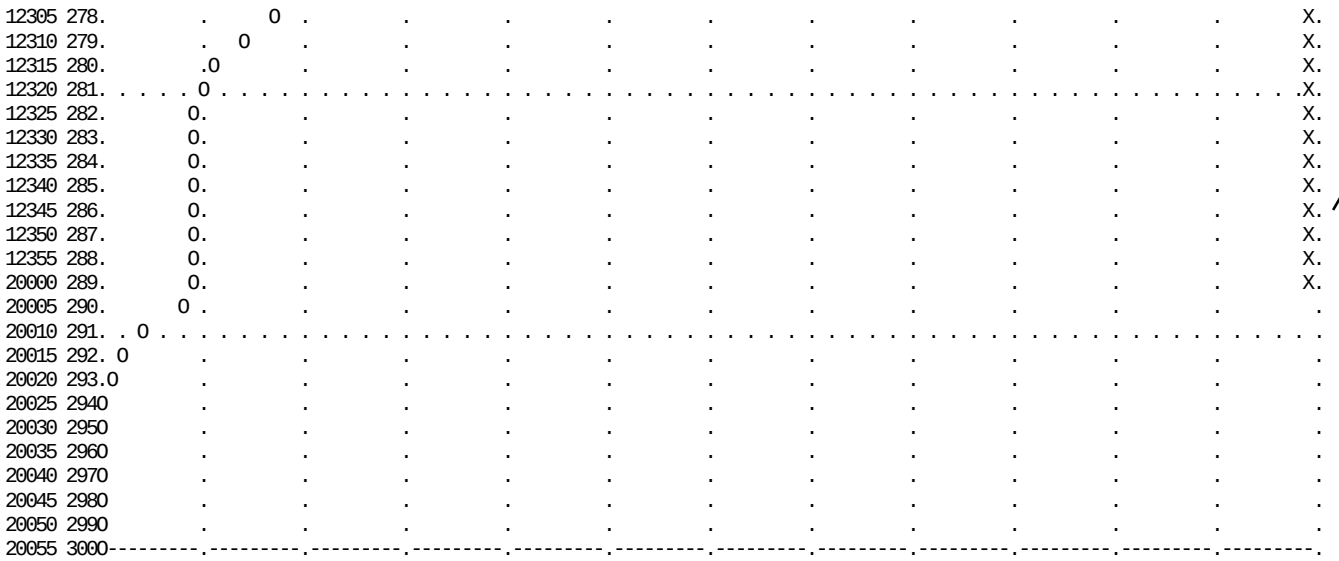
O4-13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20010 291.
20015 292.
20020 293.
20025 2940
20030 2950
20035 2960
20040 2970
20045 2980
20050 2990
20055 3000

O4-13

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	WMSA-NQ	344.	6.25	98.	56.	54.	.49		

*** NORMAL END OF HEC-1 ***

O4-13

TECHNICAL MEMORANDUM

TO: Marvin Howell, Lehigh Hanson

FROM: Tom Patterson, Ph.D.; Vice President - **Strategic Engineering & Science, Inc.**

SUBJECT: Review of Selenium Treatment Option in Permanente Quarry Draft EIR

DATE: February 14, 2012

1. INTRODUCTION

This memorandum presents an independent review of the technical feasibility of active treatment to reduce selenium in stormwater runoff from the Permanente Quarry. The Draft EIR for the proposed Permanente Quarry reclamation plan amendment concluded that active treatment to reduce selenium to the applicable regulatory benchmarks is infeasible based on cost considerations. This discussion is contained on Pages 4.10-46 and -47 regarding Mitigation Measure 4-10.2b and is based on information provided to the Santa Clara County Planning Department by Mr. Tom Sandy, a chemical engineer of CH2M Hill. To supplement the Draft EIR's analysis, we also have considered whether the water treatment methods referenced by CH2M Hill are capable of implementation at the Permanente Quarry site in light of certain engineering, technological and practical factors. Based on the information discussed below, there is a considerable technical risk that treatment of stormwater to reliably remove selenium to concentrations <5 μg/L cannot be reasonably and feasibly achieved under the conditions at the site.

2. BACKGROUND

O4-14

The technical feasibility of stormwater treatment to reduce selenium concentrations in runoff depends on a number of important factors. The key considerations are the volume and flow characteristics of the stormwater, and the treatment target in terms of the amount of selenium to remove.

In terms of volume and flow characteristics, the Draft EIR assumed the collection of all runoff from the WMSA and the EMSA as well as from the catchment of the quarry/pit, and treatment of the collected stormwater to remove selenium prior to discharge to Permanente Creek. The combined surface area for these areas totals approximately 510 acres. For an estimated design criteria runoff event (which assumes one inch of rainfall falling in two hours under saturated antecedent soil conditions so that runoff is 100 percent), the runoff volume would be approximately 14 million gallons collecting in two hours (117,000 gallons per minute [gpm] average flow). This volume of stormwater runoff is too large to be effectively treated and discharged simultaneously. As a result, surge storage would need to be provided in the form of a holding or detention pond. The amount of storage required would be on the order of 100 acre feet (AF), or 32.6 million gallons. This volume of storage would likely require utilization of the

quarry pit and several additional ponds in the EMSA and WMSA. The Draft EIR assumed that such water would be delivered to a treatment plant with the capacity to treat approximately 3600 gpm, or 100 AF of stored stormwater in six days. This assumed treatment capacity appears to be reasonable given this scenario (it is rare to have four inches of rain in a week, and the yield of water as runoff is typically more on the order of 60 percent of rainfall for rainy periods longer than one day).

The treatment target and the amount of selenium to remove are based on measured selenium concentrations in runoff samples from the EMSA and WMSA, which are on the order of 4 to 50 µg/L, and selenium concentrations in the main pit, which are on the order of 80 µg/L. Assuming an annual average 30% runoff factor, the runoff area of 510 acres, and 23 inches of rainfall per year, the total amount of stormwater that would be collected is 293 acre feet (AF), or 95 million gallons. Assuming the average selenium concentration of the stormwater is 50 µg/L, the total amount of selenium in the annual stormwater flow (i.e., that requires treatment) is approximately 40 pounds. The target concentration for selenium in the treated effluent is <5 µg/L (based on aquatic life criteria), which means >90% removal on average but >95% removal when the selenium concentrations are high.

O4-14

3. DESCRIPTION OF POTENTIAL TREATMENT TECHNOLOGY

The Draft EIR states correctly that there are a variety of treatment technologies that could be considered for selenium removal from the stormwater. These include ferrihydrite adsorption, ferrous hydroxide co-precipitation, ion exchange, and anaerobic bioreactors. All of these technologies are costly to implement on the scale discussed in the Draft EIR (i.e., 3,600 gpm of treatment capacity with construction of surge/equalization storage). The proposed treatment system described in the Draft EIR involved the use of anaerobic bioreactors, and estimated that the design, capital and construction costs would be $86 million, with operations and maintenance costs of an estimated $2.8 million per year, and a 21-year present value of $113 million assuming an 8% return.

Treatment with anaerobic bioreactors is a biological process that uses naturally-occurring bacteria to convert dissolved selenium (typically the selenate ion, SeO_4^{2-}) into solid elemental selenium. It is typically a multi-stage process which requires some pretreatment such as filtering to remove suspended solids, water softening, temperature adjustments, and/or pH control. Nutrients (phosphate and nitrogen) are added to the water with a carbon source that is used as food for the natural bacteria. The carbon source can be alcohols such as methanol or ethanol; other common carbon sources are molasses, acetate, and lactate.

Following pre-treatment, the water with nutrients is fed into a reactor vessel then isolated from oxygen to create an anaerobic environment where the selenium-converting bacteria thrive. The proposed treatment system described in the Draft EIR appears to have assumed the use of fixed film bioreactors based on the required space for the treatment facilities described (two to three acres). With fixed film technologies, there is a fixed or fluidized bed of solid media such as sand or granular activated carbon filling the reactor vessel. The solid media provides a substrate for bacteria to grow on. Treatment requires on the order of six to eight hours, and can require two to three stages to progressively bring the selenium concentration down. With this residence time

and the indicated treatment capacity, the reactor(s) would require 3.5 million to 5.5 million gallons of storage. One five million gallon tank is on the order of 45 feet tall by 140 feet in diameter.

The solidified selenium is removed from the reactor vessel by backwashing in the case of a fixed bed system, or by solids separation in the case of a fluidized bed, and it is removed along with excess/dead bacteria. These treatment residuals are dewatered with a filter press, and then disposed at a landfill.

The bioreactors also produce gases. If there is elevated nitrate in the influent, nitrogen gas is generated; if there is elevated sulfate, hydrogen sulfide can be generated although this is an undesirable competing reaction that is typically controlled. Carbon dioxide is also generated. The gases are vented into the air.

Once the selenium removal is complete, the effluent water typically requires post-treatment. Post-treatment consists of aeration to restore aerobic bacterial processes which then consume any remaining carbon source or other organic matter in the water and clarification to reduce total suspended solids. Adjustment of pH and sometimes temperature (the biological processes generate heat) can also be required for post-treatment. O4-14

4. DISCUSSION

Anaerobic bioreactors have been demonstrated to be successful in treating selenium to levels of <5 µg/L and attaining 90% to 95% removal, provided that the operational conditions are favorable. With respect to reactor performance, a common difficulty with all biological treatment systems is consistency of the influent flow and quality. Consistent attainment of the treatment objectives depends on consistent flows and influent quality. Large increases in flows or changes in the concentrations of biologically important constituents (including selenium) cause an upset in the ecosystem established in the bioreactor and reduce treatment performance. In other mining facilities where biological treatment of selenium was successfully demonstrated to <5 µg/L (MSE, 2001; Maniatis and Adams, 2003), the site conditions featured relatively constant flows of mine water that was isolated from other water sources (including stormwater runoff), and these systems did not produce effluent <5 µg/L during the entire demonstration period.

Use of this technology at the Permanente Quarry to treat large volumes of stormwater presents significant technical challenges as there would be rainy periods lasting on the order of a few days where treatment would be required at flow rates near the plant capacity but with lower selenium concentrations, and other periods during the dry season where the treatment plant probably would be shut down due to lack of flow (starting and stopping plant operation requires a period of a week or two to re-establish the anaerobic ecosystem that effectively removes the selenium). We are not aware of any successful demonstrations of this technology under these or similar site conditions, and it is unlikely that the treatment objectives could be constantly met under these highly variable conditions based on our experience with biological treatment systems.

The infrastructure requirements also present a major engineering obstacle considering the large drainage area that a treatment plant would serve. The collection and treatment systems represent

major design and engineering undertakings, considering the sizeable space and siting commitments required for ponds and equipment, and the general absence of suitable locations within the site to place infrastructure. The WMSA, main pit and EMSA occupy an area of over 500 acres and a lateral distance of approximately 2.5 miles over steep and difficult terrain. As noted above, the treatment system would likely require water storage on the order of 100 AF, or 32.6 million gallons, consisting of a number of large detention ponds across the site. This is a larger volume of storage than what is currently needed as Best Management Practices to control suspended solids in the stormwater. The ponds would need to be physically connected (through a system of pumps and piping) to route stormwater flows to a central staging pond prior to treatment in the reactor(s). Individual storage ponds would likely occupy several acres (notably, using the pit bottom for storage prevents quarrying of rock as well as backfilling, which may be unacceptable). it is not immediately apparent where these new large storage ponds could be located within the site given the topography and slope stability concerns that have characterized some areas.

Further, design of the treatment system would require bench and pilot scale testing, and it is possible that the testing would demonstrate that this technology will not work for the conditions at Permanente. Finally, the physical environment is highly dynamic, with the landforms scheduled to be significantly altered as the WMSA, quarry pit and EMSA are reconfigured according to the reclamation plan amendment. This becomes particularly problematic for finding a suitable permanent location for the large treatment system equipment.

The timing requirements for the design and installation of the system present a particular drawback considering the relatively short time period in which treatment would be required. Design and permitting[1] would require on the order of two years. Construction and startup would be approximately two additional years given the large amount of equipment that would need to be fabricated and installed. Therefore, on the order of four years would be required once contracting and financing was completed to perform the design, engineering, construction and startup. Against these time requirements, the interim need for water treatment will diminish and eventually disappear as the pit is backfilled and exposed areas are covered and revegetated, which is scheduled to occur in approximately 2025. O4-14

In terms of the costs of the treatment system, the unit cost of selenium removal would be approximately $116,000 per pound of selenium. This assumes a $113 million present value of the system, 17 years of treatment operations, and 40 lb/year of selenium removed.

5. OTHER CONSIDERATIONS

As described above, there are technologies other than anaerobic bioreactors that could be used to treat the stormwater for selenium removal. In our opinion and experience, the next-most viable technology after anaerobic bioreactors is ion exchange. Ion exchange is not a demonstrated technology for treatment of selenium to <5 µg/L. However, based on the similarity between the chemistry of selenate and other chemicals that are removed effectively using ion exchange (i.e.,

[1] Permitting of the NPDES discharge would be required, and can take two years or more.

sulfate, perchlorate, and chromate), it is likely that this technology could be developed to a full scale process at the present time. An ion exchange treatment system would likely have costs on the same order as described above for anaerobic bioreactors, although the capital costs might be slightly lower and the operations and maintenance would be higher. This system also would require nearly identical infrastructure to collect and route large volumes of stormwater runoff to a central treatment facility, and bench scale and pilot testing would be required to determine if the desired level of performance could be achieved. However, the following additional factors would need to be studied if ion exchange was considered as the treatment process:

- There is a risk that other toxic substances could be released to the effluent. On a recent project by the City of Glendale for treatment of chromate, it was discovered that the ion exchange resin leached formaldehyde (toxic to aquatic life).
- Ion exchange treatment facilities would likely require on the order of an acre, again in a permanent location. An ion exchange treatment plant with 3600 gpm of capacity would consist of three or four large vessels/tanks (each 12 ft diameter, 18 feet tall) on permanent foundations, along with large capacity filters, surge and/or break tanks, booster pumps, loading and unloading facilities, power, instrumentation, and controls. O4-14
- With the testing and permitting, the design would require approximately two years. The construction and startup would likely require one to one and a half years (the adsorption vessels, filters and other tanks need to be fabricated). Therefore, it would be about three to four years to complete the project after financing and contracting.
- Our experience with ion exchange systems of this size and type (weak base anion and strong base anion; ion-selective resins for perchlorate and chromate in drinking water systems) indicate that the technology is not very sustainable. The resin would need to be changed approximately once per year, and each vessel holds about 5 tons of resin (total of 15 to 20 tons of resin per year). Ion exchange resin consists of small plastic beads (about the size of fine sand). The resin is typically polyacrylic or polystyrene, both of which are petroleum products. There are regeneration technologies, but development of a suitable regeneration process extends the time for design (and may be infeasible). Further, regeneration produces large volumes of caustic brines that cannot be re-used and must be disposed of properly. If not regenerated, the spent resin cannot be re-used, and so it is incinerated. Removing on the order of 40 pounds of selenium per year to protect a creek that is not impaired by the existing runoff and discharge consumes 15 to 20 tons of a highly refined petrochemical product that is burned as a waste. This may not be environmentally sustainable.

6. CONCLUSIONS

Based on the considerations presented above, there is a considerable technical risk that treatment of stormwater to reliably remove selenium to concentrations <5 µg/L cannot be reasonably achieved under the conditions present at the Permanente site. This technical risk compounds the economic infeasibility that is appropriately claimed in the Draft EIR. The technical risks principally include the following:

- There is no existing technology that has been shown to treat the highly variable flows and water quality that would be characteristic of the stormwater at Permanente Quarry to

concentrations <5 µg/L for selenium on a consistent basis (i.e., NPDES discharge limits would be violated on occasion)

- Constructability is a significant question given the limited amount of suitable space available at the site that could be committed to the treatment plant, ponds/surge storage facilities and associated pumps and piping infrastructure, and the need for such infrastructure to accommodate a dynamic, changing environment as the WMSA, quarry pit and EMSA landforms are physically transformed under the reclamation plan amendment.
- The design and engineering constraints do not fit well with the relatively short time period in which treatment would be needed before backfilling and reclamation are complete. An estimated four years would be required to perform the design, engineering, construction and startup once contracting and financing was completed, assuming no major obstacles to implementation are encountered. In the meantime, backfilling is scheduled to be completed as early as 2025. While the design process would further characterize the risk and establish with certainty whether such water treatment technologies could be reasonably implemented at the site, this would not be known until years after the EIR is certified along with all mitigation measures and monitoring.

O4-14

7. REFERENCES

Maniatis, T. and D.J. Adams. 2003. *Biological Treatment of Surface and Groundwater for Selenium and Nitrate.* Presented at the 2003 National Meeting of the American Society of Mining and Reclamation.

MSE Technology Applications, Inc. (MSE). 2001. *Final Report – Selenium treatment/removal alternatives demonstration project.* Mine Waste Technology Program Activity III, Project 20. Report prepared for U.S. Environmental Protection Agency, National Energy Technology Laboratory, Office of Research and Development, Cincinnati, OH and U.S. Department of Energy, Federal Energy Technology Center, Pittsburgh, PA.

3.3.4 Comment Letter O4: Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc. (Applicant)

O4-1 The last sentence of the first paragraph in Section 2.1 of the Draft EIR (page 2-1) has been revised as indicated below in response to this comment:

> The primary areas to be reclaimed are the Quarry pit, two overburden disposal areas referred to as the West Materials Storage Area (WMSA) and the East Materials Storage Area (EMSA), the crusher/Quarry office area, surge pile, Rock Plant, approximately 284-acres located south of Permanente Creek of which approximately 19.5 acres ~~that~~ have been disturbed by prior exploratory activities (Exploration Area), and approximately 25.9-acres adjacent to Permanente Creek (Permanente Creek Restoration Area or PCRA).

O4-2 The commenter notes that Draft EIR Tables 2-6, 2-7, and 2-9 have text that exceeds the printable area of the page. The tables have been corrected as follows:

TABLE 2-6
PRCA SUBAREA 4 RECLAMATION TREATMENTS

Activity	Description
Revegetation	Disturbed areas would be hydroseeded with the seed mix listed below. The hydroseed slurry would include a bonded fiber matrix. Riparian vegetation would be hand-planted at the toe of the slope in areas where sufficient hydrology exists.
South-Creek Revegetation	Areas of mining disturbance on the south side of the creek would be seeded using a broadcast seeder or by hand-seeding in areas above the ordinary high water mark.
Slope BMPs	Erosion blankets would be placed across the slope for erosion control. Fiber rolls would be staked in place and spaced at 15-foot intervals in disturbed areas where the slope angle is 2.0H:1.0V or flatter, and at 10-foot intervals in disturbed areas that are steeper than 2.0H:1.0V. Additionally, silt collected at the toe of the slope would be removed by hand by work crews where possible.
Monitoring and Maintenance	Revegetation and erosion controls added to PCRA treatment areas on the northern and southern sides of the creek would be monitored and maintained according to the reclamation performance standards set forth in Section 2.8.
Creek Restoration	In Phase 3, creek restoration would occur to remove overburden and silts. The removal of overburden and silts would involve the following restoration measures: • Remove overburden material and sediment deposits. • Create a stable channel, subject to geotechnical and groundwater investigations as needed to determine the location of bedrock and other constraints on channel design. • Establish a new bankfull bench and floodplain. • Install step pools, drop structures and other stream control devices as needed for a stable channel. • Revegetate riparian areas.

SOURCE: EnviroMINE, Inc., 2011b (Table 15)

TABLE 2-7
PRCA SUBAREA 5 RECLAMATION TREATMENTS

Activity	Description
Slide Removal	Slide material near the foundation of the historic crusher would be removed using an excavator. The excavator arm would reach down from the main access road and remove slide material. Areas downslope of this activity would be prepared with silt fencing to prevent material rollback.
Revegetation	Disturbed areas would be hydroseeded with the seed mix listed below. The hydroseed slurry would include a bonded fiber matrix. Riparian vegetation would be hand-planted at the toe of the slope in areas where sufficient hydrology exists.
South-Creek Revegetation	Areas of historic mining disturbance on the south side of the creek would be seeded using a broadcast seeder or by hand-seeding in areas above the ordinary high water mark.
Slope BMPs	Fiber rolls would be staked in place and spaced at 15-foot intervals in disturbed areas where the slope angle is 2.0H:1.0V or flatter, and at 10-foot intervals in disturbed areas that are steeper than 2.0H:1.0V. Additionally, silt collected at the toe of the slope would be removed by hand by work crews where possible.
Monitoring and Maintenance	Revegetation and erosion controls added to PCRA treatment areas on the northern and southern sides of the creek would be monitored and maintained according to the reclamation performance standards set forth in Section 2.8.
Creek Restoration	In Phase 3, creek restoration would occur to remove an old crusher foundation next to the creek and overburden fills. The removal of the crusher foundation would involve the following restoration measures: • Removal of the concrete structure. • Establish a bankfull bench in the location of the former structure. • The removal of overburden fills would involve the following restoration measures: • Remove overburden material and sediment deposits. • Create a stable channel, subject to geotechnical and groundwater investigations as needed, to determine the location of bedrock and other constraints on channel design. • Establish a new bankfull bench and floodplain. • Install step pools, drop structures and other stream control devices as needed for a stable channel. • Revegetate riparian areas.

SOURCE: EnviroMINE, Inc., 2011b (Table 16)

TABLE 2-9
PRCA SUBAREA 7 RECLAMATION TREATMENTS

Activity	Description
Revegetation	Disturbed areas would be hydroseeded with the seed mix listed below. The hydroseed slurry would include a bonded fiber matrix. Riparian vegetation would be hand-planted at the toe of the slope in areas where sufficient hydrology exists.
Slope BMPs	Fiber rolls would be staked in place and spaced at 15-foot intervals in disturbed areas where the slope angle is 2.0H:1.0V or flatter, and at 10-foot intervals in disturbed areas that are steeper than 2.0H:1.0V. Additionally, silt collected at the toe of the slope would be removed by hand by work crews where possible.
Monitoring and Maintenance	Revegetation and erosion controls added to PCRA treatment areas on the northern side of the creek would be monitored and maintained according to the reclamation performance standards set forth in Section 2.8.

TABLE 2-9 (Continued)
PRCA SUBAREA 7 RECLAMATION TREATMENTS

Activity	Description
Creek Restoration	In Phase 3, creek restoration would occur to remove the Pond 13 outflow and to replace the downstream half-culvert with a wider and more natural creek channel. The removal of the Pond 13 outflow would involve the following restoration measures: • Recontouring of the pond floor and sides to establish a new bankfull bench and stable channel. • Removal of pond infrastructure and any accumulated sediment. • Install step pools, drop structures and other stream control devices as needed for a stable channel. • Revegetate riparian areas. The replacement of the downstream half-culvert would involve the following restoration measures: • Remove half culvert and surrounding fill material. • Establish a new bankfull bench and floodplain. • Install step pools, drop structures and other stream control devices as needed for a stable channel. • Revegetate riparian areas.

SOURCE: EnviroMINE, Inc., 2011b (Table 18)

O4-3 Table 2-17 (Draft EIR, page 2-48) has been revised as indicated below in response to this comment:

TABLE 2-17
PROPOSED FIVE-YEAR PERFORMANCE STANDARDS FOR REVEGETATION IN THE PCRA

	Hydroseed Areas Shrub/Grassland Mix		Riparian Area
	Shrub	Herb	Trees/Shrubs
Richness (average species per plot)	2	2	2 ~~NA~~
Canopy Cover	45%	45%	45% ~~NA~~
Density (average individuals per acre)	200	NA	200 ~~NA~~
Percent Survival of planted individuals	NA	NA	60%
~~Percent Survival~~			

SOURCE: WRA Environmental Consultants, 2011b (Table 18)

O4-4 Further support for the conclusion reached in Draft EIR Section 3.3.1.1 (page 3-5) that Alternative 2: the Complete Backfill Alternative would not meet certain project objectives is noted.

O4-5 The information on the distinction between "surface mining operations" and "reclamation" is noted. It is true that the "EMSA is an existing, approximately 75-acre overburden and rock storage area…designed to accept total overburden placement of approximately 6.5 million tons (approximately 4.8 million cubic yards), and to provide

overburden storage for the Quarry until approximately 2015, depending on the rate of mining as dictated by market factors" (Draft EIR page 2-10). Notwithstanding the Applicant's assertion to the contrary, the County does consider overburden materials added to the EMSA as being attributable to reclamation, and those materials are analyzed as such in this EIR.

However, the final design of the EMSA in the RPA was developed with visual considerations in mind: "Reclamation in this area also has been designed to visually screen onsite operations from offsite public viewers." As such, it is appropriate in the visual analysis to consider how the overburden in the EMSA would be distributed, and how such distribution would affect public views.

The analysis in Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*, is based on the changes proposed under the proposed Reclamation Plan Amendment (RPA) described in Chapter 2, *Project Description*. During construction of the Project, activities in the EMSA would include the following (Draft EIR page 2-16): "To achieve final contours, overburden would be moved using heavy, earth-moving equipment, and graded. Final elevations in the EMSA would be a maximum of 900 feet amsl, and overall slope angles would not exceed 2.6H:1V. These slopes would be comprised of 2H:1V inter-bench slopes, interrupted by 25-foot wide benches spaced at 40-foot vertical intervals in accordance with engineering design requirements for stability and suitability for future open space use. Fill slopes would conform to the surrounding hillside topography and natural contours." The visual simulations provided in Figures 4.1-4 through 4.1-7 portray the visual changes that would occur as part of the construction activities described above. The short-term impacts of construction would include not only the increased prominence and extent of disturbed areas, but also the presence of construction equipment and activities for a period of 10 years. As such, the Draft EIR finds short term impacts to views from the Anza Knoll scenic vista, Interstate 280 (I-280), and the RSA Preserve/Park significant and unavoidable.

O4-6 The commenter states that impacts from selenium runoff on aquatic organisms in Permanente Creek tend to be overstated at their current level of significant and unavoidable. The commenter also references supporting information regarding the baseline conditions of Permanente Creek, citing the Biological Resources Assessment that was referenced in the Draft EIR (WRA, 2011). Section 4.10 *Hydrology* states that baseline water quality measurements for selenium have exceeded thresholds proposed in the Regional Water Quality Control Board's Basin Plan, which manages waters under state jurisdiction for beneficial uses associated with wildlife. Additional runoff and discharges to Permanente Creek during implementation of the project are also anticipated to elevate selenium levels above these thresholds, as least for discrete periods of time. Since thresholds of selenium toxicity specific to aquatic species in Permanente Creek are not precisely known, the RWQCB Basin Plan thresholds protecting beneficial uses are considered practical and relevant significance criteria in determining potential impacts on aquatic species. Although the biological resources

assessment for the Project (WRA, 2011) documented aquatic organisms in the creek, and a bioassay test did not find acute toxicity in fathead minnows, this is not sufficient information to conclude that elevated selenium concentrations will have less-than-significant impacts on common and special-status aquatic wildlife in the creek. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O4-7 Comment noted. A clear distinction between modern and historic mining practices is not necessary for an adequate description of the affected environment. Per CEQA Guidelines section15126.2, the environmental setting focuses on existing conditions to ensure that changes caused by the Project are seen in context and significant effects can be identified accurately.

O4-8 While there may not be any suitable hybrid or electric vehicle technologies available today to replace heavy equipment, such technologies could become available at some point during the 25-year implementation of the reclamation plan and thus would afford the Applicant with additional flexibility to meet the required GHG emission reduction goals. Further, as the Applicant notes in this comment, there are sufficient mitigation alternatives available today to meet the GHG mitigation requirements.

O4-9 See Master Response M7, Flooding. The Applicant and its consultants have developed a proposed plan to construct a detention basin (Basin 40A) on the reclaimed Quarry floor to capture and attenuate flows following reclamation of the Quarry pit. The County and its hydrology consultants reviewed the proposed basin design and its intended function and concurred that it would adequately attenuate 100-year flows thereby reducing the potential downstream flooding risk.

O4-10 The County believes that Draft EIR Section 4.10.5, *Impacts and Mitigation Measures* (beginning on page 4.10-29), is appropriately conservative in its analysis of the potential effects of the proposed RPA. The implementation of reclamation activities would, as disclosed in the Draft EIR, have the potential to deliver selenium-bearing stormwater and sediment to Permanente Creek. See, for example, Draft EIR page 4.10-43, which discusses the EMSA ("During the interim period while reclamation is under way, limestone-bearing rock, fine grained, wash material deposited from the rock plant, and other fine to coarse-grained material within the EMSA would be disturbed and exposed to stormwater and wind erosion") and the Quarry pit ("selenium-bearing water would likely be released when the pit requires occasional dewatering during backfilling operations"). Because reclamation activities could result in selenium-laden water entering Permanente Creek and, thereby, cause potential significant impacts relating to selenium during the interim period, the County respectfully disagrees that the EIR overstates potential impacts in this regard.

O4-11 This comment contends that treatment is infeasible at the Project Area based on lack of documented performance, Project Area configuration, timing, legality and potential

environmental impacts. See Master Response M5 regarding interim selenium impacts and further evaluation of the feasibility of an on-site water treatment facility.

O4-12 See response to Comment O4-9 and Master Response M7 pertaining to flooding. This comment consists of a December 16, 2011 letter and technical analysis by a Chang Consultants in response to Draft EIR Impact 4.10-4 (page 4.10-48). This issue outlined in the documents included in this comment is no longer applicable because the Applicant has committed to construct a basin on the final reclaimed Quarry floor to capture and attenuate 100-year flood flows.

O4-13 The Supplemental Drainage report prepared by Chang Consultants on behalf of Lehigh, dated February 14, 2012, was performed for the Permanente Quarry to assess a post-reclamation detention scenario, and to compare post reclamation flows with pre-quarry flows. Because this letter report appears to be have been prepared prior to the revised plan to construct large basin on the Quarry floor, no additional response is necessary. See Master Response M7 regarding flooding for information about the proposed basin.

O4-14 This is a technical memorandum developed by SES on behalf of the Applicant. The subject is the review of selenium treatment options at the Quarry. This work has been evaluated by the County and CH2MHill. Regarding selenium treatment options at the Quarry, see Master Response M5.

From: Barry Chang <barry.bace@gmail.com>
Date: February 21, 2012 5:14:40 PM PST
To: Marina Rush <marina.rush@pln.sccgov.org>, Gary Rudholm <Gary.Rudholm@pln.sccgov.org>
Subject: Re: Comments for DEIR for Lehigh Southwest Cement Plant, Hanson/Permanente Quarry

Hi Marina & Gary,

The Selenium discharges into Permanente Creek from the Hanson/Permanente Quarry pit is 60 - 80 ug/l according to the DEIR. It is way over the Federal Clean Water Act of 5 ug/l. Lehigh is in violation of Federal Clean Water Act. You can not approve this Reclamation Plan Amendment. If you do , you are in violation of State Surface Mine and Reclamation Act (SMARA). O5-1

Barry Chang, Chairman of the Board
Bay Area for Clean Environment, Inc.

On Tue, Feb 21, 2012 at 5:02 PM, Marina Rush <marina.rush@pln.sccgov.org> wrote:

> We received your comments, thank you.
>
> Marina Rush, Planner III
>
> County of Santa Clara Planning Office

70 West Hedding Street, East Wing, 7th Floor
San Jose, CA 95110
email: Marina.Rush@pln.sccgov.org
Phone: (408) 299-5784
Fax: (408) 288-9198

On Feb 21, 2012, at 5:01 PM, Barry Chang wrote:

Hi Marina & Gary,

The attorney for Bay Area for Clean Environment, Inc.(BACE), Mr. Stuart Flashman, asked me to send the comments from Cotton, Shire and Associates regarding Lehigh Southwest Cement Plant, Hanson/Permanente Quarry's (Lehigh's) Draft Environmental Impact Report. Please see attached.

BACE has filed a lawsuit regarding the vested rights issues. You can not approve the Reclamation Plan Amendment (the Plan) based on Lehigh has vested rights. O5-2

The SMARA requires that any reclamation plan or amendment needs to meet Federal Clean Water act. Lehigh will continue to discharge selenium polluted water into Permanente Creek in this Reclamation Plan Amendment. It is a clear violation of Federal Clean Water Act. You can not approve this plan in violation of federal law. The Plan provides many wrongful information. Please DO NOT APPROVE this plan. Thanks. O5-3

Barry Chang, Chairman of the Board
Bay area for Clean Environment, Inc.

<2012-2-21 comments from Cotton, Shires G5032-Permanente Ltr.pdf>

COTTON, SHIRES AND ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

February 20, 2012
G5032

Mr. Stuart Flashman
5626 Ocean View Drive
Oakland, California 94618

SUBJECT: **Preliminary Geotechnical Peer Review of Reclamation Plan Amendment**
RE: Lehigh Permanente Quarry
Santa Clara County, California

Dear Mr. Flashman:

At your request, Cotton, Shires and Associates, Inc. (CSA) is providing you with this preliminary peer review letter concerning geotechnical aspects of the Reclamation Plan Amendment for the Lehigh Permanente Quarry and the Geotechnical Evaluations and Design Recommendations report that accompanies the Reclamation Plan Amendment.

We completed our preliminary geotechnical peer review of the proposed reclamation plan amendment using:

- Geotechnical Evaluations and Design Recommendations (Revised), Permanente Quarry Reclamation Plan Update, Santa Clara County, California (report), prepared by Golder Associates for Lehigh Southwest Cement Company, dated November, 2011; and

- Reclamation Plan Amendment for Permanente Quarry (Report), prepared by Enviro Mine, Inc. for Lehigh Southwest Cement Company, dated December 13, 2011.

SCOPE OF WORK

Our scope of work included review of the above reports, preliminary evaluation of the impact of slope instability on the quarry property and adjacent properties, and preparing this letter report.

Task 1. **Review of Geotechnical Evaluations and Recommendations Report** - We reviewed the slope stability aspects of the Geotechnical Evaluations and Design Recommendations report that accompanied the Reclamation Plan Amendment for the Lehigh Permanente Quarry. Our peer review evaluation focused on slope stability issues concerning the quarry pit, adjacent slopes, and stockpile areas.

Task 2. **Letter Report** - We prepared this letter report summarizing the results of our preliminary peer review of the slope stability issues concerning the reclamation of the quarry property and the findings of the Geotechnical Evaluations and Design Recommendations report and Reclamation Plan Amendment.

BACKGROUND

Lehigh Permanente Quarry is located along a sinuous, roughly east-west trending ridge within the Santa Cruz Mountains, west of Cupertino. The mine has a single pit, known as the North Quarry, where limestone is quarried for cement products. The quarry operator has been excavating the North Quarry pit for many years, and has not achieved the final planned pit floor elevation of 500 feet that is specified in the approved reclamation plan. The amended reclamation plan provides for a final pit floor elevation of 440 feet. West of the mine pit is an overburden stockpile area known as the West Materials Storage Area (WMSA). East of the mine pit is another overburden stockpile area known as the East Materials Storage Area (EMSA). Permanente Creek flows through the subject property south of the WMSA and the North Quarry pit.

During 2006 and 2007, we inspected the quarry site along with personnel from Santa Clara County as part of the County's SMARA quarry inspection team. We took the field observations from that inspection into account as part of our peer review of the referenced reports.

SITE CONDITIONS

The slopes within the North Quarry pit have experienced several notable failures that are discussed in the referenced report by Golder Associates. The largest landslide within the quarry pit is the Main Landslide (also known as the 1987 landslide) located in the northwest quadrant of the quarry pit. On the north wall of the quarry, the smaller Scenic Easement Landslide is named for the Scenic Easement that was impacted by the upper portion of the landslide. On the east wall of the pit, the Mid-Peninsula Landslide previously failed and encroached upon property owned by the Mid-Peninsula Regional Open Space District (MROSD). Subsequently, we understand that the quarry operator negotiated a land exchange with MROSD to take possession of the area at the head of the landslide.

During our previous inspections of the quarry pit, we observed thick fans of talus across many of the quarry benches, except where cleared to allow equipment access (Photo 1 of the eastern portion of the quarry pit). These talus fans apparently accumulate from many smaller rockfalls and rockslides on the intervening slopes outside of the areas of the named landslides. These isolated slope failures vary in size.

O5-4

West of the North Quarry pit is a cut slope with several deep-seated landslides that are labeled "West Area Slides" in the referenced report by Golder Associates. One of these landslides is large enough in areal extent that it extends into the haul road leading to the WMSA. Based upon previous review of historical aerial photographs, these failures have enlarged laterally and upslope over time.

The WMSA is located west of the North Quarry pit. It contains overburden materials that have been stockpiled during excavation of the pit. A review of historical aerial photographs shows that by 1960, some material had already been stockpiled there. Continued excavation of the North Quarry pit has led to accumulation of additional overburden materials in the WMSA.

The channel of Permanente Creek flows eastward through the site, south of the WMSA, North Quarry, and rock crusher areas. In these areas, loose fill was historically

dumped on the slope that descends to the creek channel. Locally, loose fill materials extend into the creek channel. Several historical failures have been noted within the loose fill on this slope. In the Surge Pile area, crushed rock materials are stockpiled adjacent to the stream channel before removal for processing elsewhere on the site.

O5-4

East of the North Quarry pit, overburden materials have been stockpiled in the EMSA. A review of a published geologic map by Sorg and McLaughlin (1975) shows that several landslides were previously mapped in the EMSA area. In addition, the Monte Vista fault is also mapped through the easternmost portion of the EMSA.

MAIN LANDSLIDE

The recent investigation of the Main Landslide area by Golder Associates consisted of a compilation of previous mapping and investigation by others, additional field mapping, air photo interpretation, field reconnaissance, and drilling and logging of two exploratory borings west of the landslide. Golder Associates proposes a geologic model that depicts the Main Landslide failing along a thrust fault that separates limestone in the hanging wall from greenstone in the footwall. In this model, the upper portion of the landslide area is a headscarp and the evacuated debris has come to rest lower on the quarry slope. Though some material clearly has been evacuated from the upper slope, it is clear from the landslide geomorphology of the "headscarp" area, that active scarps are present in the uppermost portion of the landslide area (Photo 2) and that the "headscarp" is part of the active landslide. This is also clearly illustrated by Figure 5.3 in the Golder Associates report, though much of the upper landslide is labeled "headscarp". Though the upslope extent of the landslide is clear from surface reconnaissance, the cross sections analyzed by Golder Associates show this upper landslide area as a stable headscarp area.

O5-5

The characterization of large, deep-seated landslides, such as the Main Landslide, typically involves extensive subsurface investigation using many borings within the landslide mass. These investigations could also potentially involve downhole logging of large-diameter borings, drilling deep core borings to install slope inclinometers, and installation of vibrating wire piezometers at multiple depths and locations within the landslide. The geologic data from borings within a large landslide (especially large-diameter borings, if appropriate for site conditions) can be used to identify the basal shear zone of the landslide. Subsurface investigation within the landslide typically includes sampling of sheared gouge materials from basal shear zones (preferably sampled during downhole logging of large-diameter borings or possibly by using continuous core small-diameter borings) for torsional ring shear strength testing. Additionally, landslide debris and intact rock below the landslide are sampled and tested for triaxial compression undrained shear strength testing with pore pressure measurements.

The investigation conducted by Golder Associates did not include subsurface investigation within the landslide. It would be very useful to have slope inclinometers within the "headscarp" area and long-term monitoring data from those slope inclinometers to evaluate the level of activity and depth of movement within the "headscarp" region. It would also be useful to have geologic data from either continuously cored small-diameter boreholes or downhole logging of multiple large-diameter borings within the landslide to help further develop the geologic model. In addition, the laboratory testing data provided in the referenced Golder Associates report did not include torsional ring shear strength testing to evaluate the shear strength of the basal rupture surface of the landslide. The limited extent of piezometer data, and the location of these data points outside of the

landslide, likely makes it difficult to accurately model the groundwater table within the landslide, which could result in inaccuracies in the slope stability analyses.

SCENIC EASEMENT AND MID-PENINSULA LANDSLIDES AND EAST PIT SLOPE

The Golder Associates investigation of the Scenic Easement and Mid-Peninsula Landslides and East Pit Slope was based upon mapping by Fouria (2004), exploratory boring data from previous investigations by others, field reconnaissance and mapping by Golder Associates, and logging of two test pits located about 25 feet behind the headscarp of the Mid-Peninsula Landslide. It is our understanding that Golder Associates was not involved in the drilling or logging of exploratory borings in this area, though they reference a previous investigation by others that appears to have included borings. The previous mapping by Fouria shows the rock mass in this area to be complexly faulted and tectonically deformed. This type of tectonic deformation could result in shearing that could impact slope stability. It is our opinion that updated subsurface data and laboratory testing should help refine the geologic model (subsurface structure, rock mass strength, groundwater, etc.) in this area. The analyses reported by Golder Associates appear to indicate that the factors of safety of the reclaimed slopes would locally be less than 1.5 under static conditions and less than 1.1 under pseudo static conditions for the East Pit Slope and Mid-Peninsula Landslide under reclaimed conditions. O5-5

"WEST SLIDES" AREA AND WMSA

As noted above, several landslides were identified in the "West Slides" area west of the North Quarry pit and southeast of the WMSA. In the report section on the WMSA, the referenced Golder Associates report mentions these landslides; however, no additional characterization of the landslides appears to have been conducted. One of the cross sections for the WMSA (Cross Section W1) goes through the largest of the "West Slides" and Golder Associates calculated slope stability analysis results based upon that cross section, but they acknowledge that they have no subsurface data for this landslide and that the geologic conditions have not been characterized in this area. Given that these landslides have enlarged over time and progressively undermined a portion of the slope southeast of the WMSA, it is recommended that Golder Associates characterize these landslides before analyzing the stability of these slopes.

PERMANENTE CREEK

As noted above, during quarry operations, loose fill material was dumped over the slope that descends to the channel of Permanente Creek, resulting in much of the slope below the WMSA, North Quarry pit, and Crusher areas being covered with loose fill material. The referenced reclamation plan amendment calls for removal of some of the loose fill material in seven Permanente Creek Reclamation Areas; however, it appears that some of the loose material will be left in place. Given that this loose fill is likely to be unstable in the long term, leaving this material in place could result in slope debris failing into Permanente Creek. It is our understanding that the quarry operator considers this portion of the slope to pre-date enactment of SMARA, and thus, would not be subject to reclamation standards outlined in SMARA. This issue should be resolved, and if SMARA jusrisdiction governs this area, then appropriate mitigation of the slopes should be included in the reclamation plan. Additionally, based upon our review of historical aerial photographs, it appears that a deep-seated landslide may extend down the south-facing slope to Permanente Creek in the approximate area of the Surge Pile. Additional

investigation would be necessary to confirm or deny the existence of this feature, and to evaluate the stability of this slope and possible landslide for reclamation purposes.

EMSA

In an appendix to the referenced report, there is a 2009 report by Golder Associates regarding the stability of proposed fill in the EMSA. In this report, Golder Associates references a geologic map by Sorg and McLaughlin (1975). Though several landslides are shown on the published map in the area of proposed fill for the EMSA, the Golder Associates report does not confirm or preclude the existence of these landslides, or the accuracy of the Sorg and McLaughlin landslide mapping. Subsurface investigation was performed in this area, and consisted of hollow stem auger borings with intermittent sampling, but this type of investigation is typically not useful for characterization of landslides. The Golder Associates investigation appears to show placement of fill directly over the native soil without apparent keying and benching into bedrock. Golder Associates calculated static factors of safety for portions of the proposed fill slopes to be less than 1.5. It would appear prudent to evaluate this area for the possible presence of older landslides, and provide recommendations for fill placement keyed into competent bedrock material.

O5-5

The U.S. Geological Survey Quaternary Fault and Fold Database shows a Quaternary active trace of the Monte Vista fault system passing through the easternmost portion of the EMSA. Though this fault is not considered to be Holocene active, the last rupture event is unknown; thus, Golder Associates should consider evaluating the potential impact, if any, from fault rupture on the stability of the proposed slopes.

CONCLUSIONS

Based upon our review of the referenced geotechnical report, it is our opinion that additional geologic subsurface characterization and laboratory testing would help refine the geologic model of the Main Landslide and other areas of the North Quarry pit slopes. Refinement of the geologic model would aid in the design of appropriate slope mitigation for mine reclamation. The proposed plan to fill the pit with overburden material appears to be a feasible means to buttress the Main Landslide; however, the final reclamation design should be based upon the refined geologic model. It may be necessary to buttress other portions of the quarry pit, such as the eastern slope, in order to prevent long-term instability and to achieve an industry-standard static factor of safety of 1.5. Stockpiled material from sources outside of the WMSA, such as EMSA, may be useful to build buttresses that extend over most or all of the pit slopes. However, much more detailed characterization of the pit slope geology and material strengths appears warranted before a buttress design can be justified. In addition, the reclamation plan describes compaction of the buttress fill by hauling and grading equipment. The geotechnical consultant should provide recommendations for compaction and testing of the fill that will be placed during reclamation to current engineering standards.

The proposed grading in the "West Slides" area cannot be accurately evaluated from a slope stability standpoint without additional characterization of the landslides and geologic conditions in that area. Currently, it remains unclear whether the proposed remedial measures would be effective in stabilizing these slope failures.

The slopes adjacent to Permanente Creek are mantled with unstable, loose fill materials. The reclamation plan amendment should include recommendations for removal of all loose fill materials on those slopes, should these fall within the SMARA jurisdiction.

O5-5

The geologic and geotechnical characterization of the EMSA site would benefit from an evaluation of the geologic mapping by the U.S. Geological Survey, with particular reference to the mapped landslides. Additionally, Golder Associates should provide recommendations for keying and benching of fill into bedrock and compaction of fill.

LIMITATIONS

Our services consist of professional opinions and recommendations made in accordance with generally accepted engineering geology and geotechnical engineering principles and practices. No warranty, expressed or implied, of merchantability or fitness, is made or intended in connection with our work, by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings. Our services have been limited to review of the referenced reports, review of historical aerial photographs, and preparation of this peer review letter.

O5-5

Our scope of work was limited to a preliminary review of the referenced report, and did not include detailed review of the slope stability analyses. In addition, we did not have the opportunity to meet with Golder Associates to discuss their methodologies and findings, which could provide additional information and clarity.

We trust that this provides you with the information that you need at this time. If you have any questions, please call.

Very truly yours,

COTTON, SHIRES AND ASSOCIATES, INC.

Philip L. Johnson
Supervising Engineering Geologist
PG 6196, CEG 2019

John M. Wallace
Principal Engineering Geologist
PG 6151, CEG 1923

Patrick O. Shires
Senior Principal Geotechnical Engineer
GE 770

POS:JW:PJ:st

Attachments: Photos 1 and 2

O5-5

Photo 1. Quarry benches that have not been cleared have accumulated debris from local slope failures.

O5-5

Photo 2. The Main Landslide showing well-defined scarps above the "headscarp" area, indicating ongoing deep-seated failure of the upper portion of the landslide.

3.3.5 Comment Letter O5: Bay Area for Clean Environment, Inc. (BACE)

O5-1 Please refer to responses O1-7 and O1-8, as well as Master Response M1 pertaining to SMARA. The Draft EIR acknowledges that selenium concentrations are elevated above Basin Plan Objectives in some reaches of Permanente Creek in the vicinity of the Project Area (Impact 4.10-1, page 4.10-31). The current discharge from the Quarry pit is an operational discharge that has been approved by the Regional Water Quality Control Board-San Francisco Bay Region (RWQCB) under Order No. R2-2008-0011, NPDES Permit No. CAG982001, General Waste Discharge Requirements for Discharges of Process Wastewaters from Aggregate Mining, Sand Washing, and Sand Offloading Facilities to Surface Waters. As stated on page 4.10-42 of the Draft EIR, the proposed reclamation activities would continue for approximately 20 years until final reclamation is complete and, during this time, could deliver selenium-bearing stormwater to Permanente Creek, which has been identified as a waterway impaired for selenium (see Draft EIR, page 4.10-4). The potential direct and indirect effects of Project-related selenium mobilization to water quality and aquatic habitats in this impaired waterway were determined to be significant and unavoidable during the 20-year interim period during which reclamation activities would be in progress (see the analysis of Impact 4.4-5, beginning on Draft EIR page 4.4-37 and the analysis of Impact 4.10-2, beginning on page 4.10-42). The Draft EIR has disclosed this impact, and the decision-making body (i.e., the Planning Commission) will consider this information in determining if the proposed RPA is compliant with SMARA. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O5-2 Comment noted. See Master Response M1(A) pertaining to vested rights.

O5-3 This comment has been addressed. See Response O5-1.

O5-4 Comment O5-4 and Comment O5-5 were prepared by Cotton Shire and Associates (CSA) at the request of Mr. Stuart Flashman, attorney for Bay Area for Clean Environment, Inc. (BACE). These comments were provided in a letter to Mr. Flashman from CSA, dated February 20, 2012 and were included in the BACE comment letter on the Draft EIR, dated February 21, 2012.

The comments provided by CSA focus on the information contained in the geologic investigation report prepared by Golder Associates (Golder) on behalf of the Applicant titled, *Geotechnical Evaluations and Design Recommendations* (Golder Associates, 2011a) and the geotechnical aspects of the Reclamation Plan Amendment (RPA). The Golder report was the primary geologic assessment source document for the geotechnical design elements of the RPA. As discussed in the Draft EIR, Section 4.7, the County and its consultants (Terraphase Engineering, 2011) peer reviewed the Golder report to determine its technical adequacy for use in the Draft EIR and relied on

it for the analysis of CEQA impacts related to the proposed Project. CSA's comments reflect professional opinions on the methodologies and conclusions presented the Golder report and the geotechnical design elements of the RPA. The CSA comments do not challenge the technical adequacy of the Draft EIR.

Comment O5-4 is a narrative description of general site conditions associated with slope stability and conditions as at the WMSA and EMSA. It describes existing conditions and does not provide specific comments as to the technical adequacy of the Golder report, the RPA, or the Draft EIR. The information provided in Comment O5-4 is generally consistent with the site conditions assessment provided in the Draft EIR, Section 4.7, *Geology, Soils and Seismicity.*

On the Applicant's behalf, Golder provided additional information in response to the comments prepared by CSA (Golder Associates, 2012a). The County Geologist and the County's consultants reviewed the additional information provided by Golder for technical adequacy, and those responses have been incorporated into this response. The information provided in Response O5-5 below, although not generated to directly respond to comments on the Draft EIR, supplement and provide clarification to the geotechnical information presented in Draft EIR Section 4.7, *Geology, Soils and Seismicity*.

O5-5 See also Response O5-4.

Main Landslide

CSA states that Golder's cross sections show the upper landslide area, or headscarp, as stable; Golder responded that this is incorrect. The cross sections in and of themselves do not imply stability; the cross sections simply show the slope profile and geologic materials making up the slope. The Golder report acknowledges that without mitigation, instability along the headscarp will continue, with ongoing impacts to the ridgeline north of the Quarry until the slope overall reaches a stable configuration. The headscarp will erode and generate debris due to failure of crack-bounded blocks and weathering-related degradation, and will migrate further into the ridge. Furthermore, Golder's stability analyses of the existing Main Slide yields a Factor of Safety (FOS) of 0.93 which by definition implies the landslide in its current configuration is unstable and actively failing. These facts are disclosed in the Draft EIR, Section 4.7.1.4 as well as on Draft EIR page 4.7-34 in Table 4.7-6.

CSA also states that Golder's investigation did not include subsurface investigation within the landslide area and recommends several methods for investigating active landslides. In actuality, the investigation conducted by Golder did include subsurface investigation of landslide materials. Golder installed two coreholes within greenstone terrane immediately adjacent to the mapped northwest limit of the Main Slide. As shown by mapping on Figures 4.3 and 5.3 of the Golder report, the boreholes are located within a block of greenstone that is undergoing incipient failure as evidenced

by tension cracks upslope of the boreholes. In other words, the boreholes are located directly in an area of the slope that is failing and is part of the existing Main Slide. Furthermore, Golder utilized available data from three boreholes installed in the Main Slide by Call and Nicolas (CNI) in previous investigations conducted in 1998 and 1999 as noted in Section 5.5 of Golder's 2011 Geotechnical Report. In summary, as concluded by the County Geologist and the County's consultants, there is sufficient information available from both Golder's and CNI's and WCA investigations regarding: the geometry and failure mechanism of the Main Slide, the geologic materials involved in the slide, laboratory testing data regarding material strengths, and pore pressure conditions in the slope to perform a reasonable and valid slope stability analyses.

Scenic Easement and Mid-Peninsula Landslides and East Pit Slope

Golder utilized subsurface and rock strength data from geotechnical investigations previously performed by CNI in the East Pit Slope and Mid-Peninsula Landslide areas of the site. CNI conducted two investigations in 2002 and a follow-up report in 2003 that provided recommendations for stabilizing the upper portion of the east quarry wall (including the Mid-Peninsula Slide). As discussed in Section 7.3 of Golder's report, CNI's work in this area of the site included: seven coreholes, laboratory testing of rock core samples, development of a geologic model based on mapping and the data from the coreholes, and slope stability analyses. CSA stated in their letter that they believe updated subsurface data and laboratory testing would improve the slope stability model, and implies that the FOS for the final reclaimed slopes does not meet adequate slope stability standards. The available data from CNI were supplemented by Golder with additional detailed geologic mapping, subsurface exploratory test pits, and laboratory testing. In Golder's opinion, sufficient data were available to perform reasonable and valid slope stability analyses. The referenced FOS for the East Pit Slope and Mid-Peninsula slope are correct, and are considered acceptable by Golder for the proposed end use of the reclaimed quarry (i.e., open space). The County Geologist and the County's geologic consultants have independently reviewed the Golder analysis and concur with its conclusions.

West Slides Area and WMSA

In its concluding remarks on the West Slides Area and WMSA, CSA states that "*the proposed grading in the 'West Slides' area cannot be accurately evaluated from a slope stability standpoint without additional characterization of the landslides and geologic conditions in that area. Currently, it remains unclear whether the proposed remedial measures would be effective in stabilizing these slope failures*."

Golder conducted an investigation of the WMSA including the installation of five borings, mapping and analysis of aerial photographs, laboratory testing of representative samples, and slope stability analyses. In addition, Golder utilized available data from an investigation of the WMSA conducted by The Mines Group in 2001. Two of Golder's borings were located nearby, or immediately upslope of the

referenced "largest of the West Slides" and Golder also performed aerial photographic analysis and site-specific mapping of this slide. Furthermore, older resource borings from the area (approximately 17 borings), were reviewed to demonstrate lithologic continuity of the bedrock underlying the "slide" area. In light of these data, adequate characterization of the slides has been performed.

Additionally, Golder's evaluation of the area denoted as the "largest of the west slides" indicated that the failure primarily involved older waste fill material placed during the early development of this area of the site. Specifically, the older fill was placed in a previously existing natural canyon underlain by in-place limestone to provide access to the western area of the site. Subsequently and over time, the old fill materials have failed in a piecemeal fashion (slumping of the older fill from the headscarp) and washed out of the canyon primarily due to erosional processes, not landsliding. Golder's field inspection of the "slide area" indicated that in-place bedrock is exposed at the toe of slide area as well as in the "floor" of the landslide. The bedrock is covered locally by slide debris that has not washed out of the canyon, which leads to the quarry floor. The headscarp area of the slide is comprised of waste rock fill, which is unstable in its current configuration. Because of these observations, and the fact that the older waste rock materials placed in the WMSA are going to be excavated and removed as part of the proposed Reclamation Plan Amendment, Golder determined that additional investigation for mitigation of the referenced area was not needed. The County Geologist and the County's geologic consultants have independently reviewed the Golder analysis and concur with its conclusions.

In summary, the unstable area of the slide referenced by CSA (i.e., the headscarp and lateral margins) is comprised of waste rock fill which will be removed by grading when the WMSA waste rock fill is removed. Under the proposed Reclamation Plan Amendment, an 80- to 100-foot-thick rock buttress founded on the floor of the Quarry pit will be placed against the west wall that would significantly improve the stability of the area.

The description and analysis of the Quarry pit that is provided in the Draft EIR is both adequate and accurate; however, the County has elected to include the following three descriptions to clarify and amplify the information contained in the Draft EIR about the West Area slides:

The following paragraph has been inserted following the description of the Mid-Peninsula Slide (2001) in Draft EIR Section 4.7.1.4 on page 4.7-19:

> **"West Area" Slides.** The "West Area" landslides are located west of the Main 1987 Slide between elevation 1400 and 1700 feet above mean sea level. The landslide boundary extends upslope of the haul road that leads to the WMSA. Golder's evaluation of the slide indicates that the failure primarily involved older waste fill material placed during the early development of this area of the quarry. Specifically, the older fill was placed in a previously existing natural canyon

underlain by in-place limestone to provide access to the western area of the site. Subsequently and over time, the old fill materials have failed in a piecemeal fashion (slumping of the older fill from the headscarp) and washed out of the canyon primarily due to erosional processes rather than deep-seated landsliding. These wall failures appear to be progressing upslope and Golder has observed cracks on the lower-most benches of the WMSA. The headscarp area of the slide is comprised of waste rock fill which is unstable in its current configuration.

The following has been inserted before the East Materials Storage Area discussion within the analysis of Impact 4.7-1 on Draft EIR page 4.7-30:

West Material Storage Area

The eastern-most cross section Golder analyzed within the WMSA (Section W-1) includes the "West Area" landslides. The stability of Section W-1 is associated with the adjacent west Quarry wall, and beginning in Phase 1 of the proposed RPA when stockpiling within the EMSA ceases, overburden material would begin to be used as backfill along the western areas of the Quarry pit (including the canyon at the base of the "West Area" slides). Beginning in Phase 2, material regrading of the WMSA would begin, which would include excavation of failed material on the east end of the WMSA. This process would result in the removal of overburden material prone slides and a buttress at the base. Golder's analysis along Cross Section W-1 indicates the final reclaimed slope would have a static FOS of 1.79. Given the West Area slides are currently unstable or marginally stable, final reclamation would significantly improve the stability of the east slope of the WMSA and the West Area slides compared to existing conditions, and would meet the stability requirements under SMARA.

To further clarify conclusions of the cumulative effects analysis of the Project, the following text has been added to the second paragraph under Section 6.2.7, Draft EIR page 6-21:

Three of the projects in the cumulative scenario are adjacent to or within the Project site: cumulative projects (1) surface mining within the Project Area, (2) operation of the Permanente Cement Plant adjacent to the Project Area, and (3) restoration of Permanente Creek within and adjacent to the Project area. Cumulative effects with respect to slope stability would occur only if the impacts of one project compound or worsen the impacts of one or more other projects in the cumulative scenario. Continuing surface mining operations within the Quarry pit would occur concurrently along with Phase 1 of the proposed Project. On its own, continued mining of the pit is expected to result in steeper overall slopes along the pit walls, particularly on the pit's east and southeast sides. Continued surface mining operations (and the accompanying deepening of the pit) within the Quarry pit would continue to present threats to the overall stability of quarry walls. Existing landslides within the quarry could continue to experience periodic

movements, and new areas of instability could occur – such conditions are inherent in hard rock quarry operations and typically are identified during regular inspections of working slopes and mitigated with temporary measures as required to protect workers.

However, Phase 1 of the Project (which would include stabilization, removal and restoration activities along Permanente Creek to address water quality concerns), would not compound or worsen the adverse slope stability effects of surface mining within the Project area. The beginning of Phase 1 would entail the continuing build-up of the EMSA and would not affect the stability of the Quarry pit. Further, when stockpiling within the EMSA ceases, Lehigh would begin to stockpile excess overburden within the West Area Slides, thereby buttressing areas within the southwestern portion of the Quarry pit. While this activity would be in close proximity with the continuing surface mining operation, it would not compound or worsen existing instabilities. In fact, it would provide additional buttressing material to the Quarry pit as surface mining operations proceed. While the timing of continued surface mining would overlap with reclamation Phase 1, the impacts of each are not cumulative in nature because they are physically separate and constitute different activities. Therefore, there would be no cumulative impact as a result of this overlap.

~~However, m~~With respect to cumulative impacts on erosion and soil loss, ~~M~~mining activity-related erosion control measures ~~are~~would be implemented, operated, and maintained within and adjacent to the Project Area. It is not anticipated that these cumulative projects would result in significant impacts to geology or soil resources within or outside of the Project Area. Furthermore, as discussed in Section 4.7, Geology and Soils, implementation of the Project overall would improve slope stability in the WMSA and the Quarry pit above baseline conditions, and successful reclamation of the Project Area would return erosion and soil loss to pre-mining conditions.

Permanente Creek Restoration Area

CSA concludes that "*the slopes adjacent to Permanente Creek are mantled with unstable, loose fill materials. The reclamation plan amendment should include recommendations for removal of all loose fill materials on those slopes, should these fall within the SMARA jurisdiction*."

Golder performed investigations related to the PCRA as requested by the County and the Applicant that focused on the portions of the PCRA that had been identified specifically by the County for review. The results indicated that relatively high factors of safety exist against failures in the overall slope in locations studied. Golder also reviewed erosion control BMPs in the proposed Reclamation Plan Amendment for stabilizing areas of loose surface fill. Golder's investigations and recommendations for these areas have been incorporated into the Project. CSA raises a question of whether

slope disturbances within the PCRA fall within the County's SMARA jurisdiction. This issue and the approach to reclamation is discussed in the Reclamation Plan Amendment, which refers to SMARA's proportional reclamation requirements under section 3505 of SMARA's implementing regulations (see RPA, page 80).

Golder has not investigated the deep-seated landslide in the area of the Surge Pile that is postulated in Comment O5-5, and so did not comment on its existence. In any event, SMARA regulates the conduct and reclamation of surface mining operations; it does not require the reclamation of naturally-occurring geologic conditions that are unrelated to mining activities.

East Materials Storage Area

CSA states that "*the geologic and geotechnical characterization of the EMSA site would benefit from an evaluation of the geologic mapping by the U.S. Geological Survey, with particular reference to the mapped landslides,"* and "*Additionally, Golder Associates should provide recommendations for keying and benching of fill into bedrock and compaction of fill."*

Golder evaluated the potential presence of pre-existing landslides as well as other surficial materials and accounted for this in the slope stability analyses. Golder conducted an engineering geologic and geotechnical investigation of the EMSA, including compilation of existing published and unpublished mapping, review of aerial photographs, site reconnaissance and geologic mapping, drilling, sampling and logging of five exploratory borings, laboratory testing, and analysis of slope stability conditions. CSA is correct in pointing out that the landslides mapped by Sorg and McLaughlin (1975) were not specifically discussed in the report. However, Golder did review and evaluate the potential presence of the landslides that were postulated by the authors on the basis of aerial photographs. Golder also reviewed mapping performed by Rogers and Armstrong (1973) and Vanderhurst (1981) and determined that the mapped landslide areas were generally topographic swales filled with colluvial materials. It also was noted that the general area of the EMSA has been highly modified by previous industrial development, as evidenced by extensive areas of cutting and filling. The County Geologist and the County's geologic consultants have independently reviewed the Golder analysis and concur with its conclusions.

The statement that "*[t]he Golder Associates investigation appears to show placement of fill directly over the native soil without apparent keying and benching into bedrock,*" is incorrect. Golder provided specific recommendations on page 13 and Figure 7 of the referenced report for ground preparations prior to fill placement. These recommendations also are referenced in the Draft EIR on pages 4.7-31 and 4.7-32. In part, Golder's recommendations state, "Foundation preparation should be completed prior to fill placement of the outer 50 feet beneath the EMSA/CMSA fill. Foundation preparation should consist of over-excavation of outer 50 feet of topsoil, organic materials (trees, brush, grasses), fine-grained colluvium with a Plastic Index greater than 25, or other

unsuitable soils until firm bedrock, granular soils, or clay soils with a Plastic Index less than 25 are exposed. If the exposed foundation surface is inclined at 5H:1V or steeper, the over-excavation distance from the outer slope should be extended from 50 feet to 100 feet. Furthermore, the fill placed on slopes of 5H:1V or steeper should be benched into the slope with individual bench heights of at least 2 feet and up to approximately 5 feet."

The U.S. Geological Survey classifies the Monte Vista-Shannon fault a Late Quaternary active and possibly Holocene active fault (USGS, 2000). Thus, by definition, the potential risk of ground rupture is considered low by the State of California. Golder evaluated the potential for slope instability in the EMSA rockfill related to seismically-induced ground shaking as required by SMARA. In light of the low risk of ground rupture assigned to the classification of the Monte Vista fault, the Golder study concludes that further analyses and investigation related to potential ground rupture is not warranted. The County Geologist and the County's geologic consultants have independently reviewed the Golder analysis and concur with its conclusions. The presence and classification of the Monte Vista fault is consistent with the information presented in the Section 4.7.1.3, page 4.7-16 of the Draft EIR, and the implications of this fault on slope stability is specifically addressed under Impact 4.7-2 of the Draft EIR.

Conclusions

Golder's analyses are based on field investigations conducted by Golder and supported by Golder's review of prior field investigations conducted by others. In particular, Golder's field investigations from 2007 to the present were part of a multi-year effort in direct response to the California Department of Conservation's request in 2007 for additional slope stability data and analysis. These investigations, in conjunction with the back analyses completed for the existing slope failures, provide a solid basis for analyzing stabilization options, particularly one that relies on a large fill buttress. The slope stability analyses demonstrate that adequate evaluation has occurred, and that the proposed buttress is a sound and viable plan for meeting the requirements of SMARA. The County Geologist and the County's geologic consultants have independently reviewed the Golder analysis and concur with its conclusions.

The eastern slopes of the Quarry pit have been investigated and do not require a buttress for long-term stability. CSA incorrectly references a FOS of 1.5 as "industry-standard." There is not an industry standard minimum of FOS of 1.5 used for designing mine-related slopes. SMARA recognizes this and requires that the stability of reclaimed mined slopes be compatible with the proposed end use. The proposed end use is undeveloped open space, and therefore, a minimum FOS of 1.5 is not warranted for the quarry site.

SMARA regulations state that "*Where ultimate site uses include roads, building sites, or other improvements sensitive to settlement, the reclamation plans shall include*

compaction of the fill materials in conformance with good engineering practice." As is stated in the RPA, the Applicant does not consider that these materials are sensitive to settlement and, in any event, the quarry and the associated rockfills would be reclaimed as undeveloped open space – an end use that does not include roads, building sites, or similarly sensitive improvements.

Furthermore, specification of compaction requirements for waste rockfills is not standard industry practice, and somewhat problematic since compaction of coarse rockfills cannot be accurately measured using industry standard methods. Back-analyses of the waste rock strength was estimated for waste rock previously placed at the site where the only compaction was that by hauling and spreading equipment in the course of the placement of the fill. These strength values have been used in the analyses and so are representative of expected future conditions based on the use of similar construction methods.

> From: Joyce M Eden <comment@sonic.net>
> Date: Tue, 21 Feb 2012 17:02:33 -0800
> To: Rob Eastwood <rob.Eastwood@pln.sccgov.org>
> Subject: dEIR Lehigh RPA: WVCAW additional comments
>
> Rob Eastwood
> SCC Planning Dept.
>
> Re: dEIR Lehigh RPA: West Valley Citizens Air Watch additional
> comments
>
> To Rob Eastwood: Please add this additional comment to the comments
> previously submitted by WVCAW today.
>
> In the dEIR Lehigh RPA, page 4.3-30 and 4.3-29 a reference is made to
> requiring Lehigh to submit a "legally binding" agreement precluding
> occupation of the "Caretaker's Residence" during Phase 1. It appears
> that this reference is to the residence known or previously known as
> the "Snyder-Hammond House." This house has been and perhaps still is a
> property of the City of Cupertino. If that is the case, then how can
> the county be asking Lehigh to require this agreement? In addition,
> even if it is owned by Lehigh, which we do not know to be the case, as
> far as we know, we object to residents being ask to move out of their
> current residence to facilitate Lehigh's project. SCC appears to be
> allowing Lehigh to do this.
>
> So this project alternative is dependent on moving a local resident
> out of their residence?
> This project is rendering this house unliveable. We object to this.

O6-1

>
> For WVCAW, Joyce M Eden, Tim Brand

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BACE 2011-05-26 BACE HRA evaluation

Evaluation of the Revised AB2588 Health Risk Assessment for 2005, Average 2008/2009 and 2013 Production Scenarios for the Lehigh Southwest Cement Company facility in Cupertino, California

O6-2

May 26, 2011

Mark Chernaik, Ph.D., J.D.

Submitted by Bay Area
For
Clean Environment

May 26, 2011

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O6-2

RE: Evaluation of the Revised AB2588 Health Risk Assessment for 2005, Average 2008/2009 and 2013 Production Scenarios for the Lehigh Southwest Cement Company facility in Cupertino, California.

Dear Dr. Alexeeff, Dr. Marty, Mr. Lutz and Ms. Jordan:

No Toxic Air has evaluated the Revised AB2588 Health Risk Assessment for 2005, Average 2008/2009 and 2013 Production Scenarios for the Lehigh Southwest Cement Company facility in Cupertino, California. We believe that, consistent with its obligations under the Air Toxics "Hot Spots" Information and Assessment Act, the Bay Area Air Quality Management District must return the health risk assessment (HRA) to the Lehigh Southwest Cement Company with instructions to revise the HRA in the following manner:

- Assume the average mercury content of limestone is **0.36 ppm**, not 0.31 ppm. Please see attached spreadsheet: Hg in limestone data.xls.

- Derive maximum 1-hour and 8-hour mercury concentrations at receptors based on maximum production rates and **maximum hourly mercury contents of limestone** (as high as 1.44 ppm, but no less than 0.48 ppm). Please see attached spreadsheet: Hg in limestone data.xls.

- Derive hazard quotients and total hazard indices at receptors by comparing estimated maximum 8-hour concentrations of arsenic, manganese and mercury to the **8-hour Reference Exposure Levels** for these substances.

We would appreciate your careful consideration of the attached evaluation.

O6-2

Sincerely,

Mark Chernaik, Ph.D.
For No Toxic Air, Inc.
Eugene, Oregon
Tel: (541) 513-1335
E-mail: mark@scienceforcitizens.com

May 26, 2011

Evaluation of

The Revised AB2588 Health Risk Assessment for 2005, Average 2008/2009 and 2013 Production Scenarios for the Lehigh Southwest Cement Company facility in Cupertino, California.

No Toxic Air reviewed the Revised AB2355 Health Risk Assessment (HRA) for 2005, Average 2008/2009 and 2013 Production Scenarios for the Lehigh Southwest Cement Company facility in Cupertino, California. What follows is a discussion of major flaws contained in the HRA.

1. By excluding its own data, the HRA underestimated the mercury content of limestone used by the Lehigh facility

Pre-blend stone (limestone) is the predominant raw material for the manufacturing of cement. Lehigh consumes more than one million tons of limestone per year, which it mines from a nearby quarry. The mercury content of this limestone is the main variable that determines mercury emissions from Lehigh's facility.

Appendix A of the HRA presents an analysis of the mercury content Lehigh's limestone performed over a 30-day period in March-April 2009. The data is presented in Table 1 of Appendix A.

O6-2

The data shows substantial variability of the mercury content in Lehigh's limestone that is likely due to the heterogeneity of mercury in limestone. The lowest measured mercury content was 0.2 micrograms per gram (= 0.2 ppm) and the higher measured mercury content was 1.44 ppm. The average mercury content of Lehigh's limestone is 0.36 ppm. See attached spreadsheet: Hg in limestone data.xls.

However, AMEC does not use an average mercury content of 0.36 ppm for determining mercury emissions from Lehigh's facility. Instead, AMEC uses an average mercury content of 0.31 ppm by excluding four measurements (replicate analyses of limestone samples performed on March 26 and March 27, 2009) as 'outliers." However, AMEC does not provide any basis for why these measurements should be excluded as outliers. There is nothing to indicate that the measurements were invalid because of the analytical method: the measurements from 26 and March 27, 2009 have the exact same reproducibility as the other measurements in the dataset.

There is nothing to indicate that the mercury content of the samples analyzed on 26 and March 27, 2009 are beyond the mercury content that can be found in limestone. One cement facility in the U.S. uses limestone with an average mercury content of 1.15 ppm and another facility uses limestone with an average mercury content of 0.63 ppm.[1] The four measurements from 26 and

[1] U.S. EPA (August 9, 2010) "National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants." at page 43.

March 27, 2009 are what they are, and should have been retained in calculations for the average mercury content of the limestone the Lehigh facility uses.

2. By ignoring the heterogeneity of the limestone used at the Lehigh facility, the HRA grossly underestimates maximum 1-hour ambient air concentrations associated with emissions from the facility

Even if we were only to use data not excluded by AMEC, there is substantial variability of the mercury content in Lehigh's limestone. For example, on April 1, 2009, limestone used at the Lehigh facility had a mercury content of 0.48 ppm.[2]

However all of the maximum 1-hour ambient air concentrations contained in the HRA for the Lehigh facility are based on the assumption that at all times the facility is using limestone with the average mercury content of 0.31 ppm.[3] Production rate (capacity) was the only variable that AMEC adjusted in the HRA when predicting maximum 1-hour ambient air concentrations of mercury.

This is an unreasonable assumption. Clearly there are days during when the Lehigh Facility is using limestone with a mercury content 50% (or more) than the average mercury content of such limestone. All of the maximum 1-hour ambient air concentrations contained in the HRA for the Lehigh facility need to be adjusted to correct this unreasonable assumption. O6-2

3. By ignoring 8-hour Reference Exposure Levels, the HRA fails to derive accurate hazard quotients and total health indices for exposure to arsenic, manganese and mercury

The Air Toxics "Hot Spots" Information and Assessment Act of 1987 states:

> "Health risk assessments required by this chapter shall be prepared in accordance with guidelines established by the Office of Environmental Health Hazard Assessment."[4]

The OEHHA guidelines for the preparation of health risk assessments states:

> "The output of an air dispersion modeling analysis will be a receptor field of concentrations of the pollutant in ambient air. These concentrations in air need to be coupled with Reference Exposure Levels and cancer potency factors to estimate the hazard indices and potential carcinogenic risks."[5]

Contrary to these guidelines, the HRA for the Lehigh facility failed to compare concentrations of the pollutant in ambient air with Reference Exposure Levels (RELs) that all pertain to the short-term impacts of arsenic, manganese and mercury on the nervous system.[6] These RELs are:

[2] HRA at Appendix A, Table 1.
[3] HRA at Appendix A, Table 3.
[4] California Health and Safety Code Section 44360(b)(2).
[5] OEHHA (2003) "Air Toxics Hot Spots Program Risk Assessment Guidelines" at page 4-4.
[6] See: http://oehha.ca.gov/air/allrels.html

Inorganic Arsenic 8-Hour REL

Reference Exposure Level	**0.015 µg/ As/m³**
Critical effect(s)	Decreased intellectual function in 10 year old children
Hazard Index target(s)	Development; cardiovascular system; nervous system; lung; skin

Manganese 8-Hour REL

Reference Exposure Level	**0.17 µg/m^3**
Critical effect(s)	Impairment of neurobehavioral function in humans
Hazard index target	Nervous system

O6-2

Mercury 8-Hour REL

Reference Exposure Level	**0.06 µg Hg/m^3 (0.007 ppb Hg^0)**
Critical effect(s)	Impairment of neurobehavioral functions in humans
Hazard Index target(s)	Nervous system

The HRA for the Lehigh facility used an air dispersion model to predict only very short-term (1 hour) and very long-term (annual) concentrations of arsenic, manganese, and mercury. For example, the HRA contains the following predictions of 1-hour maximum concentrations of arsenic, manganese and mercury at the maximum exposed individual resident (MEIR):

	Arsenic	Manganese	Mercury
HRA, maximum 1-hour concentration at MEIR, 2005 production[7]	0.004	0.003	1.050
HRA, maximum 1-hour concentration at MEIR, 2008-9 production[8]	0.004	0.003	0.966
HRA, maximum 1-hour concentration at MEIR, 2010 production[9]	0.004	0.003	0.677
HRA, maximum 1-hour concentration at MEIR, 2011 production[10]	0.004	0.003	0.336
HRA, maximum 1-hour concentration at MEIR, 2013 production[11]	0.004	NR	0.002

[7] HRA at Table 9A, Receptor 2040
[8] HRA at Table 9B, Receptor 2040
[9] HRA at Table 9C, Receptor 2040
[10] HRA at Table 9C, Receptor 2040
[11] HRA, Appendix J, 2013_Rep_Acu_Rec2041_AllSrc_AllCh_ByRec_ByChem.txt

The HRA for the Lehigh facility only compares these predicted concentrations of arsenic, manganese, and mercury to very short-term (acute, 1-hour) and very long-term (chronic) Reference Exposure Levels adopted by OEHHA in deriving total hazard indices.

Even though the air dispersion model used in the HRA for the Lehigh facility only predicted 1-hour (and annual) concentrations of arsenic, manganese, and mercury, there is a means of predicting 8-hour concentrations based on such data. The Office of Environmental Health Hazard Assessment (OEHHA) guidelines for the preparation of health risk assessments contain a recommended procedure for "Estimating Concentrations of Longer Averaging Periods from the Maximum One-Hour Concentration for Screening Purposes."[12]

This recommended procedure involves the application of conversion factors according to the following table found on page H-2 of the OEHHA guidelines for the preparation of health risk assessments.

Table H.1 Recommended Factors to Convert Maximum 1-hour Avg. Concentrations to Other Averaging Periods (U.S. EPA, 1992; ARB, 1994).

Averaging Time	Range	Typical Recommended
3 hours	0.8 - 1.0	0.9
8 hours	0.5 - 0.9	0.7
24 hours	0.2 - 0.6	0.4
30 days	0.2 - 0.3	0.3
Annual	0.06 - 0.1	0.08

O6-2

Application of these conversion factors to the predicted 1-hour maximum concentrations contained in the HRA allow an estimation of the following maximum 8-hour concentrations of arsenic, manganese and mercury at the MEIR.

	Arsenic	Manganese	Mercury
8-hour concentration at MEIR, 2005 production	0.003	0.002	0.735
8-hour concentration at MEIR, 2008-9 production	0.003	0.002	0.676
8-hour concentration at MEIR, 2010 production	0.003	0.002	0.474
8-hour concentration at MEIR, 2011 production	0.003	0.002	0.235
8-hour concentration at MEIR, 2013 production	0.003	NR	0.001

If, as required by the OEHHA guidelines, one compares these maximum 8-hour concentrations of arsenic, manganese and mercury at the MEIR to the 8-hour Reference Exposure Levels for arsenic, manganese and mercury, then one obtains the following hazard quotients and total hazard indices:

[12] OEHHA (2003) "Air Toxics Hot Spots Program Risk Assessment Guidelines" at Appendix H.

	Arsenic	Manganese	Mercury	Total HI
Hazard quotients at MEIR, 2005 Production	0.19	0.01	12.25	12.45
Hazard quotients at MEIR, 2008-9 Production	0.19	0.01	11.27	11.47
Hazard quotients at MEIR, 2010 Production	0.19	0.01	7.90	8.10
Hazard quotients at MEIR, 2011 Production	0.19	0.01	3.92	4.12
Hazard quotients at MEIR, 2013 Production	0.17	NR	0.02	0.18

The total hazard indices for 2005 and 2008-9 production scenarios are not only above the public notification threshold (hazard index =1), but are above the threshold the BAAQMD uses as a criteria for requiring a facility to reduce emissions.

These hazard quotients and total hazard indices do not reflect the fact that the HRA for the Lehigh facility underestimates the average mercury content of the limestone it uses and ignore the heterogeneity of mercury content in this material. Had the HRA for the Lehigh facility correctly inputted data about the mercury content of the limestone it uses and compared maximum 8-hour concentrations of arsenic, manganese and mercury at the MEIR to the 8-hour Reference Exposure Levels for arsenic, manganese and mercury, then even higher total hazard indices would have been derived.

4. Derived 1-hour maximum concentrations of mercury under the 2013 production scenario are inconsistent with emission factors provided in the HRA.

O6-2

The HRA for the Lehigh facility provides information about mercury emissions under the various production scenarios (2005, 2008-2009, 2010 and 2013) it inputted into the air dispersion models for predicting 1-hour maximum concentrations of mercury.[13] These emission factors are as follows:

2005 Production Scenario: 0.2 pounds per hour
2008-2009 Production Scenario: 0.18 pounds per hour (90% of 2005 level)
2010 Production Scenario: 0.14 pounds per hour (70% of 2005 level)
2013 Production Scenario: 0.011 pounds per hour (5.5% of 2005 level)

For the 2005, 2008-2009 and 2010, the HRA for the Lehigh facility discloses the predicted 1-hour maximum concentrations of mercury at the MEIR that are consistent with the decline in mercury emissions for these years. They are as follows:

2005 1-hour maximum [mercury]: 1.06 $\mu g/m^3$
2008-2009 1-hour maximum [mercury]: 0.966 $\mu g/m^3$ (91% of 2005 level)
2010 1-hour maximum [mercury]: 0.677 $\mu g/m^3$ (63% of 2005 level)

The body of the HRA for the Lehigh facility does not disclose the predicted 1-hour maximum concentration of mercury at the MEIR under the 2013 production scenario. However, consistent with the claim that mercury emissions under the 2013 production scenario would be approximately 5-6% of mercury emissions under the 2005 production scenario, one would

[13] HRA at Appendix A, Table 3

expect that the predicted 1-hour maximum concentration of mercury at the MEIR under the 2013 production scenario would be approximately 0.058 $\mu g/m^3$.

Although the body of the HRA for the Lehigh facility does not disclose the predicted 1-hour maximum concentration of mercury at the MEIR under the 2013 production scenario, Appendix J of the HRA for the Lehigh facility - HARP Modeling Input and Output files, 2013 Production Scenario.

One of the files (2013_Rep_Acu_Rec2041_AllSrc_AllCh_ByRec_ByChem.txt) in Appendix J allows one to calculate the predicted 1-hour maximum concentration of mercury at the MEIR under the 2013 production scenario that the HRA does not reveal in its body. This file calculates an acute hazard quotient for mercury of 0.00252 in comparison to the acute Reference Exposure Level for mercury of 0.6 $\mu g/m^3$. This allows one to calculate that the HRA for the Lehigh facility assumes that under the 2013 production scenario, the predicted 1-hour maximum concentration of mercury at the MEIR would be 0.0015 $\mu g/m^3$.

O6-2

This predicted 1-hour maximum concentration of mercury at the MEIR under the 2013 production scenario is only 0.15% of the predicted 1-hour maximum concentration of mercury at the MEIR under the 2005 production scenario and, therefore, is glaringly inconsistent with the claim that mercury emissions under the 2013 production scenario would still be roughly 5-6% of mercury emissions under the 2005 production scenario. Therefore, the HRA for the Lehigh facility needs to explain why predicted 1-hour maximum concentration of mercury at the MEIR under the 2013 production scenario are a 99.85% reduction of predicted 1-hour maximum concentration of mercury at the MEIR under the 2005 production scenario.

Hg in limestone data.xls.

25-Mar-09	0.394
	0.396
26-Mar-09	0.774
	0.780
27-Mar-09	1.440
	1.420
28-Mar-09	0.401
	0.397
29-Mar-09	0.302
	0.306
30-Mar-09	0.298
	0.295
31-Mar-09	0.328
	0.328
1-Apr-09	0.483
	0.480
2-Apr-09	0.272
	0.271
3-Apr-09	0.346
	0.342
4-Apr-09	0.384
	0.384
5-Apr-09	0.263
	0.264
6-Apr-09	0.279
	0.283
7-Apr-09	0.340
	0.341
8-Apr-09	0.382
	0.384
10-Apr-09	0.243
	0.243
11-Apr-09	0.253
	0.255
12-Apr-09	0.446
	0.446
13-Apr-09	0.261
	0.261
14-Apr-09	0.263
	0.262
15-Apr-09	0.247
	0.249

O6-2

Letter O6

O6-2

16-Apr-09	0.351
	0.352
17-Apr-09	0.238
	0.238
18-Apr-09	0.267
	0.267
19-Apr-09	0.200
	0.200
20-Apr-09	0.232
	0.232
21-Apr-09	0.216
	0.217
22-Apr-09	0.274
	0.273
23-Apr-09	0.326
	0.325
24-Apr-09	0.295
	0.296
Average	**0.360**

BACE 2011-05-27-BAAQMD reply
to BACE HRA evaluation

BAAQMD reply to BACE 5/26/2011 HRA evaluation

May 27, 2011
Scott Lutz, BAAQMD

O6-2

Submitted by Bay Area
For
Clean Environment

Dr. Chernaik –

Thank you for providing comments regarding the Lehigh HRA. However, it is the District's preliminary conclusion that the HRA was prepared in accordance with our direction and the OEHHA AB2588 HRA guidelines. In addition, District staff have conducted AERMOD dispersion modeling to verify the results. The District is anticipating formal comments from OEHHA and will consider them before making a final decision about the approval of the HRA. Please consider my responses to your comments.

- You state that a greater average mercury content should be used. Lehigh indicated that there were analytical anomalies for two sampling days (of 30) in question and requested that they be excluded from the 30-day average; this is often done for questionable data. The 30-day averaging protocol was developed by USEPA and the District believes this methodology is appropriate for estimating emissions from this facility until Lehigh installs a continuous emissions monitor (CEM) later this year in order to demonstrate compliance with the Portland Cement NESHAP. The District has recently issued a permit for the kiln with an hourly mercury emission limit of 0.064 lb/hr (permit is for a carbon sorbent injection system installed to reduce mercury emissions); this is the emission rate used in the HRA for the 2011 production scenario and will be enforced using a 30-day rolling average based on material balance until the CEM is operational later this year.

O6-2

- Your simple analysis regarding the 8-hour Hazard Index is flawed: you assumed that the overall maximum 8-hour concentration should be compared to the 8-hour REL – this is a common misconception. OEHHA indicates that the 8-hour REL is to be compared to repeated long-term daily 8-hour exposures (e.g., for off-site workers and children at schools or day-care facilities). Formal guidance from OEHHA is not yet available, however, OEHHA provided interim guidance to air districts on April 19, 2010. This guidance indicates that an 8-hr REL should be compared to the annual-average concentration for continuously emitting sources, and that the annual-average concentration should be adjusted by considering the operating schedule for non-continuously emitting sources (e.g., a factor of 4.2 for a source that operates 5 days a week, 8 hours/day). Since Lehigh's kiln is operated more than 4000 hours/yr, the adjustment factor would be about 2.2. The maximum annual-average concentration for a worker (MEIW = receptor 5076, Table 8B) for 2008/09 production is 4.2E-3 $\mu g/m^3$, the average exposure for a worker at the MEIW using the factor of 2.2 would be about 9E-3 $\mu g/m^3$. The 8-hour REL is 0.06 $\mu g/m^3$; therefore the 8-hr HQ for Hg for 2008/09 is about 0.15 - essentially the same as the chronic HQ of 0.14. In addition, current emissions of mercury are about 65% lower than in 2008/09. Mercury is the predominate contributor for chronic hazard index and would also be for the 8-hour hazard index; therefore, the 8-hour HI would not be significant. Because the revised HRA guidance document is not yet available and the 8-hr RELs have not been incorporated into HARP, most districts have deferred implementation of these new RELs, CARB and OEHHA have concurred with this policy.

- You state that the maximum 1-hour concentrations of Hg under the 2013 production scenario are inconsistent with emission rates for other scenarios. However, you failed to consider that improved dispersion will be achieved with the proposed new stack (see Section 6.0, page 58 of 194) that will be installed to meet requirements of the NESHAP. The much taller

stack and higher flow rates will enhance dispersion, therefore the risk estimates are not inconsistent - that's why we do detailed dispersion modeling. Although the 2013 concentration of mercury was not presented in the main report, the 2013 scenario is an optional future alternative analysis, therefore the District chooses to be less stringent in the presentation of results. Once the new equipment and stack are actually installed in 2013 and the new OEHHA HRA guidelines are adopted, the District can perform an updated risk analysis (including 8-hr HI).

O6-2

Scott

BACE 2011-06-01-BACE response to BAAQMD reply to BACE HRA evaluation

BACE response to BAAQMD 6/1/2011 reply to BACE 5/26/2011 HRA evaluation

O6-2

June 1, 2011

Mark Chernaik, Ph.D., J.D.

Submitted by Bay Area
For
Clean Environment

Dear Scott,

Thank you for the thoughtful reply to the evaluation. What follows are some additional comments and questions that I hope will enhance the understanding of Lehigh's March 2011 Health Risk Assessment.

1. Mercury content of Lehigh's limestone

You wrote: "Lehigh indicated that there were analytical anomalies for two sampling days (of 30) in question and requested that they be excluded from the 30-day average; this is often done for questionable data."

Could you please specify the nature of the analytical anomalies that justify exclusion of this data? The nature of these analytical anomalies is not specified in the Health Risk Assessment.

You indicate that Lehigh requested that this data be excluded from the 30-day average. Could you please share all of the correspondence between Lehigh and BAAQMD regarding the treatment of the sampling data in question?

You wrote: "The 30-day averaging protocol was developed by USEPA and the District believes this methodology is appropriate for estimating emissions from this facility." Could you please provide a citation to or copy of the USEPA protocol used by Lehigh that specifies the methodology for analyzing the mercury content of Lehigh's limestone and the treatment of analytical results? O6-2

There is nothing analytically anomalous about the data for these two sampling days that is readily apparent. Two runs were made on each day of sampling. The mercury contents of the two runs made on March 26 and 27 differ by only a few percent (March 26, run 1 = 0.774 ppm, run 2 = 0.780 ppm; March 27 Run 1 = 1.44 ppm, Run 2 = 1.42 ppm), consistent with the small differences in the mercury contents for all of the other sampling days. Even if we exclude data from March 26 and 27, there is substantial variation in the mercury content of Lehigh's limestone, ranging almost two-and-half-fold, from a minimum of 0.20 ppm to 0.48 ppm. This substantial variation in measurements from the other 28 days of sampling further suggests that the measurements of March 26 and 27 validly reflect an inherent variability of the mercury content of Lehigh's limestone. Finally, when the U.S. EPA promulgated the new Portland Cement NESHAP in September 2010, it stated:

> "Industry commenters stated that we should account for additional sources of variability in this floor determination, namely intra-quarry variability and variability of the mercury content in local coals which kilns could utilize. As explained below, beyond those situations where commenters documented that sources actually used inputs with greater mercury content than used during the 30-day test period (see note 11 above), or where further intra-quarry mercury variability could reasonably be estimated, we did not do so.

> "EPA is of course aware that limestone quarries are immense, and are customarily used from periods of 50 to 100 years. Taking the average of 30 days of sampling data from one part of the quarry would not necessarily encompass all of the different mercury levels throughout the quarry."

The U.S. EPA also supplied a graph depicting the average mercury content of limestone used by U.S. Portland Cement plant. See: average mercury content of limestone.gif One U.S. Portland Cement plant uses limestone with an average mercury of more than 1.1 ppm. One of the two quarries with the highest mercury content of limestone in the U.S. is Lehigh's quarry in Tehachapi, California, about 200 miles from Lehigh's quarry in Cupertino. Therefore, there is nothing inherently anomalous with the measurements of March 26 and 27 showing mercury contents from 0.77 to 1.44 ppm.

Without further justification of why the data from March 26 and 27 should be excluded, BAAQMD's decision to exclude this data seems arbitrary.

2. The District's recent issuance of a permit for the kiln with an hourly mercury emission limit of 0.064 lb/hr

O6-2

It is the contention of No Toxic Air that when predicting maximum hourly ambient air concentrations of mercury under the 2010, 2011 and 2013 production scenarios, the HRA should assume a clinker production rate of 200 tons per hour (which requires the consumption of 289 tons of limestone per hour) and a maximum mercury content of limestone.

It is the contention of No Toxic Air that, according to the mercury analysis that Lehigh performed in 2009, the maximum mercury content of limestone is 1.43 parts per million - the average mercury content of limestone that Lehigh sampled on March 27, 2009.

If the district can demonstrate that there are analytical anomalies that justify exclusion of this data (and the data from March 26, 2009), then it is the contention of No Toxic Air that, according to the mercury analysis that Lehigh performed in 2009, the maximum mercury content of limestone is 0.482 - the average mercury content of limestone that Lehigh sampled on April 1, 2009.

You wrote: "The District has recently issued a permit for the kiln with an hourly mercury emission limit of 0.064 lb/hr (permit is for a carbon sorbent injection system installed to reduce mercury emissions); this is the emission rate used in the HRA for the 2011 production scenario and will be enforced using a 30-day rolling average based on material balance until the CEM is operational later this year."

As you know, the District has issued two permits for the facility, a Major Facility Review Permit that was noticed by the District on January 7, 2011 and a Minor Revision of a Major Facility Review Permit that was noticed by the District on May 10, 2011.

It is my understanding that none of the limits on mercury emissions contained in the Major Facility Review Permit that was noticed by the District on January 7, 2011 come into effect until September 9, 2013.

The Minor Revision of a Major Facility Review Permit that was noticed by the District on May 10, 2011 does contain the following limit (on page 24):

> "The owner/operator of S-154, S-171 and S-172 shall not emit more than 261 lbs/yr (12-month rolling average) and 0.064 lb/hr (3-hour rolling average) of total mercury during normal operation. These mercury limits may be revised based on a new stack or other modifications that Lehigh will be making, which could affect the Health Risk Analysis results. (Basis: H&S Code 44300 et seq.)"

You wrote that the new hourly limit on mercury emissions would be: "enforced using a 30-day rolling average based on material balance until the CEM is operational later this year."

Does the Minor Revision of a Major Facility Review Permit that was noticed by the District on May 10, 2011 contain a deadline by which Lehigh must make CEM of mercury emissions operational?

Until Lehigh does make CEM of mercury emissions operational, how would enforcement of the hourly limit "using a 30-day rolling average based on material balance" prevent gross exceedances of the hourly limit? O6-2

For example, let us suppose that Lehigh is operating at a maximum production capacity of 200 tons per hour of clinker (289 tons per hour of limestone) and is using limestone that contains a mercury content of 1.43 ppm. Potential mercury emissions might be 0.826 lbs/hour (289 tons/hour x 2000 lbs/ton x 0.00000143). The Minor Revision of a Major Facility Review Permit explains that: "the 2011 Production scenario represents the implementation of the Activated Carbon Injection system (subject of this application) and an hourly emission rate of 0.064 lb/hr of mercury (approximate 65% reduction from baseline)." If we apply a 65% reduction of mercury emissions because of the implementation of the Activated Carbon Injection system, then Lehigh might still emit 0.289 lbs/hour for a substantial period of time. However, these elevated emissions would be completely masked by an enforcement mechanism that uses a 30-day rolling average based on material balance.

Finally, would you agree that the new mercury limit contained in the Minor Revision of a Major Facility Review Permit that was noticed by the District on May 10, 2011 has no bearing on the analyses in the HRA on prior year (2005, 2009/2009, and 2010) Production Scenarios?

3. Comparison of predicted ambient air levels of arsenic, manganese and mercury to 8-hour Reference Exposure Levels

You wrote: "Formal guidance from OEHHA is not yet available, however, OEHHA provided interim guidance to air districts on April 19, 2010. This guidance indicates that an 8-hr REL should be compared to the annual-average concentration for continuously emitting sources, and

that the annual-average concentration should be adjusted by considering the operating schedule for non-continuously emitting sources (e.g., a factor of 4.2 for a source that operates 5 days a week, 8 hours/day). Since Lehigh's kiln is operated more than 4000 hours/yr, the adjustment factor would be about 2.2."

Could you please share the interim guidance that OEHHA provided to air districts on April 19, 2010? I looked carefully for the document on OEHHA's website, but could not find this interim guidance.

In developing the 8-hr REL for mercury, OEHHA stated:

> "The 8-hour Reference Exposure Level is a concentration at or below which adverse noncancer health effects would not be anticipated for repeated 8-hour exposures (see Section 6 of the Technical Support Document)."

So, I agree with you that my analysis was too simple: predicted maximum 8-hour exposures at schools and other relevant receptors may not be similar to repeated 8-hour exposures. O6-2

However, I have concerns that an adjustment of the annual-average concentration of mercury is an appropriate method of comparing predicted 8-hour exposures at schools and other relevant receptors to the 8-hour Reference Exposure Levels considering the strong tendency of mercury to bioaccumulate (because of its well-known avidity for sulfhydryl and thiol groups in biological material). As OEHHA has noted:

> "The half life of elimination of mercury in humans following a single inhalation exposure of 14-24 min. was 21 days from the head, 64 days from the kidney, and 58 days from the body as a whole (Hursh et al., 1976). Urinary elimination among workers occupationally exposed for several years had an elimination half-life of 55 days (Sallsten et al., 1994). Thus, since mercury is only slowly eliminated, the intervals between daily 8-hr exposures, and between weeks are not long enough for the elimination of significant amounts of the metal and it will accumulate in the body with repeated exposure."

Considering that the half-life of mercury following a single inhalation exposure is so long (58 days), multiple exposures to mercury over a period of only several days would result in a nearly cumulative dose of mercury and may exert a profound toxic effect on the nervous system.

4. Maximum 1-hour concentrations of Hg under the 2013 production scenario

For the 2013 Production Scenario, I did in fact consider that a much taller stack and higher flow rates would enhance dispersion. For example, the HRA indicates that maximum hourly emissions of arsenic would be the same under the 2005 and the 2013 production scenarios (compare tables 5A and 25A). The HRA predicts that maximum 1-hour concentrations of arsenic under the 2005 production scenario would be 4.04 E-3 at the MEIR, and roughly the same, 3.58 E-3, under the 2013 production scenario. So, clearly the tall stack and higher flow rates are not having much of an effect on particle-bound pollutants. For the various Production

Scenarios, what assumptions are being made about the speciation and fraction of particle-bound mercury in overall mercury emissions from the kiln?

O6-2

Average Mercury Content of Limestone.gif

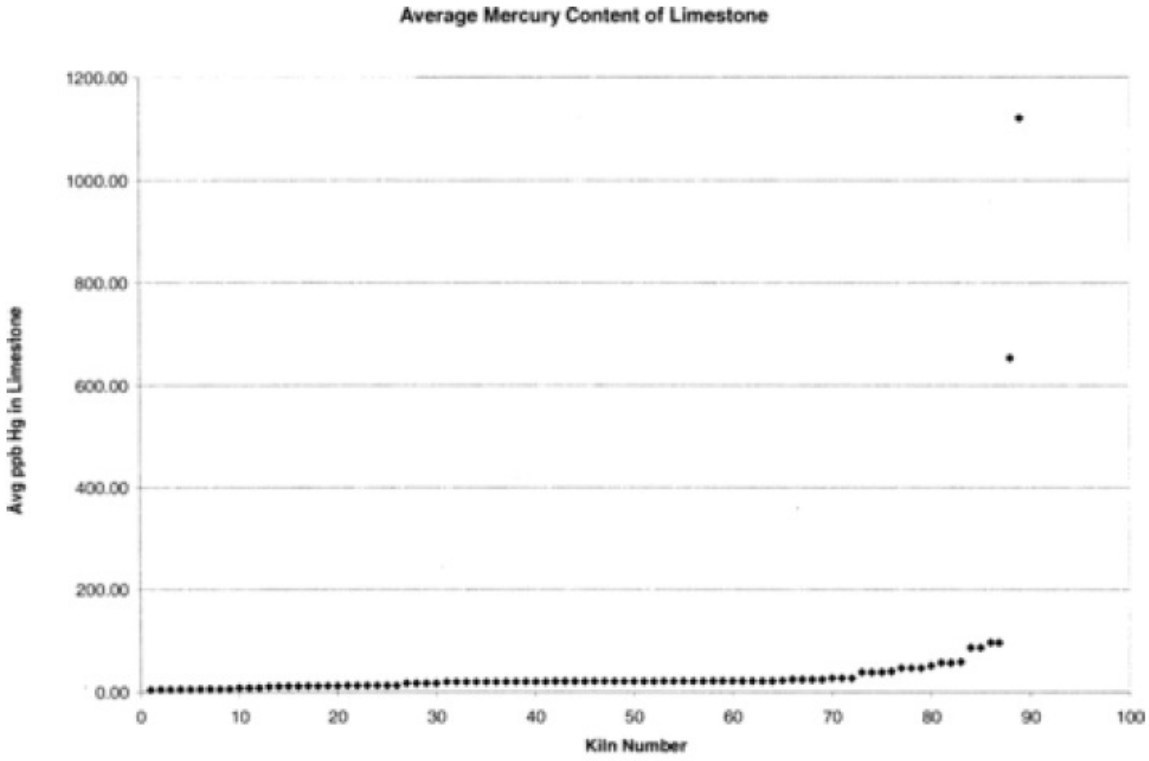

Figure 1. Average Mercury Concentration of Limestone

Average Mercury Conant ol Limeslonc

Figure 1. Average Mercury Concentration of Limestone

Attention: Rob Eastwood, Santa Clara County Planning Department, Santa Clara County Board of Supervisors (SCC BOS)

cc: Marina Rush, Santa Clara County Planning Department
California Office of Mine and Reclamation, Director
State Mining and Geology Board, Executive Director
City Of Cupertino
City of Los Altos
City of Los Altos Hills
California Regional Water Control Board

Comments on Lehigh Reclamation Plan Amendment DEIR, December, 2011

O6-2

West Valley Citizens Air Watch (WVCAW) and Bay Area for Clean Environment (BACE)

February 21, 2012

[1] The RPA has changed substantially after the August 18, 2011 EIR Notice of Preparation

The original RPA dated July 2011 was replaced with a new RPA dated December 2011. The original public scoping comments were for the July version, but then when notice dated 12/23/2011 was sent to the public announcing the DEIR had been published, it referred to a new version that we had not seen. Most of the public was not aware of this new version until the first public meeting was held by the county on January 26, 2012, 5 months into the process and one month before the deadline for final comments to the DEIR. WVCAW has put forth considerable effort in analyzing the July RPA. We had spent $959.77 creating a hardcopy of these documents and invested substantial time notating this copy. Several pictures of these documents along with the receipt are shown below.

O6-3

No explanation was given for what has changed or which pages or paragraphs are different and it is unreasonable to expect the public to review the entire document again in the time remaining. Furthermore, the body of the RPA is 42% larger in the new December RPA compared to the original July RPA, and the effect on the voluminous attachments is not known. How are citizens supposed to adequately review the DEIR when the supporting documents are changed without any schedule extension or even a notice? We believe the intent of the CEQA process will not be met without a new scoping period and additional time to review the DEIR and request the county rewrite the schedule accordingly.

O6-3

[2] The EIR must include a true “no project alternative” which assumes the predictable consequence of an alternate (and legally required) reclamation plan without speculative assumptions about expanded mineral extraction

O6-4

The DEIR arbitrarily assumes that if the proposed project is not approved, then an identical plan would be approved later on. CEQA pp15.126.6 states, “If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this “no project” consequence should be discussed.” It is entirely predictable that if this plan is not approved Lehigh will submit an alternate reclamation plan because they

are currently out of compliance, under local pressure from the community, and belatedly under State threat to implement AB3098 to correct SMARA violations of the 1985 reclamation plan. But while they are legally obligated to submit a reclamation plan, the extraction components of any future plan are not predictable but highly speculative. The past plans for the property by this cement company have included a housing development, for example. Furthermore, the County has discretionary power in the matter. Present day statements of intent by Lehigh to pursue such a course hardly embody a predictable outcome.

Yet the “no project alternative” in the DEIR assumes that any alternative with less extraction than currently proposed is invalid and can not be analyzed by the EIR. The total limestone extraction is considered a fixed constant and environmental impact mitigation measures that limit extraction are not considered.

O6-4

For compliance with CEQA, the “no project alternative” must assume that the legally required reclamation plan is eventually put in place but without further extraction of resources. Conflation of expanded resource extraction with reclamation activity has been a common complaint by the citizenry and is mentioned repeatedly in the scoping comments by the public. The fact that expanded mining in the existing pit is now proposed compared to earlier proposals for a brand new mine does not substantially change the fact that Lehigh continues to hold the reclamation plan hostage to expanded mineral extraction.

We ask that in addition to the CEQA compliant “no project alternative” described above, the EIR evaluate an alternative which precludes mineral extraction until after all environmental violations are corrected.

We also ask for consideration of one more alternative which precludes mineral extraction below the present depth (750’ AMSL) of the mine due to geological and hydrological concerns.

We further ask for other alternatives that eliminate further dumping in the EMSA and include reclamation of the entire footprint of the cement plant location.

Paragraph 3.3.2.1 suggests that an alternative site is inappropriate because the reclamation must be applied to the existing site. But the extraction proposed in this RPA is ignored when it comes to considering other sites. Cement and limestone is available elsewhere and the EIR should discuss the availability of cement and limestone from other locations and how this would impact the environment. Lehigh is presently importing limestone and claims that the Cement Plant will continue to manufacture cement "long after the Quarry is exhausted of its limestone resource", as documented on page 6-8 of the DEIR.

O6-4

[3] What is Lehigh's track record on execution of the existing 1985 reclamation plan? Where is a comprehensive list of other environmental statute violations? Ignoring past performance against the old plan and violations of other important statutes ignores a substantial body of evidence that directly applies to a realistic estimate of the environmental impact of this project.

The 1985 plan states:

> "*C. <u>Ultimate Conditions</u>*
> *At the end of this 25 year reclamation program the following conditions will exist. The West Materials Storage area will have reached a maximum elevation of 1975 feet. Its slopes will be established at a 3:1 gradient and planted with native grasses to control erosion.*
> *The East Materials Storage area will have reached a maximum elevation of 1475 feet, with slopes at a 3:1 gradient. It will be revegetated with native grasses, shrubs, and trees.*
> *The quarry pit area will be excavated at an overall gradient of 1:1 in conformance with the slope stability investigation. Any future alternatives, including revegetation and continued operation, will be addressed in another reclamation plan to be prepared in approximately 20 years."*

O6-5

After 27 years, how much of this been accomplished? The West Materials Storage area has not been graded or re-vegetated. What happened to the original East Materials Storage Area plan? The main pit has not been stable with numerous landslides (it has even intruded onto neighboring property), and the new plan was not prepared in 20 years as promised (and would not yet be prepared if not for immense community outrage)."

CEQA 15384(a) states:

> *"Substantial evidence" as used in these guidelines means enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached. Whether a fair argument can be made that the project may have a significant effect on the environment is to be determined by examining the whole record before the lead agency." And it further says, "…speculation…does not constitute substantial evidence."* (Emphasis added.)

Isn't it fair to say that the "whole" record should include the track record of this company and its predecessors on environmental issues; how well they complied with all applicable environmental laws and specifically SMARA with regard to compliance with the 1985 reclamation plan, and how well they achieved the results required by that plan? The presumption that this company will suddenly respect SMARA seems speculative and unreasonable. It is more than just an ironic coincidence that the primary motivation for this reclamation plan amendment is Lehigh's urgent need to legitimize the illegal construction of the EMSA which violates their existing 1985 reclamation plan; this history is relevant and not trivial. O6-5

The EIR should be a realistic estimate of the impacts of the project, not merely the impact of the 'intended' project because the past record clearly predicts that Lehigh will not adhere to the reclamation plan. To estimate the real impacts of the project, the report should provide a detailed accounting of all the violations this company has committed and how effectively the 'corrective action', if any, mitigated the damage.

Numerous people and organizations have sent in lists of past and ongoing serious violations of the law that this cement company has committed with little or no repercussions. We would like to ask for a tally of all the current and past fines, both levied and paid, going back to the 1985 Reclamation Plan's approval. A great deal of public input regarding this subject can be found in the EIR appendix, but little in the body of the EIR report itself. Comments to that end can be found from the Sierra Club, Audubon Society, BACE, WVCAW, and several individuals. A comprehensive accounting of the violations by this

company must be part of this EIR or mitigation cannot be addressed. This is the intent of the EIR process required by CEQA. Looking at the cover photo used by Santa Clara County on the Lehigh Reclamation Plan Amendment Environmental Impact Report for 2011, it is hard to believe that any reclamation plan has ever existed let alone been previously implemented in any way on any scale. The enormous gaping scar made by the workings of the current and previous landowners is unbelievable.

The “whole” body of evidence should also include the County’s record on oversight because if the County cannot effectively enforce the law, the SMARA requirement for compliance with the reclamation plan will be ignored in the future just as it was in the past. To that end, County oversight problems documented by the State Mining and Geology Board should be listed in the EIR. For example, page 5 of the executive officer’s report titled “Review of the 45-day Notice to Correct Deficiencies Sent to Santa Clara County, Issued April 19, 2006” states: “Furthermore, there is little evidence in the administrative record demonstrating that the County has the understanding, or will, to enforce SMARA. This is clearly documented by the County, serving as a lead agency, unwillingness to issue Notices of Violation, Orders to Comply, or Administrative Penalties, when appropriate, for any of the sites in all the years leading up to 2005.” O6-5

A NOV was issued by SCC to Lehigh regarding their use of the current EMSA area to dump mining materials and otherwise use it in mining operations only after a member of WVCAW had to push SCC to investigate the dumping of materials. Lehigh was neither required to remove the pile nor stop dumping. A fine was never issued. This incident illustrates why we in the community lack confidence in SCC as the lead agency for the mining operation and of the adequacy of the oversight of the SCC BOS.
Without including and considering an accounting of Lehigh’s compliance record and the County's enforcement record, the DEIR is critically flawed.

[4] Hydrology

[4.1] The level of the Main Pit according to the maps is now approximately 750' above sea level. However, our understanding is that this level may already be below the water table. What is the level of the water table? Why has the pit been allowed to be blasted deeper than the water table? How much O6-6

contamination is in the water because of that? How much contamination in Permanente Creek because of that? How much contamination is in our drinking water or may find its way into our drinking water in the future? Why has that been allowed to continue by SCC?

[4.2] The maps propose to allow the pit to be excavated yet further to **approximately 400'**. How can SCC justify allowing additional lowering of the Main Pit (North Pit) further into the water table? We ask this not be allowed.

[4.3] The water that would be pumped from the quarry in order to mine below the water table is ‘old’ water that has already been contaminated with selenium and pumping this to the surface will contaminate surface water. This is a direct unavoidable consequence of continued mining below the water level.

O6-6

[4.4] The EIR should include a description of a contingency plan for generating electric power for the pumping equipment during power outages.

O6-7

[4.5] The proposed 12” cap for the EMSA will not block rainwater from seeping through and seepage can occur at depths to nearly 100 feet. Capping will potentially reduce but not eliminate the oxidation of selenium. Of concern is that there is no mention in the DEIR of using low permeability barriers to prevent oxidation of the waste rock. Such barrier methods prevent both oxidation of selenium and leaching of the material into runoff water. Also, the leachable material should be buried deep enough so that deep-rooted vegetation does not increase the permeability of the cover nor endanger grazing wildlife.

Evidence that this method will be effective is weak against the price of failure. What are the mitigation measures available when we finally discover that this method was irresponsible years after it has been completed? Does the County intend to require financial assurances for the many decades it will take for us to find out how this experiment turns out? What is the expected lifetime of the 12" cap? Will the cap withstand erosion, weathering, land movement, etc.?

[4.6] How will the organic fill proposed for the main pit be isolated from oxygen in rain water or from other sources which would eventually circumvent the intended selenium mitigation mechanism? Are there other applicable

O6-8

examples of this technique on such a large scale? If so, these should have been included in the DEIR.

In addition, we ask for an independent review of the literature documenting the long term and short term effectiveness of these proposed mitigation measures. Similar mitigation efforts have been attempted with varying degrees of success. We would ask for specific examples of other cases where this method was attempted, examples of suboptimal results, and how Lehigh will avoid or respond to similar pitfalls. This scheme must be proven before the County makes a commitment to accept the irreversible consequence we will face when it fails. Does the County intend to require financial assurances for the many decades it will take for us to find out how this experiment turns out? O6-8

[4.7] The necessity of mitigating selenium inputs into Permanente Creek in the first place is due to a violation of the existing Reclamation Plan of 1985. The EMSA is a significant source of selenium and other potentially toxic materials. Water runoff is currently collected in basins before being discharged into Permanente Creek; and average levels of selenium in the runoff water exceeds the Basin Plan objective. We ask that in addition to testing runoff into Permanente Creek that further long term testing also include inputs from the creek into San Francisco Bay wetlands as well as local groundwater. O6-9

[4.8] The planned timeframe for Reclamation of the EMSA, WMSA, and Quarry pit will take a minimum of 5 years before adequate data is available on the effectiveness of the mitigation strategy. In the meantime, downstream environmental impacts will presumably be ongoing. There is no mention in the DEIR of the consequences to the Applicant if the water quality from its operations does not improve.

Furthermore, a five-year monitoring period may not capture degrading effectiveness of any mitigation measures. The completion criteria listed on 4.10-42 should be extended to fifty years. O6-10

[4.9] Final Reclamation is expected to take 20 years. This represents a significant amount of time. Despite the listing of several measures which can all be considered under the heading of Best Management Practices, the sum total of these interim control measures are simply inadequate to address the large environmental impacts of discharges of selenium, sediment and TDS into

the local water system. The DEIR quite clearly states this as fact. O6-10

[4.10] Mitigation measure 4.10-2b, the EMSA Interim Stormwater Monitoring Plan, mandates that water samples be collected within 24 hours after a storm event. This represents a very large window of time to capture releases of selenium, sediment and TDS. On 4.10-12, "In the upper watershed, floods are flashy in nature...stream flows thus respond rapidly to rainfall." Discharges of contaminants can peak and then be washed away in a matter of a few hours, and this window of time needs to be narrowed, ideally at the peak of the flood and no more than 2 hours after the high water level. O6-11

[4.11] Best available information suggests that a 100-year discharge to Permanente Creek during the latter part of the Reclamation Plan would be highly adverse in terms of downstream flooding. Given the potential of real disaster, the Project should not proceed until actual planning is done to avoid this hazard. The DEIR clearly states the following facts: It is unknown if onsite detention is even feasible. Note that if the Quarry is not backfilled but left in its baseline condition, drainage would continue and this threat is minimized. However, the current plan to backfill from EMSA, et. al. could then not proceed. O6-12

[5] Biology

Show locations on a revised Woodlands Impacts map of each tree 5" >/=DBH proposed to be removed and explain why they need to be removed and the impacts of their removal and the impacts of related habitat and species migration areas, avian for example. How is this a reclamation plan if over two hundred trees of significant size will be removed, further enlarging the already huge dead zone of the mining operations and cement plant footprints? On the WRA Woodlands Impacts map there is no documentation of the trees in the EMSA. Yet other maps show oak woodland areas. Include these trees and their locations. O6-13

On Attachment D, Section 5.1 in the December 2011 RPA, page 37, Table 3 lists potential biological impacts for all sections **except for EMSA**. In order to get this information, reference is made to WRA's 2009 Biological Resources Assessment. This document does not adequately include the impacts of the O6-14

proposed project, which further illustrates the need for a complete RPA and new scoping period.

O6-14

[6] EMSA viewshed screen function is unreasonable

Project goal of “providing screen with EMSA” is a smoke screen. ES.5.1 alternative of complete backfill should not claim lack of EMSA view screen as a disadvantage. Ultimately, the limestone will all be depleted and the temporary view being screened will be gone but the unsightly mountain they supposedly built to hide it will remain for eternity. The EMSA viewshed enhancement is naked Lehigh propaganda that needs to be removed, or at least labeled as temporary and less significant than the enormous mountain that will permanently scar our hillside. (Also, note that this view screen is claimed as an objective of the project in ES.5.1, but not listed as an objective in ES.2.)

O6-15

[7] Inadequate reference description

Apparently a Lehigh Cement company webpage titled “Working Together to Build Our Communities” and a Hanson webpage titled “Welcome to the Hanson Global Site” were used as references on page 1-9 in preparing the introduction section of the DEIR, but it is unclear what “facts” were utilized from these references, nor how these temporal references can be reliably reproduced in the future.

O6-16

[8] Page ES2 reference to future extraction

This Project SHOULD exclude any future extraction activities that have been previously proposed but deliberately removed from this Project. Delaying approval for these projects at this point may be a violation of the CEQA piecemealing provision. The application should include future commitments.

O6-17

[9] Vested Rights

Last year, the County gave Lehigh property rights to the access road leading and going through the quarry. The County was able to give away the road because it belonged to the public. According to the Santa Clara County zoning ordinances, a permit is required to mine within 1000' of a public road. The fact that this transfer occurred proves that much of the land involved in this project

O6-18

is not vested. This case is currently pending in court and therefore it is premature to assert that the issue of vested rights is settled. The area of the old cement plant and current cement plant is another issue of controversy which is discussed later in this letter.

O6-18

[10] Inappropriate classification of EMSA as “existing”

Paragraph 2.6.1 describes the East Materials Storage Area as “existing” but fails to mention that plans for this storage area were never reviewed nor approved by any government agency until now. Classifying this storage area as “existing” is disingenuous. The DEIR should provide some accounting and analysis of the contaminants that could be buried under this waste pile from previous manufacturing operations at the site which include magnesium, etc…

O6-19

[11] Baseline Conditions

Baseline conditions should assume adequate and legal adherence to the current Reclamation Plan and laws. To use a baseline condition associated with multiple existing violations (e.g. multiple landslides, operating outside the approved Reclamation Plan boundaries, violating neighboring property, oversteepened and dangerous slopes, impacted waterways) makes almost any alternative seem palatable. We ask that the baseline condition not be one that is fraught with violations.

O6-20

[12] Geology (Section 4.7)

[12.1] Geological Studies and Limitations
Golder Associates Slope Stability Evaluation for Compliance with SMARA East Materials Storage Area Section 6.0 states "The analysis and recommendations contained in this report are based on data obtained from the results of previous subsurface explorations by others as well as the explorations and mapping conducted by Golder. The methods used generally indicate subsurface conditions at the time and locations explored and sampled. Boring logs may not reflect strata variations that may exist between all sampling locations. In addition, groundwater conditions can vary with time." In other words, if they did not sample enough areas or weather conditions are wetter than at the time of sampling none of their calculations will be valid. What

O6-21

if there is a 20 or 50 or even a 100 year flood event? Will the slopes fail under these weather events? O6-21

[12.2] There are various fault lines (Monta Vista Fault Line and Berrocal Fault Zone) running through the quarry and cement plant. The San Andreas Fault is 2 miles away. Geotechnical Evaluation and Design Recommendations Update dated July 2011 by Golder Associates, Inc. page 16 states "potential seismic impacts for the project resulting from an earthquake event associated with a 10 percent probability of exceedance (POE) in a 50 year period." What are the risks of exceedance in 75 years, 100 years, 150 years? Do we not owe it to our children and grandchildren to make these calculations? O6-22

[12.3] Core sampling WMSA. Minimal core samples were taken in WMSA. This is completely inadequate. Since sometime in the 1800's all kinds of unknown materials had been dumped into the WMSA. There could be hazardous waste and other pollutants from various operations throughout the years contained therein. Planning to dig into this area for limestone and to truck it and dump it into other areas could be hazardous to the workers as well as nearby residents. Many more samples need to be taken and at various levels. Even then, how can one tell what may be in any one area. This needs to be addressed with more extensive testing. O6-23

[12.4] Mid-Peninsula Slide - The Mid-Pen slide occurred in 2001 during a heavy rain. Are the geological stability studies not supposed to account for heavy rain? This landslide destroyed part of the Mid-Pen Regional Open Space District's Rancho San Antonio Preserve. A land swap was orchestrated by Lehigh and SCC and as far as we are aware, no fines were levied against Lehigh.
As part of the land swap agreement, Lehigh agreed not to sell any product from the exchanged property for mining material. If the proposed grading of Mid-Pen does occur, will anyone be accountable for observing that Lehigh does not try to sell the graded material? O6-24

[12.5] We ask for clear disclosure of types and amounts of materials proposed to be extracted including limestone, aggregate, and overburden as required by CEQA. In addition, a comprehensive review of the estimates given in the 1985 Reclamation Plan compared with the actual volume of limestone, aggregate, and overburden extracted during the 20 year duration of the plan from 1985 to O6-25

2005. This disclosure will help the public evaluate the new proposals and provide a basis to estimate if they are realistic.

O6-25

[12.6] The 1985 Reclamation Plan (page 12) refers to "serpentinized greenstone area in the upper northwest portion of the quarry." Yet the DEIR mentions only nine samples(p4.7-9) that were independently tested for asbestos. "The Franciscan Complex is highly variable in its lithology and the map used to locate ultramafic rocks is a coarse scale geologic map that doesn not allow for precise location of various rock types." These included samples of limestone and gravel that would not contain asbestos as serpentized soil tends to be soft. We ask that a independent geologist does a survey of the area for pockets of serpentinite to be sampled. Polarized light microscopy is also quite subjective as a method of detection and may not detect the presence of asbestos.

O6-26

[12.7] There are three large slides in the quarry pit area.
1. Main Slide (1987) in the Northwest corner
2. Scenic Easement Slide (2001) near the crest of the north slope of the quarry pit. This slide violated an agreement between the quarry and the residents of Santa Clara County to protect the viewshed from the north. Please include a copy of the easement and any penalties Lehigh or its predecessors have paid for this violations.

Where are the "fixed monuments"? Do they still exist? Explain. Our understanding is that the scenic easement is supposed to be 1650', but it appears that this plan only is planned for it to reach 1450'. How does comply with the Scenic Easement Agreement? If there is non-compliance, what fines will be levied against Lehigh by the County? If there is non-compliance with the Scenic Easement and other environmental laws, how can Lehigh be trusted to continue to expand their operations?

O6-27

3. Mid-Peninsula Slide (2001)- at the top of the Quarry pit's East wall during heavy rainfall in the winter of 2001. This landslide destroyed part of Rancho San Antonio Mid -Peninsula's land. Lehigh and Mid-Pen region subsequently negotiated a land swap.

Lehigh has blamed these slides on heavy rainfalls during meetings in the past and have not taken responsibility for them. It appears that this approach will be

taken in the future as the calculated Factor of Safety (FOS) remains unacceptably low. According to the EPA, ENGINEERING PROCEDURE 2.1 STEEP SLOPE MINING: AOC and EXCESS SPOIL DETERMINATION, "The applicant must design excess spoil fills in order to attain a long-term static safety factor of 1.5 and, if a durable rock fill, an earthquake static safety factor of 1.1. "
http://www.epa.gov/Region3/mtntop/pdf/appendices/j/appj-engproc2-1.pdf

O6-27

TABLE 4.7-6
SUMMARY OF SLOPE STABILITY EVALUATIONS IN THE QUARRY PIT

Section[3]	Condition	Description	Calculated Factor of Safety and Estimated Displacement under a Design Earthquake
Main Slide (1987)			
Azimuth 120	Existing	Static	0.93
		Seismic: Pseudo-Static	NE
		Seismic: Displacement under design earthquake	NE
	Final RPA Slope	Static	1.44
		Seismic: Pseudo-Static	1.01
		Seismic: Displacement under design earthquake	7 inches (median)
Stability Section	Existing	Static	1.07
		Seismic: Pseudo-Static	NE
		Seismic: Displacement under design earthquake	NE
	Final RPA Slope	Static	1.53
		Seismic: Pseudo-Static	1.05
		Seismic: Displacement under design earthquake	6 inches (median)
Scenic Easement Slide			
SE1	Existing	Static	1.05
		Seismic: Pseudo-Static	0.8
		Seismic: Displacement under design earthquake	2.5 to 10 feet
	Final RPA Slope	Static:	2.27
		Seismic: Pseudo-Static	1.57
		Seismic: Displacement under design earthquake	NE
Mid-Peninsula Slide			
MP1	Existing	Static	1.03
		Seismic: Pseudo-Static	0.84
		Seismic: Displacement under design earthquake	4 feet
	Final RPA Slope	Static:	1.36
		Seismic: Pseudo-Static	1.03
		Seismic: Displacement under design earthquake	6 inches (median)
MP2	Existing	Static:	1.24
		Seismic: Pseudo-Static	0.98
		Seismic: Displacement under design earthquake	9 inches (median)
	Final RPA Slope	Static:	1.32
		Seismic: Pseudo-Static	1.02
		Seismic: Displacement under design earthquake	6 inches (median)
East Wall			
EW1	Ultimate Slope Excavation Prior to reclamation	Static	1.36
		Seismic: Pseudo-Static	1.04
		Seismic: Displacement under design earthquake	6 inches (median)
	Final RPA Slope	Static:	1.48
		Seismic: Pseudo-Static	1.02
		Seismic: Displacement under design earthquake	6 inches (median)
EW2	Ultimate Slope Excavation Prior to reclamation	Static:	1.28
		Seismic: Pseudo-Static	0.97
		Seismic: Displacement under design earthquake	12 inches (median)
	Final RPA Slope	Static	1.41
		Seismic: Pseudo-Static	1.07
		Seismic: Displacement under design earthquake	5 inches (median)

O6-27

TABLE 4.7-6 (Continued)
SUMMARY OF SLOPE STABILITY EVALUATIONS IN THE QUARRY PIT

Section*	Condition	Description	Calculated Factor of Safety and Estimated Displacement under a Design Earthquake
South Wall			
9A	Ultimate Slope Excavation Prior to reclamation	Static: Final Excavated South Wall, circular failure	1.7
		Final Excavated South Wall, failure along thrust fault	2.3
		Seismic: Displacement under design earthquake	NE
	Final RPA Slope (within backfill)	Static	1.46
		Seismic: Pseudo-Static	1.05
		Seismic: Displacement under design earthquake	6 inches (median)

[a] Cross sections used to calculate FOS values were chosen by Golder Associates based on the location of current areas of instability, and locations considered to be most representative of current and proposed conditions. The acronyms uniquely identify each of the cross sections, which are further detailed in Golder's geotechnical evaluations.

NE: Not Evaluated

SOURCE: Golder Associates, 2011a

Good engineering practices should take into account very heavy rainfall and likely seismic events. None of these proposals will be likely to withstand either events given the low FOS. Furthermore, the seismic displacements are listed as median. However, for example a 7 inch median displacement could be from 1/2 inch to 10 feet or greater in various locations. It would be more reasonable and considerably safer if the worst case were to be assessed instead of the median. **The design of the final slopes are destined for failure due to the unacceptably low FOS.** We ask that the County revise the target FOS to account for errors of calculation and unforeseen factors, as recommended by EPA and generally accepted engineering practice.

O6-27

[12.8] The Permanente Creek Restoration Area (PCRA) along the creek has "a substantial amount of mining-related overburden and/or road fills have traveled downslope, and in some places, have reached the active floodplain of Permanente Creek" PCRA has been subject to cleanup and abatement orders issued in July 1999 by the San Francisco Bay Regional Water Quality Control Board. How much of this order had Lehigh complied with and what if any penalties have been imposed?

O6-28

[13] Cement Plant

[13.1] SCC determined that the old cement plant area was an integral part of the mining operation and therefore vested. Yet, the new cement plant area is not included in the Reclamation Plan. SCC cannot have it both ways. Either the cement plants as part of the mined lands are vested, requiring inclusion in the Reclamation Plan and an adequate FACE, or they are separate from the mined lands and therefore not vested.

This is completely inadequate oversight by SCC as a lead agency over the mining operations. This plan should not go one step forward until SCC resolves this issue of the cement plants one way or the other.

[13.2] We have repeatedly asked for in written communications with SCC a map by the SCC geologist outlining the location of the former cement plant. This is necessary if this reclamation plan is to continue to go forward. The water tower that is visible in the western section of the EMSA appears to be a clear maker by which an approximation of the location of the former cement plant can be located.

O6-29

[13.3] The cement plant area is within Cupertino's Urban Service Area as Very Low Density Residential, NOT industrial use. In fact, the City of Cupertino General Plan 2000-2020 proposes a trail extension through the area "when the Railroad (Union Pacific RR that serves Lehigh Cement) goes out of service in 20 years" This area must be appropriately reclaimed for this use to occur. (pages 2-50, 2-51 City of Cupertino General Plan 2000-2020) http://www.cupertino.org/index.aspx?page=709

[14] Below is a letter we sent in 2007 explaining why the current cement plant should be included in the reclamation plan.

O6-30

West Valley Citizens Air Watch
10136 Camino Vista Dr
Cupertino, CA 95014
(408) 446-1827
October 4, 2007

Douglas W. Craig

Assistant Director
Department of Conservation
Office of Mine Reclamation (OMR)
801 K Street, MS 09-06
Sacramento, CA 95814

Re: Hanson Permanente Cement Corporation (Hanson Permanente) -- necessity of inclusion of cement plant in reclamation plan amendment and Draft Environmental Impact Report (DEIR) based on State Mining and Reclamation Act (SMARA) requirements. Mine Identification No. 91-43-0004

Dear Mr. Craig:

The Hanson Permanente cement plant needs to be included in the upcoming reclamation plan amendment and Draft Environmental Impact Report (DEIR) as stated in the OMR letter of September 22, 2006 [1]; as also stated in the letter from James S. Pompy, Manager Reclamation Unit, OMR, in his letter of May 18, 2007 [2]; and again stated by Paul Marshall, Senior Engineering Geologist, Compliance Section, OMR, in his letter of June 7, 2007 [3]. O6-30

The OMR letter dated, September 22, 2006, pointed out that, “According to the approved reclamation plan [of 1984], ‘. . . crushed rock is transported, for further processing, to the cement plant further to the east.’ Because the cement plant includes structures, facilities, equipment, machines, tools, or other materials or property which result from, or are used in, surface mining operations, it meets the definition of ‘Mined Lands’ contained in Public Resources Code (PRC) § 2729 (SMARA).* Because there is no approved reclamation plan or financial assurance for this area, Hanson has been and is currently operating the cement plant in violation of SMARA. “

“The Department [of Conservation] believes that the reclamation plan for the Hanson Permanente Quarry and Cement Plant needs to be amended to include the cement plant site.” [1]

On May 18, 2007, in reviewing the Hanson Permanente Application (dated March 2007), James S. Pompy, Manager Reclamation Unit, OMR, states,

“OMR
specifically identified the cement plant as an area which meets the definition of “Mined Lands” as stated in PRC Section 2729. The proposed Amendment is not in compliance with Article 1 (commencing with Section 3500) of Title 14 of the CCR that addresses reclamation plan amendments, and will not resolve this outstanding compliance issue.” [2], p 2.

On June 7, 2007, in reviewing the Financial Assurance cost estimate for Hanson Permanente, Paul Marshall, Senior Engineering Geologist, Compliance Section, OMR, wrote, “OMR has reviewed the cost estimate and proposed amendment and finds that it specifically excludes Kaiser Cement Corporation’s cement plant facilities that are located just east of the existing Permanente quarry pit . . . The proposed amendment is not in compliance with Article 1 (commencing with Section 3500) of Title 14 of the CCR that addresses reclamation plan amendments, and therefore, the cost estimate is inadequate to resolve this outstanding compliance issue.” [3] p 1.

O6-30

To the contrary, after receiving a letter dated July 2, 2007, from Hanson Permanente, on August 23, 2007, the OMR reversed itself, “Based on a review of information provided by the operator of this site, Hanson Permanente Cement, Inc. . .” However, additional facts have come to our attention which provide for the opposite conclusion and which we have documented below. [4] & [5]

The OMR determination to include the cement plant in the reclamation plan and thus the DEIR needs to be restored; that is, include the cement plant in the upcoming reclamation plan and DEIR. [1] Not including the cement plant appears to violate the State Mining and Reclamation Act (SMARA) and possibly other laws. Hanson’s response in their letter of July 2, 2007, to OMR claims that SMARA did not apply to the plant as it met the exclusion criteria for a processing facility.”
[4]

To the contrary:

The Surface Mining and Reclamation Act of 1975 (SMARA) section 2714,

states:

"This chapter does not apply to any of the following activities:
. . .
(c) Operation of a plant site used for mineral processing, including associated onsite structures, equipment, machines, tools, or other materials, including the onsite stockpiling and onsite recovery of mined materials, subject to all of the following conditions: [bold added]

(1) The plant site is located on lands designated for industrial or commercial uses in the applicable county or city general plan.
(2) The plant site is located on lands zoned industrial or commercial, or are contained within a zoning category intended exclusively for industrial activities by the applicable city or county.
(3) None of the minerals being processed are being extracted onsite.
(4) All the reclamation work has been completed pursuant to the approved reclamation plan for any mineral extraction activities that occurred onsite after January 1, 1976."

*** The cement plant site does not meet any of these four criteria for exclusion, let alone all of the criteria as required under 2714 (c) as quoted above. ***

O6-30

West Valley Citizens Air Watch would like OMR to now have access to the pertinent facts and accurate information, which it appears they did not previously have, as follows:

Re: Subsection (c) (1)
The location of the cement plant site is within the City of Cupertino Urban Service Area and thus it is located on the City of Cupertino Land Use Map. (It does not fall under the Santa Clara County land use designation). On the City of Cupertino Land Use Map, the area is designated Very Low Density Residential (5-20 Acre Slope Density Formula) . Therefore the fact is the cement plant area is not designated for industrial or commercial use.[6]

In addition, attached is a letter dated August 30, 2007, from the City of Cupertino to SMGB requesting the cement plant be included in the EIR

for the reclamation plan amendment.[7]

Re: Subsection (c) (2)
When the cement plant facility was rebuilt in the early 1980's it was moved to a different site from the original location. [8] The new site, which is the current site, was and is zoned "A Exclusive Agriculture." (See the Santa Clara County Zoning map) [8] & [9]

Even if the current cement plant was still within the original A1 Zoning category, which it is not, A1 is a General Use District allowing for residential and agricultural uses and other uses through a permit process. It is not zoned industrial or commercial or exclusive industrial. [9]

Therefore the fact is the cement plant is not located on lands zoned for industrial or commercial uses, and it is not contained within a zoning category intended exclusively for industrial activities by the applicable city or county.

O6-30

Re: Subsection (c) (3)
According to the approved reclamation plan "… crushed rock is transported, for further processing, to the cement plant further to the east." (Reclamation Plan, Kaiser Cement and Permanente Quarry, 1984, p 20) [10]

The cement plant was established after the quarry operation began because of the presence of the limestone onsite. The cement plant was and currently is primarily supplied by limestone from the onsite quarry. Although Hanson states in its letter of July 2, 2007 that it is served by rail, it fails to point out that it is primarily the fuel -- coal and petroleum coke -- which are delivered by rail, along with comparatively small amounts of bauxite and iron ore. Virtually all of the limestone used in the kiln comes from the onsite quarry. And, as was explained to me, Karen Del Compare, by Mr. John Giovanola of Hanson Permanente on an August 14, 2007 tour of the Hanson Permanente site, limestone makes up about 95% of the material needed to make cement. [11]

In a Scoping Meeting for the DEIR for the Reclamation Plan Amendment in the City of Cupertino on July 26, 2007, Hanson Permanente Land Use Director Marvin E. Howell stated “The most important thing I’d like you to take away today from my comments would be the fact that this material is mined here, the material is milled here, and the material is used here.” [12]. It is clear that the cement plant is part of an integrated operation, supplied by limestone from the quarry. As quoted above, Hanson’s own officials proclaim this in public meetings.

The fact is that the vast majority of the minerals being processed are being extracted onsite.

Re: Subsection (c) (4)
The document in Attachment [13] refers to the current cement plant site being “quarried” after 1976. [13] p 4

O6-30

In its letter of July 2, 2007, Hanson incorrectly claims that, “The plant is a stand-alone facility that has been operating continuously in the same footprint since its inception in 1939.” [4]

It appears that Hanson’s position -- that the cement plant should not be included as a part of the reclamation plan -- would circumvent the CEQA process (Division 13, commencing with Section 21000) and produce an EIR which would improperly piecemeal the reclamation plan and would not properly provide for reclamation of a quarried area.

Because SMARA Section 2714, (c) requires all four conditions to be met as a criteria for exemption and because those required conditions are not satisfied (not even one of them), we are requesting redress of this matter, by OMR requiring inclusion of the cement plant in the reclamation plan amendment and the DEIR.

We support the OMR and the Department of Conservation in using your professional expertise to enforce SMARA. Please inform us of progress on this matter.

Thank you for your attention,

Karen Del Compare and Joyce M Eden for West Valley Citizens Air Watch

cc: Bridgett Luther, Director, Department of Conservation
Stephen Testa, Executive Officer, State Mining and Geology Board
Val Alexeeff, Director, Dept. of Planning, Santa Clara County
David W. Knapp, City Manager, City of Cupertino
Sally Lieber, Assemblywoman, 22nd Assembly District

* SMARA § 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.

O6-30

Attachments:
[1] OMR letter to Santa Clara County dated September 22, 2006
[2] OMR letter to Santa Clara County dated May 18, 200
[3] OMR letter to Santa Clara County dated June 7, 2007
[4] Hanson Aggregates letter to OMR dated July 2, 2007
[5] OMR letter to Santa Clara County dated August 23, 2007
[6] City of Cupertino Land Use Map- Note: an enlargeable pdf is available on the web. Google search, “Cupertino Land Use Map”
[7] Letter from City of Cupertino to State Mining and Geology Board dated August 30, 2007
[8] November 28, 1977 Memo from Lucas S. Stamos (SCC Planning) to Board of Supervisors
[9] Santa Clara County (SCC) Zoning Map
Santa Clara County Land Use Map
Santa Clara County Zoning Descriptions obtained on September 19, 2007 from SCC Planning Office
[10] Reclamation Plan, Kaiser Cement and Permanente Quarry, 1984, p 20

[11] Excerpted Notes from visit to quarry and cement factory on August 14, 2007 by members of West Valley Citizens Air Watch
[12] Hanson Quarry Scoping Meeting Video, July 26, 2007:
<http://cupertino.granicus.com/ViewPublisher.php?view_id=5>
Scroll down to “OTHER CITY PROGRAMS AND EVENTS”, click on “Hanson Quarry Community Scoping Meeting”, advance to minute 22:43. DVD available upon request from City of Cupertino.
[13] Application to Santa Clara County Planning Department for Categorical Exemption Assessment of Kaiser Cement & Gypsum Corporation Proposed Cement Plant Modernization; Permanente, California; Use Permit 23, Issued May 8, 1939;
dated, August 1977
Section: Environmental Assessment Factors of Applications to Santa Clara County for Categorical Exemption Assessment of Cement Plant Modernization, August 1977, p4

O6-30

[15] Health Risk Assessment

Please find the attached analysis of the HRA performed by an independent consultant, along with 2 other documents showing correspondence between this consultant and the BAAQMD. These documents have the following filenames:
Bay Area for Clean Environment 2011-05-11 -Evaluation of the Health Risk Assessment.pdf
Bay Area for Clean Environment 2011-05-27 - BAAQMD response.pdf
Bay Area for Clean Environment 2011-06-01- Reply to BAAQMD response.pdf

O6-31

[16] Chapter 6: Cumulative Impacts

[16.1] Only minimal comments are mentioned from this part of the EIR regarding the “past impact” of the Lehigh site. Scant mention is made of past-accumulated pollution on the site from the old aluminum plant, once present gas tank for the then company owned trucks and the magnesium workings years ago. Certainly some of these processes left permanent damage to the surrounding grounds long before any regulations or monitoring agencies even existed yet the effects may still impact current workings and proposed projects adding to the cumulated impact. These concerns need to be addressed.

O6-32

[16.2] Seven quarries are listed in the “projects list”, four of which are “actively engaged in extraction activities” all within a 25-mile radius.

Their distance from resident’s homes cannot diminish their impact. Air & water pollution never go away – it just shifts to another location. Cumulative impacts of surrounding operations must be considered as a total when reclamation plans are proposed. Even if the Lehigh project does not exceed the identified significance thresholds, the cumulative impact of all the active sites may on maximum production days.

The daily operations of the cement kiln and the quarry at the Lehigh site contributes enough particulate matter and dangerous toxin and criteria pollutants to impact the Bay Area’s air quality and any incremental increase in their operations will only negatively impact our breathable air locally and on a global basis.

O6-33

[16.3] As stated in 4.10-31 "atmospheric deposition is a notable source of mercury in the environment." Lehigh has emitted as much as 1200 pounds per year of mercury for decades. The deposition of this known toxic substance should be counted as a cumulative impact. The mercury in the environment near Lehigh is not likely to represent a naturally occurring "background" level as stated in the DEIR.

There is always going to be mercury in the environment since it occurs naturally in the earth yet 70% of our exposure comes from human activity. One seventieth of a teaspoon can pollute a 20-acre lake.

Lehigh must use the “best available control technology” to filter or remove mercury from its emissions.

O6-34

[16.4] Traffic and transportation: Diesel fuel trucks are the majority of traffic entering and leaving the Lehigh site.

We have had a record number of “spare the air days” over the past 14 months and yet operations at Lehigh Permanente have been allowed to conduct “business as usual” on these days with a total disregard for the surrounding residents. Diesel truck traffic coming and going from the site alone increases

O6-35

the pollutants on a daily basis, their impact on a “spare the air day” is only more profound.

Lehigh boasts that there are traffic controls in place yet there is no initiative on Lehigh’s part to put pressure on the trucks visiting the site to participate in the CARB program for emissions modification of these diesel trucks.
Table 4.3-10 indicates an increased cancer rate of 18.3 per million at a residential receptor. It is notable that the health risk in this residence is so high that Lehigh will force restrictions on occupying the residence. Given the large number of commercial trucks that travel through the same residential area, we recommend that Lehigh only allow trucks that participate with the CARB retrofit program to service Lehigh. O6-35

Location of the maximum impact for the cumulative impacts were separated for the project area from the cement plant, yet the air dispersal of PM2.5 and toxic air contaminants know no boundaries and mix freely in the atmosphere. We do not feel that adding the impacts together would be an over estimate.
Furthermore, no studies have been conducted on the impact of the diesel truck traffic on noise pollution. Specifically, braking at the stoplight on Stevens Creek Boulevard at the intersection with Foothill Expressway produces a significant amount of noise and represents a nuisance in the early hours of the morning. Limits need to be placed on the hours of truck traffic activity entering or leaving the facility.

[16.5] The aesthetics of the operation does not include some major viewing sites. Traveling North bound on HWY 85 near the Saratoga exit one can clearly see scarring and rock over burned dumping on the site. These views are seen by thousands of people every day and need to be addressed. O6-36

[17] Previous scoping comments

West Valley Citizens Air Watch requests that all scoping comments submitted against the current NOP or previous NOP's (as shown in the appendix of the DEIR) be addressed in the EIR. O6-37

[18] Confusing EMSA label

To avoid confusion, we herein point out the area referred to as the EMSA in the 1985 plan is in a completely different location (far west of the current EMSA and adjacent to the main pit) and orders of magnitude smaller than the current area referred to as the EMSA. This appears to further strengthen the indication that the current area of the EMSA was not intended to be used as a storage area under the 1985 plan. The new EMSA should be labeled differently such as EMSA2 to avoid confusing the public.

O6-38

[19] Santa Clara County population

The population of SCC was approximately 60,000 when mining commenced. Today the population of Santa Clara County is around 2 million people. It is now a completely different situation. When the mining was started, few homes and businesses and schools (if any) and probably no health and retirement facilities were located nearby. Now there is a large population of all of these. This must be considered in impacts and in whether or not it is acceptable to expand mining in this location at this present time.

O6-39

[20] Buffer Zones

Figure 2-2 "Project Area" shows virtually no boundary between the EMSA and the City of Cupertino. This is significant because the EMSA is very close to a highly populated area of Cupertino. Why are the buffer zones mostly to protect the rest of Lehigh property and not the citizens living in close proximity?

O6-40

[21] Aggregate Storage near Entrance Gate

The Title V Permit Statement of Basis (date 1/21/2011) from the Bay Area Air Quality Management District, page 129
http://baaqmd.gov/Divisions/Engineering/Title-V-Permit-Programs/Title-V-Permits/Santa-Clara/A0017/Lehigh-Southwest-Cement-Company.aspx
"S-607 the stockpile area # 2 (1", ¼" aggregates and slag) at the entrance's gate is new."

Where exactly is this stockpile area? The current and proposed reclamation plans do not appear to account for aggregate storage near the entrance gate. We again request a formal investigation and report.

O6-41

[22] Weed abatement and Permanente Creek

As per the proposed Amendment weed abatement will be done. Will round-up or any other potentially toxic herbicide be used? If so, please test the levels prior to usage in Permanente Creek before, during and after. Round-up is especially toxic for frogs and tadpoles. Protected species such as the red-legged frog live in Permanente Creek.

O6-42

[23] Hours of operation

Operations are 24 hours/day for 365 days per year.Business hours should be limited to a reasonable level as to not disturb those living near the quarry and truck routes.

O6-43

[24] Public document access

Please include copies, both hard copies and CDs to be held at the Cupertino Library for ease of public viewing for all public documents. The SCC planning department website documents are difficult to download, especially the larger files if the connections are not fast. Access hours to the Planning Department in Santa Clara County are limited to business hours, which makes it difficult for those who work during the workdays. Also in the past, planners have given the public who ask for documents a difficult time.

O6-44

[25] Conclusion

We have brought up serious issues regarding the adequacy of the Lehigh Application, of the many violations documented by various regulatory and oversight agencies issued to Lehigh, and the quality of the decision making by the BOS. This Application by Lehigh will determine the fate of the hills above Western Santa Clara County, the watershed, whether or not the ground water and the San Francisco Bay continues to be polluted by this operation, whether or not our drinking water continues to be polluted, the quality of the air, the protection of the ecosystem of large segments of the hills of the Santa Cruz Mountains, the air we breathe, the visual impacts, the destruction of hundreds of trees and habitat, etc.

Thank You,

Joyce M Eden, Karen Del Compare, Tim Brand, Marylin McCarthy on behalf of West Valley Citizens Air Watch
Barry Chang, on behalf of Bay Area for Clean Environment

3.3.6 Comment Letter O6: West Valley Citizens Air Watch (WVCAW)

O6-1 The Applicant is provided with the option of establishing a legally binding agreement precluding occupation of the Caretaker's Residence during Phase 1 of the Project as an alternative mitigation for air quality as well as noise impacts at the nearest residence. However, that is only one option, as there are other specific mitigation measures identified in the Draft EIR for both air quality and noise that would mitigate the potentially significant impacts without such an agreement. Therefore the Project is not dependent on moving a resident out of their house.

O6-2 BACE's May 2011 evaluation of and additional correspondence relating to the health risk assessment developed for the Lehigh Southwest Cement Company facility were prepared before the health risk assessment was completed for the Project, and do not address the adequacy or accuracy of the Project-specific health risk assessment evaluated in the Draft EIR. As explained in Master Response M4(B), the Cement Plant is not part of the Project. The health risk assessment that was the subject of this Comment O6-2 was considered as part of the cumulative scenario (see Draft EIR Section 6.1.2.1, page 6-9).

O6-3 The commenter is correct that the RPA was modified after the August 18, 2011 NOP. As stated on Draft EIR page 1-4, "On August 18, 2011, the County issued an NOP for the July 2011 application, which was updated in December 2011 to include subsequent developments and refinements and which is the Project now under consideration."

CEQA requires that the NOP "shall provide the responsible and trustee agencies and [OPR] with sufficient information describing the project and the potential environmental effects to enable the responsible agencies to make a meaningful response" (14 Cal. Code Regs. §15082(a)). The information provided must include at least the following three things: a description of the project; the location of the project (either by street address and cross street, for a project in an urbanized area, or by attaching a specific map); and the project's probable environmental impacts. Because the NOP issued by the County for the Project on August 18, 2011, satisfies these requirements, no new NOP or separate scoping process was initiated or required.

A copy of the County's August 18, 2011, NOP was provided as part of the Scoping Report contained in Appendix A of the Draft EIR. On page 1, the NOP states, "The proposed reclamation area… encompasses all portions of the property that have been disturbed by mining related operations." This is emphasized on page 2 of the NOP, which states: "The proposed reclamation project area encompasses all mining areas, including the East Materials Storage Area, West Materials Storage Area, main mining pit, and rock crushing facility." In light of the definition of the word "including," which is "containing as part of the whole being considered," (Oxford University Press, 2010) the County did not intend for the word as used in the NOP to signal an exclusive list.

The project location is described and a map is provided on page 2 of the NOP. Anticipated environmental impacts of the Project are described on a resource by resource basis beginning on NOP page 3. Consistent with the NOP, the Project analyzed in the Draft EIR would reclaim all areas of the site that have been affected by surface mining operations, including the locations identified in the NOP.

Updates to the July 2011 RPA were posted on the County's website, the address for which was provided in the NOP. The County Planning Office website has made access to information about the Permanente Quarry readily available to members of the public throughout the environmental process by featuring it as one of three main links on the Planning Department's homepage.[2] The fact that the County considers the modifications that have occurred since July to be updates and not a new proposal is underscored by its identification of each of the prior proposals identified in Section 1.4.1 (page 1-4 et seq.) and elsewhere in the Draft EIR in the "related links" portion of the Project-specific webpage.[3]

"The public review period for a draft EIR shall not be less than 30 days nor should it be longer than 60 days…." (14 Cal. Code Regs. §15105(a)). The NOA for the Draft EIR, issued on December 23, 2011, initiated a 60-day public review period. More than 250 copies of the Draft EIR (including a combination of printed copies and CDs) were distributed with the NOA, including one copy that was provided to the signatory of Comment Letter O6 and printed copies that were made available to all members of the public at three libraries in the vicinity of the Project (Cupertino County Library, Los Altos County Library, and Saratoga County Library). Because the Project materials, including the updated RPA and Draft EIR, were available for review for the longest duration contemplated by the CEQA Guidelines, the County has determined that the time allotted to review them was adequate. The Project has received the full extent of environmental review required by CEQA and has included the maximum opportunities for agency and public involvement.

O6-4 As described in Draft EIR Section 3.3.1.3, beginning on page 3-14, and Table 3-2 on page 3-7, the Draft EIR does not assume that an identical reclamation plan to the one proposed would be approved. Instead, it assumes that the requirements of SMARA would be met. In other words, a reclamation plan would be approved that at least satisfied the requirements of SMARA and its implementing regulations.

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2 See, e.g., Santa Clara County, 2011. Planning Office homepage. Available online: http://www.sccplanning.org/portal/site/planning. The other two featured links from the Department's homepage are for the County General Plan Health Element and Wineries & Agri-Tourism.

3 See, Santa Clara County, 2012. Permanente Quarry: Reclamation Plan Amendments. Available online: http://www.sccgov.org/portal/site/planning/agencyarticle?path=%252Fv7%252FPlanning%252C%2520Office%2520of%2520%2528DEP%2529&contentId=622e5f552afbd210VgnVCM10000048dc4a92. Visited March 20, 2012. See also, Santa Clara County, 2012. Permanente Quarry: Superseded Reclamation Plan Documents. Available online: http://www.sccgov.org/portal/site/planning/agencyarticle?path=%252Fv7%252FPlanning%252C%2520Office%2520of%2520%2528DEP%2529&contentId=5989d7208c4d1310VgnVCM10000048dc4a92. Visited March 20, 2012.

In light of the Applicant's vested rights (see Master Response M1(A)), no future reclamation proposal that could be submitted if the Project were not approved would be expected to contain an "extraction component" of the type the County understands this comment to mean. Because the Applicant has a vested right to extract materials, the only limitation on the Applicant's right to mine within the vested rights area is the physical extent of the commercially viable mineral deposit that can be extracted safely.

As described in Master Response M4(A), surface mining is not a component of the Project. For this reason, the County is not authorized under CEQA to impose mitigation measures that would avoid or reduce impacts of surface mining in the context of this Project. This is why the Draft EIR contains no mitigation measures that would limit extraction. Because the County does not have authority to regulate mineral extraction within the vested rights area, the County has not supplemented the Draft EIR to evaluate an alternative that precludes mineral extraction. Similarly, the County has not amended the Draft EIR to evaluate an alternative that includes reclamation of the Cement Plant: as described in Master Response M4(B), the Cement Plant is not a component of the Project.

The County disagrees with the characterization in this comment that the Applicant is holding the reclamation plan hostage to expanded mineral extraction. To the contrary, the Applicant has submitted four separate proposals to reclaim the site, including this Project, and numerous studies, reports, and other analyses relating to the environmental effects of reclaiming the site consistent with a final end use.

In connection with the request for the evaluation of other alternatives that eliminate further materials storage in the EMSA, the County notes that "CEQA does not require an EIR to consider 'each and every conceivable variation of the alternatives stated'" (*Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 491). As described in Draft EIR Section 3.3.1.2 beginning on page 3-9, "no new materials would be stockpiled in [the EMSA]" and reclamation activities in that area would begin immediately if the Central Materials Storage Area Alternative (Alternative 2) were approved.

The comment takes issue with the Draft EIR's determination in Section 3.3.2.1 (page 3-16) that "no feasible alternative locations to the Project Area exist because none of the significant effects of implementing the RPA to effect final reclamation of the Permanente Quarry would be avoided or substantially lessened by implementing reclamation activities in any other location." The availability of cement and limestone in other locations does not affect the Applicant's legal obligation under SMARA and the County's SMARA ordinance to reclaim the mined lands within the Project Area. The County declines to supplement the Draft EIR by adding a discussion of such other sources or by analyzing related environmental effects beyond the description and analysis provided in the cumulative effects context. See Draft EIR Section 6.1.2.2,

Other Local Mining and Reclamation Activities, beginning on page 6-10. As noted above, neither the Cement Plant nor its environmental effects are part of the Project.

O6-5 The commenter requests an accounting of Lehigh's compliance record and the County's enforcement record. The Draft EIR describes the NOVs issued by the County in 2006 and 2008 in Chapter 2, *Project Description*, on page 2-8. Master Response M3 provides additional information regarding the compliance status of the Quarry and the County's authority to enforce compliance. As discussed in Master Response M3(A), public and private parties are entitled to a presumption that they will comply with applicable requirements. In any event, the County will be conducting annual inspections in satisfaction of its duties under SMARA. If non-compliance with the RPA is observed, the County retains the full suite of its code enforcement options and can be relied upon to regularly perform its official duties (Evid.Code §664). Moreover, the County has prepared a MMRCP, which will be included with the County's Findings of Fact and Conditions of Approval for the Project. This will ensure effective, enforceable implementation of the mitigation measures imposed by the County pursuant to the EIR for the Project.

O6-6 Please refer to Master Response M6 and Draft EIR Section 4.10.4 (page 4.10-27), both of which provide a discussion on groundwater in the Project Area and in the general vicinity of the Project. Master Response M6 provides clarification and supplemental analysis regarding geologic and hydraulic containment of groundwater, as well as a discussion of groundwater contamination.

O6-7 The proposed RPA does not include a contingency plan for generating electric power for the pumping equipment during power outages. Therefore, the EIR need not include a description of one.

O6-8 Please refer to Master Responses M5 and M6 pertaining to selenium and groundwater, respectively.

O6-9 The water quality impact analysis completed for the Draft EIR determined that the Project would reduce selenium concentrations in Permanente Creek through a various measures including covering the limestone overburden material in the reclaimed EMSA and removing the limestone overburden material in the WMSA and using it to backfill the Quarry pit. Water quality analysis determined that after reclamation is complete, the selenium concentrations discharged to Permanente Creek would be lower than they are now and below Basin Plan Objectives (Draft EIR Section 4.10). Considering how the RPA would reduce selenium concentration in Permanente Creek adjacent to the Project Area, it follows that long term water quality testing of the lower reaches of Permanente Creek and the San Francisco Bay would not be a reasonable or necessary requirement of the Project. Master Response M6 addresses concerns regarding the impact of Project activities on groundwater resources in the Santa Clara Subbasin.

O6-10 The opinion expressed in the comment about the minimum amount of time that would be required to produce adequate data about the effectiveness of the mitigation strategy is noted. As required by CEQA, the Draft EIR evaluates impacts of the proposed Project, i.e., the RPA, on water quality and other aspects of the environment, and does not attribute the environmental consequences associated with existing adverse water quality conditions to the Project. Instead, appropriately, the Draft EIR considers such conditions as part of the baseline. See, for example, Draft EIR Section 4.10.1.2 on page 4.10-4 and Table 4.10-1, which acknowledge that Permanente Creek is included on the Clean Water Act section 303(d) list of impaired water bodies because it does not meet water quality standards for selenium. See also, page 4.10-6, which states: "water quality monitoring conducted by the RWQCB and the SCVURPPP has… shown that selenium concentrations in Permanente Creek, in the reaches adjacent to and near the Quarry, are generally greater than the water quality objective presented in the Basin Plan" (internal citations omitted). Any liability that may be associated with existing water quality conditions is not within the County's purview in the context of SMARA or CEQA for this Project.

Mitigation Measure 4.10-1b, *Verification and Water Quality Monitoring* (including the statement in the last bullet point on Draft EIR page 4.10-42, which states: "Reclamation of the Quarry Pit, EMSA, and WMSA areas shall not be considered complete until 5 years of water quality testing as described above demonstrate… that selenium in surface water runoff and any point source discharges has been reduced below all applicable water quality standards, including Basin Plan Benchmarks.") was developed by County and other resource area experts based on Project-specific analysis and decades of combined experience. Because the comment provides no data, analysis or other information to support the assertion that the recommended 5 years should be extended to 50 years, the County has not revised the Draft EIR in response to this comment.

Under the interim reclamation conditions (Draft EIR, Impact 4.10-2, page 4.10-42), the Draft EIR recognizes the uncertainty of stormwater and sediment control measures and therefore determined that the Basin Plan Water Quality Objectives for selenium may not be met, resulting in a significant and unavoidable impact. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact. See also Master Response M6 regarding potential impacts to groundwater.

O6-11 Stormwater sampling within a 24-hour period following a storm event is an accepted standard required by regulatory agencies, including the RWQCB. Sampling storm water following the peak flows provides a more representative sample of constituents in the stormwater because there is less dilution and the water sample better represents the actual conditions in the creek or drainage conveyance.

O6-12 Please refer to Master Response M7 regarding offsite flooding.

O6-13 Comment O6-13 requests a map of the locations of all affected trees to assess impacts on woodlands in the Project Area. Mapping every tree in the Project Area with a DBH greater than or equal to 5 inches is not required by CEQA. Oak woodlands were treated as a habitat type and impacts were calculated in acres, which is sufficient to analyze impacts according to guidance provided in the Santa Clara County Oak Woodlands Impact Guidelines. Impacts from removal of oak woodlands on special-status wildlife and migratory corridors are addressed at a Project-wide level in Impact 4.4-1 (special-status and migratory birds), Impact 4.4-2 (special-status bats), and Impact 4.4-3 (San Francisco dusky-footed woodrat). While the Project will require the removal of oak woodlands, proposed reclamation plantings of approximately 1,745 oak trees will reduce this impact to less-than-significant levels, and eventually result in comparable or improved oak woodland habitat conditions relative to baseline levels.

O6-14 Comment O6-14 states that the RPA does not describe impacts to the EMSA adequately. For the Draft EIR analysis, all potential biological impacts that the RPA may have on the EMSA were fully considered. While the Draft EIR does depend on information provided in the RPA, assessing the adequacy of the RPA itself is not within the scope of this assessment. Information provided in the RPA and the Project Description of this Draft EIR is considered sufficient to analyze impacts to biological resources for all Project components, including the EMSA.

O6-15 See Response A6-7.

O6-16 The commenter refers to two references used in Draft EIR Chapter 1, *Introduction*. The first (Lehigh Cement Company, 2011), is a website titled *Lehigh Heidelberg Cement Group: Working Together to Build Our Communities*. The second (Hanson, 2011), is a website titled *Welcome to the Hanson Global Site*. Both references were used in the first footnote on Draft EIR page 1-1, in the description of the Project Applicant: "The Permanente Quarry is owned by Hanson Permanente Cement, Inc. and operated by Lehigh Southwest Cement Company. Lehigh and Hanson both are part of the Heidelberg Cement Group, a worldwide producer of construction materials (Lehigh Cement Company, 2011; Hanson, 2011)." Electronic copies of both websites, as viewed on September 7th and 8th, 2012, respectively, are saved in the County's Administrative Record for the Project.

O6-17 This comment has been addressed. See Response O3-10 regarding why the Project would not preclude future extraction activities within the Project Area, and Response P14-3 for additional information on Project segmentation issues.

O6-18 The determination of the extent of the Applicant's vested rights was settled on February 8, 2011, when the County Board of Supervisors held a public hearing and considered public comments before making its determination that mining operations are a legal nonconforming use (i.e., a vested right) in the Project Area (Santa Clara County Board of Supervisors, 2011). The County will continue to act in accordance with its decision unless it is overturned as part of a judicial process.

Comments about the Cement Plant are addressed in this section of the Final EIR as they arise in the comments submitted.

O6-19 As explained in Master Response M3(A), the Draft EIR is clear that the storage of overburden materials in the EMSA is in violation of SMARA. However, this violation or lack of prior agency approval has no bearing on the analysis of potential environmental impacts of the Project. Because such details would not better inform decision makers and public participants about the environmental consequences of the Project, they were not included in the Draft EIR.

The comment is correct that the description of the EMSA provided in Draft EIR Section 2.6.1 (page 2-10) describes the EMSA as "existing." This was intended in the sense that the description provided is of the area to be reclaimed. This section of the Project Description does not describe the baseline against which the significance of the change in the environment caused by the Project was determined. As shown in the photographs provided in Draft EIR Figure 4.1-3, some materials (but not mining overburden) were stored in the EMSA as of the 2007 baseline date. The Draft EIR's analysis of Project impacts evaluates the environmental effects of reclaiming the EMSA relative to a baseline condition when no surface mining overburden was stored in the EMSA.

Comments suggesting that the Draft EIR should identify and analyze contaminants that could be present under the EMSA as a result of prior uses of the site are addressed in Response A4-5.

O6-20 As discussed in Master Response M2(B) pertaining to baseline, there is no uniform, inflexible rule regarding establishment of baseline, and a lead agency has considerable discretion to decide how the existing physical conditions without the project can most realistically be measured. Draft EIR Section 4.0 (page 4.0-3 et seq.) identifies the actual existing physical conditions to provide a point of comparison of pre-Project conditions (the baseline) and post-Project conditions to ensure that changes caused by the proposed reclamation activities are seen in context and any and all potential significant environmental effects can be identified and analyzed accurately. For the purposes of analyzing the Project in the Draft EIR, and for reasons described in detail on pages 4.0-3 and 4.0-4 of the Draft EIR, the County has determined that the appropriate date for establishing the baseline for purposes of evaluating the Project's environmental effects is June 2007, the date the County first issued a NOP to evaluate the environmental effects associated with amendment of the Applicant's existing, approved reclamation plan. For additional information, see Master Response M2(B).

O6-21 The disclaimer referenced by the commenter is standard in the geotechnical practice, and is meant to acknowledge that subsurface conditions can vary in space and time. It is not possible to know with certainty the exact conditions of subsurface materials hidden from view, and therefore investigators must make reasonable extrapolations based on the available data and professional judgment. As discussed on Draft EIR page 4.7-31,

Terraphase Engineering Inc. was hired by the County to peer review Golder Associates' report and confirmed that the methods used by Golder Associates to perform the FOS analysis is consistent with the state of practice of geotechnical engineers in northern California for mining operations such as those taking place at the Project site.

The commenter expresses concerns about the effect of groundwater or heavy rainfall on the stability of the EMSA slopes. Golder Associates incorporated groundwater conditions within the EMSA in their analysis of slope stability as stated in the Draft EIR on page 4.7-32. Based on historical data indicating groundwater depths ranging from approximately 40 feet to over 200 feet beneath the surface, Golder Associates conservatively assumed that permanent groundwater is approximately 30 feet to 100 feet below existing ground surface, and assumed even shallower water levels at the toe of the proposed waste fill slopes. These assumptions are reasonably based in accordance with the available data, and factored into the analysis of slope stability within the EMSA. The 20-, 50-, or 100-year flood zone does not intersect the EMSA, so during such an event the EMSA would not be subjected to flood conditions. All drainage conveyances for the Project have been designed to carry 100-year storm events. The commenter is referred to Draft EIR Section 4.10, *Hydrology and Water Quality*, for additional information on groundwater and flooding as well as Master Response M6 relating to Groundwater and Master Response M7 relating to the risk of off-site flooding.

O6-22 The commenter suggests including calculations for seismic risks that could be exceeded in 75-, 100-, and 150-year timeframes due to the close proximity to seismic sources. The commenter is referred to Draft EIR page 4.7-22 for a discussion of estimates of ground shaking levels that may be caused by future earthquakes within the Project Area. As discussed under Impact 4.7-1 on Draft EIR page 4.7-38, the effects of an earthquake within the Project Area would not increase existing seismic risks for the public at large, given the Project proposes no new structures for human occupancy, does not increase the number of onsite workers subject to existing risk levels, and proposes the end use of the Quarry as undeveloped open space. Providing peak ground accelerations that have 10 percent probability of occurring in 75, 100 or 150 years is unnecessary and excessive, given the standards used in the industry combined with the minimal impact implementation of the RPA would have on seismic risks to the public or offsite properties.

O6-23 There are no "nearby residents" in the vicinity of the WMSA or the Quarry pit, where materials currently stored in the WMSA would be moved. In any event, potential hazards and hazardous materials-related impacts of the Project, including backfilling the pit with materials stored in the WMSA, are analyzed in Draft EIR Section 4.9 (page 4.9-1 et seq.). As explained in Draft EIR Section 4.9 (page 4.9-2 et seq.), regulatory agency records of hazardous materials sites in the vicinity of the Project Area were reviewed to identify sites where known releases have occurred that could affect soil or groundwater conditions in the Project Area. The information presented is based on database searches of the SWRCB Geotracker and the DTSC Envirostor databases. These databases identify facilities with known hazardous materials use or releases including

federal Superfund sites, state response sites, voluntary cleanup sites, corrective action sites, leaking underground storage tank sites, other cleanup sites, land disposal sites, military cleanup sites, permitted underground storage tank facilities, DTSC cleanup sites, and DTSC-permitted hazardous waste permits. The Project Area was not identified on any of the regulatory agency lists searched.

Comments submitted on a draft EIR should focus on the sufficiency of the document's identification and analysis of environmental impacts, and should provide data, references, or other evidence to support their comments (14 Cal. Code Regs. §15204). The comment provides no data or other analysis beyond unsupported conjecture that hazards to workers and others could result from the Project's movement of materials. Because a lead agency is not required to conduct every test or to perform all research or other studies requested in a comment (Pub. Res. Code §21091(d)(2)(B); 14 Cal. Code Regs. §15204(a)), the County declines to conduct or require additional testing at the WMSA.

O6-24 The commenter raises several issues regarding past agreements between Lehigh and the County of Santa Clara associated with the scenic easement. However, the issues raised by the commenter are not relevant to the adequacy of analysis presented in the Draft EIR because the scenic easement is not part of the Project. The commenter is referred to Master Response M4, *Project Description*, for further details concerning activities that are not part of the proposed final reclamation of the Permanente Quarry as well as Master Response M2 regarding comments that do not comment on the adequacy of the Draft EIR.

O6-25 CEQA does not require "clear disclosure" in the Draft EIR for the proposed RPA "of the types and amounts of materials proposed to be extracted" or a comparison of anticipated and actual extraction volumes because, as discussed in Master Response M4(A), surface mining is not a component of the Project. See also, Master Response M1(A), which explains why this is the case, i.e., because the Applicant has a vested right to extract materials within the Project Area.

O6-26 The commenter raises concern about reference in the 1985 Reclamation Plan to a "serpentinized greenstone area in the upper northwest portion of the quarry" and the adequacy of the sampling effort conducted for the presence of naturally occurring asbestos (NOA). The potential presence of NOA in quarry materials has been addressed in the Draft EIR on pages 4.7-8 and 4.7-9, which describes past sampling efforts and conclusions regarding the absence of NOA within the Quarry. Geocon Consultants, Inc. (2007) reviewed numerous laboratory analytical reports for materials sampled from the Quarry between 1981 and 2007 and found no evidence of NOA. As discussed in the Draft EIR, the California Air Resources Board concurred with Geocon's finding and determined that the site is not subject to the requirements of either the Asbestos Airborne Toxic Control Measure (ATCM) for surface applications or the ATCM for Construction, Grading, Quarrying, or Surface Mining Operations.

The most recent sampling effort, commissioned by the County, was focused on reconfirming and re-verifying these findings, and was targeted towards the primary rock types that are end-dumped in the EMSA and WMSA. The area that reportedly contained serpentinite rock is now covered, and will remain covered by overburden; further, the testing performed on the material detected no NOA, according to Geocon's review. Conclusions regarding the absence of asbestos in Quarry materials are reasonable, adequate and based on sufficient information.

O6-27 The commenter lists known slides in the Project Area and their relationships to scenic easements and land swaps. In addition, the commenter suggests that the factor of safety used is inappropriate. The commenter is referred to Master Response M4, *Project Description*, for further details concerning activities that are not part of the proposed final reclamation of the Permanente Quarry. This includes issues related to the scenic easement. In addition, the commenter is referred to Master Response M3, *Compliance Status*, for further information about Orders to Comply/Notices of Violation and their relationship to the proposed RPA.

With respect to standards for acceptable factor of safety (FOS) values, the commenter is referred to Draft EIR page 4.7-30, second paragraph, which explains how the level of acceptable risk (i.e., minimum FOS) is determined. The EPA document referenced by the commenter is specific to a different kind of surface mining operation (mountain-top removal) in a different region of the United States. Given the proposed end use of the quarry as undeveloped open space, the FOS values considered acceptable by Golder are reasonable, and the peer review commissioned by the County and performed by Terraphase Engineering, Inc., raised no issue in this regard.

O6-28 The status of the Applicant's compliance with the cleanup and abatement order issued by the RWQCB on July 27, 1999, is summarized in Master Response M3(B). As explained therein, the order required the implementation of interim and long-term corrective actions, most of which have been satisfied. To fulfill the last requirement, Lehigh/ Hanson proposed the Permanente Creek Long-term Restoration Plan to the RWQCB in March 2011. The County is not aware of any monetary penalties that may have been imposed.

O6-29 Disagreements about the extent of rights vested and opposition to the Cement Plant are beyond the scope of the Draft EIR. Neither the Cement Plant nor the Applicant's surface mining operation are components of the Project.

O6-30 Comment noted. As discussed in Master Response M4(B), the County and OMR made a determination in 2007 that the Cement Plant is distinct from the surface mining operation. Consistent with this determination, the Cement Plant is not within the Project Area and would not be reclaimed as a part of the Project. Accordingly, issues associated with the Cement Plant are not properly within the scope of the Project or this EIR. See Master Response M4(B).

O6-31 Receipt of these documents is acknowledged. Nonetheless, the HRA analyzed by the independent consultant and the associated correspondence relate to the HRA that was completed for the Cement Plant, not for the proposed RPA. None of the materials provided with the comment letter bear on the adequacy or accuracy of the environmental analysis documented in the Draft EIR.

O6-32 Cumulative effects are analyzed in Draft EIR Chapter 6 (page 6-1 et seq.). The cumulative scenario is identified and described in Section 6.1, and cumulative impacts are evaluated on a resource by resource basis in Section 6.2. The analysis considers all sources of environmental effects (including past, present, and reasonably foreseeable probable future projects) that would cause impacts that could combine with the incremental impacts of the proposed reclamation activities.

The analysis relies, in part, on the "list of projects" approach to analysis. The list for this Project is provided in Table 6-1 on Draft EIR pages 6-3 through 6-5, and depicted in the map in Figure 6-1 on page 6-6. Past projects considered as part of the cumulative scenario include the other on-site activities described in Draft EIR Section 6.4.2.1 (page 6-7 et seq.). Surface mining, Permanente Creek restoration, and Cement Plant operations all are considered. The former aluminum plant and magnesium plant also are disclosed. See Response A4-5.

O6-33 The list of cumulative projects described in Response O6-32 includes the projects referenced by the commenter, including surface mining at the Permanente Quarry (Map Key 1), operation of the Cement Plant (Map Key 2), and surface mining and reclamation activities associated with seven other quarries in Santa Clara County (Map Keys 4 through 10). Cumulative impacts to air quality, including criteria pollutants and health impacts, are analyzed in Draft EIR Section 6.2.3.

O6-34 The cumulative effects analysis does consider emissions from the cumulative projects. See Draft EIR Section 6.2.3, beginning on page 6-15. The opinions expressed and assertions made in the comment about existing mercury levels in the environment are noted. Lehigh's obligations with respect to mercury emissions from the Cement Plant are independent of the environmental analysis presented in the Draft EIR.

O6-35 The BAAQMD Spare the Air program recommends voluntary measures that residents can take to reduce air emissions in the basin; there are currently no mandatory measures for either residents or businesses. Consequently, there are no standards or requirements that would be applicable to the Project. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

Regarding truck retrofits, the truck replacement program referred to by the commenter is limited to replacement of Bay Area port (drayage) trucks registered in the CARB Drayage Truck Registry with 2004 model year engines and is not applicable to other on-road trucks. Nevertheless, as described on page 4.3-12 of the Draft EIR, CARB has

established phase-in requirements that would reduce the emissions and associated risk from diesel-fueled engines by 85 percent in 2020. There are no Project-related air quality or health risk impacts identified in the Draft EIR for which the impacts are not less than significant or can be mitigated to less than significant with the mitigation measures already identified, so there is no basis for requiring further mitigation in this regard. Please also see response to Comment O6-1 for more information regarding restrictions as an alternative mitigation for air quality impacts at the nearest residence.

As described on page 6-16 of the Draft EIR, the locations of maximum impact for the Cement Plant and for the Project are not the same, so adding the maximum impacts together is an overestimate of what the actual maximum cumulative impact would be at any sensitive receptor. Regardless, adding the maximum impacts together was the approach used in the cumulative analysis. The statement in the text is merely disclosing that the reported result was calculated in that manner and therefore may be an overestimate.

With regard to noise impacts from trucks braking at the stoplight on Stevens Creek Boulevard at the intersection with Foothill Expressway, the commenter describes an existing condition that may be associated with ongoing operations at the quarry, the Cement Plant, and any other local truck-related businesses. Under CEQA, an EIR is not a tool for requiring mitigation of existing conditions. Further, the cumulative noise analysis in Section 6.2.13 of the Draft EIR finds that the Project's daily contribution to trips would be up to approximately 30 one-way trips per day. This Project-related increase in truck trips would not result in a cumulatively considerable increase to offsite traffic noise.

O6-36 Views of the Project Area from State Route (SR) 85 are addressed in Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*. SR 85 is identified as a major and scenic roadway on page 4.1-9, with a designation as a County Scenic Freeway, Expressway, Arterial or Rural Route. Views of the existing setting from and around SR 85 are described extensively under subsection 4.1.1.2, *Existing Visual Quality of the Project Area*, most specifically on pages 4.1-10 et seq. under the subheading *State Route 85*. Four photos in Figure 4.1-2 show existing views from or adjacent to SR 85, including Photo 2 (Bascom Avenue overpass looking northwest over State Route 85), Photo 3 (Northbound State Route 85 near Quito Road, southeast of Saratoga Avenue non-ramp, looking northwest), Photo 5 (Westbound Stevens Creek Boulevard, just east of the State Route 85 interchange, looking west), and Photo 6 (Northbound De Anza Boulevard on the State Route 85 overpass, looking west). The visual setting for SR 85 concludes, "Given the representative to distinct visual quality of the road, the high number of viewers, the short to medium view duration and open visibility, overall viewer sensitivity is moderate to high for SR 85."

Figures 4.1-5a, b, and c present visual simulations of the Project as seen from SR 85, from northbound SR 85 near Quito Road, southeast of the Saratoga Avenue on-ramp,

looking northwest. Impacts to SR 85 are analyzed under significance criterion b (scenic roadways), under Impacts 4.1-3 and 4.1-4. The Draft EIR found impacts from SR 85 to be less than significant.

O6-37 All scoping comments submitted subsequent to the publication of four Notices of Preparation (NOPs) were considering during the preparation of this EIR. Draft EIR Chapter 1, *Introduction* (page 1-4 et seq.) describes opportunities for public comment on the Draft EIR issue areas, including all comments gathered. In total, more than 200 people provided more than 350 comment letters on the four separate proposals to reclaim the Quarry. A Scoping Report prepared for the Project (Appendix A of the Draft EIR) included copies of each of the NOPs, of all of the written comments and summaries of all of the oral comments that the County received in response to the respective requests for input. Both the Scoping Report and Draft EIR (page 1-5 et seq.) describe the overarching themes of the comments as they relate to elements carried forward in the Project that fall within the purview of the CEQA process. These themes were reviewed during preparation of the Draft EIR.

O6-38 The labeling distinction made in this comment is noted. As shown in the figures throughout the Draft EIR and in the proposed RPA, these documents are clear and consistent in their references to the EMSA. Accordingly, no change has been made in response to this comment.

O6-39 The Project is a Reclamation Plan Amendment and does not propose expanding mining in the Project Area. Impacts to population and housing from the Project are analyzed in Draft EIR Section 4.14, *Population and Housing*. The setting includes Bay Area population trends by county, 2000-2030 (Table 4.14-1, page 4.14-2), Santa Clara County population by municipality, 2000-2030 (Table 4.14-2), and Santa Clara County and City of Cupertino employment trends and projections, 2005-2030 (Table 4.14-3, page 4.14-3). As stated on Draft EIR page 4.14-4, "Baseline conditions reflect the 2007 operation of the Project Area as a limestone and aggregate mining quarry, including necessary staffing levels and operations and maintenance activities relating to mining operations and the surrounding open space areas."

O6-40 The buffer zones identified in the Draft EIR are shown in the locations proposed by the Applicant in the RPA, and the Draft EIR evaluates the impacts of the proposal submitted. Potential impacts of the Project to the nearest neighbors and other sensitive receptors are analyzed in Draft EIR Chapter 4. Mitigation measures and alternatives were identified to avoid or substantially reduce potential impacts to nearby residences where it was feasible to do so. See, for example, the description of Alternative 2, the Central Materials Storage Area Alternative, in Draft EIR Section 3.3.1.2, beginning on page 3-9.

O6-41 The entrance gate is not within the Project Area. Details about materials that may be stored outside the Project Area for use in the manufacture of cement would not inform decision-makers and members of the public about the environmental impacts of the proposed RPA, and so are not included in the Draft EIR.

O6-42 The potential for implementation of the proposed RPA to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, such as may be used to control weeds, is analyzed in Impact 4.9-1 (see, Draft EIR, page 4.9-15). As explained, proposed revegetation activities would require weed control to reduce the occurrence of non-native plants that may invade the revegetated areas. Weed control methods may include chemical as well as mechanical removal techniques, depending on the species and number of individuals encountered.

Any use of herbicides (including any proposal to use roundup or other herbicides) to control invasive species while native plantings become established would be subject to the oversight of the Santa Clara County Division of Agriculture, which regulates the use, storage, and disposal of all pesticides (including herbicides). Regulations outline training requirements for individuals performing pesticide application and require the submittal of monthly pesticide use reports. These regulations are designed to ensure the protection of workers, the public, and the environment (including the aquatic environment) from pesticide use. Because the Applicant and its contractors would be required to comply with all hazardous materials laws and regulations for the transport, use, and disposal of hazardous materials, the impacts associated with the potential to create a significant hazard to the public or the environment was determined to be less than significant.

O6-43 The commenter expresses the opinion that business hours should be limited to less than 24 hours per day, 365 days a year, to prevent disturbance to those living near the quarry. Comment noted. Regarding potential impacts to local residents pertaining to noise and air quality, the commenter is referred to Draft EIR Sections 4.3 and 4.13, which analyze air quality and noise impacts from the Project, and Sections 6.2.3 and 6.2.13, which analyze cumulative air quality and noise impacts from the proposed Project and other projects in the vicinity, including mining operations and operation of the Cement Plant.

O6-44 Copies of the Draft EIR were provided at the Cupertino Library, and other public locations. As stated in the Notice of Availability published for the Draft EIR on December 23, 2011 (Appendix A of this document), "Copies of the Draft EIR are available for review at the following locations as well as on the County's web site at http://www.sccgov.org/portal/site/planning/.

County of Santa Clara - Planning Office, 70 West Hedding Street, East Wing, 7th Floor, San Jose, CA 95110, Phone: (408) 299-6740

Cupertino Library, 10800 Torre Avenue, Cupertino CA 9501 4

Los Altos Library, 13 South San Antonio Road, Los Altos, CA 94022

Saratoga Library, 13650 Saratoga Avenue, Saratoga, CA 95070"

Copies of the Final EIR have been distributed to the same locations as described above.

Letter O7

SAN FRANCISCO BAYKEEPER®

February 21, 2012

Rob Eastwood, Principal Planner
Santa Clara County Planning Office
70 West Hedding Street, 7th Floor
San Jose, CA 95110
Rob.eastwood@pln.sccgov.org
Submitted via electronic mail

RE: Comments on the Draft Environmental Impact Report for the Lehigh Permanente Quarry Reclamation Plan

Dear Mr. Eastwood:

Thank you for the opportunity to comment on the Draft Environmental Impact Report ("DEIR") for Lehigh Southwest Cement Company's ("Lehigh") Permanente Quarry Reclamation Plan Amendment ("RPA" or "Project"). San Francisco Baykeeper ("Baykeeper") submits these comments on behalf of our 2,300 members that live and recreate in and around the San Francisco Bay. Baykeeper is a 501(c)(3) nonprofit organization with the mission to protect and enhance the water quality of the San Francisco Bay for the benefit of its ecosystems and surrounding communities.

Baykeeper believes that the DEIR is fundamentally flawed in several regards. The project description, environmental impact analysis, and cumulative impacts analysis are vague and incomplete, leaving the public in the dark as to the true consequences of the proposed Project. Since this does not satisfy the purposes of the California Environmental Quality Act ("CEQA"), the DEIR must be revised and recirculated to provide the public with a meaningful opportunity to comment on a complete environmental impact report ("EIR").

1. The DEIR Fails to Support Any Assertion of a Vested Right.

The DEIR fails to provide any discussion of the legal underpinnings supporting the claim that Lehigh has a vested right to mine the entirety of the Project Area, rendering any CEQA analysis of the environmental impacts of mining operations moot. Instead, the DEIR baldly states that Lehigh has a vested right to mine and no county permits are necessary. However, this issue was not decided at the time the DEIR was circulated for public review, and is currently the subject of legal controversy that significantly implicates the scope and adequacy of environmental review in this DEIR. O7-1

A vested right under the Surface Mining and Reclamation Act ("SMARA") only exists to the scope and extent of mining activities that were occurring before SMARA was enacted, so long as those rights have been continuously exercised and not abandoned. The DEIR contains no evidence showing the scope of mining undertaken at each of the Project sub-areas prior to SMARA, no evaluation of whether ongoing and planned activities are consistent with such a scope, and no evidence showing that the exercise of that right has been continuous and not

abandoned. Without such a discussion, the DEIR provides the public with no meaningful way to evaluate the DEIR's fundamental assertion that no environmental analysis of ongoing and future mining activities is needed under this DEIR. O7-1

2. <u>The Project Description is Flawed Because it Does Not Sufficiently Describe Future Mining Activities in the Project Area.</u>

The DEIR is incomplete because it fails to discuss how much mining will occur in the Project Area during the length of the Reclamation Plan. CEQA requires all EIRs to include project descriptions that provide the public with an "accurate, stable and finite project description," which courts have stated "is the *sine qua non* of an informative and legally sufficient EIR." *County of Inyo* v. *City of Los Angeles* (1977) 71 Cal. App. 3d 185, 199. The DEIR briefly mentions that the proposed RPA includes "approximately 1,238.7 acres, consisting of approximately 636.8 acres of *existing or planned* surface mining operation-related disturbance and approximately 599.3 acres of open space." DEIR 2-1 (emphasis added). However, this description leaves the reader guessing as to (1) how many acres Lehigh plans to use for additional mining operations in the future and (2) how much limestone will be extracted from these areas. The DEIR's Project Description must specifically address both of these issues to satisfy CEQA. O7-2

3. <u>The Three Phases of Reclamation Described in the Project Description Are Too Flexible.</u>

The DEIR fails to describe a concrete plan for reclamation in the Project Area. According to Table 2-2, the Project will be implemented in three phases that all end by 2030, but the DEIR renders this phased plan defective by leaving the implementation deadlines open to interpretation: "The actual timing of each phase of reclamation would depend on the rate of extraction and the availability of overburden for use in backfilling the Quarry pit, which could vary based on market conditions and the quality of mineral resources encountered during the mining process. Additional time could be required for one or more of the proposed phases to allow for maintenance and monitoring of revegetation efforts until reclamation goals standards are met." DEIR 2-14. This ambiguous qualification does not constitute an "accurate, stable and finite project description," as required by the California Supreme Court. *County of Inyo*, 71 Cal. App. 3d at 199. Also, the DEIR should clearly state that Lehigh must obtain approval to amend its Reclamation Plan in the event of any "substantial deviations" from the phased plan. Cal. Pub. Res. Code § 2777. O7-3

4. <u>The Scope of the Environmental Impacts Analysis Is Unlawfully Narrow.</u>

The DEIR's analysis of water quality impacts is faulty because it only analyzes the impacts to one waterbody, Permanente Creek. To evaluate the significance of a project's environmental impacts, CEQA requires the lead agency to consider both "direct physical changes in the environment which may be caused by the project" and "reasonably foreseeable indirect physical changes in the environment which may be caused by the project." CEQA Guidelines § 15064(d). As stated by the Project DEIR, Permanente Creek flows into the southern portion of San Francisco Bay and is diverted to Stevens Creek by way of the Permanente Creek Diversion. O7-4

DEIR 4.10-1. However, despite this clear hydrologic connection, the DEIR does not discuss how the Project will impact Stevens Creek or the San Francisco Bay. *See* DEIR 4.10-29 to 4.10-51. Since all of these waterbodies are listed as impaired by pollutants found in the Project Area, it is "reasonably foreseeable" that the Project will have significant environmental impacts on Stevens Creek and the San Francisco Bay. These impacts must be fully analyzed in the DEIR to satisfy CEQA. O7-4

5. <u>The DEIR Fails to Fully Analyze How Post-Reclamation Activities Will Impact Water Resources.</u>

The DEIR ignores how post-reclamation activities could potentially impact local waterways with mercury contamination. In order to fulfill the fundamental purpose of an EIR, which is "to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment," an EIR "shall include a detailed statement setting forth . . . [a]ll significant effects on the environment of the proposed project." CEQA §§ 21061, 21100(b)(1). CEQA does not have an "ironclad definition" for what constitutes a significant effect because "the significance of an activity may vary with the setting." CEQA Guidelines § 15064(b). The DEIR's discussion of Impact 4.10-1, "Post-reclamation conditions in the EMSA, WMSA, and Quarry pit would increase selenium concentrations in Permanente Creek to levels exceeding baseline conditions and RWQCB Basin Plan objectives," mentions that "mercury is being mobilized and transported in surface runoff at levels that sometimes exceed the (4-day average) Basin Plan objective," but concludes that mercury contamination is an insignificant impact because "the concentrations of mercury measured in runoff from the EMSA and within Permanente Creek cannot be reliably distinguished from background (or natural) concentrations based on the best available information." DEIR 4.10-30 to 4.10-31. This contradictory and superficial analysis of mercury-related impacts is not sufficient to satisfy CEQA. Both the San Francisco Bay and the Stevens Creek Reservoir are listed as impaired by mercury under section 303(d) of the Clean Water Act ("CWA"), increasing the harmfulness of mercury discharges from the Project Area. It is clear that Project activities, including mining and cement production, introduce mercury into surface waters and through aerial deposition, which must be accounted for as a direct and cumulative impact of the Project. O7-5

The DEIR mentions that elevated mercury concentrations were found at "several locations" within the Project Area and Permanente Creek, but does not analyze this parameter as extensively as selenium. *See* DEIR 4.10-6, 4.10-8. For example, the SES water quality sensitivity analysis was only performed for selenium because the DEIR considers it the "key constituent of concern," and the parameters measured in the Quarry Pit's water quality did not include mercury. DEIR 4.10-36, Table 4.10-6. Since it is clear that there is an abundance of mercury located in the Project Area, there must be more analysis before the DEIR can conclude that post-reclamation conditions would not significantly impair water quality with mercury contamination.

Even the analysis for selenium impacts is insufficient. According to the DEIR, "studies have not been performed to determine whether selenium concentrations in fish located in portions of Permanente Creek downstream from the Quarry differ from than those in fish located upstream

from the Quarry." DEIR 4.10-5. Since selenium is the DEIR's key constituent of concern and the Regional Board recently proposed listing Permanente Creek as impaired by water toxicity under section 303(d) of the CWA, the DEIR must analyze whether the Project will significantly impact fish populations to satisfy CEQA. O7-5

6. The Proposed Mitigation Measures for Impact 4.10-1 Are Inadequate.

The two mitigation measures selected for reducing selenium pollution caused by post-reclamation activities are insufficient because they will not fully mitigate this significant impact of the proposed Project. CEQA requires EIRs to fully describe all "feasible measures" that could minimize significant adverse impacts. CEQA Guidelines § 15126.4(a)(1). If there is more than one mitigation measure available, the EIR must discuss each measure and identify the basis for selecting a particular measure. CEQA Guidelines § 15126.4(a)(1)(B). The DEIR contains two mitigation measures – hiring a professional geologist to verify the use of materials containing no limestone, and implementing a water quality and mitigation verification program. While these mitigation measures are a good starting point, they do not completely address all feasible options. There is no discussion of the best management practices that Lehigh could use to reduce selenium and mercury in stormwater runoff and from aerial deposition. *See* DEIR 4.10-41 to 4.10-42. Also, the water quality monitoring and verification program requires Lehigh to reduce only one parameter to a level below all applicable water quality standards, selenium. DEIR 4.10-42. The reduction program should also target additional parameters since the waterways surrounding the Project Area are impaired by several constituents, including, but not limited to, mercury (San Francisco Bay and Stevens Creek Reservoir), water toxicity (Permanente Creek and Stevens Creek), and diazinon (Stevens Creek), all of which may be discharged from the Project activities. O7-6

7. The DEIR Fails to Fully Analyze How Reclamation and Mining Activities Will Impact Water Resources.

The DEIR's analysis of the impacts caused by reclamation activities ignores any potential contamination of waterbodies with metals. Under CEQA, an EIR "shall include a detailed statement setting forth . . . [a]ll significant effects on the environment of the proposed project." CEQA § 21100(b)(1). The DEIR discusses how reclamation activities in the Project Area and the Permanente Creek Reclamation Area would contribute to selenium, total dissolved solids, and sediment in Permanente Creek (Impacts 4.10-2 and 4.10-3), but this discussion is incomplete because it does not analyze whether Permanente Creek or other surrounding waterbodies will be impacted by metals. DEIR 4.10-42 to 4.10-47. It is widely known that there is a high presence of mercury and other metals in the Project Area. Since these metals will be disturbed by mining and reclamation activities, the DEIR must address any potential impacts that this disturbance will have on water quality in the Bay Area to satisfy CEQA. O7-7

8. The DEIR's Discussion of the Cumulative Impacts on Biological Resources is Incomplete.

The DEIR is inadequate because it fails to fully discuss how all related past, present, and future projects, including the operation of the Lehigh Cement Plant and surface mining at the Lehigh O7-8

Quarry, will impact aquatic habitats in Permanente Creek, Stevens Creek, and the San Francisco Bay. CEQA mandates that an EIR discuss a project's cumulative impacts when the project`s incremental effect is "cumulatively considerable," meaning that "the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." CEQA Guidelines §§ 15130(a), 15065(a)(3). The DEIR lists "potential secondary effects to aquatic habitat associated with selenium runoff to Permanente Creek" as a significant cumulative impact. DEIR 6-17. However, this discussion is incomplete for three reasons.

First, like the environmental impacts analysis, the DEIR's cumulative impacts analysis must also discuss the impacts to aquatic habitats in Stevens Creek and the San Francisco Bay, not just Permanente Creek. CEQA requires lead agencies to "provide a reasonable explanation for the geographic limitation used" in its cumulative impacts analysis, yet the DEIR does not provide any explanation for why it only discusses impacts to Permanente Creek alone. CEQA Guidelines § 15130(b)(3). Since Permanente Creek is hydrologically connected to both Stevens Creek and the San Francisco Bay, these important waterbodies should also be included in this analysis. O7-8

Second, the DEIR unlawfully limits its discussion of impacts on aquatic habitats to just selenium. Since CEQA requires an EIR to discuss any impact that is "cumulatively considerable," the DEIR should have discussed how *all* pollutants resulting from mining and cement plant operations impact aquatic habitats in the Bay Area. CEQA Guidelines §§ 15130(a). There are many studies showing that Permanente Creek, Stevens Creek, and the San Francisco Bay are all adversely impacted by several contaminants, such as mercury, metals, and suspended sediments. Therefore, the DEIR must fully assess how these pollutants, among others, impact the relevant aquatic habitats.

Third, the DEIR only discusses "short-term impacts from selenium runoff to Permanente Creek" without any explanation of long-term impacts. DEIR 6-18. The DEIR must include an assessment of long-term impacts to aquatic habitats to satisfy CEQA.

9. <u>The DEIR's Discussion of the Cumulative Impacts on Hydrology and Water Quality is Incomplete.</u>

Like the discussion of cumulative impacts on biological resources, the scope of potential cumulative water quality impacts is unlawfully limited to just Permanente Creek. The DEIR states that the geographic scope "includes Stevens Creek and Permanente Creek out to the San Francisco Bay," but the actual discussion of cumulative impacts in this section does not mention either Stevens Creek or the San Francisco Bay. DEIR 6-23, *see generally* § 6.2.10. The DEIR must complete a full analysis of cumulative water quality impacts with an appropriate geographic scope to satisfy CEQA. O7-9

In addition, the DEIR completely fails to discuss the cumulative impacts of the mercury contamination caused by mining and cement plant operations. According to the DEIR, there would be "ongoing discharges from the Quarry pit from groundwater intrusion and stormwater runoff (including from a portion of the WMSA) and stormwater runoff from the EMSA and

other portions of the Project Area" that would contain "selenium, total dissolved solids (TDS), and other constituents" and flow into Permanente Creek. DEIR 6-23. This limited analysis does not account for the massive amount of mercury that the Lehigh Mine and Leigh Cement Plant release into the San Francisco Bay through both stormwater and aerial deposition of mercury-laden air emissions.

O7-9

10. Conclusion

Due to the many inadequacies discussed in this comment letter, the County of Santa Clara must recirculate the DEIR. CEQA mandates recirculation of an EIR to the responsible agencies for consultation whenever "significant new information" has been added after the draft EIR has been available for review but prior to certification of the final EIR. CEQA § 21092.1; CEQA Guidelines § 15088.5. The issues discussed in this comment letter constitute new information that must be considered by the responsible agencies and the public.

Thank you for considering Baykeeper's comments. If you have any questions, please feel free to contact Abigail at (415) 856-0444, extension 109.

Sincerely,

Abigail Blodgett
Legal Fellow, San Francisco Baykeeper

Jason Flanders
Program Director, San Francisco Baykeeper

3.3.7 Comment Letter O7: San Francisco Baykeeper

O7-1 The commenter states that the Draft EIR fails to support an assertion of a vested right. See Master Response M1(A) which addresses the Applicant's right to engage in surface mining activities on the site. A vested right to use property in a certain way also without the need to obtain new land use permits is often referred to as a "grandfathered" or legal nonconforming use. The California Supreme Court has defined a nonconforming use as a use "that existed lawfully before a zoning restriction became effective and that is not in conformity with the ordinance when it continues thereafter" *Hansen Brothers Enterprises, Inc. v. Board of Supervisors* (1996) 12 Cal.4th 533, 541.

O7-2 As explained in Master Response M4(A), surface mining operations are not part of the Project described in Draft EIR Chapter 2 (page 2-1 et seq.). As discussed therein, surface mining operations began at the Quarry as early as 1903, have been continuous since 1939, and have been determined to be a legal nonconforming use. Consequently, County approval is not required for the Applicant to continue to mine; County approval is required, however, per SMARA, of the Applicant's plan to reclaim the mined lands. The Project Description is determined based not on the amount left to be mined, but rather on what is to be reclaimed. The proposed Reclamation Plan Amendment states on page 26, "[t]he total anticipated production of aggregate and limestone is estimated at 35-45 million tons. The maximum anticipated depth of the North Quarry excavation is 440 feet msl."

O7-3 The description of proposed reclamation activities provided and analyzed in the Draft EIR is specific, detailed, and concrete with specific performance standards to mark the transition from one reclamation phase to another. The fact that the commenter would like to see different phasing does not affect the adequacy or accuracy of the analysis of environmental effects that would be caused by the activities or of the impact conclusions reached.

The County agrees that an accurate, stable, and finite project description is required (14 Cal. Code Regs. §15124), but disagrees that the Project Description provided in Draft EIR Chapter 2 falls short of the mark. Chapter 2 contains sufficient specific information about the proposed RPA to foster informed environmental decision-making and public disclosure. All integral components of the Project are described. See, for example, Draft EIR Section 2.6, page 2-9, identifying the RPA components, and Section 2.7, page 2-13, explaining how the Project would be implemented. The CEQA Guidelines Section 15124(c) requires only a "general description" of the project's characteristics. As clarified by the court in *Dry Creek Citizens Coalition v. County of Tulare* (1999) 70 Cal.App.4th 20, 28, "'General' means involving only the main features of something rather than details or particulars." The description of reclamation phasing provided in Draft EIR Section 2.7.1 (page 2-14 et seq.) satisfies this requirement.

SMARA (Pub. Res. Code §2777) states, "Amendments to an approved reclamation plan may be submitted detailing proposed changes from the original plan. Substantial deviations from the original plan shall not be undertaken until such amendment has been filed with, and approved by, the lead agency." Because this independent obligation applies whether or not the CEQA document repeats it, it is not necessary for the County to include the requested statement in the Draft EIR. It should also be noted that, should the County approve the proposed Reclamation Plan Amendment, any "substantial deviations" from that approved plan are not covered by this EIR and subsequent CEQA review of such deviations may be required.

O7-4 The Draft EIR concluded that under post-reclamation conditions the Project would result in reduced concentrations of selenium and other metals and constituents of concern in the surface and Quarry pit water that discharges to Permanente Creek (Draft EIR, Impact 4.10-1, page 4.10-29). Given that the Project would reduce concentrations of selenium and other constituents in Permanente Creek, there is no need to extend the analysis downstream. Under interim conditions, however, the Draft EIR determined that there would be a significant and unavoidable impact to surface water during reclamation activities because, although implementation of the mitigation measures "is expected to reduce selenium-containing runoff, sediment, and TDS to acceptable levels, there is insufficient evidence at this time regarding the efficacy of these measures" (Draft EIR Impact 4.10-2, page 4.10-46). Based on this conclusion, it is still reasonable to assume that levels of selenium and other constituents contained in the surface water runoff would decrease compared to the baseline during reclamation implementation. Given this assumption, it is not necessary to extend the water quality study into downstream reaches. In other words, because overall implementation of the Reclamation Plan Amendment will improve Permanente Creek water quality over baseline, and because the potential for impacts to surface water quality from interim reclamation activities has already been disclosed, there is no expressed need to evaluate the effect the Project would have in lower watershed area of Permanente Creek, Steven's Creek beyond the diversion, and San Francisco Bay. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O7-5 The comment appears to misunderstand the Project described in Draft EIR Chapter 2 and analyzed in the subsequent sections of the Draft EIR: for the reasons discussed in Master Response M1(A) and M4(A) and (B), neither surface mining nor cement production is a component of the Project. The potential for mining and cement production activities to introduce mercury into surface waters and through aerial deposition is analyzed in the Draft EIR as part of the cumulative scenario. Draft EIR Section 6.1 identifies surface mining and Cement Plant operations as cumulative projects (see, e.g., page 6-3 and pages 6-7 through 6-10). See also, Figure 6-1 on page 6-6, which show the location of surface mining at the Permanente Quarry as cumulative project number/ May Key 1 and Cement Plant operations as cumulative

project number/ May Key 2. Cumulative effects to air quality, and to hydrology and water quality, are analyzed in Draft EIR Section 6.2.

Under CEQA, the depth of treatment accorded different issues varies to allow decision-makers and other participants in the environmental review process to focus on the impacts that would be caused by the Project. The Draft EIR analyzes the potential impacts of the proposed RPA related to selenium and mercury differently because the levels of selenium consistently and significantly exceed Basin Plan Objectives (see Draft EIR, Table 4.10-2) and mercury, although above Basin Plan Objectives in some instances, remain generally low and were not considered as significant a constituent of concern as selenium. Nevertheless, the water quality analysis in the Draft EIR considered mercury in Draft EIR Section 4.10.1.2 (page 4.10-1 et seq.) and Impact 4.10-1 (page 4.10-30 et seq.). The water quality study prepared for the Applicant by Strategic Engineering Science (SES, 2011) and independently reviewed by the County and relied upon for the Draft EIR analysis focused on constituents that appeared present in elevated concentrations. From the significant amount of sampling and testing at the site, mercury was generally below benchmarks and not among those constituents found generally elevated beyond natural background levels.

The Draft EIR considers the existing mercury levels in the environment within and near the Project Area to the extent they contribute to and are reflected in baseline conditions and in the cumulative scenario to the extent they have been caused by past or ongoing projects. Existing mercury levels cannot be attributed to the Project. Without data, references, or other evidence and specific documentation to support a conclusion that implementation of the proposed RPA, once complete, could significantly impair water quality with mercury contamination, the County has no basis to reach a conclusion in this regard contrary to the one set forth in the Draft EIR.

The Draft EIR analyzes the potential for Project activities to result in selenium-burdened runoff reaching aquatic habitats and, thereby, in deleterious effects to aquatic organisms and their prey base in the context of Biological Resources Impact 4.4-5 (page 4.4-37). Mitigation Measure 4.4-5 would require the implementation of interim stormwater control and sediment management as well as an EMSA Interim Stormwater Monitoring Plan. This would supplement preexisting surface water monitoring required by the General Industrial Storm Water and Sand and Gravel NPDES Permit and be designed specifically to monitor surface water during reclamation activities in active and inactive excavation and backfill areas. Although this would reduce the potential for stormwater runoff to deliver sediment and selenium to Permanente Creek during the Project activities, it would not be sufficient to fully eliminate the possibility. For this reason, the Draft EIR concludes that the potential selenium-related impact to aquatic habitats would be significant and unavoidable. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O7-6 The comment is correct that the Draft EIR does not identify mitigation measures that would "fully mitigate" the significant impact of the proposed RPA related to the potential discharge of selenium to Permanente Creek, but is incorrect in suggesting that CEQA requires it to. Per CEQA, a public agency can approve a project with significant environmental impacts if it concludes that significant unavoidable impacts cannot be feasibly avoided and there are merits and benefits to the project that outweigh its significant environmental impacts (Pub. Res. Code, §21081; 14 Cal. Code Regs. §§15091, 15092).

As acknowledged in the comment, the Draft EIR does identify mitigation measures the implementation of which could reduce the interim selenium impacts. See Master Response M5 regarding interim selenium impacts and further evaluation of the feasibility of an on-site water treatment facility.

The County respectfully disagrees with the assertion that implementation of the proposed RPA would result in discharges of mercury to San Francisco Bay and Stevens Creek Reservoir, of water toxicity to Permanente Creek and Stevens Creek), and of diazinon to Stevens Creek. The impact analysis for the Draft EIR identified constituents of concern for surface and groundwater quality in the Project Area based on previous studies provided by the Applicant, especially the reports prepared for the Project by Golder Associates (Golder Associates, 2011) and SES (SES, 2011). These studies provided water quality data that were used to draw conclusions regarding potential water quality impacts. The water quality protection measures contained in the RPA were then developed based on the constituents of concern. Because this is a reclamation project, the RPA addresses control and reduction of the constituents that are found on the site. The Draft EIR discusses the potential constituents of concern for water quality in Sections 4.10.1.2 pages 4.10-4 through 12, 4.10-12, Impact 4.10-1 page 4.10-29, and Impact 4.10-2 page 4.10-42. Review of the studies and available data determined that a specific group of constituents were of concern for the Project, including, selenium, nickel, mercury, TDS, and molybdenum. These constituents were the basis of the impact analysis in the Draft EIR. The implementation of the RPA would reduce to below baseline levels, those constituents determined to be of concern for water quality in the Project Area. Note that diazinon is a pesticide that has been identified in Steven's Creek reservoir, which is located in another watershed to the south; there is no reason to believe that reclamation activities would lead to discharges of diazinon to Permanente or Stevens Creek.

O7-7 Draft EIR Section 4.10.5 (starting on page 4.10-29) analyzes the potential direct and indirect impacts of the proposed RPA to water quality in surface waters and groundwater relative to baseline conditions, as well as the potential for incremental, Project-specific impacts to combine with the impacts of past, present, and reasonably foreseeable future projects to cause or contribute to significant cumulative effects. See, for example, Draft EIR page 4.10-4, which discloses contaminant data that indicates considerable inputs of metals in the lower watershed, as well as monitoring data and

previous investigations that suggest that the existing concentrations of some metals, including selenium and mercury, are relatively high. Further, presence of nickel, mercury, and selenium in surface water samples from locations on Permanente Creek adjacent to and just downstream of the Quarry site in concentrations above Basin Plan water quality objectives is discussed on page 4.10-6 and shown in Table 4.10-2 on page 4.10-9.

To determine whether Project implementation could result in metals-related impacts to water quality, tests were conducted to determine the total metals content of the rocks and their potential to leach from these materials (see Draft EIR page 4.10-10 et seq. and Tables 4.10-3 and 4.10-4 on pages 4.10-13 and 4.10-15, respectively). With these results in mind, potential Project impacts related to metals are analyzed in the context of Impact 4.10-1 (page 4.10-29 et seq.) and 4.10-2. See, for example, Mitigation Measure 4.10-2b on page 4.10-46, which would require the Applicant to inspect BMPs and collect water samples for analysis of metals (including but not limited to selenium) within 24 hours after a storm event and to sample non-stormwater discharges when they occur.

O7-8 Comment O7-8 states that the cumulative impacts discussion for the biological resources section is incomplete in three ways: the cumulative context should include Stevens Creek and San Francisco Bay, impacts on aquatic habitats from other contaminants should be considered, and long-term cumulative impacts from selenium runoff in Permanente Creek should be discussed. The Draft EIR assessment determined that selenium runoff would have a considerable contribution to the existing cumulative impact of selenium contamination in Permanente Creek. The following text of Draft EIR page 6-17 has been revised to reflect Response O7-8:

> The geographic context for analysis of cumulative impacts on biological resources encompasses the eastern side of the Santa Cruz Mountains and the Santa Clara Valley adjacent to San Francisco Bay, within a 5-mile radius of the Project Area. <u>In regards to aquatic impacts, this context would extend to the lower reaches of Stevens Creek, as well as San Francisco Bay, which are both hydrologically connected to Permanente Creek.</u>

Revisions have also been made to text on page 6-18, as follows:

> With regard to short-term impacts from selenium runoff to Permanente Creek, <u>Stevens Creek, and San Francisco Bay,</u> the Project's individual contribution has been determined to be significant and unavoidable.

The commenter also states that cumulative impacts on aquatic habitat should include any water contaminants resulting from mining in the region. This is a required approach by the CEQA Guidelines; however, page 4.10-30 in Section 4.10 describes why other contaminants were not considered in the water quality analysis. No surface water objectives for these contaminants are related to aquatic life, and total daily

sediment and sulfate were measured in higher concentrations upstream of the Quarry, indicating that Quarry discharge water does not contribute to increased concentrations in downstream Permanente Creek. To address mercury concentrations in Permanente Creek, Section 4.10 states that mercury concentrations in surface waters of the creek were generally similar to those measured in groundwater, suggesting limited contamination from the Quarry. The Draft EIR assessment of potential impacts to aquatic habitat was based on the technical review and significance thresholds used in the Draft EIR Section 4.10. The above contaminants were not considered in the cumulative analysis for biological resources due to evidence suggesting the Quarry is not contributing to their increased concentrations in Permanente Creek.

Impacts from selenium concentration are described as "short-term" because completion of the reclamation process is anticipated to reduce selenium contamination in Permanente Creek. Long-term impacts from selenium contamination will be less than significant. See Master Response M5 regarding further evaluation of the feasibility of an on-site water treatment plant to address the interim selenium impact.

O7-9 The commenter is correct that the geographic scope for cumulative impacts was described to include Stevens Creek and Permanente Creek out to the San Francisco Bay. The water quality impact to that defined geographic scope was determined to be significant and unavoidable and it includes Permanente Creek, the Stevens Creek Diversion Structure, and the baylands and outfall to San Francisco Bay. Clearly the determination of significance applies to the entirety of the waters within the geographic scope. No further analysis is necessary because the Draft EIR has identified and described that the cumulative impact would apply to that geographic area.

The Project Area defined for the draft EIR does not include the Cement Plant or operations at the Plant (see Master Response M4). In regards to mercury discharges from the Cement Plant operation, the comment is correct that there are, and will continue to be, ongoing discharges from the Quarry pit, WMSA, and EMSA. This discharge is an existing condition. Once reclamation is complete, discharges of selenium and other constituents of concern are expected to be reduced to levels below Basin Plan Objectives. Refer to the response to Comment A2-7 for a discussion of mercury in the surface water in the Project Area.

QuarryNo
10570 Blandor Way
Los Altos Hills, CA 94024

February 21, 2012

Rob Eastwood
Santa Clara County Planning Office
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Dear Rob,

We appreciate the opportunity to comment on the Draft EIR (DEIR) and the Planning Offices' incorporation into it of some of our past comments. However we believe it still has some omissions. CEQA states that the **EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the NOP was published,** which in this case was 5 years ago (2007). There is no such description easily understood by the Public in the DEIR. O8-1

While the Reclamation Plan outlines a 20 year plan of action there is no chronology of the changes that have already occurred since the NOP was published and a listing of actions to mitigate the damage. Hopefully this can be corrected quickly but the public is left with wonderment of a Reclamation Plan and accompanying EIR that only appears 5 years after the Notice of Publication.

The DEIR describes in great detail the extensive operations of the Lehigh Quarry and Cement Plant covering 3,510 acres in an unincorporated area of Santa Clara County. However the focus or "Project" is limited to Reclamation, the majority of which will not start for another 10 years. Reclamation under the prior 1985 Reclamation Plan has never occurred. For example:

1. Ridge line elevation limits of 1,500 and 1,650 feet on page 2 not achieved.
2. WSMA re-vegetation as committed on page 24 yet to occur.
3. Mining to be limited to 330 acres as stated on page 18 greatly exceeded.
4. Permanente Creek limit not to pass through quarried area per page 3 unmet.
5. Assumption of no rare or endangered species present on page 4 erroneous.
6. Limestone not described as having high Mercury content missed.
7. Assumption of unlikely pit wall failure on page 12 incorrect.
8. EMSA to have "extensive tree and shrub plantings" per page 25 erroneous.
9. Five years of irrigation to occur as stated page 25 erroneous.
10. Oak seedlings with individual mesh screening as stated page 25 yet to occur.
11. New EMSA hill to be incorporated into natural setting per page 25 missing.
12. WSMA not maintained at specified 3:1 gradient on page 28 creating erosion.

O8-2

There has never been an EIR for the Lehigh operation although it is a prime polluter in Santa Clara County with a past EIR required by Statute (CEQA 15081.5). This is justified on the basis that the Lehigh O8-3

Quarry is vested, the operations are not integrated (which Lehigh denies), the County has only limited responsibility (Cement Plant operates under a County Use Permit) and the County can only address truck pollution on Lehigh property not on County Roads. O8-3

As a consequence this EIR is very narrow in scope and does not meaningfully address Public Health and Safety. The County states on page ES-2 that the number one objective is to continue operations of the Quarry in order to maintain a local economic source of cement and reclaim mining disturbance. So much for Health and Safety. O8-4

The EIR process is intended to protect residents of Santa Clara County from significant environmental impacts from the Lehigh operations. California Courts have stated that the EIR process should be a demonstration to the Public that the environment is being protected. This is not the case here.

The pollution from Lehigh is treated as an ongoing toxic spill that cannot be stopped or mitigated but can only be continually cleaned up through Amended Reclamation Plans. The deliberate narrowness of the EIR Statement and Purpose restricts and excludes consideration of meaningful alternatives. According to CEQA the County decision makers (Planning Commission) must consider direct and indirect impacts of the expansion of Lehigh operations. O8-5

This is indeed an expansion. Lehigh deliberately expanded outside its mining boundaries in the EMSA in 2007 which triggered the NOP. However the EIR does not address the expansion, only the cleanup. From 2007 on Lehigh continuously submitted many Reclamation Plans to cover their expansion even to the point of two plans covering the same operation in violation of the *California Code of Regulations*. O8-6

The most significant one was the biggest expansion yet, that of digging a second Pit on the basis that the current Pit limestone was close to exhaustion. The Plan submitted testified to this in detail and stated there was no alternative other than to dig a new Pit. This Plan was processed and a Public Hearing held with Public comments submitted April 11, 2011.

However, on June 3, 2011 it was withdrawn by Lehigh to speed up approval of the current EMSA Plan. We understand that this shortcut approach was suggested to Lehigh by a County Supervisor. However that does not make it compliant with CEQA but may explain why there has never been an EIR while the Quarry and Cement Plant expanded. County Staff stated to the State Mining and Geology Board that the new Pit was being set aside only to speed up the approval process. O8-7

In essence the withdrawal of the proposal for a new Pit appears to be a temporary administrative action to speed up approval of the EMSA Reclamation Plan and not to eliminate the new Pit. Hence it appears to be a reasonably foreseeable event that CEQA says must be considered in the EIR. CEQA is very clear in stating that the lead agency shall consider reasonably foreseeable physical changes in the environment which may be related to the project. A new adjacent Pit is exactly that**. The DEIR must be modified to address the Reclamation of the new Pit**. Thankfully the extensive data required is already on file with the County. O8-8

This has been confirmed by California Court rulings stating that if there is substantial evidence indicating reasonable foreseeable future activities that will alter or change the scope of the initial project an EIR must analyze the impacts of those future activities to determine if they will change or alter the scope or nature of the of the initial project: *Laurel Heights versus Regents of California (1988) 47 Cal. 3d376.*

Even if this is rectified there are other issues with the DEIR in the critical area of Health. Great dependency is placed on the Air District and its Health Risk Assessment (HRA) even though it is based on old (2008) source data projected out only for the next 2 years of the 20 year Reclamation Plan period. The HRA in Appendix E is based on the Air District HRA and hence has the same flaws.

The HRA defines in parts per million the amount of each of the 69 toxins that fall on individual schools and homes concluding all is well. It touts the use of the AERMOD model in doing this and the approval of the Office of Environmental Health Hazard Assessment (OEHHA). Nowhere is it mentioned that the Air District has concluded that the complex terrain surrounding the Lehigh facility is not adequately accommodated by AERMOD and that they are looking for a better model.

Much credence is given to the fact that the OEHHA has approved the use of AERMOD but a reading of the approval states that their approval is dependent on the appropriateness of the selection of AERMOD. Bottom line the Air District and the County do not know with certainty where the toxins will be falling over the next 20 years, the duration of the Reclamation Plan under consideration.

Finally the HRA assumes that the level of toxic emissions by Lehigh will be down in 2012 due to reduced production. Factually this is not the case as December 2011 production was 124,987 tons which over 12 months becomes 1.5 million tons of clinker well above the 994,020 tons assumed for 2012 in the HRA.

The HRA assumes eventual increased production over the next 20 years but mitigated by the effectiveness of the Mercury Reduction effort which hopefully will be the case. However what of the other toxins such as Benzene and Hexavalent Chromium? Consequently it is obvious **the HRA must be redone to correct all these flaws before it is considered in the EIR.**

O8-9

Appendix B on Air Resources is a well intended effort to correct this but it continues to only address the limited impact of the reclamation activity and not the overwhelming impact coming from the Quarry and Cement Plant daily operations. Adding additional appendices without new independent data does not correct the flaws in the Air District HRA. Since the purpose of the Reclamation Plan is to allow Limestone to be produced for the Cement Plant, the toxic pollution from the Cement Plant must be considered in the EIR.

O8-10

Beyond the HRA what else do we know about the Health Hazards from the Lehigh operation? Well the Air District states that Lehigh is the largest source of Nitrogen Oxides emissions in the Bay Area, not just in the County, operating without modern emission reducers. They emit 5 tons per day. In addition the Air District says Lehigh does not meet ground level Ozone requirements and that Lehigh will have to reduce Nitrogen Oxides emissions by 58% to meet safer standards now being set. For now the Public will breathe the unclean air coming from Lehigh.

Far worse are the Particulate (PM) emissions by Lehigh. According to the Air District Lehigh emitted 32 pounds of PM per day in 2010 when production was running at 50% of capacity. As production doubles, these emissions will double.

The worst form of PM is the microscopic PM 2.5 which is 2.5 microns in size. Currently Santa Clara County is categorized by the EPA as non-attaining the safe level of PM 2.5. The Lehigh Cement Plant and the Diesel Trucks servicing it are one of the reasons. They are the largest emitters of PM 2.5 in the County if not the largest. It comes from the Kiln as well as the tailpipes of the diesel trucks. It does not come from common dust.

O8-11

PM 2.5, according to the Air District, is the most harmful air pollutant in the Bay area. It aggravates asthma, bronchitis and other respiratory ailments and leads to hardening of the arteries while triggering heart attacks consequently decreasing life expectancy by years. The Air District must submit a State Implementation Plan to reduce PM 2.5 to the California Air Resources Board (CARB) this spring. Key to this Plan is the development of a "Transportation Conformity Budget" reducing PM 2.5 emissions from Heavy Duty Diesel Engines. The absence of treatment of the Diesel Trucks in the EIR puts it at odds with CARB's objectives. The 100,000 trips per year by the trucks is the delivery of the cement produced by the Cement Plant using the Quarry product. It is what CEQA defines as an indirect impact.

According to a September 2011 study by the Air District the County would save $2.965 Billion, yes Billion, from a reduction of PM2.5. However this environmental impact is not considered in the EIR on the basis that the Cement Plant is not part of the Quarry (Lehigh says they are one united operation) and the Diesel Trucks are not owned by Lehigh. This is plain gerrymandering of the facts to avoid the obvious conclusion. **The public must be told of the health consequences of adding more pollutants in a non-attainment area and the justification for not including the impact of the Lehigh trucks.**

Equal to the toxic effect of PM 2.5 is the effect of Hexavalent Chromium. According to the EIR it is nowhere to be found with one of the reasons being that none of the current Monitoring Stations, including the Monte Vista Station, monitor the air for Hexavalent Chromium.

O8-11

Another reason is that Lehigh has buried the results in their submission. On page 4-10-8 we are told of the 82ug/liter of Selenium found in a water sample taken January 2010. That same sample showed 2.0ug/liter of Hexavalent Chromium with even higher amounts seen in samples taken by Lehigh on August 30, 2011 and September 21, 2011. Nowhere is this mentioned in the EIR.

The Public Health Goal (PHG) is .02ug/liter and this level will become the California Maximum Contaminant Level (MCL) later this year. This reasonably foreseeable event is not addressed in the EIR. Hexavalent Chromium is released from the rock when crushed and finds its way into the water and the air. The regulators sweep it away by claiming it only comes from slag which Lehigh does not use. It is there and the Reclamation Plan does not address it. **The DEIR must be amended to include corrective action for the removal of Hexavalent Chromium.**

O8-12

In addition they say Lehigh is exceeding the one hour national safe emission standard for Sulfur Oxide based on the AERMOD model. As stated before they are now looking for a new model that may give a different result. The Air District when faced with a toxic threat always seems to look for reasons to conclude there is no threat.

They found no threat when Lehigh reported that they had emitted 2 tons of Mercury in 2008-2010. The EPA had directed in 2009 that a Mass Balance approach be used in determining Mercury emissions due to the underreporting in the past. Lehigh stated Public Notification for 2010 was now required. The Air District said they would decide when Public Notification was required, not Lehigh, and concluded Notification would not be required if they credited Lehigh for using Mercury Reduction equipment for all of 2010 even though it was only installed in midyear which is what was done.

O8-13

Beyond these toxins are the huge emissions of Green House Gases (GHG) by the Lehigh Operation. Lehigh is the largest producer in the County. The output of just the Cement Plant is 4 million tons per day compared to the 10 tons produced by an automobile in one year. Put another way the Lehigh

O8-14

Cement Plant emits more Green House Gases in one hour than the County Operations do in an entire year. As the County strives to meet new standards for GHG emissions they could have to take 150,000 cars off the road to offset these emissions. That does not include additional offsets for the Diesel Trucks servicing Lehigh.

The trucks produce Green House Gases equal in volume to the Cement Plant. Because of this the California Air Resources Board (CARB) banned diesel trucks older than 1993 at the Port of Oakland and this year that ban is extending to trucks older than 2005. In addition, underlining the severity of these emissions, the Air District will spend $15 million this year to replace 247 privately owned Diesel Trucks servicing the Port.

O8-14

There is no such action contemplated by the County or the Air District for the trucks servicing Lehigh as the claim is made that mitigation is not required (page 4-3-14): *Emissions associated with operations of the adjacent cement plant are not included in the baseline analysis since the cement plant is a separately permitted industrial use, and because the "Project" would not affect the cements plants use permit, operating permits or regulatory status.* No mention made that the Cement Plant's permits come from Santa Clara County. **There must be similar mitigating action for the trucks servicing Lehigh.**

This is not the only "face slap" to the Public. Condition #8 of the current 1985 Reclamation dictated that the maximum height of the West Material Storage Area shall not exceed the top of the ridgeline. Lehigh swept this aside and piled excessive mine waste there in direct violation of the Reclamation Plan and there it stands above Los Altos today. This deliberate action suggests Lehigh has no intention of abiding by any Reclamation Plan.

O8-15

The DEIR submerges this transgression and does not suggest corrective action until 2022 at the earliest. In essence the County is saying that Reclamation Plan commitments are only on paper and nothing more than pap for the Public. This is an ongoing violation of the 1985 Reclamation Plan and must be corrected before any new action is taken under the new Reclamation Plan. The EIR must address this physical impact change and **the Reclamation Plan must require that the excessive mine waste in the West Material Storage area be removed immediately.**

In summary, while the DEIR states the "project" is limited to only Reclamation, the County shows doubt by spending over 400 pages describing the massive impact of the Lehigh operation on the local environment. The only alternatives proposed are other ways to eventually clean it up. Santa Clara County is the California Lead Agency for regulating the Lehigh Quarry and the State Permit Issuer for the Cement Plant but it appears to spend its time more on establishing what cannot be done rather than using its eminent authority to safeguard the Environment and Public Health.

O8-16

Bill

Bill Almon
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3.3.8 Comment Letter O8: QuarryNo

O8-1 Draft EIR Section 4.0 (page 4.0-3 et seq.) identifies the actual existing physical conditions to provide a point of comparison of pre-Project conditions (the baseline) and post-Project conditions to ensure that changes caused by the proposed reclamation activities are seen in context and any and all potential significant environmental effects can be identified and analyzed accurately. For the purposes of analyzing the Project in the Draft EIR, and for reasons described in detail on pages 4.0-3 and 4.0-4 of the Draft EIR, the County has determined that the appropriate date for establishing the baseline for purposes of evaluating the Project's environmental effects is June 2007, the date the County first issued a NOP to evaluate the environmental effects associated with amendment of the Applicant's existing, approved reclamation plan. For additional information on the methodology for choosing the baseline and differences in baseline for different resource areas, see Master Response M2(B).

O8-2 Comment noted. As described in Draft EIR Chapter 2, *Project Description*, the scope of the Draft EIR covers the RPA submitted in December of 2011; it does not include the 1985 Reclamation Plan. Impacts are analyzed relative to the baseline established for the Project, which was June 2007 (see Response O8-1). Violations of the 1985 Reclamation Plan, including County-issued NOVs pertaining to SMARA, are detailed in the Draft EIR on page 2-8, and further discussed in Master Response M3.

O8-3 A Draft EIR was issued on December 23, 2011, to analyze environmental impacts of the Applicant's proposed RPA. Prior environmental review of activities within the Project Area also has occurred. For example, the County analyzed the impacts of the 1985 Reclamation Plan under CEQA related to geology, water quality, biological resources, aesthetics, and other resources (Santa Clara County Department of Planning and Development, 1985). The County also prepared an Initial Study and Proposed Negative Declaration for a crusher relocation project in 2007 (EIP, 2007).

The statement is correct that the Applicant has a vested right to mine, which is discussed in Master Response M1(A). An explanation of why the ongoing surface mining operations are not a component of the Project analyzed in the Draft EIR is provided in Master Response M4(A).

The County exercises its full authority consistent with the police powers available under Article XI, Section 7 of the State Constitution, the California Planning and Zoning Law (Gov't Code §65000 et seq.) and other statutes, as well as the County Code. The County objects to the characterization of its responsibilities under these authorities as "limited."

The comment is correct that the Cement Plant operates under a County-approved Use Permit. This is disclosed in the Draft EIR (see, e.g., Section ES.4.1 on page ES-3).

The comment is incorrect that the County can address air emissions, noise and associated adverse effects of trucks only on the site and not on County roads. The County's authority to include conditions of approval and to investigate and enforce the abatement of nuisances extends to the full extent of its jurisdictional area.

O8-4 As stated on Draft EIR page 1-1, this EIR "is an informational document intended to disclose to the public and decision-makers the potential impacts of the Lehigh Permanente Quarry Reclamation Plan Amendment…This document assesses the direct, indirect, and cumulative environmental impacts that could occur as a result of the slope stability, revegetation, drainage and erosion control, structure dismantling and removal, monitoring, and other reclamation activities proposed in the Reclamation Plan Amendment submitted by Lehigh to Santa Clara County (County) on December 1, 2011." Project impacts pertaining to public health and safety are addressed in multiple sections of the Draft EIR, most specifically in Section 4.3 (*Air Quality*, which includes the results of a health risk assessment), Section 4.7 (*Geology, Soils, and Seismicity*), Section 4.9 (*Hazards and Hazardous Materials*), and Section 4.10 (Hydrology and Water Quality).

Cumulative effects on public health and safety are analyzed in Draft EIR Chapter 6: the cumulative scenario is identified and described in Section 6.1, and cumulative impacts are evaluated on a resource by resource basis in Section 6.2. The analysis considers all sources of environmental effects (including past, present, and reasonably foreseeable probable future projects) that would cause health and safety impacts that could combine with the incremental impacts of the proposed reclamation activities.

O8-5 The Court's statements in *South Orange County Wastewater Authority v. City of Dana Point* (2011) 196 Cal.App.4th 1604 are instructive by analogy:

> *The Legislature did not enact CEQA to protect people from the environment. Other statutes, ordinances, and regulations fulfill that function. See, e.g., Health & Safety Code §25220 et seq. [location of residences near hazardous waste site]; §2621.5 et seq. [location of structures near earthquake faults]; Water Code §8410(a) [construction of structures in floodways]; Silveira v. Las Gallinas Valley Sanitary Dist. (1997) 54 Cal.App.4th 980, 990 [Bay Area Air Quality Management District's regulation regarding residential construction near waste treatment plant].) The South Coast Air Quality Management District regulates SOCWA's operations (see Health & Safety Code §§40440, 40460), and regulation of odor emission forms part of the district's oversight of air pollution. (Id., §39013.) This is the framework established by the Legislature to protect people from odors such as the ones SOCWA's sewage plant might produce. CEQA serves another purpose.*

SMARA's purpose of protecting the environment by reclaiming mined lands is served in its requirement that surface mining operations conducted after 1975 have a lead agency-approved reclamation plan. The proposed RPA was prepared consistent with

SMARA. CEQA's purpose is to provide responsible officials with adequate information. Consistent with CEQA, the Draft EIR analyzes potential direct, indirect, and cumulative impacts of the Applicant's proposed RPA and alternatives in the context of baseline conditions. The cleanup of toxic releases is regulated by other bodies of law, including those identified by the court in the *South Orange County Wastewater Authority* decision.

The Draft EIR relied on the statement of Project Purpose and Need provided in Draft EIR Section 2.4 (page 2-7 et seq.) as well as the Project Objectives provided in Section 2.5 (page 2-9), and other factors identified in the discussion of the alternatives development screening process (Draft EIR Section 3.2, page 3-2 et seq,) to develop the range of alternatives for analysis. The comment does not explain how or why the methodology used in the Draft EIR was inadequate, but merely concludes that it was. The comment does not identify any other "meaningful alternatives" that should have been analyzed, and the County will not speculate in this regard. As described in Master Response M1(A) and Master Response M4(A), the vested surface mining operation, or potential expansion thereof, is not part of the Project.

It is not clear what "expansion" of operations is referred to in this comment. See Response O8-6.

O8-6 The status of the EMSA as a violation of SMARA is disclosed in the Draft EIR and described in Master Response M3(A). As described in Master Response M1(A) and Master Response M4(A), the vested surface mining operation is not part of the Project. The decision before the County is whether or not to approve the proposed RPA. Implementation of the proposed RPA would reclaim all of the lands on the site that have been affected by surface mining operations. Neither SMARA nor CEQA requires more.

O8-7 Excavation of a new quarry pit is not a component of the Project, and as such is not analyzed in the EIR. As discussed fully in Master Response M4(C), the Draft EIR identifies that excavation of a new quarry pit has been previously considered by the Applicant. See, for example, Draft EIR Section 1.4.1, page 1-4, which identifies the possibility of a new pit in connection with two prior reclamation plan amendment applications, i.e., the 2007 and 2010 reclamation plan amendment proposals. Further, the Draft EIR is clear that approval of the Project "would not preclude future extraction activities within the Project Area," and "does not foreclose the possibility of future mining in other unincorporated areas of the Applicant's 3,510-acre ownership" (Draft EIR Section ES.4.1, page ES-3). The Applicant has a vested right to conduct surface mining activities in the Quarry pit, WMSA, EMSA, crusher/Quarry office support area, Surge Pile, and Rock Plant, and it is reasonably assumed that the Applicant will exercise its vested rights to their lawful extent. With regard to why a new quarry pit is not considered a reasonably foreseeable future project for purposes of the cumulative analysis in the Draft EIR, please see Master Response M2(C).

O8-8 See Master Response M2(C), which explains why a new quarry pit is not considered a reasonably foreseeable future project for purposes of the cumulative analysis in the Draft EIR. At present, consideration of a new quarry pit as a reasonably foreseeable future project in the EIR for the Project would be premature. Any analysis of potential environmental impacts is speculative and unwarranted. CEQA does not require the County to consider the effects of a new pit under these circumstances. See generally, *Concerned McCloud Citizens v. McCloud Community Services District* (2007) 147 Cal.App.4th 181 and cases cited therein.

O8-9 The commenter does not provide any evidence or cite any published statements to support the assertion that the BAAQMD has found the AERMOD model to be flawed or inappropriate for use for evaluation of this Project. To the contrary, the BAAQMD *CEQA Air Quality Guidelines* specifically recommend the use of the ISCST3 and AERMOD models in assessing the potential impacts of industrial facilities. The other questions in this comment relate to the HRA that was conducted by others for the Cement Plant and not for the HRA that was conducted for and included in the Draft EIR for the Project. The Cement Plant HRA was relied upon in this Draft EIR only for the evaluation of cumulative health risk impacts, not for the incremental health risks associated with the Project. With regard to the validity of using the Cement Plant HRA for the cumulative analysis, it should be noted that the Cement Plant HRA has been accepted by the BAAQMD and OEHHA. A notice of this approval is available on the BAAQMD website at http://www.baaqmd.gov/~/media/Files/Engineering/Air%20Toxics%20Programs/Lehigh%20HRA%202011/Lehigh%20ATHS%20status.ashx?la=en.

O8-10 The comment correctly states that the focus of the proposed RPA, including Appendix B, is reclamation. See Response O8-6 regarding why these documents to not focus on the mining operation and Master Response M4(B) regarding why they do not focus on the Cement Plant. The portion of this comment addressing the "Air District HRA" once again relates to the HRA that was conducted by others for the Cement Plant and not the HRA that was conducted for and included in the Draft EIR for the Project. Further, it is expressly not the purpose of the proposed RPA to allow limestone to be produced for the Cement Plant. As described in Master Response M1(A) and Master Response M4(A), the vested surface mining operation is not part of the Project. The decision before the County is whether or not to approve the proposed RPA. Implementation of the proposed RPA would reclaim all of the lands on the site that have been affected by surface mining operations. The cumulative analysis in the Draft EIR evaluates the incremental impacts of the Project in combination with the incremental impacts of other projects in the cumulative scenario, including the Cement Plant.

O8-11 This comment expresses concern over nitrogen oxides and particulate matter emissions from the Lehigh Cement Plant. These emissions are not associated with the Project except to the extent that they are included as part of the baseline from which the

Project's incremental impacts were assessed. As described on page 4.3-18 of the Draft EIR, and as required by CEQA, the air quality analysis looks at the net change in air emissions that would be associated with the Project as compared to baseline conditions.

With regard to emissions from trucks, as shown in Table 5 on page E-12 of Draft EIR Appendix E, on-road truck trips associated with the Rock Plant at the quarry would be expected to increase from a baseline average of 43,490 trips per year to a maximum of 77,800 trips per year under the Project. An additional 1,000 on-road truck trips per year would occur in years 2023 through 2025 to bring green waste onsite for mixing with the WMSA material for Quarry pit backfill. Emissions from this incremental increase on truck trips were included in the Draft EIR health risk assessment. Further, as noted on page E-12 of Draft EIR Appendix E, there are approximately 45,112 on-road truck trips per year associated with the Cement Plant. Emissions associated with operation of the adjacent Cement Plant are not included in the Project air quality analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. However, emissions from these Cement Plant truck trips were included in the cumulative health risk analysis as noted on page E-16 of Draft EIR Appendix E.

Hexavalent chromium, as well as other toxic air contaminant components of particulate matter, was included in the health risk assessment for the Project. Please see response to Comment O3-11 for additional details.

O8-12 Please refer to the response to Comment A2-7. Concentrations of hexavalent chromium detected in surface water and groundwater at the Project site are below Basin Plan objectives and do not represent a significant adverse impact to water quality. It should be noted that Public Health Goals are not regulatory requirements, but instead represent non-mandatory goals and the Maximum Contaminant Level (MCL) mentioned in the comment is an enforceable drinking water standard. There are no groundwater sources for drinking water in the Project Area. The highest detection of hexavalent chromium in groundwater was 1.9 µg/L but this concentration was found in a monitoring well drilled into bedrock, which is not used for drinking water. The detection in groundwater indicates that it is naturally occurring in the Franciscan Bedrock present beneath the site. According to the RWQCB-SFBR Basin Plan, the Freshwater Water Quality objective for chromium is 11 µg/L for the 4-day average and 16 µg/L for the 1-hour average. Water quality samples on the site did not contain hexavalent chromium above the Basin Plan objectives and consequently, this compound was not considered a constituent of concern.

O8-13 This comment is related to emissions from the Lehigh Cement Plant and does not raise any matters pertinent to the Draft EIR for the Project.

O8-14 GHG emissions associated with operation of the Cement Plant are not included in the Project air quality analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating

permits, or regulatory status. Therefore, under CEQA there is no nexus between the Project and the Cement Plant that would require mitigations to be applied to the Cement Plant. The truck replacement program referred to by the commenter is limited to replacement of Bay Area port (drayage) trucks registered in the CARB Drayage Truck Registry with 2004 model year engines and is not applicable to other on-road trucks. Moreover, there are no Project-related air quality or health risk impacts identified in the Draft EIR for which the impacts are not less than significant or can be mitigated to less than significant with the mitigation measures already identified, so there is no need for further mitigation of Project emissions in this regard.

O8-15 As described in Draft EIR Chapter 2, *Project Description*, the scope of the Draft EIR covers the RPA submitted in December of 2011; it does not include the 1985 Reclamation Plan. Impacts are analyzed relative to the baseline established for the Project, which was June 2007 (see Response O8-1). Violations of the 1985 Reclamation Plan, including County-issued NOVs pertaining to SMARA, are detailed in the Draft EIR on page 2-8, and further discussed in Master Response M3.

Regarding the commenter's assertion that Lehigh has no intention of abiding by any reclamation plan, Master Response M3(A) discusses that public and private parties are entitled to a presumption that they will comply with applicable requirements. Furthermore, the County will be conducting annual inspections in satisfaction of its duties under SMARA. If non-compliance with the RPA is observed, the County is able to seek SMARA compliance. Moreover, the County has prepared a MMRCP, which will be included with the County's Conditions of Approval for the Project. This would ensure effective, enforceable implementation of the mitigation measures imposed by the County pursuant to the EIR for the Project.

The commenter suggests that the reclamation activities in the WMSA begin prior to 2021. However, the commenter does not state what impact is created by the Project that would warrant mitigation to begin reclamation activities immediately. The County's authority to impose mitigation measures in an EIR is subject to the constitutional requirement that there must be a nexus, or reasonable relationship, between an impact to be mitigated and the project proposed (CEQA Guidelines § 15041(a), 15126.4(a)(4); *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987)). The Project now under consideration is not the source of the problem cited by the commenter, and the County is not able to impose mitigation to correct it.

O8-16 The commenter is correct that the Project is limited to the RPA, as stated on Draft EIR Chapter 2, *Project Description*. However, potential impacts resulting from implementation of the Project are not limited to the Project Area; as such the analysis of environmental impacts in Chapter 4, *Environmental Analysis*, includes analysis of impacts on the local environment, the range of which is specific to the resource area being analyzed and the regulations applicable to that resource area. For example, Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*, analyses impacts to

viewsheds throughout Santa Clara County, as views of the Project Area are visible from many locations, including scenic and/or major roadways several miles away. Section 4.3, *Air Quality*, reviews impacts that would occur within the boundaries of the San Francisco Bay Area Air Basin, which encompasses all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara Counties, and the southern portions of Solano and Sonoma Counties.

The choice of alternatives was developed per CEQA Guidelines section 15126.6 (a), as discussed on Draft EIR page 3-1: "CEQA requires an evaluation of the comparative effects of a range of reasonable alternatives to a project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project (CEQA Guidelines § 15126.6(a))." Based on the Project objectives identified on Draft EIR page 2-9, all alternatives include the reclamation of existing mining disturbance. Draft EIR Chapter 3 describes the process that was used to identify and screen alternatives for consideration, provides the rationale for why some alternatives were eliminated from consideration, and describes those alternatives that were carried forward for analysis in this EIR.

The commenter is correct that the only alternatives considered were alternative ways to reclaim ("clean up" in the commenter's words) the site. All mining activities are legally required to have a SMARA-compliant Reclamation Plan. Consequently, the EIR cannot consider an alternative that does not include some form of SMARA-compliant reclamation, as the Quarry would consequently not be compliant with California law.

3.4 Responses to Written Comments from the Public

Permanente Quarry Reclamation Plan Amendment
Draft EIR
Public Workshop
January 26, 2012

Request to Speak

If you have general questions on CEQA, Draft Environmental Impact Report and process, for the Lehigh Permanente Quarry Reclamation Plan Amendment, please complete this form and give to Planning staff.

Print Name: Cathy Helgerson

Organization: CAP

Permanente Quarry Reclamation Plan Amendment
Draft EIR
Public Workshop
January 26, 2012

Request to Speak

If you have general questions on CEQA, Draft Environmental Impact Report and process, for the Lehigh Permanente Quarry Reclamation Plan Amendment, please complete this form and give to Planning staff.

Print Name: Cathy Helgerson

Organization: CAP

Written Comments

If you would also like to provide written comments for the record, please write your comments below:

EMSA Height Limits Who sets these limits? Concern for scenic view destroyed with out concern for cit. view.

P1-1

I wish to speak!

(1)

Written Comments

If you would also like to provide written comments for the record, please write your comments below:

Have you tested the soil under the EMSA? If not why not? I have been asking about this for over 1 yr and Have no answer. There was an aluminum plant & an ammunitions factory there and there has never been a clean up.

P1-2

3.4.1 Comment Letter P1: Cathy Helgerson

P1-1 The County, as the lead agency for the Project under SMARA and CEQA, would regulate the height of the EMSA by approving the proposed reclamation plan as the Project may be modified by mitigation measures imposed or an alternative to the Project approved pursuant to the CEQA process. As described in Draft EIR Section 2.7.2 (page 2-16), final elevations in the EMSA would be a maximum of 900 feet amsl.

The Draft EIR analyzes impacts to scenic views of the Project and alternatives in Section 4.1, *Aesthetics, Visual Quality, and Light and Glare* (page 4.1-1 et seq.). This section analyzes the possibility that reclamation of the EMSA and other areas within the Project Area could have a substantially adverse effect on a scenic vista (the Anza Knoll) during the period of time in which reclamation activities are in progress (Impact 4.1-1, page 4.1-40 et seq.) and concludes that this would be a significant unavoidable impact for purposes of CEQA. Once reclamation is complete (see Aesthetics Impact 4.1-2, page 4.1-41), the Project Area would visually blend with the surrounding natural landscape, adding to the scenic nature of the viewshed and decreasing the presence of industrial components in a distinct viewshed. The height of the EMSA would not be sufficient to block views of surrounding scenic mountains, and, overall, the view would improve relative to existing conditions (page 4.1-41). Citizens' views of the Project Area in terms of lines of sight have been analyzed, and opinions have been invited and considered.

P1-2 The County has not tested the soil beneath the EMSA because implementation of the proposed reclamation activities would cause no change in the physical environment in that area. Consistent with CEQA, the Draft EIR provides descriptions and analysis to provide decision-makers and members of the public with sufficient information to make a decision informed by the environmental consequences of the Project without supplying extensive detail beyond that which is required to make such a decision. As described in Draft EIR Section 2.6.1 and Section 2.7.2, the EMSA is an approximately 75-acre overburden and rock storage area with existing slopes at a 2H:1V (horizontal to vertical) angle interrupted by 25-foot benches every 40 feet (2.5H:1V to 2.6H:1V overall). During Reclamation Phase 1, final contours would be achieved, and native vegetation and oak woodland habitats would be established that would be consistent with the surrounding area and topography. The proposed grading and revegetation of these slopes would not disturb soils beneath the EMSA.

The use of the property as a site of a former aluminum plant and incendiary materials manufacturing is described in the cultural resources discussion in Draft EIR Section 4.5.1.4, page 4.5-9 et seq. As described therein, a magnesium plant was constructed on the site in 1941. It covered a 30-acre area adjacent to the Cement Plant. By 1947, the production of magnesium had ended and the company began to produce aluminum on the site. In 1950, a new foil mill was installed for the manufacturing of

aluminum foil, and aluminum extruded products were manufactured there until 1990, when the plant was closed. However, the former aluminum plant and incendiary materials manufacturing plant site were not within the Project Area. See, for example, Draft EIR Section 4.4.1.2, page 4.4-17 ("The former aluminum plant building at the north east corner of the site outside the Project Area…").

As described generally in Draft EIR Section 4.0.2.2, the environmental baseline for purposes of analysis in the Draft EIR is June 2007. Draft EIR Figure 4.1-3 provides photographs of views of the EMSA taken from or near Cristo Rey Drive at the Hammond-Snyder Loop Trail in 2007 and 2008 (Photos 1 through 5), and a view from I-280 east of the SR 85 interchange in 2007 (Photo 6). The materials present in the EMSA at that time are part of the baseline condition and any effect they may have on the environment is not attributable to the Project. Overburden materials later added to the EMSA as part of the quarry operator's surface mining operation also are not attributable to the Project. The environmental effects of the reclaiming the EMSA as proposed and pursuant to each of the alternatives is analyzed on a resource by resource basis throughout Draft EIR Chapter 4.

January27 2012

Rob Eastwood, Principal Planner
County of Santa Clara Planning Office
70 West Hedding Street, East Wing 7th floor
San Jose, CA 95110

Mr. Eastwood

This communication is in response to your request of December 23, 2011for comment regarding an application for a Reclamation Plan Amendment for the Lehigh Permanente Quarry above Cupertino, DEIR. My wife and are long term (since 1973) residents of Cupertino:

John and Marilyn Buenz
22115 Dean Ct
Cupertino CA 95014 phone 408 343 0655/ e-mail jbuenz0835@att.net

We understand that the quarry operates under an arrangement with the county going back many years. However it is high time to recognize that the valley, and especially the area immediately surrounding the quarry site, has changed and developed dramatically since the time of the original arrangement. How the County Planning Office could fail to realize that times and circumstances have changed over this time is beyond me and most others in Cupertino. P2-1

Let me cite the obvious rationale for that statement:
1. Homes now surround the quarry which has been out of compliance with environmental obligations unheard of when the quarry was founded. Just now quarry ownership seems to be considering these obligations long after they were enacted while the Sierra Club and a local organization have struggled for years to force environmental regulators P2-2

to enforce these obligations, and without a serious hearing, let alone compliance. P2-2

2. Trucks carrying cement and other materials produced by the quarry fill and pollute (with noise, traffic and dust) Foothill Expressway at least five days a week. Many residences line this freeway, constructed long after the quarry began operations. Nose from the cement producing operations can be heard as far away as my home which is located in the Steven Creek Canyon. Dust from these operations covers our area, including my home, to say nothing about homes just above the quarry P2-3 P2-4

.

3. The visual scar from quarry operations can be seen from far down Hwy 85, and this makes a farce of county restrictions on unobtrusive grading all over the county. Even many years ago, I had to request and defend my request of a grading permit for a small area on property on Shannon Road, Los Gatos. That minor grading could not be seen from any location beyond the site itself. The quarry scar is a major visual feature for the entire county, for which you are responsible. P2-5

The "specific environmental impacts" which your report is to address includes all of the "significant impacts" which your "Notice of Availability" includes in the paragraph "Significant Environmental Effects". This should not be rocket science for you; and we, and I am sure many others you may or may not hear from, urge, in the strongest terms, a negative declaration on this application. What on earth is your office for but to protect the county from issues obviously raised by the Leigh Quarry Permanente Quarry and its application to amend its existing arrangement? P2-6

John F. Buenz

Marilyn A. Buenz

John F. Buenz Marilyn A. Buenz

3.4.2 Comment Letter P2: John and Marilyn Buenz

P2-1 As indicated in the Draft EIR, quarry operations occur as a legal nonconforming use (also known as a "vested right" or a "grandfathered" use) in the Quarry pit, WMSA, EMSA, crusher/ Quarry office support area, Surge Pile, and Rock Plant (see, Draft EIR pages ES-3, 1-2). No County permit is required to mine these areas. The County Department of Planning and Development's February 8, 2011 Staff Report for Agenda Item 27 of the Board of Supervisors' meeting of that same date, in addition to related documentation, provides additional information about the vested rights determination for the quarry.[1]

The Draft EIR identifies and describes the types of residential and other development in the area that would be affected by the Project. See, for example, Section 4.11.1, which describes the regional and local land use and planning setting, as well as Section 4.3 and 4.13, which analyze potential impacts relating to air quality and noise in the context of the Project's closest neighbors.

As described in Draft EIR Section 4.0.2.2, the Draft EIR assesses the significance of Project impacts relative to the actual physical environmental conditions as they existed in June 2007, when the County issued a NOP of the EIR to evaluate impacts of the Applicant's first reclamation plan amendment proposal. That initial proposal was refined over time, and resulted in the Project that was evaluated in the Draft EIR. Since environmental conditions fluctuate over time, an 11-year average was used to define the baseline for air resources, GHG, energy use, and traffic. For land use and other development-related considerations, conditions as they existed in June 2007 provided the analytical baseline.

P2-2 Regarding the proximity of homes to the quarry, see Response P2-1. Regarding the quarry's compliance status, see Master Response M3.

P2-3 Environmental effects of truck trips associated with the Cement Plant and Quarry, as well as existing surface mining operations that cause noise and dust, contribute to baseline conditions in the Project Area and are also considered in the Draft EIR as part of the cumulative scenario. See, Draft EIR Section 6.1.2, *Projects Considered in the Cumulative Scenario*; Draft EIR Section 6.2.13 (the cumulative noise impacts analysis); Draft EIR Section 6.2.17 (the cumulative truck analysis), and Draft EIR Section 6.2.1 (the cumulative air quality analysis).

P2-4 Concerning dust generated by cement trucks and mining activities, see Response P2-3. If the Project is approved, mineral extraction activities, materials storage, and other mining uses would cease (and cease generating dust) in the Project Area, and the site would be reclaimed as described in Draft EIR Chapter 2. Potential impacts to air quality associated with the proposed reclamation activities are analyzed in Draft EIR Section 4.3, *Air*

[1] The Staff Report and other documentation related to the nonconforming use determination is available for review on the County's website (Santa Clara County Planning Office, 2011).

Quality. Because the Cement Plant is separate from the quarry and is not part of the Project (see Master Response M4(B)), Cement Plant operations and related trucking would not be governed by the permits or other approvals necessary for this Project.

P2-5 Views of the Project Area are provided in Draft EIR Figure 4.1-4 (pages 4.1-27 through 4.1-29), which shows existing views of the Project Area as well as visual simulations of future (post-Project) conditions over time from the Mary Avenue bicycle footbridge looking southwest over I-280; Figure 4.1-5 (pages 4.1-30 through 4.1-32), which shows existing and future (simulated) views from northbound SR 85 near Quito Road, southeast of the Saratoga Avenue on-ramp, looking northwest; Figure 4.1-6 (pages 4.1-33 through 4.1-35), which shows existing and future (simulated) views from westbound Stevens Creek Boulevard, just east of the SR 85 interchange, looking west; and Figure 4.1-7 (pages 4.1-36 through 4.1-38), which shows existing and future (simulated) views from the Cristo Rey Drive at Hammond-Snyder Loop Trail, looking southwest. Views of the Project Area as they existed in 2007 and 2008 (i.e., at or about the baseline timeframe) are shown in Figure 4.1-3 (pages 4.1-21 and 4.1-22). As can be seen in these images, the Project Area is visible under baseline and existing conditions. Regarding visual impacts as seen from SR 85, see Response O6-36.

P2-6 The Notice of Availability (Final EIR Appendix A) identified specific environmental effects of the Project to aesthetics, air quality, biological resources, cultural resources, geology/soils, GHG emissions, hazards, hydrology and water quality, and noise. This is consistent with the analysis documented in the Draft EIR. Please refer to Draft EIR Section ES.8.2 (page ES-11), which summarizes Project impacts; and Table ES-3 (page ES-13 et seq.), which identifies the environmental impacts of the Project and their significance before mitigation measures are implemented, identifies mitigation measures that could avoid or reduce those impacts, and summarizes the significance of the impacts after recommended mitigation measures are implemented. Full analysis of direct and indirect effects is provided throughout Draft EIR Chapter 4, and cumulative effects to these resource areas are analyzed in Chapter 6.

Consistent with CEQA, a negative declaration may be prepared only if there is no possible significant environmental effect (see, e.g., CEQA Guidelines §§15063, 15371). If the Project could cause a significant environmental effect, then the appropriate document for the CEQA lead agency to prepare is an EIR. The County's notice of its intent to prepare an EIR for this Project was included in the Draft EIR as Appendix A, *Scoping Report*.

The County assumes that by advocating a "negative declaration," the comment intended to urge County decision makers not to approve the proposed Reclamation Plan Amendment. Disapproval of the Project would result in a surface mining operation without a SMARA lead agency-approved reclamation plan. As explained in Draft EIR Section 3.1.3 (page 3-14), which describes the No Project Alternative, any decision that would result in the absence of an approved reclamation plan for the Permanente Quarry would be legally infeasible.

From: Vicky Ho <vickyyueho@yahoo.com>
Subject: **Comment for Public Meeting re Lehigh Southwest Cement Co**
Date: January 30, 2012 3:43:09 PM PST
To: Marina Rush <marina.rush@pln.sccgov.org>
Cc: Al & Sharon Seid <srseid@aol.com>, Alex & Fen Choi <fenchoi@yahoo.com>, Andrew & Anita Shu <anitashu57@yahoo.com>, Andy & Janet Filo <janfilo@aol.com>, Beez Jones <beezj@aol.com>, CHUN HUI & JIAQIAN YANG <Jiaqian@sbcglobal.net>, Connie & Steve Chiang <S_C_Chiang@comcast.net>, Dave & Nadine Grant <nadine@daveandnadine.com>, Dick & Sophie Lee <dicktlee@netzero.com>, Dina Wynne <jdinacpa@comcast.net>, Don & Kay Carnie <kccarnie@aol.com>, Eran & Iris Cohen <Iris_Cohen@yahoo.com>, "eran99@comcat.com" <eran99@comcat.com>, Erik & Julie Lai <julialai@yahoo.com>, Fred Laccabue <fred.laccabue@hp.com>, George & Steven Tyson <tysoncup@aol.com>, Jack & jennie Shabel <jennieshabel@juno.com>, Jack & Mia Yao <mingfang@comcast.net>, Judy Sha <judysha@hotmail.com>, Ken & Cynthia Smyth <cynsmyth@comcast.net>, M & T Takahashi <kokky@comcast.net>, Majeed & Azam Novbakhtian <Majeed_Novbakhtian@yahoo.com>, Margo Tenold <revmargo@att.net>, Merv Kato <mervk@sbcglobal.net>, Michael & Nancy Chan <michaelhchan@yahoo.com>, "nancy_s_leong@yahoo.com" <granitef@aol.com>, Patrick Ho <patrickyho@yahoo.com>, Randy & Carle Hylkema <hylk@att.net>, Sam & Mimi Chou <Munmie@yahoo.com>, Stan & Nancy Chu <stanchu62@yahoo.com>, Steve Dauber <Steve@dauberfamily.com>, "sukhija@gmail.com" <sukhija@gmail.com>, Susan & John Ha <suemha1@yahoo.com>, TAKESHI & NARUMI Yasui <narumi_softwind@yahoo.co.jp>, Wendy Peikes <wendypei@yahoo.com>
Reply-To: Vicky Ho <vickyyueho@yahoo.com>

Dear Ms. Rush:

I cannot attend the meeting, but here is my input :

The current Environmental Impact Report (EIR) is inadequate. It does not include the impact of the 100,000 Diesel truck trips per year
This must be included in the EIR.
This is essential as truck traffic goes with the cement plant , and the cement plant cannot exist without the Quarry.
The trucks generate pollution, noise and safety hazards 24x7 for the community around it.

P3-1

The Cement Plant operates under a Permit from the County. Lehigh owns both and they should not be considered as separate businesses.
Please for once do your job, SC council members, stand by the citizens instead of Lehigh.
Our grandchildren and yours as well will thank you.

P3-2

Vicky Ho
22600 Alpine Dr, Cupertino, CA 95014

From: Marina Rush <marina.rush@pln.sccgov.org>
To:
Cc: Marina Rush <marina.rush@pln.sccgov.org>
Sent: Wednesday, January 25, 2012 1:21 PM
Subject: Notice of Public Meeting re Lehigh Southwest Cement Co

Everyone,

Please see the attached Notice of Public Meeting regarding Lehigh Southwest Cement Company. County is accepting public oral comments

on the Draft Environmental Impact Report, meeting is scheduled for February 2, 2012, 1:30 p.m. at the County Government Center, Board of Supervisors' Chambers, 70 W. Hedding Street, San Jose.

Best regards,

Marina Rush, Planner III

County of Santa Clara Planning Office
70 West Hedding Street, East Wing, 7th Floor
San Jose, CA 95110
email: Marina.Rush@pln.sccgov.org
Phone: (408) 299-5784
Fax: (408) 288-9198

Marina Rush, Planner III

3.4.3 Comment Letter P3: Vicky Ho

P3-1 The commenter asserts that there are 100,000 diesel truck trips that are not included in the Draft EIR analysis, but does not say from which operation or activity those truck trips originate. From the context of the comment, however, it is reasonable to conclude that the commenter is referring to on-road truck trips.

As described on page 4.3-18 of the Draft EIR, and as required by CEQA, the air quality analysis looks at the net change in air emissions that would be associated with the Project as compared to baseline conditions. Project emissions and health risks were calculated from the proposed operation and reclamation activities at the quarry. As shown in Table 5 on page E-12 of Draft EIR Appendix E, on-road truck trips associated with the Rock Plant at the quarry would be expected to increase from a baseline average of 43,490 trips per year to a maximum of 77,800 trips per year under the Project. An additional 1,000 on-road truck trips per year would occur in years 2023 through 2025 to bring green waste onsite for mixing with the WMSA material for Quarry pit backfill. Emissions from this incremental increase on truck trips were included in the Draft EIR health risk assessment. Impacts pertaining to safety and noise were analyzed in Draft EIR Section 4.9, *Hazards and Hazardous Materials*, and Section 4.13, *Noise*, respectively.

As noted on page E-12 of Draft EIR Appendix E, there are approximately 45,112 on-road truck trips per year associated with the Cement Plant. Emissions, noise, and safety issues associated with operation of the adjacent Cement Plant are not included in the Project analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. However, emissions from these Cement Plant truck trips were included in the cumulative health risk analysis as noted on page E-16 of Draft EIR Appendix E, as well as the cumulative analyses for noise and safety impacts (Draft EIR Sections 6.2.9 and 6.2.13).

P3-2 Regarding why the Cement Plant is not a part of the Project Area, see Response P3-1. Master Response M4(B) provides additional information regarding why the Project does not include activities associated with the following: surface mining operations, Cement Plant, excavation of a new quarry pit, the scenic easement, the Permanente Creek Restoration Plan being developed by the Applicant in coordination with the RWQCB, and the San Jose Water District's Permanente Creek Flood Protection Project.

From Cathy Helgerson

County of Santa Clara Planning Commission and Board of Zoning Adjustments

Addressed to Commissioners – Jack Bohan, Dennis Chiu, Michael Franzino, Scott Lefaver, MaryAnn Ruiz, Kathy Schmidt and John Vodovich

Meeting Schedule: February 2, 2012 at 1:30 PM, 1st floor, Board of Superviosrs' Chambers

Item 7 - 2250-10P(M1)-10EIR Lehigh Southwest Cement Company

Comments related to the public hearing to receive public comments on Permanente Quarry Reclamation Plan Amendment Draft Environmental Impact Report (DEIR). Address 24001 Stevens Creek Blvd. Cupertino, Ca. 95014; Zoning District: HS; Parcel Size: 627.97 acres; Supervisorial District 4; APN: 351-09-011,012,013.

Public Comments verbally stated and written preliminary by: Cathy Helgerson, 20697 Dunbar Drive, Cupertino, Ca. 95014 resident and citizen of Cupertino for 30 years. Note: Citizen will also follow up with a more detailed comment report by February 21st 2012 to the Planning SCC Planning Commission, the SCC Board of Supervisors and the SCC Planning Department.

The Reclamation Plan for the WMSA and the EMSA can not be approved at this time can not be implemented due to a Super Fund Cleanup. I filed a formal request for an investigation to be conducted by the EPA Region 9 Superfund Site Division at the Lehigh Southwest Cement Plant and Quarry and also the Stevens Creek Quarry in Cupertino, this Preliminary Assessment is still under way and I am waiting for the results. When the EPA decides to elect a Super Fund Site these sites will need a massive cleanup they will need to be closed down in order to conduct a full investigation. There will need to be testing of the site and pollution levels determined so that a formal cleanup can begin there can be no delay in this process in order to protect the public from further contamination. Superfund Sites are imposed to clean up a site and to also make sure that there is no further contamination in the future. P4-1

The EPA Region 9 Super Fund Division can set a 15 mile perimeter around the site due to the contamination of the water in our creeks, reservoir, wells and aquifer. The air, water and soil has been highly contaminated with Selenium, Mercury, Arsenic, Dixon, Nitrogen Oxide, Sulfur Dioxide, CO2, Chromium 6, Vanadium, Lead and many more chemicals, metals and gases. The Dust that is emitted due to this pollution is everywhere and we are eating and breathing in this dust 24/7. The powers that be have not issued any real strong opposition to the many notices of violations no one has used any form of real enforcement to stop the serious continued polluting of our communities that have resulted in many health problems including death. The fact that cancer is at epidemic levels and that one out of two people are getting cancer seems to be overlooked by the agencies that have been formed to protect us. P4-2 P4-3

The public has been deceived and the dangers are played down by the agencies and the news media which brings many people to believe that there is no way to protect ourselves and families. There are many children born with autism which is also now at epidemic levels again the continued overlooking of P4-4

the pollution and contamination that has affected our children's health the question now is how will we protect our children? P4-4

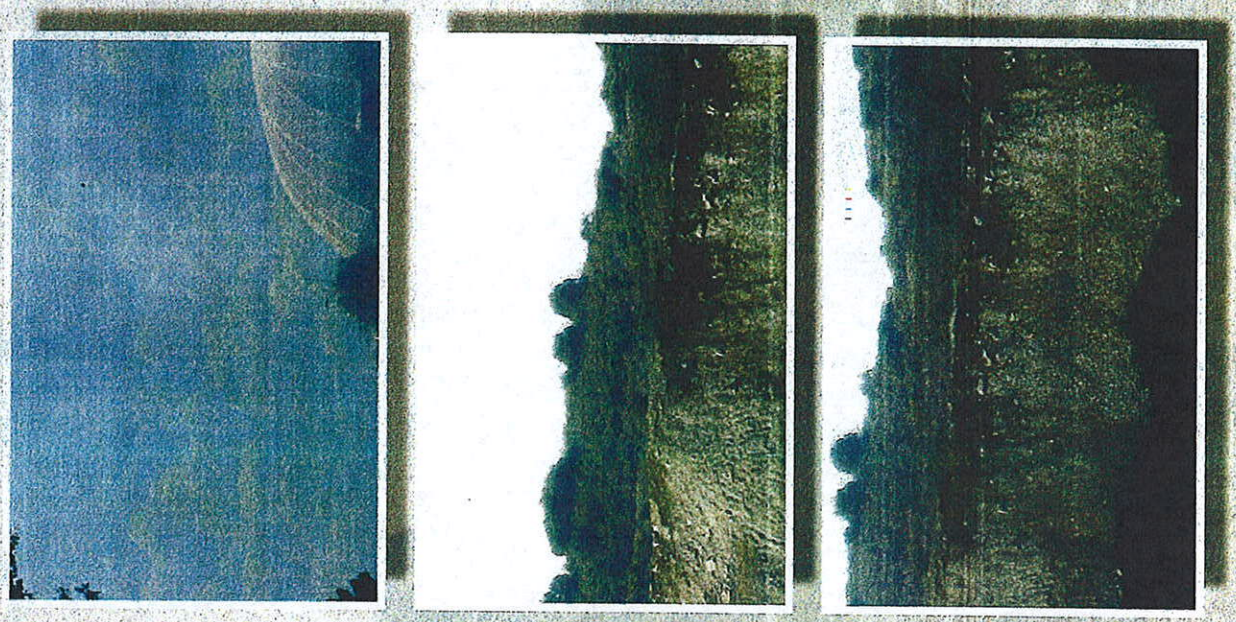
The spare the air days have increased steadily as the pollution has changed our climate and we must accept this climate disaster realization that can not longer be overlooked by any of us. The weather is dryer and as each emission of pollution that is released in the air or falls on the ground has subjected us to cumulative effects that are taking a terrible toll. The planet's weather is changed continually and we sit by and wonder why earth quakes and other catastrophes are happening when we can see all of the signs around us that should be an indicator of what is causing such a great threats to human and animal life as we know it on this planet. The San Andres fault is about two miles from the site as so stated in the EIR and could be a major problem with any new pit mined which would even be closer that would P4-5 cause the next major earth quake in California. I must insist that no new pit of 200 acres and the destroying of 10,000 thousand trees be allowed which would only be the beginning of the continued mining of this area that would reach up to 600 acres or more and the destruction of 30,000 thousand trees. These trees have acted as a buffer for decades and if they are removed there will be no way that we can go on living in the Silicone Valley and in our community homes. P4-6

The fact that under the EMSA there was once an aluminum plant and an ammunitions factory that are suspect to high levels of contamination that has never been cleaned up this seems to be completely overlooked by the SCC Planning Department. I have continually asked that soil samples under the ground be tested this information should have been part of EIR. P4-7 The EMSA is ugly and the height is completely out of control. The destruction of the calm scenic view has been disrupted without any consideration for the citizens in Santa Clara County and what they feel is important to the community. Why has this been allowed to continue and who will correct this injustice has yet to be determined. P4-8

I ask that each member of the commission take into full consideration the seriousness of my concerns with the EIR and the proposed Reclamation Plan and do the right thing and work with the EPA to insure the safety to the citizens of Santa Clara County and the surrounding areas.

Thank you

4 attachments + 5 Blow ups



P4-9

Letter P4

P4-9

3.4-17

1/6/2010 EMSA Lehigh

3-4-18

Letter P4

P4-9

3.4.19

Letter P4

P4-9

3.4.4 Comment Letter P4: Cathy Helgerson

P4-1 This comment has been addressed. See Response O1-3.

P4-2 Regarding the EPA Superfund Program, see Response O1-3. The comment does not suggest that air, soil, and water contamination at the time the comment was written are attributable to the proposed reclamation activities, the direct, indirect and cumulative effects of which are analyzed in the Draft EIR. The Draft EIR analyzes cumulative effects to air quality, including air quality related health risks, in Section 6.2.3 (page 6-15 et seq.); cumulative effects to soil in Section 6.2.7 (page 6-21 et seq.); cumulative effects pertaining to hazardous materials in Section 6.2.9 (page 6-22 et seq.); and cumulative effects to water in Section 6.2.10 (page 6-23 et seq.) This analysis evaluates the incremental impacts of the Project in combination with the incremental impacts of other projects in the cumulative scenario, including the Cement Plant. Cement Plant-related air quality considerations are described as part of the cumulative scenario in Draft EIR Section 6.1.2.1, on page 6-9.

P4-3 The Draft EIR describes the notices of violation issued by the County in 2006 and 2008 in Chapter 2, Project Description, on page 2-8. Regarding the compliance status of the Quarry and the County's authority to enforce compliance, see Master Response M3(A).

P4-4 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A). Regarding health impacts resulting from the Project, see Draft EIR Section 4.3, *Air Quality*, which contains the results of a health risk assessment for the Project, as well as Section 6.2.3.2, which analyzes cumulative impacts to air quality and associated health risks.

P4-5 Regarding concerns about climate change, see Draft EIR Section 4.9, *Greenhouse Gas Emissions*. Regarding air quality and cumulative impacts, see Response P4-2. Regarding seismicity and impacts pertaining to the San Andreas Fault, see Response O1-47. Regarding a new quarry pit in the Project Area, see Master Response M4(C) pertaining to elements excluded from the Project description.

P4-6 Excavation of a new quarry pit is not a component of the Project. The Draft EIR identifies that excavation of a new quarry pit previously has been considered by the Applicant, but is clear that approval of the Project "would not preclude future extraction activities within the Project Area," and "does not foreclose the possibility of future mining in other unincorporated areas of the Applicant's 3,510-acre ownership" (Draft EIR Section ES.4.1, page ES-3). See Master Response M4(C) pertaining to project description exclusions.

P4-7 This comment has been addressed. See Response P1-2.

P4-8 Visual impacts resulting from construction of the EMSA are analyzed in Draft EIR Section 4.1, *Aesthetics, Visual Quality, and Light and Glare.*

P4-9 This comment has been addressed. See Response P1-1.

Dear Neighbors,

As I reach the boiling point of frustration, I find it necessary to speak out on an issue that affects all of us in Cupertino, Monta Vista, Los Altos, Saratoga and Los Gatos: the LeHigh Cement Plant. Do any of you every look up at Black Mountain? If not, it is time you did -- and see what the plant is doing to our community. Stop for a moment and listen. Only this morning I was awakened by the plant's noise and vibration. Now it is just past 3 p.m. and the plume of white dust has started -- all but destroying the crisp beautiful view of the hills. To see it for yourself, drive down Granada Ave. around 3:30 p.m. and look up. Then, if you dare, take a deep breath.

P5-1

If you look one way towards Los Gatos you see the dust following the hills around and filling up the valley. Some call it smog. If you look north towards Los Altos, it is the same. The dust is insidious -- I am forced to replace my filters on my furnace monthly, and I installed new double pane windows. But gray dust still rapidly accumulates on the shirts in my closet. I have to breath this dust every day -- but my sinuses seem to clear if I get on a flight to Seattle, Saint Louis or Florida.

I have a nice wooden deck on my home looking at the view -- but there's a constant accumulation of dust that needs to be blown or swept off. When I park my black car out in front of my home, it's covered with dust within five minutes. But when I park outside at work next to 237 and Lawrence, there's no dust buildup.

Even on "no burn" nights when we are instructed not to use our fireplaces or get a $400 fine, the smoke and dust continues to billow out into the atmosphere from the cement plant. I have also noticed the system always runs at full bore on rainy or foggy nights. The disguise is apparent -- if you can't see it, you don't know about it.

P5-2

We live in an area of million and even multi-million homes, and all of you with the big bucks to afford these homes are getting the brunt of the crap. Why don't you use some of that cash to help shut this down? Think about how much it may take off the value of your home if new permits are allowed. Not to mention your failing health.

P5-3

When this issue is addressed at city meetings, polished presentations by expensive lawyers seem to drown out the legitimate concerns being voiced by individual homeowners. Could it be that the cities are handed cash under the table to say it is out of their control? Come on City, you work for us. Do your job! P5-4

I am a concerned citizen who has lived in Monta Vista since 1976. The plant was then under control. I think it was in 1989 when expansion began behind our backs. Do you remember when the valley was clear? Since then, the plant has tripled production and plans to go further, cutting up your mountain, leaving you with a gaping hole and white spattered hillside, never to be the same gorgeous green vista that nature installed. P5-5

In a recent study I got my hands on, they did not study the trucks traveling from the plant to 280 and 280/85 to the plant. They are going to increase this equaling the traffic over 500 cars a day and I bet it will be more like several thousand. A truck equals five cars. Consider the dust and cement splashed all over your car on a wet day. P5-6

If you have an iphone download vr mobile and take measurement on the sound and vibration in your area. P5-7

Get a grip, Santa Clara County -- shut this mess down!

Terry Hertel

3.4.5 Comment Letter P5: Terry Hertel

P5-1 Emissions and noise associated with operation of the Cement Plant are not included in the Project air quality or noise analyses since the Cement Plant is a separately permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. See Master Response M4(B) for further explanation on what Quarry components were and were not included in the Project description.

However, environmental effects of truck trips associated with the Cement Plant and Quarry, as well as existing surface mining operations that cause noise and dust, contribute to baseline conditions in the Project Area and also are considered in the Draft EIR as part of the cumulative scenario. See Draft EIR Section 6.1.2, *Projects Considered in the Cumulative Scenario*; Draft EIR Section 6.2.13 (the cumulative noise impacts analysis); Draft EIR Section 6.2.17 (the cumulative truck analysis); and Draft EIR Section 6.2.1 (the cumulative air quality analysis).

P5-2 The comment does not suggest that the dust in the air at the time the comment was written is attributable to the proposed reclamation activities, the direct, indirect and cumulative effects of which are analyzed in the Draft EIR. The Draft EIR analyzes cumulative effects to air quality, including air quality related health risks, in Section 6.2.3 (page 6-15 et seq.). This analysis evaluates the incremental impacts of the Project in combination with the incremental impacts of other projects in the cumulative scenario, including the Cement Plant. Cement Plant-related air quality considerations are described as part of the cumulative scenario in Draft EIR Section 6.1.2.1, on page 6-9.

P5-3 Comment noted. This comment does not address the adequacy or accuracy of the Draft EIR. See Master Response M2(A).

P5-4 This comment does not address the adequacy or accuracy of the Draft EIR. See Master Response M2(A).

P5-5 See Response P5-1. Visual impacts from the Cement Plant are not included in the Project aesthetic analysis since the Cement Plant is not a part of the Project. However, existing surface mining operations and the presence of industrial components associated with the Cement Plant contribute to baseline conditions in the Project Area and also are considered in the Draft EIR as part of the cumulative scenario. See, Draft EIR Section 6.1.2, *Projects Considered in the Cumulative Scenario*; Draft EIR Section 6.2.1, the cumulative aesthetic impacts analysis.

P5-6 See response to Comment P5-1 regarding the Project analyzed in the Draft EIR, which is a proposal to amend the existing, approved 1985 Reclamation Plan for a 20-year period dating from Project approval, not a proposal to increase quarry production beyond permitted levels. The comment does not identify the referenced "recent study", and as such, the statement about traffic increases cannot be substantiated. However, as

described on page 4.17-8 of the Draft EIR, the Project would generate up to a maximum of 30 one-way vehicle trips per day (two truck trips and 28 employee commute trips) on roads external to the site (during the nine-year Phase 1 of the Project), not the "over 500 cars a day" cited in the comment.

As stated in the Draft EIR, the above-cited increases in vehicle trips would be spread over the course of a day, resulting in an average of less than one new truck trip per hour on any one day. Although drivers could experience delays if they were traveling behind a truck, the increase in traffic due to the reclamation-related activities would be negligible relative to both existing and cumulative (2030) traffic volumes, and the Project impact would be less than significant, with no required mitigation.

P5-7 This comment does not address the adequacy or accuracy of the Draft EIR. See Master Response M2(A). Regarding noise and vibration impacts from the Project, see Draft EIR Section 4.13, *Noise*.

From: <Jlemons@aol.com>
Date: Sun, 5 Feb 2012 00:37:43 -0500 (EST)
To: <rob.eastwood@pln.sccgov.org>
Subject: Lehigh

I have lived in Cupertino for over 40 years. Our city has suffered with years and years of abuse from Lehigh Cement. From air pollution from their facility and their trucks, to hazardous, speeding cement trucks spewing toxic exhaust, to broken roads from the trucks day and night, and so forth. They have raped our foothills beyond reason and it is time for them to call a halt to these substantive abuses.

We Cupertino residents can see the pollution that sits atop our outdoor furniture tables and chairs.

I remember when they wanted to burn rubber tires which would elevate the pollution levels. Their comment? To paraphrase, "Well it will only increase the pollution a very little bit." That is their arrogant attitude.

Please represent the lungs and lives of Cupertino/Los Altos residents in a worthy and fair manner.

P6-1

Sincerely,

Mary Ann Lemons

3.4.6 Comment Letter P6: Mary Ann Lemons

P6-1 Emissions, noise, and hazards associated with operation of the Cement Plant are not included in the Project air quality, noise, or hazards analyses since the Cement Plant is a separately permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. See Master Response M4(B) for further explanation on what quarry components were and were not included in the Project description. However, environmental effects of truck trips associated with the Cement Plant and Quarry, as well as existing surface mining operations that cause noise and dust, contribute to baseline conditions in the Project Area and also are considered in the Draft EIR as part of the cumulative scenario. See Draft EIR Section 6.1.2, *Projects Considered in the Cumulative Scenario*; Draft EIR Section 6.2.13 (the cumulative noise impacts analysis); Draft EIR Section 6.2.17 (the cumulative truck analysis); Draft EIR Section 6.2.1 (the cumulative air quality analysis); and Draft EIR Section 6.2.9 (the hazards and hazardous materials analysis).

From: Rhoda Chung <rhodachung@gmail.com>
Date: Wed, 8 Feb 2012 09:59:54 -0800
To: <rob.eastwood@pln.sccgov.org>
Subject: Lehigh Cement

My name is Rhoda Chung and my address is 1501 Ben Roe Drive, Los Altos, CA 94024.
I believe I live quite close to Lehigh Cement Plant.

I am writing in support of the cement plant. Our county needs the cement plant for employment and also for economic reasons.
The City of Los Altos and Los Altos Hills held a meeting recently and reported that the emission has very low health risk. P7-1

The people who protest are those people whose back yard has a view of the plant and some doesn't like the noise of the truck that went by their houses every day.
The cement plant was here way before those houses were here. If they don't like the cement plant, they have a choice to move away. They bought their houses for cheap because the cement plant was there, and now they tried to get rid of it so that their property value can increase. P7-2

Thank you for your kind attention,
Rhoda Chung

3.4.7 Comment Letter P7: Rhoda Chung

P7-1 Comment noted. Operation of the Cement Plant is not included in the Project description since the Cement Plant is a separately permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. See Master Response M4(B) for further explanation on what quarry components were and were not included in the Project description.

P7-2 Comment noted.

From: terry hertel <waxman@pacbell.net>
Date: Thu, 9 Feb 2012 08:34:27 -0800 (PST)
To: <rob.eastwood@pln.sccgov.org>
Subject: MSDS

YOU FOLKS NEED TO DO MORE HOMEWORK.

Material safety data sheets or health hazards are attached.

It is funny but Leigh will not release MSDA and this is a violation.

I am demanding MSDS for every product they handle be published to the community.

Your county rangers are suffering from it. The people in Monta Vista and Los Altos Hills are suffering from it.

The Rapid cure cement collects on vehicle windshields and you can't get it off.
When it rains, the cement gets on the under part and sides of your car and you cant get it off.
When we sleep it bonds our lips, eyes and anything with moisture. Our homes are filled with cement dust. Daily I meet with random people at the Starbucks at Homestead and Foothill. Every women complains about the issue but due to the suppression of health information to the community, they do not know about there slow death caused by the count of Santa Clara.

P8-1

I live 1.5 miles from this operation and have witnessed it turning our valley into a dangerous PM pit.
I can see Cement spewing in the air every day from my home, I can here it every day at 4:20 in the am. Then I have vibrations that comes with the sound wrecking items in my home.
I just happen to live on the ridge facing the plant with many others who have a nice home overlooking the gulf course and Black Mountain that is now turning white.
We purchased our homes for the views and tranquility that comes with a beautiful mountain over thirty year ago. we have pictures of Black mountain when it was clear every day. Look at it now

P8-2

In a meeting last week at the city, we all observed the disinterest in the city council.
We all feel a pay off is coming to people in the county.

P8-3

Terry Hertel
waxman@pacbell.net

MATERIAL SAFETY DATA SHEET

For

CONCRETE/CONCRETE PRODUCTS

(Wet unhardened concrete and dry hardened concrete products such as block, pipe, and precast concrete)

Chandler Concrete Company, Inc.

Section 1: PRODUCT AND COMPANY INFORMATION

Product Name(s):	Ready Mixed Concrete (Concrete)
Product Identifiers:	Ready Mixed Concrete, Concrete Ready Mix, Portland Cement Concrete, Ready Mix Grout, Permeable Concrete, Shotcrete, Gunite, Colored Concrete, Flowable Fill, Roller-Compacted Concrete, Fiber Reinforced Concrete
Manufacturer:	**Information Telephone Number:**
Chandler Concrete Company, Inc.	336-226-1181 (8am to 5pm EST)
1006 S Church St.	**Emergency Telephone Number:**
Burlington, NC 27216	336-260-2416
Product Use:	Concrete is widely used as a structural component in construction applications.
Note:	This MSDS covers many types of Concrete. Individual composition of hazardous constituents may vary between types of Concrete.

Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components (Chemical Identity / Common Names)	**CAS No.**	**OSHA PEL**	**ACGIH TLV**	**MSHA PEL**	**%**
Portland Cement	65997-15-1	15mg/m^3 (Total) 5mg/m^3 (Respirable)	10mg/m^3 (Total)	10mg/m^3 (Total)	10-30%
Granite *North Carolina Product*	None	N/A	N/A	N/A	0-65%
Limestone – *Virginia Product* (CaCo3) (Calcium carbonate, present, if limestone aggregates are used)	1317-653	15 mg/m^3 (Total)	10 mg/m^3 (Total)	10 mg/m^3	0-65%
Crystalline Silica (Quartz) (Concrete aggregates may contain silica)	14808-60-7	$\frac{30}{(\%SiO^2+2)}$mg/m^3 (Total Particulate) 10/(%SiO^2+2)mg/m^3 (Respirable Particulate)	0.1mg/m^3 (Total) (Respirable quartz)	$\frac{30}{(\%SiO^2+2)}$mg/m^3 (Total) 10/(%SiO^2+2)mg/m^3 (Respirable)	0.5-80%
Water	N/A	N/A	N/A	N/A	15-25%
Fly Ash which contains:	68131-74-8	N/A	N/A	N/A	1-4%
Aluminum Oxide (Al_2O_3)	1344-28-1	15mg/m^3 (Total) 5mg/m^3 (Respirable)	10mg/m^3	10mg/m^3	0.1-2%
Amorphous Silica	61790-53-2	80mg/m^3 /(%SiO^2)	10mg/m^3 (Total) 3mg/m^3 (Respirable)	20mppcf	0.01-3%
Calcium Oxide (CaO)	1305-78-8	5mg/m^3	2mg/m^3	5mg/m^3	0-1%
Iron Oxide (as Fe_2O_3)	1309-37-1	10mg/m^3	10mg/m^3	10mg/m^3	0.1-2%

Note: Chemical admixtures may be present in quantities less than 1%. Information on specific aggregates, cementitious materials and admixtures will be provided by the supplier upon request.

P8-4

Section 3: HAZARD IDENTIFICATION

WARNING

Corrosive-Causes severe burns.
Toxic-Harmful by inhalation.
(Contains crystalline silica)

Use proper engineering controls, work practices, and personal protective equipment to prevent exposure to wet or dry product.
Read MSDS for details.

Emergency Overview:	Unhardened concrete is an odorless semi-fluid, flowable, granular paste of varying color and texture. It is not combustible or explosive. Exposure of sufficient duration to wet concrete can cause serious, potentially irreversible tissue (skin, eye, respiratory tract) damage due to chemical (caustic) burns, including third degree burns.
Potential Health Effects:	
Eye Contact (acute):	Concrete may cause immediate or delayed irritation or inflammation. Eye contact with wet concrete can cause moderate eye irritation, chemical burns and blindness. Eye exposures require immediate first ad and medical attention to prevent significant damage to the eye. Direct contact can cause irritation before mechanical abrasion.
Skin contact (acute):	Wet unhardened concrete and concrete dust may cause dry skin, discomfort, irritation, severe burns, and dermatitis.
Burns:	Exposure of sufficient duration to wet unhardened concrete can cause serious, potential irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. A skin exposure may be hazardous even if there is no pain or discomfort.
Dermatitis:	Wet unhardened concrete is capable of causing dermatitis by irritation and allergy. Skin affected by dermatitis may include symptoms such as redness, itching, rash, scaling, and cracking.
Sensitization:	Allergic contact dermatitis is caused by sensitization to hexavalent chromium (chromate) present in concrete. The reaction can range from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with wet unhardened concrete. Others may develop allergic dermatitis after years of repeated contact with wet concrete.
Ingestion:	Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.
Inhalation (general):	May result, depending on the degree of the exposure, from exposure to dust generated from cutting, grinding, crushing, or driving hardened concrete.
Inhalation (acute):	Breathing dust may cause nose, throat lung or mucous membrane irritation, including choking. Inhalation of high levels of dist can cause chemical burns to the nose, throat and lungs.
Inhalation (chronic):	Risk of injury depends on duration and level of exposure.
Silicosis:	This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, and other seriously disabling and fatal diseases.
Carcinogenicity:	Concrete is not listed as a carcinogen by IARC or NTP; however, concrete contains trace amounts of crystalline silica and hexavalent chromium which are classified by IARC and NTP as known human carcinogens.
Autoimmune Disease:	Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys.
Medical conditions Aggravated by Exposure:	Individuals with lung disease (e. g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure to concrete dust.

P8-4

Section 4: FIRST AID MEASURES

Eye Contact:	Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions and burns.
Skin Contact:	Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash, burns, irritation, dermatitis, and prolonged unprotected exposures to wet concrete.
Inhalation:	Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.
Ingestion:	Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

Section 5: FIREFIGHTING MEASURES

Flashpoint & Method:	Non-combustible, concrete poses no fire related hazard.
Combustion Products:	None.

Section 6: ACCIDENTAL RELEASE MEASURES

General:	Place spilled material into a contained area and then allow material to dry or solidify before disposal. Avoid contact with skin. Wear appropriate protective equipment as described in Section 8. Do not wash concrete down sewage and drainage systems or into bodies of water (e.g. lakes, streams, wetlands, etc.).
Waste Disposal Method:	Dispose of concrete according to Federal, State, Provincial and Local regulations.

Section 7: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Handling:	When cutting, grinding, crushing or drilling hardened concrete, use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.
Engineering Controls:	Supplemental controls are not required when working with wet/unhardened concrete.
Personal Protective Equipment (PPE):	
Respiratory Protection**:**	When working with wet, unhardened concrete under ordinary conditions, no respiratory protection is required. When working with hardened concrete, wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits.
Eye Protection**:**	Wear ANSI approved glasses with side shields or safety goggles when handling concrete to prevent contact with eyes. Wearing contact lenses is not recommended.
Skin Protection**:**	Wear gloves, boot covers and protective clothing impervious to water to prevent skin contact. Do not rely on barrier creams, in place of impervious gloves.
Clothing**:**	Remove clothing and protective equipment that becomes saturated with wet concrete and immediately wash exposed areas.

Section 8: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Semi-fluid, Flowable, granular substance	**Evaporation Rate:**	NA.
Appearance:	Variety of Color (usually gray)	**PH (in water):**	12-13
Odor:	Slight to none	**Boiling Point:**	NA
Vapor Pressure:	NA.	**Freezing Point:**	<32°F (unhardened)
Vapor Density:	NA.	**Viscosity:**	Varies.
Specific Gravity:	1.9-2.4	**Solubility in Water:**	Slightly (0.1-1.0%)

P8-4

Section 9: STABILITY AND REACTIVITY

Stability:	Hardened concrete is stable. Wet unhardened concrete is alkaline
Incompatibility:	Wet unhardened concrete is alkaline and is incompatible with acids, ammonium salts and aluminum, copper and some other metals (verify compatibility prior to incorporating with product). Concrete dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Cement in concrete reacts with water to form silicates and calcium hydroxide. These silicates react with powerful oxidizers.
Hazardous Polymerization:	**Hazardous Decomposition**: None.

Section 10 and 11: TOXICALOGICAL AND ECOLOGICAL INFORMATION
For questions regarding toxicological and ecological information refer to contact information in Section 1.

Section 12: DISPOSAL CONSIDERATIONS
Dispose of excess material in compliance with applicable Federal, State, Provincial and Local regulations.

Section 13: TRANSPORT INFORMATION
This product is not classified as a Hazardous Material under U.S. DOT or Canadian TDG regulations.

Section 14: REGULATORY INFORMATION

OSHA/MSHA Hazard Communication:	This product is considered by OSHA/MSHA to be a hazardous material and should be included in the employer's hazard communication program.
CERCLA/SUPERFUND:	This product is not listed as a CERCLA hazardous substance.
EPCRA SARA Title III:	This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a hazardous and a delayed health hazard.
EPCRA SARA Section 313:	This product contains none of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
RCRA	If discarded in its hardened form, this product would not be a hazardous waste either by listing characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.
TSCA:	Portland Cement and crystalline silica are exempt from reporting under the inventory update rule.
California Proposition 65:	Crystalline silica (airborne particulates of respirable size) and Chromium (hexavalent compounds) are substances known by the State of California to cause cancer.
WHMIS/DSL:	Products containing crystalline silica and calcium carbonate are classified as D2A, E and are subject to WHMIS requirements.

P8-4

Section 15: OTHER INFORMATION

Abbreviations:

<	Less than	NFPA	National Fire Protection Association
ACGIH	American Conference of Governmental Industrial Hygienists	NIOSH	National Institute for Occupational Safety and Health
CAS no	Chemical Abstract Service number	NTP	National Toxicology Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	OSHA	Occupational Safety and Health Administration
CFR	Code for Federal Regulations	PEL	Permissible Exposure Limit
CL	Ceiling Limit	pH	Negative log of hydrogen ion
DOT	US Department of Transportation	PPE	Personal Protective Equipment
EST	Eastern Standard Time	RCRA	Resource Conservation and Recovery Act
HEPA	High-Efficiency Particulate Air	SARA	Superfund Amendments and Reauthorization Act
HMIS	Hazardous Materials Identification System	TDG	Transportation of Dangerous Goods
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
MG/M^3	Milligrams per cubic meter	TWA	Time Weighted Average (8 hour)
MSHA	Mine Safety and Health Administration	WHMIS	Workplace Hazardous Materials Information System
NA	Not Applicable		

This MSDS (Sections 1-15) was revised on June 10, 2008.

P8-4

An electronic version of this MSDS is available at: www.chandlerconcrete.com under the MSDS Section.

Chandler Concrete Company, Inc. (CCCI) believes the information contained herein is accurate. CCCI makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein which is not intended to be and should not be construed as legal advice or as insuring compliance with any federal, state or local laws or regulations. Any Party using this product should review all such laws, rules, or regulations prior to use. This Material Safety Data Sheet is representative of our Ready Mix Concrete and represents ingredients and values typical for Portland cement concrete, concrete and its constituent ingredients vary in composition.

The information set forth herein is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside the concrete/concrete products producer CCCI control, the producer makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information.

Google searches on (1)concrete, (2) Cement, (3)Lime, and (4)rapid drying cements.
The Killer Particulate Material (PM) you (Dust) breath daily.

MATERIAL SAFETY DATA SHEET (MSDS)
FOR PORTLAND CEMENT

(Complies with OSHA and MSHA Hazard Communication Standards,
29 CFR 1910.1200and 30 CFR Part 47)

Trace Ingredients

Trace amounts of naturally occurring chemicals might be detected during chemical analysis. Trace constituents may include up to
0.75% insoluble residue, some of which may be free crystalline silica, calcium oxide (Also known as lime or quick lime),
magnesium oxide, potassium sulfate, sodium sulfate, chromium compounds, and nickel compounds.

Effects Resulting from Inhalation:

Portland cement may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free silica can aggravate
other lung conditions and cause silicosis, a disabling and potentially fatal lung disease.

P8-4

MATERIAL SAFETY DATA SHEET

ProductName: CalciumOxide(LimeKilnDust)

. HEALTH HAZARD DATA

Inhalation: Extremely high concentrations of dust are typically self-eliminated due to the nuisance conditions they create. Over exposure may produce irritation of the mucous membranes, nose, throat, coughing and shortness of breath. In addition it may contain small amounts of silica particles less than 5 mm in diameter. These silica particles are capable of causing silicosis if inhaled in high enough concentrations over an extended period of time. The principal manifestation of silicosis if difficulty in breathing. This condition can progress to dry cough, shortness of breath on exertion**, decreased lung function and pulmonaryfibrosis.**

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. (May contain trace (<0.05 %) amounts of chromium salts or compounds including hexavalent chromium, or other metals found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace substitutions within the principal minerals)

P8-4

HAZARDOUS INFORMATION

Primary Route(s) of Entry: Inhalation, Skin, Eye, Ingestion

Inhalation Hazards: May cause respiratory tract, nose, throat, and lung irritation and inflammation

Skin Hazards: May irritate skin causing drying, redness, rash, and blistering. When mixed with water, a high alkali material is produced which can cause severe skin burns. Individuals may develop allergic dermatitis.

Eye Hazards: May severely irritate eyes. May develop inflammation of the cornea.

Ingestion Hazards: May be caustic to mucus tissue.

Chronic Exposure: Individuals may develop allergic dermatitis, inflammation of the cornea, and inflammation of the nose, throat, and lungs. May cause carcinogenic effects.

Carcinogenic Effects: During manufacturing of a Hydraulic Cement small traces of insoluble residues will form. These traces may have crystalline silica, a known

Human Carcinogen (Group 1), that can cause silicosis and cancer. Exposure to crystalline silica may also increase the risk of Scleroderma, tuberculosis, and kidney disorders. May contain traces of chemicals on the California Proposition 65 list.

Threshold Limit Value: 5 mg/m3 (respirable dust), 10 mg/m3 (total dust), 30 million particles per cubic footHazardous Components, CAS No., PEL (OSHA)[mg/m3], TLV (ACGIH)[mg/m3]

Calcium Sulfoaluminate, 960375-09-1, 15, 10

Crystalline Silica (Quartz), 14808-60-7, 10/(%SiO2+2), 0.05(respirable)

Amorphous Silica, 7631-86-9, 80/(%SiO2), 10

Inhalation: Remove from exposure, if breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Immediately seek medical aid.

Skin Contact: Wash thoroughly with soap and water. Seek medical aid.

P8-4

Eye Contact: Flush immediately with large amounts of water, lifting the lower and upper lids occasionally. Seek medical help.

Ingestion: Give 1-2 large glasses of water or milk. Immediately seek medical aid. Never give liquids to an unconscious person.

Carcinogenicity: Not listed as a carcinogen by NTP, IARC, o rOSHA.

Routes of Entry: Inhalation, Skin and Eye Contact if handled in such a manner that dust is generated.

Effects of Over exposure: As sold, this product is not anticipated to pose an acute or significant health hazard. However, if subjected to dust generating processes, adverse health effects may occur.

Calcium oxide is caustic to living tissue. Over exposure may cause irritation of the eyes, skin, and upper respiratory tract. Inflammation of the respiratory tract, ulceration and perforation of the nasal septum, bronchitis and pneumonia have also been attributed to inhalation of calcium oxide dust. Eye contact may cause conjunctivitis, corneal ulceration. Skin contact may causes inflammation and ulceration.

Medical Conditions Aggravated by Exposure: Chronic disease and disorders of the respiratory system and skin.

9. SPECIAL PROTECTION INFORMATION LIME

Respiratory: Respiratory protection approved by NIOSH/MSI-IA for protection against dust should be used to avoid inhalation. Appropriate respiration selection depends on the type and magnitude of exposure.
Skin: Clean, body-covering clothing should be worn to prevent irritation in situation where direct contact with product may occur or dust levels are excessive.
Eyes: Employees should be required to wear chemical safety splash goggles in situations where direct contact with the product may result in eye injury.
Ventilation: Local exhaust ventilation should be used to control worker exposure to below recommended Permissible Exposure Levels(PEL).

Other Protective Equipment: Emergency eye wash stations and deluge safety showers should be available in the work areas.

P8-4

3.4.8 Comment Letter P8: Terry Hertel

P8-1 This comment refers to operation of and materials produced at the Cement Plant. The comment has been addressed. See responses P5-1 and P5-2.

P8-2 This comment refers to operation of and materials produced at the Cement Plant. The comment has been addressed. See responses P5-1 and P5-2.

P8-3 This comment does not address the adequacy or accuracy of the Draft EIR. As described in Chapter 2 of this document, *Introduction to Comments and Responses*, the County has reviewed and responded to all written and oral comments submitted during a 60-day comment period (December 23, 2011 through February 21, 2012), including oral and written testimony submitted at the February 2, 2012 public hearing. As required by CEQA, the responses to comments in this Final EIR address significant environmental issues raised by commenters during the review period (Pub. Res. Code § 21091(d); CEQA Guidelines §§ 15088(a), 15132).

P8-4 The County's receipt of the Material Safety Data Sheets (MSDSs) relating to the Cement Plant is acknowledged. See Response P5-1.

From: Claire Myers
To: Claire Myers
Subject: FW: Please read the attached letter.
Date: Monday, February 13, 2012 8:58:16 AM
Attachments: Dear Neighbors.doc
ATT453713.htm

------ Forwarded Message
From: terry hertel <waxman@pacbell.net>
Date: Thu, 9 Feb 2012 08:43:08 -0800 (PST)
To: <rob.eastwood@pln.sccgov.org>
Subject: Please read the attached letter.

I witnessed the out cry of Los Altos Hills, Cupertino, Monta Vista and Santa Clara residence. Each and every one of them want the dam site shut down.

My question, what words in the English language do we have to use to get your attention. There is only one answer. Shut it down.

This drag the feet expression has gone on so long it is becoming a joke.

If you understand euro Infrastructure, please see what is going on and act. ya know in Germany they would not allow this toxic mess.

P9-1

------ End of Forwarded Message

Dear Neighbors,

As I reach the boiling point of frustration, I find it necessary to speak out on an issue that affects all of us in Cupertino, Monta Vista, Los Altos, Saratoga and Los Gatos: the LeHigh Cement Plant. Do any of you every look up at Black Mountain? If not, it is time you did -- and see what the plant is doing to our community. Stop for a moment and listen. Only this morning I was awakened by the plant's noise and vibration. Now it is just past 3 p.m. and the plume of white dust has started -- all but destroying the crisp beautiful view of the hills. To see it for yourself, drive down Granada Ave. around 3:30 p.m. and look up. Then, if you dare, take a deep breath.

If you look one way towards Los Gatos you see the dust following the hills around and filling up the valley. Some call it smog. If you look north towards Los Altos, it is the same. The dust is insidious -- I am forced to replace my filters on my furnace monthly, and I installed new double pane windows. But gray dust still rapidly accumulates on the shirts in my closet. I have to breath this dust every day -- but my sinuses seem to clear if I get on a flight to Seattle, Saint Louis or Florida.

P9-2

I have a nice wooden deck on my home looking at the view -- but there's a constant accumulation of dust that needs to be blown or swept off. When I park my black car out in front of my home, it's covered with dust within five minutes. But when I park outside at work next to 237 and Lawrence, there's no dust buildup.

Even on "no burn" nights when we are instructed not to use our fireplaces or get a $400 fine, the smoke and dust continues to billow out into the atmosphere from the cement plant. I have also noticed the system always runs at full bore on rainy or foggy nights. The disguise is apparent -- if you can't see it, you don't know about it.

We live in an area of million and even multi-million homes, and all of you with the big bucks to afford these homes are getting the brunt of the crap. Why don't you use some of that cash to help shut this down? Think about how much it may take off the value of your home if new permits are allowed. Not to mention your failing health.

When this issue is addressed at city meetings, polished presentations by expensive lawyers seem to drown out the legitimate concerns being voiced by individual homeowners. Could it be that the cities are handed cash under the table to say it is out of their control? Come on City, you work for us. Do your job!
I am a concerned citizen who has lived in Monta Vista since 1976. The plant was then under control. I think it was in 1989 when expansion

began behind our backs. Do you remember when the valley was clear? Since then, the plant has tripled production and plans to go further, cutting up your mountain, leaving you with a gaping hole and white spattered hillside, never to be the same gorgeous green vista that nature installed.

In a recent study I got my hands on, they did not study the trucks traveling from the plant to 280 and 280/85 to the plant. They are going to increase this equaling the traffic of over 500 cars a day and I bet it will be more like several thousand. A truck equals five cars. Consider the dust and cement splashed all over your car on a wet day.

P9-2

If you have an iphone download vr mobile and take measurement on the sound and vibration in your area.

Get a grip, Santa Clara County -- shut this mess down! Your New Football stadium will be filled with toxic dust.

SEE FOR YOURSELF LeHigh Cement

3.4.9 Comment Letter P9: Terry Hertel

P9-1 Comment noted. See Response P7-1. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

P9-2 This letter contains the same comments as Letter P5. See responses P5-1 through P5-7.

> From: HARRELL BELL <halsbels@pacbell.net>
> Reply-To: HARRELL BELL <halsbels@pacbell.net>
> Date: Mon, 13 Feb 2012 01:23:20 -0800
> To: <rob.eastwood@pln.sccgov.org>
> Subject: Lehigh Cement Plant
>
> Mr. Rob Eastwood:
>
> Dear Sir:
>
> You asked for opinions? Here's mine, with no scientific adornments.
>
> My husband and I moved here to Cupertino 52 years ago and have never
> had any
> quarrel with the operation of Kaiser Permanente/ Hansen/ Lehigh Cement
> Plant. If Lehigh drew up the EIR and is okay with it, that's good
> enough in
> my opinion. I myself know little about EIR's except to wonder if
> they are
> really necessary to anyone except environmentalists. I seriously
> doubt if
> the Johnny-come-lately Lehigh complainers will accept it. They want
> Lehigh
> gone. I want the complainers gone. Or quiet, at least.
>
> Sincerely,
> Rowena Bell
> 21361 Columbus Avenue
> Cupertino, CA 95014
>
>
>

P10-1

3.4.10 Letter P10: Rowena Bell

P10-1 The commenter expresses support for the Project. Comment noted.

From: terry hertel <waxman@pacbell.net>
Date: Tue, 14 Feb 2012 19:04:07 -0800 (PST)
To: <rob.eastwood@pln.sccgov.org>, <waxman@pacbell.net>
Subject: Re: Test

Hi Rob,
I am forwarding you MSDS data sheets for Cement, Concrete, Lime and the fast cure additives. I tried to download them from Leigh and they will not give access to them. This is against the law. I can't believe all of you are allowing this to happen. P11-1

I hope you understand this nasty powder floats in the air. At night as we breath, we inhale it ,it cures or hardens, Causing decreased lung function that leads to cardiovascular failure. It is funny, out of a family of thirty or so, I am the only one with heart disease. They live in the mid west.

As I write I feel the dust between my fingers. As I sleep at night I have to use a Cpap machine to filter the air. When I wake up I have cement crust in my eyes, mouth and nose. I have lived a healthy life with three or four days in Tahoe weekly during the winter, breathing fresh air. I have a place in Seattle and the air is so clean. Then I visit Florida and Missouri. Believe me I have something to compare to. P11-2

As I get ready for my sixth heart operation, My doctor and I are connecting the dots on why I am having these problems. I understand there have been over one hundred more cases of heart disease in Santa Clara in a recent study presented to the Cupertino council.

I was in a discussion with friends about the cement dust and the County. They brought up the new football stadium stating all the county is interested in is getting this project on the book. Nothing else matters.

At the reclamation hearing, I felt all the council members were on death ears and all they wanted to do is get out of there. The report is just a waist of tax payer money. I feel it is just another stall while lehigh forges ahead. Lehigh, a German company, would not allow this process in there country.

I hope you are not sacrificing the community health for the big pay off of the new stadium.

Last, we were allowed 2 minutes to vent our evidence that the council member don't pay attention to weather it is in writing or in print. do you think one member read that study? funny, we paid over $15,000.00 in property taxes and we the public only get 15 minutes. P11-3

As a planner, how can you sleep at night knowing the damage this fiasco is causing. If the Forty Niners new the health hazards, I don't think they would have wanted the team here. How does one play good football with decreased lung capacity?

Terry Hertel

From: Rob Eastwood <rob.eastwood@pln.sccgov.org>
To: terry hertel <waxman@pacbell.net>
Sent: Thu, February 9, 2012 5:45:25 PM
Subject: Re: Test

Yes Terry, I've received this and your previous two emails.

Feel free to give me a call if you'd like

-Rob Eastwood
408-299-5792

on 2/9/12 11:11 AM, terry hertel at waxman@pacbell.net wrote:

This is a test to see if this is a real email????

3.4.11 Comment Letter P11: Terry Hertel

P11-1 The County's receipt of the Material Safety Data Sheets (MSDSs) relating to the Cement Plant is acknowledged. See responses to Letter P8.

P11-2 The comment does not suggest that the "powder" and dust in the air at the time the comment was written is attributable to the proposed reclamation activities, the direct, indirect and cumulative effects of which are analyzed in the Draft EIR. The Draft EIR analyzes cumulative effects to air quality, including air quality related health risks, in Section 6.2.3 (page 6-15 et seq.). This analysis evaluates the incremental impacts of the Project in combination with the incremental impacts of other projects in the cumulative scenario, including the Cement Plant. Cement Plant-related air quality considerations are described as part of the cumulative scenario in Draft EIR Section 6.1.2.1, on page 6-9.

P11-3 Comment noted. As described in Chapter 2 of this document, *Introduction to Comments and Responses*, the County has reviewed and responded to all written and oral comments submitted during a 60-day comment period (December 23, 2011 through February 21, 2012), including oral and written testimony submitted at the February 2, 2012 public hearing. As required by CEQA, the responses to comments in this Final EIR address significant environmental issues raised by commenters during the review period (Pub. Res. Code § 21091(d); CEQA Guidelines §§ 15088(a), 15132).

Received from: Rhoda Fry 2/2/12

Letter P12

The draft EIR has ignores NOP comments and communications from previous events such as vested rights (including documents written by staff). P12-1

Due to regulation, we pay more for building products which subsidize government jobs. But we're not getting our return on investment.

Rather, we're getting the illusion of effective regulation. This is not okay. P12-2

According to the OMR, Lehigh has been out of compliance for over a decade for numerous infractions. During this time, a mountain of mining waste grew and grew without review for visual or health impacts.

Certainly you would not allow 30 acres of skyscrapers to pop up without review.

Lehigh has managed to sidestep the simplest of regulations – like -getting permits for building structures or getting rid of them or inspections for those that did receive permits. This is particularly troublesome at the EMSA site – the former headquarters of Kaiser Aluminum which manufactured: munitions during WWII, ferrosilicon, phosphate fertilizer with imported serpentine and pressed aluminum products. The company was fined by the county and got attention from the EPA among other agencies. P12-3

Which leads me to the history section of the draft EIR:

It ain't history, its fiction.

Failing to mention the toxic history or the historic 50-year-old headquarters and laboratory burnt by arson, and more, is a major oversight.

Yet all this data resides in county coffers. P12-4

Considering there is a plan to move a bunch of dirt up there – we have to ask – what's in it? P12-5

There are also unpermitted ponds – what are the cumulative impacts of running more – or less – water through them. P12-6

I implore you to set aside this EIR and launch a full investigation so we can understand why the county has not regulated this facility.

DO YOU REALLY WANT YOUR NAMES ON THIS?

Please, let's get to the bottom of this debacle. P12-7

County of Santa Clara
Department of Planning and Development
County Government Center, East Wing
70 West Hedding Street, 7th Floor
San Jose, California 95110

	Administration	Development Services	Fire Marshal	Planning
Phone:	(408) 299-6740	(408) 299-5700	(408) 299-5760	(408) 299-5770
Fax:	(408) 299-6757	(408) 279-8537	(408) 287-9308	(408) 288-9198

February 10, 2011

RE: **Public records request for demolition permit for:**

Site Address: 0 Stevens Creek Blvd./24001 Stevens Creek Blvd., Cupertino

Assessor Parcel No.: 351-10-005

Present Jurisdiction: County

Bldg. Permit #	Date	Description	Status
19658	06/25/74	Demolish	Incomplete
76991	02/27/98	Demolish Storage Bldg.	Incomplete
76992	02/27/98	Demolish Office Bldg.	Incomplete
76993	02/27/98	Demolish Office Bldg.	Incomplete
76994	02/27/98	Demolish Office Bldg.	Incomplete
76995	02/27/98	Demolish Storage Bldg.	Incomplete
76996	02/27/98	Demolish Storage Bldg.	Incomplete
76997	02/27/98	Demolish Office Bldg.	Incomplete
76998	02/27/98	Demolish Office Bldg.	Incomplete
76999	02/27/98	Demolish Office Bldg.	Incomplete

P12-8

Respectfully,

Michael L. Harrison

Michael L. Harrison,
Acting Building Official

Attachment

*Please see other side

COMPLETED:	The project has received a final inspection by office.
INCOMPLETE:	The project has not received a final inspection by this office. If the last inspection was made more than six months, ago, the building permit will have to be renewed by the owner or agent.
JURISDICTION:	If the parcel was annexed to a city, information regarding construction will have to be obtained from the noted city.
NO PERMIT:	A building permit has not been issued by this office, for work at this address. In order to legalize construction, the owner or his agent has to apply for a building permit. For more information, please ask for a building permit information handout.
PRIOR TO: 1947	Buildings constructed prior to 1947 were not required to have a permit.

P12-8

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

ALAMEDA, COLUSA, CONTRA COSTA, LAKE, MARIN, MENDOCINO, MONTEREY, NAPA, SAN BENITO, SAN FRANCISCO, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, SONOMA, YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
Email: leigh.jordan@sonoma.edu
http://www.sonoma.edu/nwic

August 15, 2011

File No.: 11-0143

RECEIVED
2011 AUG 23 AM 8:41
PLANNING OFFICE

Marina Rush, Project Planner
Santa Clara County
Environmental Resources Agency, Planning Office
County Government Center, East Wing, 7th Floor
70 West Hedding Street
San Jose, CA 95110-1705

re: 2250-13-66-10P M1/ 24001 Stevens Creek Blvd./ Hanson Permanente Cement, Inc.

Ms. Rush,

Records at this office were reviewed to determine if this project could adversely affect cultural resources. **Please note that use of the term cultural resources includes both archaeological sites and historical buildings and/or structures. The review for possible historic-era building/structures, however, was limited to references currently in our office and should not be considered comprehensive.**

Previous Studies:

XX Studies covering approximately 100% of the proposed project area, identified one or more cultural resources *(see below)*.

Study #	Author: Year	Title
S-10471	Holman 1988:	An Archaeological Inspection of the Kaiser Cement Property, Cupertino, Santa Clara County, California.
S-36633	Jensen: 2009	Archaeological Inventory Survey: Proposed Permanente Quarry Project, c. 1, 105 Acres, Santa Clara County, California.
S-38058	Jensen: 2009	Archaeological Inventory Survey, Proposed Permanente Development Project, c. 1, 105 Acres, Santa Clara County, California.

P12-9

Archaeological and Native American Resources Recommendations:

XX The proposed project area contains or is adjacent to the archaeological site(s):

P-43-001867	Kaiser Permanente Quarry District
P-43-001868	Permanente Creek Road
P-43-001870	Hanson Permanente Quarry Pumphouse (Remains)
P-43-001833	Railroad (adjacent to the project area)

XX Due to the nature of the previous surveys, which studied the project area in its entirety, no study is recommended prior to commencement of proposed project activities. However, the following recommendations noted on page 16-17 in Jenson:2009 should be followed in regards to cultural materials:

1) Consultation in the event of inadvertent discovery of human remains: In the event that human remains are inadvertently encountered during any ground-disturbing activities or at any time subsequently, State law shall be followed, which includes, but is not limited to, immediately contacting the County Coroner's office upon any discovery of human remains.

11 AUG 23 AM 8:41
RECEIVED
PLANNING OFFICE

2) Consultation in the event of inadvertent discovery of cultural material: The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that important unidentified cultural materials could be encountered on or below the surface during the course of future construction or other activities. This possibility is particularly relevant considering the constraints generally to archaeological field survey, and particularly where extensive past disturbance has occurred, as in the present case. In the event of inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.

XX We recommend you contact the local Native American tribe(s) regarding traditional, cultural, and religious heritage values. For a complete listing of tribes in the vicinity of the project, please contact the Native American Heritage Commission at 916/653-4082.

Built Environment Recommendations:

XX The 1961 USGS Cupertino 7.5-minute topographic quadrangle indicated approximately 40 buildings and 11 water tower/tanks within the project area. Since the Office of Historic Preservation has determined that any building or structure 45 years or older may be of historical value, if the project area contains such properties, it is recommended that prior to commencement of project activities, a qualified professional familiar with the architecture and history of Santa Clara County conduct a formal CEQA evaluation.

P12-9

For your reference, a list of qualified professionals in California that meet the Secretary of the Interior's Standards can be found at http://www.chrisinfo.org. If archaeological resources are encountered during the project, work in the immediate vicinity of the finds should be halted until a qualified archaeologist has evaluated the situation. If you have any questions please give us a call (707) 664-0880.

Sincerely,

Jillian Guldenbrein
NWIC Researcher

cc: Lehigh Southwest Cement Company
24001 Stevens Creek Blvd.
Cupertino, CA 95014

3.4.12 Comment Letter P12: Rhoda Fry

P12-1 Draft EIR Chapter 1, *Introduction* (page 1-4 et seq.) describes opportunities for public comment on the Draft EIR issue areas, including comments gathered subsequent to the publication of four Notices of Preparation (NOPs). In total, more than 200 people provided more than 350 comments letters on the four separate proposals to reclaim the Quarry. A Scoping Report prepared for the Project (Appendix A of the Draft EIR) included copies of each of the NOPs and all written comments and summaries of all oral comments that the County received in response to the respective requests for input. Both the Scoping Report and Draft EIR (page 1-5 et seq.) describe the overarching themes of the comments as they relate to elements carried forward in the Project that fall within the purview of the CEQA process. These themes were reviewed during preparation of the Draft EIR.

Issues pertaining to vested rights are addressed in Master Response M1(A).

P12-2 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

P12-3 Discussion of the Quarry operator's compliance status with respect to the 1985 Reclamation Plan, including the Notices of Violation (NOVs) issued by the County in October 2006 and June 2008 for conducting surface mining activities outside the boundaries of an approved reclamation plan, are discussed in Draft EIR Section 1.4.1 (page 1-4 et seq.) and Draft EIR Section 2.4 (page 2-7 et seq.). See also Master Response M3 which addresses commenter concern about enforcement actions against the Quarry operator.

P12-4 No information regarding the reported arson of the headquarters and laboratory building was included in the cultural resources documents prepared for the Project (Jensen, 2009; Maggi et al., 2011; PBS&J, 2007). Subsequent research has revealed that a fire destroyed a storage building at the northern edge of the property in April 1993. The building was originally used as the company's administration and engineering offices, but since 1989 was used for storage. Available news accounts from the time indicate that the cause of the fire had not been determined. The Draft EIR's discussion of historic activities and buildings in the Project Area is provided for context; omission of this fire event is not a substantive matter that would affect the conclusions of the Draft EIR with regard to the Project's potential impact on historic resources.

P12-5 This comment has been addressed. See Response P1-2.

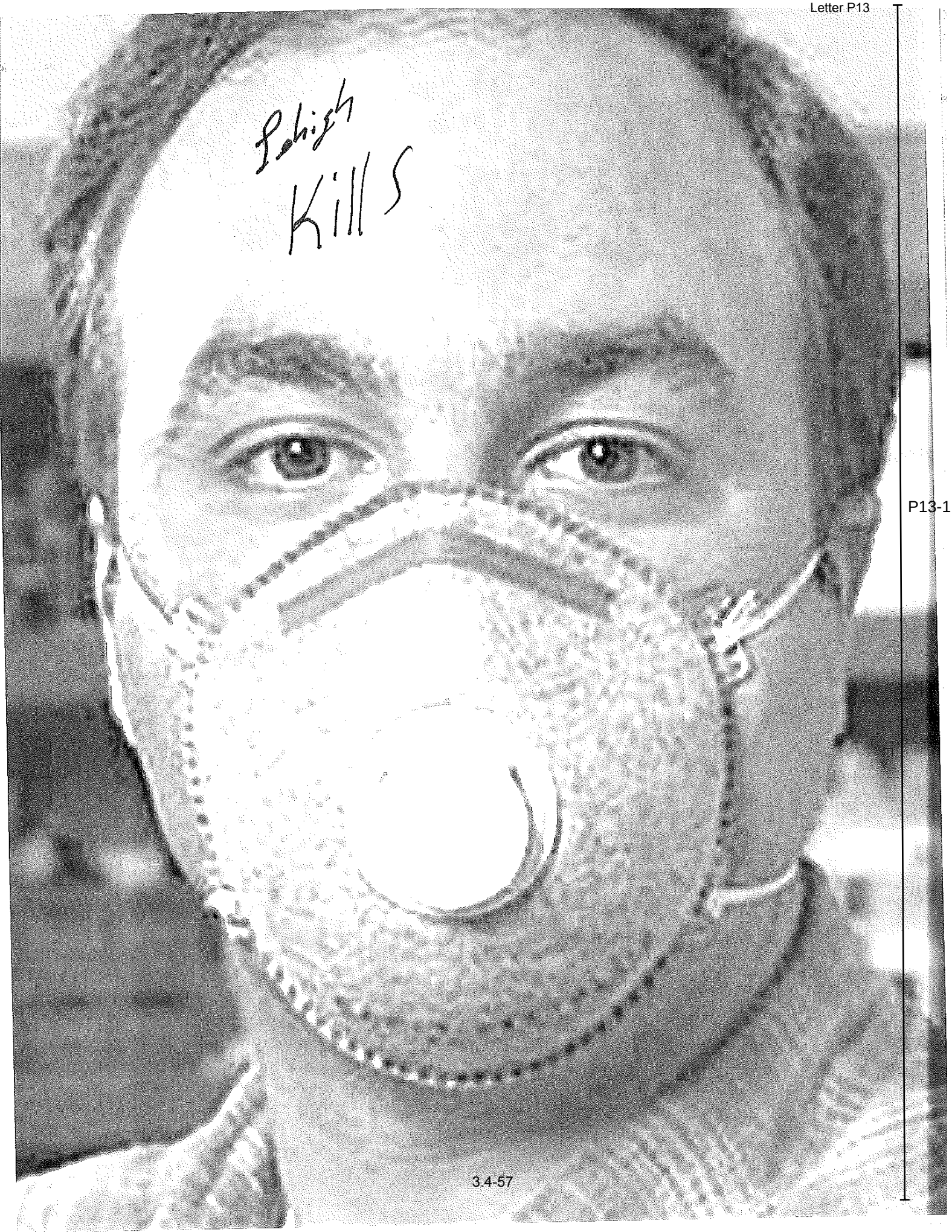
P12-6 It is not clear as to which ponds the comment is referring. To the County's knowledge, all active ponds on the site are permitted and are under jurisdiction of the RWQCB. As new ponds are proposed as part of the Project, their functionality has been considered

in terms of the RPA. The potential impacts of these ponds receiving more or less flow as a result of the Project were studied by the Applicant and its consultants and analysis was incorporated into the Drainage Plan (Chang Consultants, 2011). The Drainage Plan considers the expected flows that would be generated from the reclaimed Project Area and the sediment and detention ponds have been designed accordingly. Prior to commencing reclamation, these ponds would go through final design and review and approval by the County to ensure they comply with the current Santa Clara County Drainage Manual and adequately contain and discharge stormwater flows.

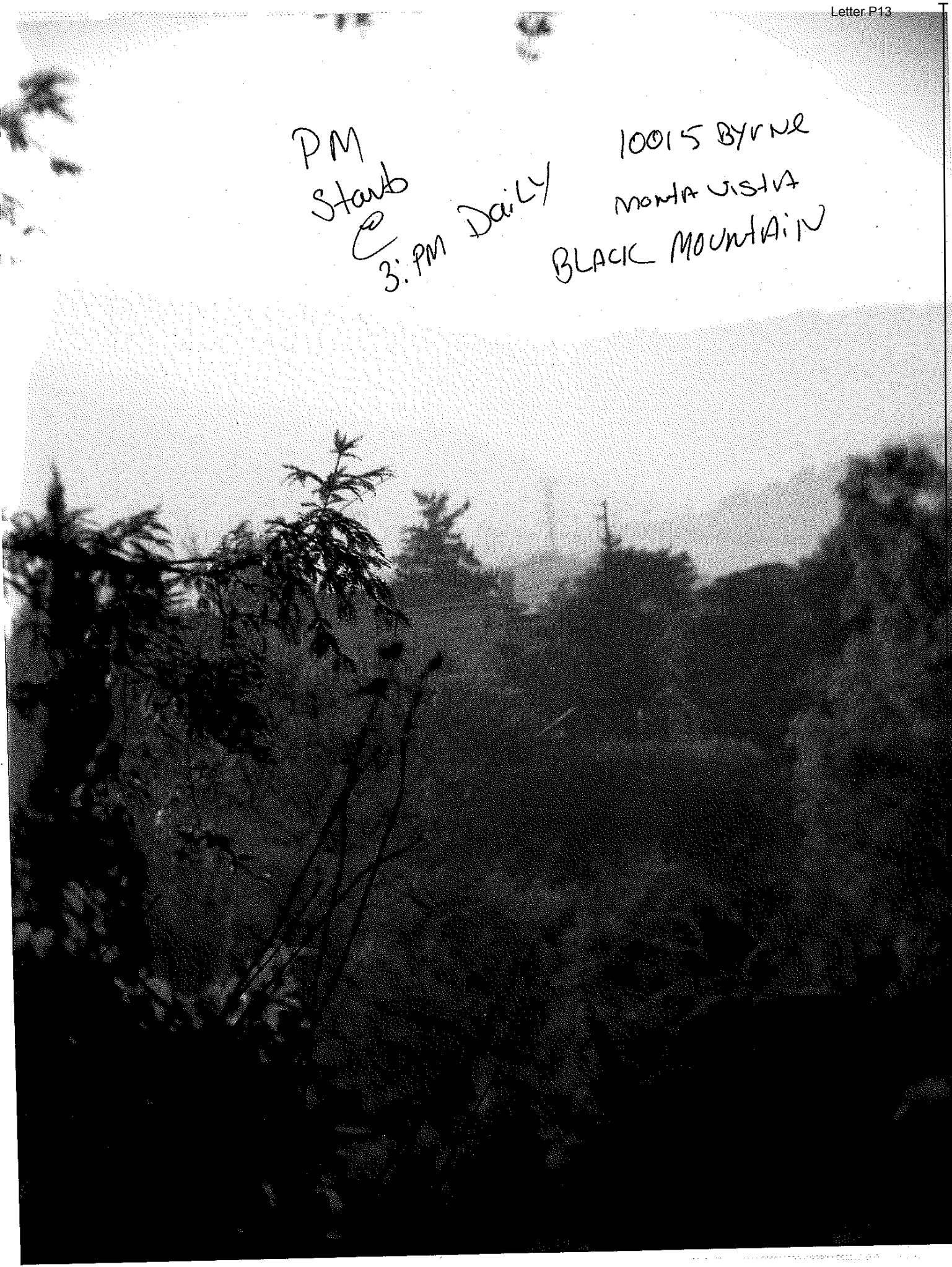
P12-7 See Master Response M3 addressing commenter concern that no enforcement of violations of applicable laws against the Quarry operator has occurred.

P12-8 See Master Response M3 addressing commenter concern that no enforcement of violations of applicable laws against the Quarry operator has occurred.

P12-9 The Northwest Information Center letter is acknowledged. Draft EIR Section 4.5, *Cultural and Paleontological Resources*, addresses the NWIC recommendations.



P13-1



P13-2

Letter P13

13-2

Dear Neighbors,

As I reach the boiling point of frustration, I find it necessary to speak out on an issue that affects all of us in Cupertino, Monta Vista, Los Altos, Saratoga and Los Gatos: the LeHigh Cement Plant. Do any of you every look up at Black Mountain? If not, it is time you did -- and see what the plant is doing to our community. Stop for a moment and listen. Only this morning I was awakened by the plant's noise and vibration. Now it is just past 3 p.m. and the plume of white dust has started -- all but destroying the crisp beautiful view of the hills. To see it for yourself, drive down Granada Ave. around 3:30 p.m. and look up. Then, if you dare, take a deep breath.

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If you look one way towards Los Gatos you see the dust following the hills around and filling up the valley. Some call it smog. If you look north towards Los Altos, it is the same. The dust is insidious -- I am forced to replace my filters on my furnace monthly, and I installed new double pane windows. But gray dust still rapidly accumulates on the shirts in my closet. I have to breath this dust every day -- but my sinuses seem to clear if I get on a flight to Seattle, Saint Louis or Florida.

I have a nice wooden deck on my home looking at the view -- but there's a constant accumulation of dust that needs to be blown or swept off. When I park my black car out in front of my home, it's covered with dust within five minutes. But when I park outside at work next to 237 and Lawrence, there's no dust buildup.

Even on "no burn" nights when we are instructed not to use our fireplaces or get a $400 fine, the smoke and dust continues to billow out into the atmosphere from the cement plant. I have also noticed the system always runs at full bore on rainy or foggy nights. The disguise is apparent -- if you can't see it, you don't know about it.

We live in an area of million and even multi-million homes, and all of you with the big bucks to afford these homes are getting the brunt of the crap. Why don't you use some of that cash to help shut this down? Think about how much it may take off the value of your home if new permits are allowed. Not to mention your failing health.

When this issue is addressed at city meetings, polished presentations by expensive lawyers seem to drown out the legitimate concerns being voiced by individual homeowners. Could it be that the cities are handed cash under the table to say it is out of their control? Come on City, you work for us. Do your job!
I am a concerned citizen who has lived in Monta Vista since 1976. The plant was then under control. I think it was in 1989 when expansion began behind our backs. Do you remember when the valley was clear? Since then, the plant has tripled production and plans to go further, cutting up your mountain, leaving you with a gaping hole and white spattered hillside, never to be the same gorgeous green vista that nature installed.

In a recent study I got my hands on, they did not study the trucks traveling from the plant to 280 and 280/85 to the plant. They are going to increase this equaling the traffic over 500 cars a day and I bet it will be more like several thousand. A truck equals five cars. Consider the dust and cement splashed all over your car on a wet day. P13-3

If you have an iphone download vr mobile and take measurement on the sound and vibration in your area.

Get a grip, Santa Clara County -- shut this mess down!

Terry Hertel
waxman@pacbell.net

Leigh will Not Supply MSDS.?

MATERIAL SAFETY DATA SHEET
For
CONCRETE/CONCRETE PRODUCTS
(Wet unhardened concrete and dry hardened concrete products such as block, pipe, and precast concrete)

Chandler Concrete Company, Inc.

Section 1: PRODUCT AND COMPANY INFORMATION

Product Name(s):	Ready Mixed Concrete (Concrete)
Product Identifiers:	Ready Mixed Concrete, Concrete Ready Mix, Portland Cement Concrete, Ready Mix Grout, Permeable Concrete, Shotcrete, Gunite, Colored Concrete, Flowable Fill, Roller-Compacted Concrete, Fiber Reinforced Concrete
Manufacturer:	**Information Telephone Number:**
Chandler Concrete Company, Inc.	336-226-1181 (8am to 5pm EST)
1006 S Church St.	**Emergency Telephone Number:**
Burlington, NC 27216	336-260-2416
Product Use:	Concrete is widely used as a structural component in construction applications.
Note:	This MSDS covers many types of Concrete. Individual composition of hazardous constituents may vary between types of Concrete.

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Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components (Chemical Identity / Common Names)	CAS No.	OSHA PEL	ACGIH TLV	MSHA PEL	%
Portland Cement	65997-15-1	15mg/m³ (Total) 5mg/m³ (Respirable)	10mg/m³ (Total)	10mg/m³ (Total)	10-30%
Granite *North Carolina Product*	None	N/A	N/A	N/A	0-65%
Limestone – *Virginia Product* (CaCo3) (Calcium carbonate, present, if limestone aggregates are used)	1317-653	15 mg/m³ (Total)	10 mg/m³ (Total)	10 mg/m³	0-65%
Crystalline Silica (Quartz) (Concrete aggregates may contain silica)	14808-60-7	30/(%SiO^2+2)mg/m³ (Total Particulate) 10/(%SiO^2+2)mg/m³ (Respirable Particulate)	0.1mg/m³ (Total) (Respirable quartz)	30/(%SiO^2+2)mg/m³ (Total) 10/(%SiO^2+2)mg/m³ (Respirable)	0.5-80%
Water	N/A	N/A	N/A	N/A	15-25%
Fly Ash which contains:	68131-74-8	N/A	N/A	N/A	1-4%
Aluminum Oxide (Al_2O_3)	1344-28-1	15mg/m³ (Total) 5mg/m³ (Respirable)	10mg/m³	10mg/m³	0.1-2%
Amorphous Silica	61790-53-2	80mg/m³/(%SiO^2)	10mg/m³ (Total) 3mg/m³ (Respirable)	20mppcf	0.01-3%
Calcium Oxide (CaO)	1305-78-8	5mg/m³	2mg/m³	5mg/m³	0-1%
Iron Oxide (as Fe_2O_3)	1309-37-1	10mg/m³	10mg/m³	10mg/m³	0.1-2%

Note: Chemical admixtures may be present in quantities less than 1%. Information on specific aggregates, cementitious materials and admixtures will be provided by the supplier upon request.

Section 3: HAZARD IDENTIFICATION

WARNING

Corrosive-Causes severe burns.
Toxic-Harmful by inhalation.
(Contains crystalline silica)

Use proper engineering controls, work practices, and personal protective equipment to prevent exposure to wet or dry product.
Read MSDS for details.

Emergency Overview:	Unhardened concrete is an odorless semi-fluid, flowable, granular paste of varying color and texture. It is not combustible or explosive. Exposure of sufficient duration to wet concrete can cause serious, potentially irreversible tissue (skin, eye, respiratory tract) damage due to chemical (caustic) burns, including third degree burns.
Potential Health Effects:	
Eye Contact (acute):	Concrete may cause immediate or delayed irritation or inflammation. Eye contact with wet concrete can cause moderate eye irritation, chemical burns and blindness. Eye exposures require immediate first ad and medical attention to prevent significant damage to the eye. Direct contact can cause irritation before mechanical abrasion.
Skin contact (acute):	Wet unhardened concrete and concrete dust may cause dry skin, discomfort, irritation, severe burns, and dermatitis.
Burns:	Exposure of sufficient duration to wet unhardened concrete can cause serious, potential irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. A skin exposure may be hazardous even if there is no pain or discomfort.
Dermatitis:	Wet unhardened concrete is capable of causing dermatitis by irritation and allergy. Skin affected by dermatitis may include symptoms such as redness, itching, rash, scaling, and cracking.
Sensitization:	Allergic contact dermatitis is caused by sensitization to hexavalent chromium (chromate) present in concrete. The reaction can range from a mild rash to severe skin ulcers. Persons already sensitized may react to the first contact with wet unhardened concrete. Others may develop allergic dermatitis after years of repeated contact with wet concrete.
Ingestion:	Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage.
Inhalation (general):	May result, depending on the degree of the exposure, from exposure to dust generated from cutting, grinding, crushing, or driving hardened concrete.
Inhalation (acute):	Breathing dust may cause nose, throat lung or mucous membrane irritation, including choking. Inhalation of high levels of dist can cause chemical burns to the nose, throat and lungs.
Inhalation (chronic):	Risk of injury depends on duration and level of exposure.
Silicosis:	This product contains crystalline silica. Prolonged or repeated inhalation of respirable crystalline silica from this product can cause silicosis, and other seriously disabling and fatal diseases.
Carcinogenicity:	Concrete is not listed as a carcinogen by IARC or NTP; however, concrete contains trace amounts of crystalline silica and hexavalent chromium which are classified by IARC and NTP as known human carcinogens.
Autoimmune Disease:	Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys.
Medical conditions Aggravated by Exposure:	Individuals with lung disease (e. g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure to concrete dust.

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Section 4: FIRST AID MEASURES

Eye Contact:	Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions and burns.
Skin Contact:	Wash with cool water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash, burns, irritation, dermatitis, and prolonged unprotected exposures to wet concrete.
Inhalation:	Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.
Ingestion:	Do not induce vomiting. If conscious, have person drink plenty of water. Seek medical attention or contact poison control center immediately.

Section 5: FIREFIGHTING MEASURES

Flashpoint & Method:	Non-combustible, concrete poses no fire related hazard.
Combustion Products:	None.

Section 6: ACCIDENTAL RELEASE MEASURES

General:	Place spilled material into a contained area and then allow material to dry or solidify before disposal. Avoid contact with skin. Wear appropriate protective equipment as described in Section 8. Do not wash concrete down sewage and drainage systems or into bodies of water (e.g. lakes, streams, wetlands, etc.).
Waste Disposal Method:	Dispose of concrete according to Federal, State, Provincial and Local regulations.

Section 7: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Handling:	When cutting, grinding, crushing or drilling hardened concrete, use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.
Engineering Controls:	Supplemental controls are not required when working with wet/unhardened concrete.
Personal Protective Equipment (PPE):	
Respiratory Protection:	When working with wet, unhardened concrete under ordinary conditions, no respiratory protection is required. When working with hardened concrete, wear a NIOSH approved respirator that is properly fitted and is in good condition when exposed to dust above exposure limits.
Eye Protection:	Wear ANSI approved glasses with side shields or safety goggles when handling concrete to prevent contact with eyes. Wearing contact lenses is not recommended.
Skin Protection:	Wear gloves, boot covers and protective clothing impervious to water to prevent skin contact. Do not rely on barrier creams, in place of impervious gloves.
Clothing:	Remove clothing and protective equipment that becomes saturated with wet concrete and immediately wash exposed areas.

Section 8: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Semi-fluid, Flowable, granular substance	**Evaporation Rate:**	NA.
Appearance:	Variety of Color (usually gray)	**PH (in water):**	12-13
Odor:	Slight to none	**Boiling Point:**	NA
Vapor Pressure:	NA.	**Freezing Point:**	<32°F (unhardened)
Vapor Density:	NA.	**Viscosity:**	Varies.
Specific Gravity:	1.9-2.4	**Solubility in Water:**	Slightly (0.1-1.0%)

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Section 9: STABILITY AND REACTIVITY

Stability:	Hardened concrete is stable. Wet unhardened concrete is alkaline
Incompatibility:	Wet unhardened concrete is alkaline and is incompatible with acids, ammonium salts and aluminum, copper and some other metals (verify compatibility prior to incorporating with product). Concrete dissolves in hydrofluoric acid, producing corrosive silicon tetrafluoride gas. Cement in concrete reacts with water to form silicates and calcium hydroxide. These silicates react with powerful oxidizers.
Hazardous Polymerization:	**Hazardous Decomposition**: None.

Section 10 and 11: TOXICALOGICAL AND ECOLOGICAL INFORMATION
For questions regarding toxicological and ecological information refer to contact information in Section 1.

Section 12: DISPOSAL CONSIDERATIONS
Dispose of excess material in compliance with applicable Federal, State, Provincial and Local regulations.

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Section 13: TRANSPORT INFORMATION
This product is not classified as a Hazardous Material under U.S. DOT or Canadian TDG regulations.

Section 14: REGULATORY INFORMATION

OSHA/MSHA Hazard Communication:	This product is considered by OSHA/MSHA to be a hazardous material and should be included in the employer's hazard communication program.
CERCLA/SUPERFUND:	This product is not listed as a CERCLA hazardous substance.
EPCRA SARA Title III:	This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 and is considered a hazardous and a delayed health hazard.
EPCRA SARA Section 313:	This product contains none of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
RCRA	If discarded in its hardened form, this product would not be a hazardous waste either by listing characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.
TSCA:	Portland Cement and crystalline silica are exempt from reporting under the inventory update rule.
California Proposition 65:	Crystalline silica (airborne particulates of respirable size) and Chromium (hexavalent compounds) are substances known by the State of California to cause cancer.
WHMIS/DSL:	Products containing crystalline silica and calcium carbonate are classified as D2A, E and are subject to WHMIS requirements.

Section 15: OTHER INFORMATION

Abbreviations:

<	Less than	NFPA	National Fire Protection Association
ACGIH	American Conference of Governmental Industrial Hygienists	NIOSH	National Institute for Occupational Safety and Health
CAS no	Chemical Abstract Service number	NTP	National Toxicology Program
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act	OSHA	Occupational Safety and Health Administration
CFR	Code for Federal Regulations	PEL	Permissible Exposure Limit
CL	Ceiling Limit	pH	Negative log of hydrogen ion
DOT	US Department of Transportation	PPE	Personal Protective Equipment
EST	Eastern Standard Time	RCRA	Resource Conservation and Recovery Act
HEPA	High-Efficiency Particulate Air	SARA	Superfund Amendments and Reauthorization Act
HMIS	Hazardous Materials Identification System	TDG	Transportation of Dangerous Goods
IARC	International Agency for Research on Cancer	TLV	Threshold Limit Value
MG/M^3	Milligrams per cubic meter	TWA	Time Weighted Average (8 hour)
MSHA	Mine Safety and Health Administration	WHMIS	Workplace Hazardous Materials Information System
NA	Not Applicable		

This MSDS (Sections 1-15) was revised on June 10, 2008.

An electronic version of this MSDS is available at: www.chandlerconcrete.com under the MSDS Section.

Chandler Concrete Company, Inc. (CCCI) believes the information contained herein is accurate. CCCI makes no guarantees with respect to such accuracy and assumes no liability in connection with the use of the information contained herein which is not intended to be and should not be construed as legal advice or as insuring compliance with any federal, state or local laws or regulations. Any Party using this product should review all such laws, rules, or regulations prior to use. This Material Safety Data Sheet is representative of our Ready Mix Concrete and represents ingredients and values typical for Portland cement concrete, concrete and its constituent ingredients vary in composition.

The information set forth herein is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside the concrete/concrete products producer CCCI control, the producer makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information.

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Google searches on (1)concrete, (2) Cement, (3)Lime, and (4)rapid drying cements.
The Killer Particulate Material (PM) you (Dust) breath daily.

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MATERIAL SAFETY DATA SHEET (MSDS)
FOR PORTLAND CEMENT

(Complies with OSHA and MSHA Hazard Communication Standards, 29 CFR 1910.1200and 30 CFR Part 47)

Trace Ingredients

Trace amounts of naturally occurring chemicals might be detected during chemical analysis. Trace constituents may include up to 0.75% insoluble residue, some of which may be free crystalline silica, calcium oxide (Also known as lime or quick lime), magnesium oxide, potassium sulfate, sodium sulfate, chromium compounds, and nickel compounds.

Effects Resulting from Inhalation:

Portland cement may contain trace amounts of free crystalline silica. Prolonged exposure to respirable free silica can aggravate other lung conditions and cause silicosis, a disabling and potentially fatal lung disease.

MATERIAL SAFETY DATA SHEET

ProductName: CalciumOxide(LimeKilnDust)

. HEALTH HAZARD DATA

Inhalation: Extremely high concentrations of dust are typically self-eliminated due to the nuisance conditions they create. Over exposure may produce irritation of the mucous membranes, nose, throat, coughing and shortness of breath. In addition it may contain small amounts of silica particles less than 5 mm in diameter. These silica particles are capable of causing silicosis if inhaled in high enough concentrations over an extended period of time. The principal manifestation of silicosis if difficulty in breathing. This condition can progress to dry cough, shortness of breath on exertion, decreased lung function and pulmonaryfibrosis.

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of
breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with
water can cause caustic burns as severe as third degree.
Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with
pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye
irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is
associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney
lesions.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and
inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. (May contain
trace (<0.05 %) amounts of chromium salts or compounds including hexavalent chromium, or other metals
found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace
substitutions within the principal minerals)

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HAZARDOUS INFORMATION

Primary Route(s) of Entry: Inhalation, Skin, Eye, Ingestion

Inhalation Hazards: May cause respiratory tract, nose, throat, and lung irritation and inflammation

Skin Hazards: May irritate skin causing drying, redness, rash, and blistering. When mixed with water, a high alkali material is produced which can cause severe skin burns. Individuals may develop allergic dermatitis.

Eye Hazards: May severely irritate eyes. May develop inflammation of the cornea.

Ingestion Hazards: May be caustic to mucus tissue.

Chronic Exposure: Individuals may develop allergic dermatitis, inflammation of the cornea, and inflammation of the nose, throat, and lungs. May cause carcinogenic effects.

Carcinogenic Effects: During manufacturing of a Hydraulic Cement small traces of insoluble residues will form. These traces may have crystalline silica, a known

Human Carcinogen (Group 1), that can cause silicosis and cancer. Exposure to crystalline silica may also increase the risk of Scleroderma, tuberculosis, and kidney disorders. May contain traces of chemicals on the California Proposition 65 list.

Threshold Limit Value: 5 mg/m3 (respirable dust), 10 mg/m3 (total dust), 30 million particles per cubic footHazardous Components, CAS No., PEL (OSHA)[mg/m3], TLV (ACGIH)[mg/m3]

Calcium Sulfoaluminate, 960375-09-1, 15, 10

Crystalline Silica (Quartz), 14808-60-7, 10/(%SiO2+2), 0.05(respirable)

Amorphous Silica, 7631-86-9, 80/(%SiO2), 10

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Inhalation: Remove from exposure, if breathing is difficult or has stopped, administer artificial respiration or oxygen as indicated. Immediately seek medical aid.

Skin Contact: Wash thoroughly with soap and water. Seek medical aid.

Eye Contact: Flush immediately with large amounts of water, lifting the lower and upper lids occasionally. Seek medical help.

Ingestion: Give 1-2 large glasses of water or milk. Immediately seek medical aid. Never give liquids to an unconscious person.

Carcinogenicity: Not listed as a carcinogen by NTP, IARC, o rOSHA.

Routes of Entry: Inhalation, Skin and Eye Contact if handled in such a manner that dust is generated.

Effects of Over exposure: As sold, this product is not anticipated to pose an acute or significant health hazard. However, if subjected to dust generating processes, adverse health effects may occur.

Calcium oxide is caustic to living tissue. Over exposure may cause irritation of the eyes, skin, and upper respiratory tract. Inflammation of the respiratory tract, ulceration and perforation of the nasal septum, bronchitis and pneumonia have also been attributed to inhalation of calcium oxide dust. Eye contact may cause conjunctivitis, corneal ulceration. Skin contact may causes inflammation and ulceration.

Medical Conditions Aggravated by Exposure: Chronic disease and disorders of the respiratory system and skin.

9. SPECIAL PROTECTION INFORMATION LIME

Respiratory: Respiratory protection approved by NIOSH/MSI-IA for protection against dust should be used to avoid inhalation. Appropriate respiration selection depends on the type and magnitude of exposure.
Skin: Clean, body-covering clothing should be worn to prevent irritation in situation where direct contact with product may occur or dust levels are excessive.
Eyes: Employees should be required to wear chemical safety splash goggles in situations where direct contact with the product may result in eye injury.
Ventilation: Local exhaust ventilation should be used to control worker exposure to below recommended Permissible Exposure Levels(PEL).

Other Protective Equipment: Emergency eye wash stations and deluge safety showers should be available in the work areas.

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Material Safety Data Sheet
For
PORTLAND CEMENT

Section 1 - IDENTIFICATION

Product Names: Nevada Portland Cement - Type I/II

MSDS Information
This MSDS was revised January 5, 2004 and supercedes and replaces any prior versions.

Product Code
Standard Industrial Classification: 3241

Chemical Family
Calcium compounds. Calcium silicate compounds and other calcium compounds containing iron and aluminum make up the majority of this product. Major compounds:

$3CaO{\cdot}SiO_2$	Tricalcium silicate	CAS#12168-85-3
$2CaO{\cdot}SiO_2$	Dicalcium silicate	CAS#10034-77-2
$3CaOAl_2O_3$	Tricalcium aluminate	CAS#12042-78-3
$4CaO{\cdot}Al_2O_3{\cdot}Fe_2O_3$	Tetracalcium aluminoferrite	CAS#12068-35-8
$CaSO_4{\cdot}2H_2O$	Calcium sulfate dihydrate or Gypsum	CAS#7778-18-9

Chemical Name and Synonyms
Portland cement. Also known as hydraulic cement.

Formula
This product consists of finely ground portland cement clinker mixed with a small amount of calcium sulfate.*

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Supplier/Manufacturer

Nevada Cement Company
I-80 East @ Exit 46
Fernley, Nevada 89408
(775) 575-2281

Emergency Contact Information

Safety Director - (775) 575-2281, Ext 288
Chief Chemist - (775) 575-2281, Ext. 252

*Trace Elements
Portland cement is made from materials mined from the earth and is processed using energy provided by fuels; and therefore may contain trace amounts of naturally occurring materials which might be detected during chemical analysis. For example: Portland cement may contain up to 0.75% insoluble residue, of which <0.1% may be free crystalline silica. Other trace constituents may include potassium and sodium sulfate compounds, chromium compounds, and nickel compounds.

Section 2 - COMPONENTS

Hazardous Substances	**OSHA PEL (8-Hour TWA)**	**ACGIH TLV-TWA (1995 - 1996)**	**NIOSH REL (8-Hour TWA)**
Portland Cement Clinker (CAS#65997-15-1) Nominal 95% by weight	50 million particles/ft^3	10mg total dust/m^3	
Calcium sulfate (CAS#7778-18-9) [Gypsum (CAS#13397-24-5)] Nominal 5% by weight	5mg respirable dust/m^3 10mg total dust/m^3	10mg total dust/m^3	
Calcium Oxide (CAS#1306-78-8) (Free Lime) < 4% by weight	5mg/m^3	2mg/m^3	
Magnesium Oxide (CAS #1309-48-4) < 5% by weight	15mg total dust/m^3	10mg total dust/m^3	

Crystalline silica (CAS#14808-60-7	10mg of respirable dust/m^3 (%SiO2 +2)	0.10mg respirable quartz/m^3	0.05mg respirable quartz/m^3

Section 3 - HAZARDS IDENTIFICATION/TOXICOLOGICAL INFORMATION

Emergency Overview:
Portland cement is a light gray powder that poses little immediate hazard. A single short-term exposure to the dry powder is not likely to cause serious harm. However, exposure of sufficient duration to wet portland cement can cause serious, potentially irreversible tissue (including skin or eye) destruction in the form of chemical (caustic) burns, including third degree burns. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry portland cement.

Potential Health Effects:
Potential effects resulting from **eye contact**:
Exposure to airborne dust may cause immediate or delayed irritation or inflammation.
Eye contact by larger amounts of dry powder or splashes of wet portland cement may cause effects ranging from moderate eye irritation to chemical burns and blindness. Such exposures require immediate first aid (see Section 4) and medical attention to prevent significant damage to the eye.

Potential effects resulting from **skin contact:**
Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing or avoiding skin contact, particularly contact with wet cement. Persons exposed to wet cement may not feel discomfort until hours after the exposure has ended and significant injury has occurred.

Exposure to dry portland cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry portland cement contacting wet skin or exposure to moist or wet portland cement may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns.

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Some individuals may exhibit an allergic response upon exposure to portland cement, possibly due to trace amounts of chromium. The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers. Persons already sensitized may react to their first contact with the product. Other persons may first experience this effect after years of contact with hydraulic cement products.

Potential effects resulting from **inhalation:**
Portland cement may contain trace amounts (<0.1%) of free crystalline silica. Prolonged exposure to respirable free crystalline silica may aggravate other lung conditions. It also may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease.

Exposure to portland cement may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.

Potential effects resulting from **ingestion:**
Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten under any circumstances.

Carcinogenic Potential:
Portland cement is not listed as a carcinogen by IARC, the State of California, NTP or OSHA. It does, however, contain trace amounts (<0.1%) of a substance listed as a carcinogen by some of these organizations. Crystalline silica is now classified by IARC as a known human carcinogen (Group 1). It is known by the State of California to cause cancer. NTP has characterized respirable crystalline silica as "reasonably anticipated to be (a) carcinogen".

Medical Conditions Which May Be Aggravated By Inhalation or Dermal Exposure:
- Pre-existing upper respiratory and lung diseases.
- Unusual (hyper) sensitivity to hexavalent chromium (chromium +6) salts.

Section 4 - FIRST AID

Eyes
Immediately flush eyes thoroughly with water. Continue flushing eyes for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin
Wash skin with cool water and pH-neutral soap or a mild detergent intended for use on skin. Seek medical treatment in all cases of prolonged exposure to wet cement, cement mixtures, liquids from fresh cement products, or prolonged wet skin exposures to dry cement.

Inhalation of Airborne Dust
Remove to fresh air. Seek medical help if coughing and other symptoms do not subside. (Inhalation of gross amounts of portland cement requires immediate medical attention.)

Ingestion
Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

Section 5 - FIRE & EXPLOSION DATA

Flash Point	None
Lower Explosive Limit	None
Upper Explosive Limit	None
Auto Ignition Temperature	Not combustible
Extinguishing Media	Not combustible
Special Fire Fighting Procedures	None (Although portland cement poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.)
Hazardous Combustion Products	None
Unusual Fire and Explosion Hazards	None

Section 6 - ACCIDENTAL RELEASE MEASURES

Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin. Wear appropriate personal protective equipment as described in Section 8.

Scrape up wet material and place in an appropriate container. Allow the material to "dry" before disposal. Do not attempt to wash portland cement down drains.

Dispose of waste material according to local, state and federal regulations.

Section 7 - HANDLING AND STORAGE

Keep portland cement dry until used. Normal temperature and pressure do not affect the materials.

Promptly remove dusty clothing or clothing which is wet with cement fluids and launder before reuse. Wash thoroughly after exposure to dust or wet cement mixture or fluids.

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Section 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

Skin Protection
Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened (wet) portland cement products. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened portland cement products might occur, wear impervious clothing and gloves and boots to eliminate skin contact.

Respiratory Protection
Avoid actions that cause dust to become airborne. Use local or general ventilation to control exposures below applicable exposure limits. Use NIOSH/MSHA-approved respirators in poorly ventilated areas when dust causes discomfort or irritation, or where there is an applicable exposure limit (Advisory: Respirators and filters purchased after July 10, 1998 must be certified under 42 CFR 84).

Ventilation
Use local exhaust or general dilution ventilation to control exposure below applicable limits.

Eye Protection
When engaged in activities where cement dust or wet cement or concrete could contact the eye, wear safety glasses with side shields or goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with portland cement or fresh cement products.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray or White powder
Odor	No distinct odor
Physical state	Solid (powder)
pH (in water)(ASTM D 1293-95)	12 to 13
Solubility in water	Slightly soluble (0.1 to 1.0%)
Vapor pressure	Not applicable
Vapor density	Not applicable
Boiling point	Not applicable (i.e. > 1000°C)
Melting point	Not applicable
Specific gravity (H20 = 1.0)	3.15
Evaporation rate	Not applicable

Section 10 - STABILITY AND REACTIVITY

Stability
Stable

Conditions To Avoid
Unintentional contact with water.

Incompatibility
Wet portland cement is alkaline. As such it is incompatible with acids, ammonium salts and aluminum metal.

Hazardous Decomposition
Will not spontaneously occur. Adding water results in hydration and produces (caustic) calcium hydroxide.

Hazardous Polymerization
Will not occur.

Section 11 - TOXICOLOGICAL INFORMATION - See Section 3

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity
No recognized unusual toxicity to plants or animals.

Relevant Physical and Chemical Properties
(See Sections 9 and 10).

Section 13 - DISPOSAL

Dispose of waste material, including bags, according to local, state, and federal regulations.
Section 14 - TRANSPORTATION DATA

Hazardous Materials Description/Proper Shipping Name
Portland cement is not hazardous under U.S. Department of Transportation (DOT) regulations.

P13-5

Section 15 - OTHER REGULATORY INFORMATION

Status Under USDOL-OSHA Hazard Communication Rule 29 CFR 1910.1200
Portland cement is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.

Status Under CERCLA/Superfund 40 CFR 117 and 302(v)
Not listed.

Hazard Category Under SARA (Title III) Section 311 and 312
Portland cement qualifies as a "hazardous substance" with delayed health effects.

Status Under SARA (Title III) Section 313
Not subject to reporting requirements under Section 313.

Status Under TSCA (as of May 1997)
Some substances in portland cement are on the TSCA inventory list.

Status Under the Federal Hazardous Substances Act
Portland cement is a "hazardous substance" subject to statutes promulgated under the subject act.

Status Under California Proposition 65
Crystalline silica is known by the State of California to cause cancer.

Status Under WHMIS
Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products regulations (class E - corrosive material) and is therefore subject to the labeling and MSDS requirements of the workplace hazardous materials information system (WHMIS).

Section 16 - OTHER INFORMATION

Prepared By
Nevada Cement Company
I-80 East @ Exit 46
Fernley, Nevada 89408

Revision Date
January 5, 2004

Other Important Information
Portland cement should only be used by knowledgeable persons. Inexperienced product users must obtain proper training before using this product. A key to using the product safely requires the user to recognize that portland cement chemically reacts with water, and that some of the

intermediate products of this reaction (that is, those present while a portland cement product is "setting") pose a far more severe hazard than does portland cement itself.

While the information provided in this material safety data sheet is believed to provide a useful summary of the hazards of portland cement as it is commonly used, the sheet cannot, and does not, anticipate and provide all of the information that might be needed in every situation. In particular, the data furnished in this sheet does not address hazards that may be posed by other materials mixed with portland cement products. Users therefore, should review other applicable material safety data sheets before working with this portland cement or working on portland cement products, for example, portland cement concrete.

P13-5

NEVADA CEMENT COMPANY MAKES NO WARRANTY, EXPRESS OF IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY NEVADA CEMENT COMPANY, EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS. THE INFORMATION PROVIDED HEREIN WAS BELIEVED BY NEVADA CEMENT COMPANY TO BE ACCURATE AT THE TIME OF PREPARATION OR PREPARED FROM SOURCES BELIEVED TO BE RELIABLE, BUT IT IS THE RESPONSIBILITY OF THE USER TO INVESTIGATE AND UNDERSTAND OTHER PERTINENT SOURCES OF INFORMATION, TO COMPLY WITH ALL LAWS AND PROCEDURES APPLICABLE TO THE SAFE HANDLING AND USE OF PRODUCT, AND TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE. BUYER'S EXCLUSIVE REMEDY SHALL BE FOR DAMAGES AND NO CLAIM OF ANY KIND, WHETHER AS TO PRODUCT DELIVERED OR FOR NON-DELIVERY OF PRODUCT, AND WHETHER BASED ON CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, OR OTHERWISE SHALL BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE QUANTITY OF PRODUCT IN RESPECT OF WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL NEVADA CEMENT COMPANY BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER BUYER'S CLAIM IS BASED ON CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHERWISE.

3.4.13 Comment Letter P13: Terry Hertel

P13-1 Comment noted. This comment does not address the adequacy or accuracy of the Draft EIR.

P13-2 The commenter provides photographs depicting air pollution in the vicinity of the Project Area. See Response P5-2.

P13-3 This letter contains the same comments as Letter P5. See responses P5-1 through P5-7.

P13-4 This comment contains the same information as comment P8-4. See Response P8-4.

P13-5 This comment has been addressed. See Response P5-1.

From: Rhoda Fry <fryhouse@earthlink.net>
Date: Tue, 21 Feb 2012 15:03:37 -0800
To: <rob.eastwood@pln.sccgov.org>
Subject: draft eir comments attached

Failure to Include Known Data:

The draft EIR ignores NOP comments and communications from previous events such as vested rights (including documents written by staff). The result is that this draft EIR is incomplete and inaccurate. All NOP comments and vested rights comments and staff documents must be included as commentary to this Draft EIR. In addition, some comments sent in regarding vested rights, were not made available to the public, such as a letter from Cupertino City Manager David Knapp. While I have added my vested rights commentary from last year, I expect staff to leverage their previous research and public commentary and include it in the EIR. Due to regulation, we pay more for building products which subsidize government jobs. But we're not getting our return on investment. Rather, we're getting the illusion of effective regulation. This is not okay.

P14-1

P14-2

The County has demonstrated its inability to be an effective lead agency with the applicant having submitted 5 RPAs in as many years and to be seriously overdue with the 1985 RPA sunset of 2005. Furthermore, the WMSA should have been revegetated by now according to the 1985 plan. How can we trust the county to ensure the next plan is properly implemented? The latest RPA does not have a list of changes making it difficult for the public to participate in what is supposed to be an open process. This creates a challenge for this writer to provide coherent input as well. We can fully anticipate yet another RPA for new mining operations, given previous applications and exploration, as had previously been proposed – the county should not allow this piecemeal approach that is counter to CEQA law.

P14-3

Baseline and what is in and what is out:

When convenient, the Quarry, Cement Plant and Rock Plant are considered as separate entities. When convenient they are all glued together. In the case of the EIR, the quarry and rock plant are considered as one and the cement plant is not considered. The cement plant is located where it is because the limestone is there. Now we know that the local limestone is unusually high in mercury and it is not appropriate to be mining it or cooking it. However, this continues because the grandfathered rights of the facility (when the health impacts were unknown) trump the health and welfare of the county's residents. Interestingly, as of October, the cement plant has been imported large quantities of limestone and shut down the aggregate business. Thus the statement in the EIR that mining has been continuous is not correct. By importing limestone, the company has demonstrated that it is being disingenuous when it comes to the relative

P14-4

importance of this quarry in obtaining exceptions from the State and from the County. Note that the history of the rock crusher and volume output is not disclosed in the EIR. P14-4

The County has the discretion to determine when the baseline time should be for the EIR. The baseline should be BEFORE the facility started dumping mining waste outside of the 1985 RPA. The county was slow to respond, in spite of resident complaints. Two wrongs don't make a right. Show some level of integrity and set the baseline to be pre-EMSA. P14-5

One choice that should be considered is to stop mining. We now know that the limestone is unusually high in mercury. The facility is currently importing limestone – so we know that local limestone is NOT required (and it brings into question whether a local cement plant is required as well). The document appears to be nearly doubling production with a 16 year project vs. a 9 year project. Other options must be provided. We know that county and other agencies have been unable to regulate the facility. The facility has had challenges with nearly every agency that regulates it. The company has had fatal incidents locally in October, in January 2010 at Tehachapi, and in February 2012 on the east coast. There is quite a bit of theory in the EIR. While in theory, the mitigations measures should work, with many years of history, the practice shows otherwise and it is troubling that the Draft EIR does not mention it – because we know that past history can be a reasonable predictor of future behavior. P14-6

EMSA:

According to the OMR, Lehigh has been out of compliance for over a decade for many infractions. During this time, a mountain of mining waste grew and grew without review for visual or health impacts, this is called the EMSA. Now we learn of the high Selenium levels of water exiting the EMSA. I am surprised to learn that the EMSA contains Rock Plant waste, while we had been led to believe that it contained quarry pit waste, not processed waste, which is potentially more toxic due to increased surface area. The basis for allowing continued use of the EMSA was for obtaining limestone for cement, not the ancillary business to selling aggregate. It also brings into question on how the county managed the EMSA NOV and the justification for continuing to use it. P14-7

Certainly the county would not allow 30 acres of skyscrapers to pop up without review. Lehigh has managed to sidestep the simplest of regulations – like -getting permits for building structures or getting rid of them or inspections for those that did receive permits. The county has not adhered to the CALIFORNIA BUILDING CODES when it comes to issuing and inspecting demolition and building permits. Therefore, it can

reasonably be assumed that this shall not happen in the future and would add significantly to the environmental cumulative impacts. It is particularly troublesome at the EMSA site – the former headquarters of Kaiser Aluminum which manufactured: munitions during WWII, ferrosilicon, phosphate fertilizer with imported serpentine and pressed aluminum products. The company was fined by the county and got attention from the EPA among other agencies. This must be mentioned and investigated. Why are there not height restrictions on the EMSA?

The EIR fails to mention that the county supervisors voted that the vast majority facility did not need a county permit. This appears to have been a political decision rather than a factual one and should weigh heavily upon the conscience of those who made this decision. This was counter to staff recommendation, MROSD recommendation, and there is pending litigation. It got the county out of a bit if a pickle when it came to the EMSA violation – how could a publicly traded company that engaged in manufacturing for over 50 years be logically considered as part of a vested mining operation?

P14-7

History section of the draft EIR:

Failing to mention the toxic history or the historic 50-year-old headquarters and laboratory burnt by arson, and more, is a major oversight. Yet all this data resides in county coffers. Considering there is a plan to move a bunch of dirt up there – we have to ask – what's in it? The history section also fails to mention that there had been a plan to terminate quarrying in 2010 and building housing (see my vested rights report which follows).

P14-8

Hazardous Waste:

It appears to me that the samples taken have been arbitrary – especially when considering the history of the property has not been taken into account. Note that the manufacturing facility that had been under the EMSA had previously imported serpentine from New Almaden in the production of phosphate fertilizer. More on this is in my vested rights commentary below. A concerted effort must be made to determine all the hazardous materials that had been onsite and determine whether they are present today. The company had been fined by the county for hazmat and had been under scrutiny by the EPA. Structures had been removed without permit. Some structures with a hazardous legacy were removed with permit but without inspection. This known information has been omitted from the EIR and is available in the NOP comments. According to the County, the owner or agent would need to RE-APPLY for building permits to have those un-inspected structures removed. How can we possibly consider moving the stuff in the EMSA and WMSA and elsewhere without documenting what truly happened?

P14-9

Recently, BAAQMD has proposed including synthetic gypsum into the cement product after it has been cooked. It would be carried on new conveyor belts. Synthetic gypsum is a power plant waste product, potentially containing large quantities of mercury. The fugitive dust and spill potential must be considered. P14-10

HRA:
The EIR must use an appropriate HRA. The draft used an old one. The current one is known to be deficient. The EIR must be put off until a true and correct HRA is available. P14-11

PERMANENTE CREEK:
Permanente Creek has experienced unpermitted and excessive flows into Los Altos. The plan contains only reclamation of the creek within a portion of the property boundary. Damage to the creek outside of the property boundary must also be considered for repair.

According to a water boards report, the drainage systems onsite were not mapped. There were a number of "mystery pipes" and no one knew where they were going or where they came from. This mapping must be complete and shared with the public before an EIR is approved. P14-12

PONDS:
The property has unpermitted ponds as outlined by the water violations. What are the cumulative impacts of running more – or less – water through them? What are the anticipated effects of change of use of these ponds for water quality and slope stability? P14-13

PG&E:
What is the status of the PG&E gas line into the facility and how will it be affected during reclamation? P14-14

Slope Stability:
The draft EIR makes excuses for failing slopes, such as rain. However, under SMARA, there are no excuses. The planned slope angles are not adequate to ensure future slope stability and must be reconsidered. While the document choses arbitrary baseline conditions, what is the slope stability of the EMSA in 2012? According to MRSOD, emergency repairs to slides have not occurred as promised. According to an OMR (office of mine reclamation) report, the quarry has been out of compliance with SMARA for at least 10 years. This should be mentioned in the EIR. The county should seriously consider whether it has the skills to manage this surface mine as should the state. P14-15

How do we know that the San Francisco Garter Snake habitat is not impacted? P14-16

--- my vested rights input, I expect County Staff to include ALL previous commentary and research in the subsequent edition of the EIR ---

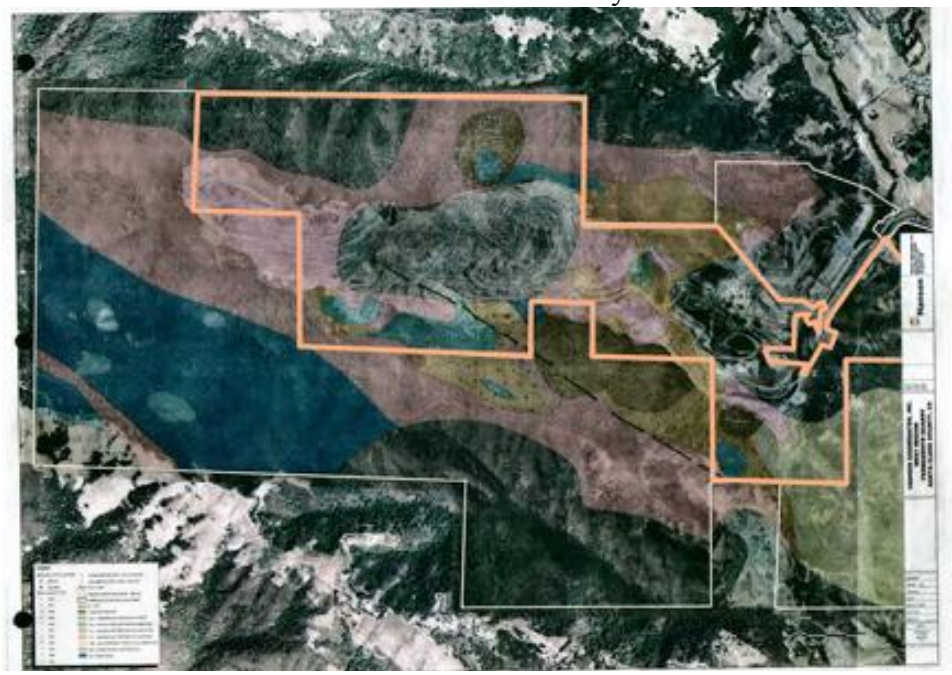
To: County of Santa Clara Department of Planning and Development Planning Office, the Santa Clara County Board of Supervisors & the Clerk of the Board
From: Rhoda Fry, Cupertino

Permanente Quarry/Lehigh Southwest Cement Company Legal Non-Conforming Use Determination: No Vested Rights

Introduction: This document augments the comprehensive report by the Santa Clara County Planning Department and demonstrates that the Permanente Quarry does not have a vested right to the Morris, Crocker, or "EMSA" parcels using the claimant's information and other factual data.

Hanson Map with Vested Boundary: The claimant's 2007 map[1] clearly demonstrates that the established "vested boundary" does not include Morris or "EMSA." (Crocker inclusion would need to be determined by an expert). Note that this is not a reclamation boundary which would be well inside the vested boundary line. The "approximate property boundary" line has been enhanced in thin white and the "vested boundary" line has been enhanced with thick orange.

P14-17



Diepenbrock Harrison declares that the properties were acquired for mining[2],

> There is no doubt that, in acquiring these parcels, Kaiser intended to devote them to mining.

however, Kaiser Board Meeting Minutes state that Morris was acquired for legal reasons: [3]

> Vice President, E.E. Trefethen, Jr., explained that certain property adjacent to the property owned by this corporation in Santa Clara County, known as the Morris property, consisting of

[1] 1/4/2011 Diepenbrock Harrison letter, Appendix C last page emphasis added, document date on first page
[2] 1/4/2011 Diepenbrock Harrison letter, page 4
[3] 1/4/2011 Diepenbrock Harrison letter, Appendix D, minutes from April 24, 1942 pages 27, 28

> approximately 500 acres lying adjacent to the property of this corporation on the south, was for sale and that due to certain conditions which had developed on this property that could lead to legal involvements, it seemed advisable that this corporation should proceed to purchase the said Morris property for its own use.

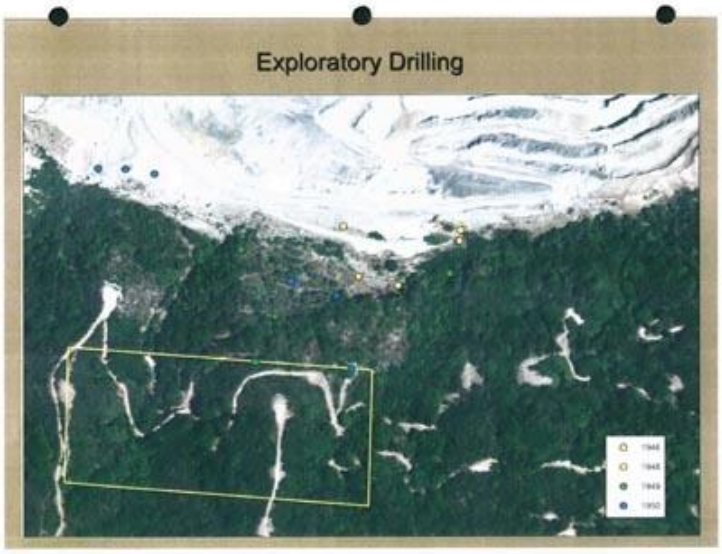
Morris & Crocker: Indeed, the Morris property contained an essential segment of road between portions of the operation; a hostile neighbor could have been disastrous to the operation. The intent to purchase for access-only is affirmed by the fact that in nearly seventy years of ownership, the only land improvement, which preceded the purchase date, is that road segment. Recall, "There must be evidence that the owner or operator at the time the use became nonconforming had exhibited an intent to extend the use to the entire property owned at the time."[4] There are only two exploratory drilling holes on the very edge of the Crocker parcel and these occurred too late for vesting consideration (1949 and 1950).

Morris Parcel with road segment is the key to access within facility[5]

P14-17

[4] Hansen, State Supreme Court
[5] 1/4/2011 Diepenbrock Harrison Appendix A page 53

Crocker Parcel exploratory holes don't qualify for vesting cut-off date[6]



It is to be expected that a corporation with such a disruptive operation, in an area with a growing population, would whenever possible purchase adjacent property to serve the dual purpose of avoiding a hostile neighbor from moving in while creating a buffer from their neighbors. The concept of creating a buffer is well-documented in the reclamation plans. Again, we know from the company's board meeting minutes that the Morris parcel was purchased for legal reasons. The board minutes surrounding the Crocker purchase do not appear to be in the claimant's Appendices. Finally, the claimant has failed to demonstrate that the paths on these parcels were intended for mining and it is equally plausible that these were logging roads.[7]

P14-17

Public/Private Permanente Road Determination: When making the determination of the public or private Permanent road the decision makers should also examine the claimant's view of ownership below.[8] This excerpt of an ownership map clearly shows a portion of Stevens Creek Blvd (Permanente Road) along with the rail spur as not being within the lines of ownership. This could be used as one measure as to where the public portion of the road would end.

[6] 1/4/2011 Diepenbrock Harrison Appendix A page 56
[7] http://en.wikipedia.org/wiki/Black_Mountain_(near_Los_Altos,_California
[8] 11/05/2010 Diepenbrock Harrison letter EXHIBIT 9, excerpt

P14-17

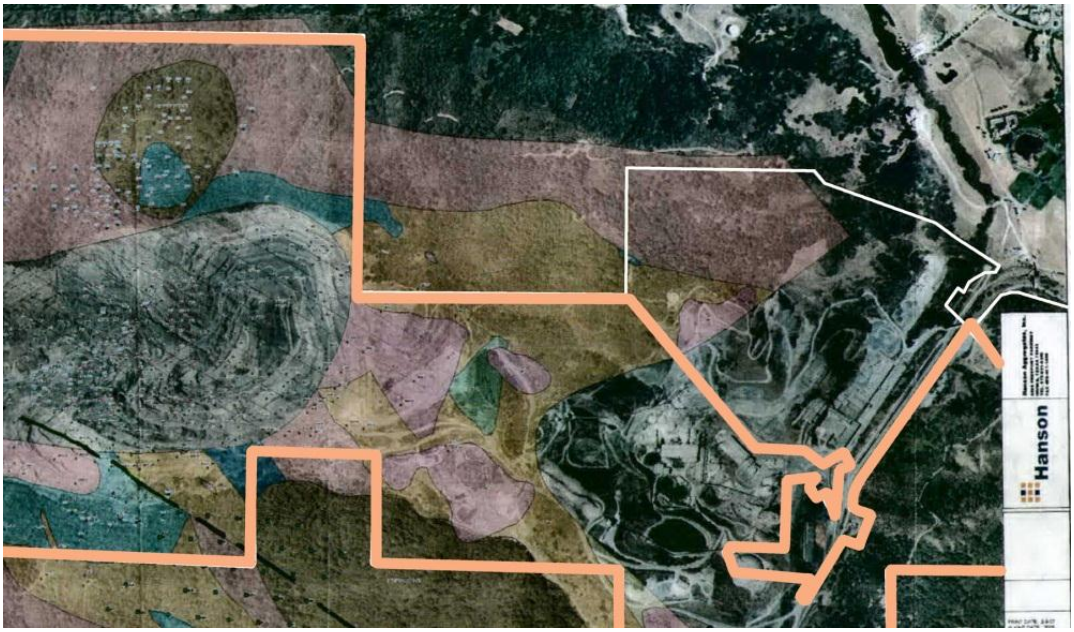
Area referred to as the East Materials Storage Area (EMSA): The Permanente Quarry does not have a vested right to an area referred to as the East Materials Storage Area (EMSA). The false claim that the area is vested because "it has always been an integrated part of the Facility" [9] is most succinctly refuted by the claimant's own letter, which affirms non-integration:[10]

> Next to the cement plant is the former Aluminum plant site, which covers approximately 153 acres. The site was under completely separate ownership from the quarry until 1995, when the owners sold the defunct plant to Kaiser Cement. The aluminum plant is not used, nor has it ever been used, to process mined material from the Permanente Quarry.

The independence of these two publicly traded companies is further affirmed:
1. By 1951, Kaiser Aluminum had 9 plants none of which required a quarry for a neighbor.
2. When Cupertino cement workers went on strike, the Cupertino foil plant continued to operate.
3. Conversely, when the Cupertino foil plant sold in 1990, the "facility" continued to operate.
4. The companies that occupied these sites were sold to different investors at different times.

Hanson Map with Vested Boundary: The claimant's 2007 map[11] showing their <u>established "vested boundary" does NOT include the area referred to as EMSA</u> (see enhanced excerpt below). Thus the claimant has no right to threaten equitable estoppel for halting use of this property. The "approximate property boundary" line has been enhanced in thin white and the "vested boundary" line has been enhanced with thick orange. The EMSA area is outlined in thin white on the top right along with part of Permanente Road. The EMSA area is also outlined in thick orange on the bottom showing the beginning of the facility's vested area.

P14-17



[9] 1/4/2011 Diepenbrock Harrison letter, page 5
[10] 1/4/2011 Diepenbrock Harrison letter, Appendix C pages 285,286 contains 1/10/2006 letter
[11] 1/4/2011 Diepenbrock Harrison letter, Appendix C last page with document date on the first page

Company identifiers demonstrate these companies are in very different industries:

Corporate Identity	Lehigh Hanson	Kaiser Aluminum
Address	24001 Stevens Creek Blvd, Cupertino, CA 95014	23333 Stevens Creek Blvd, Cupertino, CA 95014
Stock	privately owned under HEIG.DE (Germany) also KCG, HAN, …	KALU (NASDAQ) also KACC, KLU, MXM, …
NAICS Code	327310 Cement Manufacturing	331316 Aluminum Extruded Product Manufacturing
DUNS NUMBER	103037458	177762192 (one of several)
EPA Registry ID	110000484039	110011654584

Permanente Metals History: The recently named "East Materials Storage Area"[12] is located on the original site of the publicly traded Permanente Metals Corporation (later Kaiser Aluminum), which started acquiring land adjacent to the Permanente Company (later Lehigh Hanson) in 1941.

In his lifetime American industrialist Henry J. Kaiser created many companies including Kaiser Shipyards, Kaiser Steel, Kaiser Motors, Kaiser Healthcare, Kaiser Aluminum (preceded by Kaiser Aluminum and Chemical Corporation and Permanente Metals), and Kaiser Cement (preceded by Permanente Cement and Permanente Company). WWII created a strategic inflection point for the industrialist who capitalized on abundant government opportunities. One was Permanente Metals which was launched using the United States government's Reconstruction Finance Corporation.

P14-17

At this site, Permanente Metals had a state of the art campus for magnesium production for incendiary bombs and ferrosilicon in WWII, fused phosphate fertilizer from New Almaden serpentine and phosphate rock from Idaho, [13] and for aluminum extruded products until 1990. Diepenbrock Harrison has led the reader to believe that grading performed to build the company campus was a mining activity and that material storage is equivalent to dumping mining waste. Adding to this confusion, the claimant states:

> Both companies performed mining and mining related operations. The cement plant was the end process that began with limestone mining in the adjacent quarry. The magnesium plant, similarly, processed dolomite mined from off-site Kaiser facilities including the Natividad quarry in Monterey County and was simply the last stop before mined material was processed before distribution to customers.[14]

Until the recent impermissible dumping of mining waste, "EMSA" has neither been used for mining nor has there been a plan to mine there prior to applicable vesting dates and therefore has no vested rights for mining. Even if there had been vested rights, the substantial changes in operations by both Permanente Metals and its successor, Kaiser Aluminum would confirm an abandonment or waiver of vested rights for mining.

[12] Note that although the same name was used in a previous reclamation plan, it referred to a different location that has since been renamed to "CMSA," Central Materials Storage Area

[13] Geology and quicksilver deposits of the New Almaden District, Santa Clara County

[14] 1/4/2011 Diepenbrock Harrison letter, page 29

Unpermitted Surface Mining Operation & Impermissible Intensification thereof: The overburden area was first officially recognized by the county in a 2006 Notice of Violation and again in 2008 as an intensification of the previous Notice of Violation.[15] In April 2009, county staff and Lehigh came to a provisional agreement until the timely delivery of a reclamation plan.[16]

1948: Permanente Metals state of the art campus

2009: same site under new ownership used for mining overburden

P14-17

[15] 2006 Lehigh NOV and 2008 Lehigh NOV
[16] 2009 Agreement regarding EMSA and Associated Correspondence

Kaiser Cement Plans to Close Quarry and Abandon Vested Mining Right: In 1992, Kaiser Cement, then owned by British Hanson Industries, pre-announced its exit plan from the quarry business, a clear intent by the facility to waive, abandon, or otherwise forgo its vested right in its operation. As Kaiser anticipated about 20 more years of remaining material in the quarry, they hired a consulting firm to plan "the City of the 21st Century" upon their 3600 acres. This plan was presented at the City of Cupertino Planning Commission.[17]

Around this time, former Kaiser employee Barbara Koppel served on the Cupertino City Council and Kaiser manager Tom Legan served on the County Board of Supervisors. Recognizing a conflict of interest and reversing county counsel opinion, the State of California Fair Political Practices Commission ruled unanimously that Supervisor Legan could not vote on his proposal to loosen hillside development restrictions as it could financially benefit his employer.[18]

Abandonment is further affirmed by the company's lack of investment and disregard of regulators. The Diebenbrock Harrison letter dated January 4, 2011 touts the most recent cement plant investment was made around 1980, over thirty years ago (by now fully depreciated). The abundance of violations is well-known.

Considerations Regarding Vested Rights Determination by the County: We urge the County Board of Supervisors to consider the facts and not provide vested rights to the applicant. P14-17

Kaiser Aluminum and Chemical & Lehigh Hanson History and News: Below are some interesting stories about political connections, Permanente Metals, and cement and quarry[19].

Political Connections	
1982	Kaiser Cement executive Tom Legan is appointed to fill Dan McCorquodale's vacant seat on the Santa Clara County Board of Supervisors. (SJ 11/25/87) He serves on the board from 1982 – 1989. In 1986, he lost a bid for state senator against McCorquodale.
1985	Kaiser Cement executive and Santa Clara County Supervisor Tom Legan shows conflict of interest by seeking to increase housing densities on hillsides in unincorporated areas of the county which would substantially increase the value of Kaiser property. (SJ 7/13/85)
1987	Former Kaiser Cement employee, Barbara Koppel elected to Cupertino City Council (elected twice and serves 8 years) and also serves on the Bay Area Air Quality Management District BAAQMD. (SJ 11/21/90)
1992	Kaiser **Cement** Corp., owned by British Hanson, unveils plan to build 1,100 homes and a golf course in the hills west of **Cupertino.** (SJ 2/19/92)
1996	Supervisorial candidate and longtime Cupertino council member Barbara Koppel fined for accepting too much money from Hanson and fails to accurately report $500 from Assemblyman Jim Cunneen – who is now an adviser to Lehigh Hanson. (SJ 10/3/96)
2008	Sandra James, former Cupertino mayor (serving 8 years on Cupertino City Council) is hired as the company's community affairs and public relations manager. (SJ 10/29/2008)
2010	Supervisor Liz Kniss proposes Resolution No. 2010-162 commending Cupertino Citizen of the Year (& Lehigh Hanson PR manager) Sandy L. James. It is adopted unanimously.

[17] APPENDIX A San Jose Mercury News 2/20/1992: DEVELOPER'S VISION OF 'CITY OF 21ST CENTURY'
[18] APPENDIX B Two San Jose Mercury News Articles Santa Clara County Board of Supervisors and FPPC
[19] (NYT = New York Times, SJ = San Jose Mercury News)

Permanente Metals	
1941	Permanente Metals Corporation becomes a neighbor of the Permanente Company.[20]
1943	The two companies make sure to be separate: "The Permanente Corporation, former official name of the cement plant, has been changed to the Permanente Cement Company. The change will prevent confusion between the cement and magnesium operations." [21]
1947	Permanente Metals Corporation closes the magnesium plant. (NYT 11/1/47)
1947	Permanente Metals Corporation hires San Francisco advertising company for national campaign of Kaiser Aluminum – [cement is not mentioned at all]. (NYT 3/4/47)
1948	NYT earnings reports of several companies including: Permanente Metals Corporation (for the year, $2.67 a share) and Permanente Cement Company (for the quarter, $1.09 a share). (NYT 6/17/48).
1950	Economic Changes Affect Aluminum: Permanente Metals Corporation purchases previously rented aluminum mill from the War Assets Administration. In late 1949 government adds aluminum to the list of strategic metals to be stockpiled. (NYT 1/3/50)
1950	Kaiser Aluminum and Chemical Corporation (the new name for Permanente Metals) announces stock split and supplies 30% of the nation's aluminum. (NYT 4/7/55)
1951	Kaiser Aluminum expands to nine plants. (NYT 8/21/51)
1956	Company sponsors "Kaiser Aluminum Hour" drama series on NBC. (NYT 11/19/56)
1980	Some Kaiser Aluminum land is sold to the facility.[22]
1980	Claimant's historical record states that "around 1980, the facility's primary office, previously abandoned for a number of years, was vandalized and destroyed by arson. Following the fire, the structure and several associated buildings and features were razed."[23] These statements are not supported by the photographic record, demolition permits, or newspaper reports. This description more accurately matches a fire under Hanson ownership in 1993.
1983	Kaiser Aluminum correspondence with EPA: the company is separate from Kaiser Cement and the location of the latter is at the terminus of Stevens Creek Blvd.[24]
1983	Kaiser Aluminum obtains a building permit for a 5000 square foot storage facility and loading dock at the Cupertino plant. (Santa Clara County permit: 1983-39739-00)
1984	Kaiser Aluminum obtains a permit to re-roof. (permit: 1984-40550-00)
1987	British investor Alan Clore purchases Kaiser Aluminum and Chemical Corporation and reorganizes into a company called Kaisertech, LTD. (NYT 5/2/87)
1987	"Twenty workers at the Kaiser Aluminum & Chemical Corp. plant in Cupertino have complained about a mysterious skin rash during the past two weeks, a company official said." (SJ 1/24/87)
1988	"kerosene fire Wednesday at the Kaiser Aluminum and Chemical Corp. in Cupertino. Central Fire District spokesman Angelo Chancellor said the fire broke out about 9:30 a.m. in two kerosene tanks." (SJ 3/24/88)
1988	Kaiser Aluminum signs letter of intent to sell California, Ohio foil plants to TXL private investment group. (PRNEWSWIRE 6/2/88)

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[20] 1/4/2011 Diepenbrock Harrison letter, Appendix E, page 2
[21] 1/4/2011 Diepenbrock Harrison letter, Appends D, page 42
[22] 1/4/2011 Diepenbrock Harrison letter, Appendix E, page 2
[23] Santa Clara County Historic Reference Public Access Binder page 126
[24] See APPENDIX C of this document

1988	Kaisertech agrees to be acquired by Maxxam group (NYT 5/24/88) owned by Texas wheeler dealer Charles Hurwitz and financed with Drexel Burnham Lambert junk bonds.
1989	Santa Clara County fines Kaiser Aluminum and Chemical Corp. $79,392 for improper storage and handling of hazardous materials (SJ 6/27/89). See also the Santa Clara County Department of Environmental Health[25] and the only EPA Kaiser Aluminum (0903175) document that is approved for release to the public. More information is unavailable due to litigation. Site is under consideration for the National Priorities List.
1990	**"**Kaiser expects to shut down the foil plant at the end of May. It will sell the entire operation to Coastal Aluminum Rolling Mills Inc. which plans to dismantle the plant and move the rolling mills and associated processing equipment to Williamsport, Penn…. The Kaiser foil operation is wedged into a gouged-out portion of the Cupertino foothills, behind a dusty Kaiser cement facility, and is in an old munitions plant dating back to at least World War II. Simon said about 100 employees work at the foil plant and the company hasn't decided how many employees, if any, that Kaiser will move into other operations… Coastal will offer to transfer some of Kaiser's foil mill employees to Pennsylvania with the equipment, " (San Francisco Business Times 3/12/90)
1993	A fire at the Kaiser Cement Corp. plant in the hills behind Cupertino and Los Altos destroyed a storage building and sent a huge plume of smoke into the air … Kaiser operations faltered briefly when phone lines went out, … The building was at the northern edge of Kaiser 's property. It formerly held the company's administration and engineering offices, but since 1989 had been used for storage … The fire was reported at 4:42 p.m. and contained about 6 p.m. Firefighters were hampered by inadequate water supplies, said Teresa Meisenbach, senior deputy fire marshal with Central Fire . The cause remained under investigation, she said. (SJ 4/27/93)
1995	The remainder of Cupertino Kaiser Aluminum land is sold to the facility.[26]
	Cement and Quarry
1943	The two companies make sure to be separate: "The Permanente Corporation, former official name of the cement plant, has been changed to the Permanente Cement Company. The change will prevent confusion between the cement and magnesium operations." [27]
1947	Permanente Cement Company offers 150,000 shares of common stock. (NYT 12//18/47)
1958	Permanente Cement announces earnings with record high sales. (3/14/58)
1980	Some Kaiser Aluminum land is sold to the facility.[28]
1980	Claimant's historical record states that "around 1980, the facility's primary office, previously abandoned for a number of years, was vandalized and destroyed by arson. Following the fire, the structure and several associated buildings and features were razed."[29] These statements are not supported by the photographic record, demolition permits, or newspaper reports. This description more accurately matches a fire under Hanson ownership in 1993.

P14-17

[25] Santa Clara County Department of Environmental Health File 07S2W16L01f
[26] 1/4/2011 Diepenbrock Harrison letter, Appendix E, page 2
[27] 1/4/2011 Diepenbrock Harrison letter, Appends D, page 42
[28] 1/4/2011 Diepenbrock Harrison letter, Appendix E, page 2
[29] Santa Clara County Historic Reference Public Access Binder page 126

1985	Striking Cupertino Kaiser Cement Corp. workers mark second month anniversary off the job Friday with a rally and little hope of a settlement in the near future. (SJ 8/31/85)
1985	EPA report identifies only one major air pollution site in the area -- the coal-and-coke burning Kaiser Cement plant in the hills above Cupertino. The disclosure that Kaiser Cement Corp. may be the single largest source of cancer-causing air pollution in Santa Clara County did not come as a great surprise to neighbors of the plant. (SJ 10/12/85)
1985	Air Board plans tests at Kaiser will measure metals that may cause cancer. (SJ 11/1/85)
1986	Hanson Industries agrees to acquire Oakland- based Kaiser Cement Corp. (SJ 11/28/86)
1987	A group of Cupertino and Los Altos residents will appear Tuesday before the Santa Clara County Board of Supervisors to object to the Kaiser Cement Corp.'s proposal to lower the hilltop ridge line near Monta Vista because of a landslide. (SJ 9/21/87)
1990	Bay Area Air Quality Management District ranks Kaiser Cement as top Santa Clara County polluter for arsenic, cadmium, chromium, mercury and nickel. (SJ 8/2/90)
1991	Nine South Bay companies, including Kaiser Cement & Gypsum, are told to warn nearby residents of potential cancer risks from their emissions, under a sweeping new regional program to reduce toxic air pollutants. (SJ 8/8/91)
1992	The British company that owns Kaiser **Cement** Corp. tonight is expected to unveil a plan to build 1,100 homes and a golf course in the hills west of **Cupertino.** (SJ 2/19/92)
1993	A fire at the Kaiser Cement Corp. plant in the hills behind Cupertino and Los Altos destroyed a storage building and sent a huge plume of smoke into the air … Kaiser operations faltered briefly when phone lines went out, … The building was at the northern edge of Kaiser 's property. It formerly held the company's administration and engineering offices, but since 1989 had been used for storage … The fire was reported at 4:42 p.m. and contained about 6 p.m. Firefighters were hampered by inadequate water supplies, said Teresa Meisenbach, senior deputy fire marshal with Central Fire. The cause remained under investigation, she said. (SJ 4/27/93)
1993	Kaiser Cement agrees to pay $685,933 for faulty cement (contaminated with dolomite in 1980) at Alameda County Jail. (SJ 3/6/91)
1995	The rest of the Kaiser Aluminum land in Cupertino is sold to the facility.[30]
1996	Kaiser Cement tire 45-day burning experiment raises health concerns. The Bay Area Air Quality Management District, which declared 25 Spare the Air days the same year, had quietly issued Kaiser its experimental permit in November 1995. (Metro 10/17-23/96)
2005	The dumping of quarry rock along a ridgeline in the Cupertino hillsides -- which created a jarring visual contrast to an otherwise natural setting -- will end this summer. The Palo Alto-based Committee for Green Foothills announced last week that the Hanson Quarry has agreed to end the dumping. (SJ 3/17/2005)
2007	HeidelbergCement buys Hanson.[31]
2008	The largest emitter of greenhouse gases in Santa Clara County is the Hanson Permanente Cement Plant in Cupertino. (SJ 2/9/08)

P14-17

[30] 1/4/2011 Diepenbrock Harrison letter, Appendix E, page 2
[31] http://www.aggregateresearch.com/article.aspx?ID=11020

APPENDIX A: Kaiser Cement Plans Housing Development

DEVELOPER'S VISION OF 'CITY OF 21ST CENTURY'

San Jose Mercury News (CA) - Thursday, February 20, 1992

Author: *BERNARD BAUER, Mercury News Staff Writer*

A spokesman for the owner of the Kaiser Cement Corp. unveiled a plan Wednesday night for a high-tech "city of the 21st and 22nd century" on 3,600 acres in the foothills west of Interstate 280 adjacent to Cupertino.

The community of homes, office parks, golf courses and open space would link up with mass transit and Highway 85 via a 17- mile Southern Pacific railroad line that now serves the Kaiser quarry and cement factory, said Los Angeles-based consultant John Janneck, who represents Hanson Trust PLC, the British holding company that bought Kaiser Cement in 1986.

Janneck, in making an informational presentation to the Cupertino Planning Commission, said the first phase of development could begin as soon as 1997. "It's reasonable to assume it will be developed by someone, so why not take advantage of it now?" Janneck said.

The dramatic proposal comes as Cupertino appears poised to enact strict limits on hillside development. Earlier this month, a majority of the city council endorsed a proposed ordinance that would effectively block significant development in the hills west of I-280, including the Kaiser property. While most of the Kaiser land is under Santa Clara County's jurisdiction, county regulations would require annexation to Cupertino before development could occur.

P14-18

"In order to protect those hills, we need that ordinance in -- period," said Phil Zeitman, co-chairman of CURB, a slow-growth citizens group in Cupertino . "What (Janneck) is proposing is mind-boggling." The hillside protection ordinance would require minimum lot sizes of five to 20 acres per home, effectively ending large- scale development in that area.

While Janneck did not specify the size of the proposed Kaiser development at Wednesday's meeting, city officials say he has suggested building up to 3,200 homes.

"We don't want to make this a rich man's enclave," Janneck said. "We must make this property available to everybody." Janneck said that the community could be served entirely by public transportation, eliminating the need for cars. He said the community should be built with Silicon Valley's cutting- edge technology.

About 20 percent of the Kaiser land is used for quarry and cement operations. The rest is woods. Janneck said that under one scenario, only 10 percent of the land -- 360 acres -- would be developed, with the rest remaining open space. By comparison, the adjacent hillside land owned by the Roman Catholic Diocese of San Jose, which also wants to build hundreds of homes, is 208 acres.

Kaiser officials estimate that the quarry has about 20 more years of material. The cement operation, which underwent a major modernization in 1984, is one of the worst air polluters in Santa Clara County.

Caption: Map
MAP: CARL NEIBURGER -- MERCURY NEWS (**Kaiser Cement** Property)
Memo: Shorter version ran on page 1B of the Morning Final edition.
Edition: *Peninsula/Am*
Section: *Local*
Page: *1B*
Index Terms: *CONSTRUCTION PRODUCT COMPANY PLANNING DEVELOPMENT ; CUPERTINO*
Record Number: *9201130287*

APPENDIX B: Santa Clara County Board of Supervisors and FPPC

FPPC STAFF RULES IN LEGAN CASE SUPERVISOR URGED NOT TO VOTE ON HILLSIDE DEVELOPMENT ISSUES

San Jose Mercury News (CA) - Thursday, July 4, 1985

Author: *MICHAEL REZENDES, Mercury News Staff Writer*

In a long-awaited opinion, the state Fair Political Practices Commission staff suggests that Santa Clara County Supervisor Tom Legan disqualify himself from further votes on a measure that would increase the value of property owned by his employer, Kaiser Cement Corp.

The opinion, which has been referred to the five FPPC commissioners, strongly contradicts the arguments of County Counsel Don Clark, who has said Legan acted properly when he proposed a general plan amendment that would nearly double the allowable density of development on county hillsides.

The commissioners are scheduled July 12 to hear opinions for and against Legan's position, and are expected to make a final decision on the matter. Lynn Montgomery, a spokeswoman for the FPPC, said the commission will not rule on whether Legan violated state conflict-of-interest laws on actions he has already taken. "The decision will simply set up guidelines for him to follow from now on," she said.

Legan said he intends to challenge the FPPC staff opinion before the commission. "I don't think that opinion is the last word," he said. Although he declined to be specific, he also said, "There are some areas (in the opinion) that were not appropriately addressed, and we'll be addressing (them) before the commission." Clark said he'll represent Legan at the commission's meeting in Sacramento. "I'm maintaining our initial position," he said.

Legan requested an opinion from the FPPC after newspaper articles raised the possibility that he had violated conflict laws. Since the articles have appeared, he has refrained from voting on all hillside matters while awaiting the FPPC ruling.

P14-18

Legan's employer operates a mineral quarry in part of its 3,260 acres of hillside property in the northwestern part of the county. Parts of the property are in the cities of Cupertino and Palo Alto. About two-thirds of the Kaiser property is in a hillside zone under county jurisdiction. Legan is rock products manager at Kaiser and owns more than $1,000 in company stock.

In July 1984, he suggested that the county loosen development restrictions on the 180,000 acres of land in its hillside zone. And in December, he was part of a 3-2 board majority that voted to proceed with an environmental study of the effect of his proposed general plan amendment.

State conflict-of-interest law says no public official "shall make, participate in the making, or in any way attempt to use his official position to influence a governmental decision in which he knows or has reason to know he has a financial interest." The law says an official has a financial interest in a decision if "the decision will have a financial effect, distinguishable from its effect on the public generally," on a source of income for the official.

After questions about the propriety of Legan's actions were raised, Clark said Legan acted properly because the effect of Legan's proposal "is not distinguishable from its effect upon all owners of hillside property in the county" -- arguing that hillside property owners make up a "significant segment" of the general public.

But the FPPC staff disagreed. After determining that Legan's proposal would have increased the fair market value of Kaiser property by approximately $2.9 million, the opinion says "the effect on Kaiser will clearly be distinguishable from the effect upon the general public, most of whom will not be affected at all."

With Legan not voting on hillside development, the board seemed deadlocked 2-2 on the issue. In the December vote to study Legan's proposal, Legan was joined by Supervisors Susanne Wilson and Zoe Lofgren. Supervisors Rod Diridon and Dianne McKenna opposed the study. The board never gave final approval to the study, and in March voted to drop the study from its agenda until the FPPC issued its opinion. On June 25, McKenna persuaded the

board to set up a task force to study preserving open space on the hillsides. The vote was 4-0, with Legan abstaining. On Wednesday, McKenna said she was not surprised by the FPPC staff opinion. "I've anticipated that opinion," she said. "That's why I went ahead with my proposal."

Caption: Photo
Supervisor Tom Legan . . . Employed by Kaiser Cement
Edition: *Morning Final*
Section: *Local*
Page: *1B*
Index Terms: *CITY COUNCIL ETHICS ZONING DEVELOPMENT OFFICIAL SAN-JOSE*
Record Number: *8501090639*

LEGAN CAN'T VOTE ON LAND-USE ISSUE, STATE PANEL RULES

San Jose Mercury News (CA) - Saturday, July 13, 1985

Author: *ARMANDO ACUNA, Mercury News Sacramento Bureau*

The state Fair Political Practices Commission ruled unanimously Friday that Santa Clara County Supervisor Tom Legan can't vote on a land-use issue that could financially affect his employer, Kaiser Cement Corp.

On a 4-0 vote, the commission upheld the legal opinion of its staff, which said efforts by Legan to increase housing densities on hillsides in the unincorporated areas of the county would substantially increase the value of Kaiser property.

P14-18

. . .

County Counsel Donald L. Clark, who represented Legan at the hearing, said there was no conflict of interest because allowing more housing on the hillsides would have affected all owners of hillside property, who they claimed represented a "significant segment" of the public.

But the FPPC staff said a change in the county's general plan allowing higher hillside densities would increase the value of Kaiser's undeveloped land by $2.9 million, a result the staff said "will clearly be distinguishable from the effect upon the general public."

Clark argued that Kaiser had no plans to develop any of its land for housing, stressing the "unity of use and unity of ownership" based on the quarry operation.

Commissioner Michael B. Montgomery was skeptical. He said that if Kaiser really didn't want to develop its land, then why hadn't the company made an effort to say, "We don't want to be part of the higher density." Later in the hearing Montgomery said Kaiser's reluctance to "to take everyone off the hook . . . sort of bothers me a little bit." Montgomery noted, for example, that Kaiser could sell its undeveloped property to residential builders and keep the quarry. And Commissioner Lim P. Lee, noting the clamor for more housing in the South Bay, said, "If the price is right, Kaiser will sell that land."

Caption: Photojump page hed
Supervisor Tom Legan . . . Kaiser rock products manager
Edition: *Morning Final*
Section: *Local*
Page: *1B*
Index Terms: *POLITICS SANTA-CLARA-CO.*
Dateline: *Sacramento*
Record Number: *8501110813*

APPENDIX C: 1983 Letter from Kaiser Aluminum to EPA stating that the company is separate. This also supports the end of Stevens Creek Blvd. Source: Page 19 of the only EPA Kaiser Aluminum (0903175) document in the database that is approved for release to the public from Stevens.Shelley@epamail.epa.

P14-19

KAISER ALUMINUM

KAISER ALUMINUM & CHEMICAL CORPORATION

September 15, 1983

Ms. Vera Brady
Environmental Protection Agency
Mail T-2-2
215 Fremont Street
San Francisco, CA 94105

Dear Ms. Brady:

This is your notification that our address has changed from:

RCRA 1. Kaiser Aluminum, Stevens Creek Road, Permanente, California } CAD009155

to: Kaiser Aluminum, Foil Plant, 23333 Stevens Creek Boulevard, Cupertino, CA 95014.

2. Kaiser Cement is still located at the west terminus of Stevens Creek Boulevard, Permanente, California. CAD009109

Super-Fund CA Docket

We are two separate companies who are located next to each other.

Very truly yours,

George McGee

G. A. McGee
Plant Engineer

itk

23333 STEVENS CREEK BLVD., CUPERTINO, CALIFORNIA (408) 252-3780

3.4.14 Comment Letter P14: Rhoda Fry

P14-1 This comment has been addressed. See Response P12-1.

P14-2 Copies of all NOP comment letters were included in the Scoping Report prepared for the Project, published in November 2011 and included as Appendix A in the Draft EIR. The commenter is correct that there is no letter from Cupertino City Manager David Knapp. Comment noted. See Master Response M1(A) pertaining to vested rights. See also Response P12-1.

P14-3 The Draft EIR analyzes the environmental impacts resulting from implementation of the Reclamation Plan Amendment published in December 2011. As explained in Draft EIR Section 1.1 (page 1-1), the "December 2011 application supersedes all prior applications for amendment of the 1985 Reclamation Plan." As such, this document does not consider prior reclamation plans proposed by the Applicant, not does it list changes between the current RPA and past versions. The EIR does, however, consider the scoping comments made pursuant to the NOPs published for the current and past RPAs in 2007, 2010, and 2011 (see Draft EIR Section 1.4-1, page 1-4 et seq.) Additional information on opportunities for public participation in the CEQA process, including opportunities for the public to provide input, is provided in Draft EIR Chapter 1, as well as Final EIR Chapter 2.

Monitoring and Enforcement

The commenter asserts that, per the 1985 Reclamation Plan, the WMSA should be revegetated by now, and questions the County's ability to ensure the next plan is properly implemented. As explained in Master Response M1(B), the County conducts annual inspections of the Permanente Quarry to evaluate compliance under SMARA, and will continue to do so until final reclamation is complete. Separate from and independent of its monitoring activities under SMARA, the County has prepared a MMRCP, which will be included with the County's Findings of Fact and Conditions of Approval for the Project. This will ensure effective, enforceable implementation of the mitigation measures imposed by the County pursuant to the EIR for the Project.

Segmentation

The comment suggests that the analysis improperly segments the environmental review of a future proposal to excavate a new pit from the current effort. An EIR must describe the entire project being proposed for approval, or the "whole of the action" in CEQA terms. A lead agency may not split a single project into smaller pieces and thereby avoid reviewing all of the environmental effects or otherwise limit the scope of environmental review. A project that is related to a proposed project that has independent utility, meaning that it is not necessary for the project to proceed, need not be included in a single EIR and may be reviewed independently in its own EIR. *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal. App. 4th 70.

Although an EIR must analyze the impacts of improvements necessary to serve the project, it need not examine the impacts of improvements that are planned independently of the project. In *Anderson First Coalition v. City of Anderson*, 130 Cal. App. 4th 1173 (2005), the Court rejected arguments that an EIR for a commercial development improperly segmented the project because it did not analyze, as part of the project, interchange improvements that would be required to mitigate cumulative effects to traffic because the interchange improvements were based on the cumulative effects of several projects, would serve the entire surrounding area, and would not change the scope or nature of the project. The Draft EIR did not segment the analysis of a future proposal to excavate a new pit. See Master Response M4.

P14-4 The Draft EIR defines Project components in Chapter 2, *Project Description*, page 2-1 et seq. See Master Response M4 for additional clarification on which elements were or were not included in the Project description, including surface mining, the Cement Plant, and excavation of a new quarry pit. Regarding the Quarry's vested right to mine, see Master Response M1(A). Regarding health risks from mercury, see Response A2-2.

The commenter's assertion that, by importing limestone, the Applicant has demonstrated that it is being disingenuous when it comes to the relative importance of the Quarry, is noted. See Master Response M2(A). The commenter asserts that the history and volume output of the "rock crusher" are not disclosed in the EIR. The commenter is referred to Draft EIR Section 2.6.6, *Rock Plant* (page 2-11 et seq.), which states: "The Rock Plant is an existing, fully-integrated rock processing facility capable of an annual throughput of approximately 2,000,000 tons of aggregate…"

P14-5 The commenter questions the adequacy of the analytical baseline relied upon for purposes of the environmental review, and suggests that a different baseline be used. See Master Response M2(B) pertaining to baseline.

P14-6 The commenter presents opinions and information on a number of issues. These issues are addressed below in the order in which they appear in the comment.

The commenter's request that the Applicant stop mining is noted; see Master Response M2(A). Regarding health risks from mercury, see Response A2-2. The commenter's question of whether local limestone and/or the Cement Plant are necessary is noted; see Master Response M2(A).

The comment that production would be nearly doubled with a 16-year project versus a 9-year project is not clear as to which alternatives are being referenced; however, for the purposes of this response it is assumed that the commenter is referring to the No Project Alternative, discussed in Draft EIR Section 3.3.1.3. Under the No Project Alternative, the total amount of production would not be doubled, rather, the timeframe in which a given amount of production would occur would differ than under the Project: "…under the No Project scenario in which mining would continue at the

baseline rate, it would take approximately 16 years to reach the same total production as would be reached in 9 years under the Project" (page 3-14 et seq.).

The commenter's opinion that other "options" (i.e., alternatives) must be provided is noted. Draft EIR Chapter 3 describes the process that was used to identify and screen alternatives for consideration, provides the rationale for why some alternatives were eliminated from consideration, and describes those alternatives that were carried forward for analysis in the EIR.

Regarding the ability for the County and other agencies to regulate the Quarry, as well as information on the Quarry's history of violations, see Master Response M3 on compliance status issues. The comment on fatal incidents does not address the adequacy or accuracy of the Draft EIR, and is noted. Regarding the feasibility of County-enforcement of mitigation measures, see Response P14-3.

P14-7 The commenter presents opinions on a number of issues. These issues are addressed below in the order in which they appear in the comment.

Regarding Quarry and EMSA compliance with County and other regulations, see Draft EIR Section 2.4 (page 2-7 et seq.) and Master Response M3. Regarding selenium in the EMSA, see Master Response M5. Regarding the composition of the EMSA, see Draft EIR Section 2.6.1, page 2-10. The comment on Quarry compliance with building codes is noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

The commenter's opinion that past violation on the part of the Quarry indicate that future violations will occur as well is noted. As a fundamental matter, parties both public and private are entitled to a presumption that they will comply with the law. See also Response P14-3 regarding the County-enforcement and efficacy of mitigation measures. Height restrictions in the EMSA are described on Draft EIR page 2-16: "Final elevations in the EMSA would be a maximum of 900 feet amsl…"

The commenter does not provide specifics regarding what circumstances the County Supervisors voted on facility permits, and as such the relevancy of that vote in the context of the Draft EIR cannot be substantiated. The Quarry's vested right to mine is addressed in Master Response M2(A).

P14-8 Regarding the historic headquarters and laboratory burnt by arson, see Response P12-4. Regarding the contents of soils in the EMSA, see Response P1-2. Past plans to build housing within the Project Area are not within the Project description, and as such are not examined in the Draft EIR. The Project examined by the Draft EIR is a proposed amendment to the existing Reclamation Plan for the Quarry, published in December 2011. As explained in Draft EIR Section 1.1 (page 1-1), the "December 2011

application supersedes all prior applications for amendment of the 1985 Reclamation Plan." For more information about vested rights, see Master Response M1(A).

P14-9 The commenter expresses concern about hazardous materials in the Project Area, including that 'samples taken have been arbitrary.' The commenter does not specify which samples are in question, and as such, this response cannot clarify the methodology for choosing sample sites. Draft EIR Section 4.9 (page 4.9-1 et seq.) analyzes potential impacts of the Project pertaining to hazards and hazardous materials. Regarding the testing of soils in the EMSA, see Response P1-2. Information about removal of structures without appropriate permits is noted, and the County will consider it as part of its decision-making process on the Project. Quarry violations are addressed in Master Response M3 regarding compliance status. Permits, approvals, and consultations expected to be required for approval of the Project are listed in Table 1-1 on Draft EIR page 1-3, and include a demolition permit from the Santa Clara County Department of Planning and Development.

P14-10 Comment noted. Operation of the Cement Plant is not included in the Project description since the Cement Plant is a separately-permitted industrial use. The Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. See Master Response M4(B) for further explanation on why the Cement Plant was not included in the Project description.

P14-11 The comment relates to the HRA that was conducted by others for the Cement Plant and not to the HRA that was separately conducted for and included in the Draft EIR for the Project. The Cement Plant HRA was relied upon in this Draft EIR only for the evaluation of cumulative health risk impacts, not for the incremental health risks associated with the Project. With regard to the validity of using the Cement Plant HRA for the cumulative analysis, it should be noted that the Cement Plant HRA has been accepted by the BAAQMD and OEHHA. A notice of this approval is available on the BAAQMD website at http://www.baaqmd.gov/~/media/Files/Engineering/Air%20Toxics%20Programs/Lehigh%20HRA%202011/Lehigh%20ATHS%20status.ashx?la=en.

P14-12 Historical high flows in Permanente Creek that flowed through Los Altos were likely a result of large storm events and it is not clear why the comment refers to the flows as "unpermitted." The analysis in the Draft EIR (Impact 4.10-4, page 4.10-48) concluded that the Project could increase flows to Permanente Creek following the reclamation of the Quarry pit; however, this impact would be mitigated with the construction of Basin 40A (see Mitigation Measure 4.10-4 and see Master Response M7). Therefore, the Project would not result in excessive flows to Permanente Creek that would overwhelm flood control protection or cause downstream hydromodification.

The reclamation of the PCRA, as described in the Draft EIR (Section 2.6.8, page 2-26), proposes to reclaim approximately 49.2 acres of mining-related disturbance. The Applicant has proposed a customized reclamation treatment for each PCRA subarea.

The reclamation of the PCRA would be complete in addition to Permanente Creek restoration work required under the long-term creek restoration plan that is currently being developed with the RWQCB for the Permanente Creek watershed (URS Corporation, 2011). The RPA adopts certain restoration concepts proposed in the Restoration Plan. The PCRA and the Permanente Creek Long-term Restoration Plan (footnote 7) would restore much of Permanente Creek within the Lehigh property.

The lack of discussion in the Draft EIR of the unmapped drainage systems and "mystery pipes," does not constitute a deficiency in the Draft EIR. Identification and mapping of these pipes is not necessary prior to approval of the EIR. The purpose of the Draft EIR is to analyze the potential direct, indirect, and cumulative environmental effects of implementing the proposed RPA relative to baseline. The presence of these pipes is considered part of the baseline. Identifying unmapped pipes that have been previously observed by the RWQCB is an issue associated with operational compliance with water quality regulations, as required by the RWQCB, rather than CEQA analysis of the Project.

P14-13 See response to comment P12-6. It is not clear from the comment which ponds have received water violations and therefore, it is difficult to provide a detailed response.

P14-14 The PG&E natural gas line located in the Project Area is described on Draft EIR page 2-36: "PG&E also provides natural gas service to the site. However, no facilities in the Project Area use or would use natural gas. An inactive powerline and a natural gas pipeline currently cross the EMSA. The powerline would be dismantled and natural gas line removed/rerouted before overburden is placed in the affected area. These dismantling and removal/rerouting activities necessarily would occur as part of the existing mining operation, and are not part of the Project."

P14-15 Comment noted. The Draft EIR discloses the NOVs issued by the County (see Draft EIR page 2-8, third paragraph), and describes the areas of existing instability within the Quarry property (Draft EIR Section 4.7.1.4). The comment does not provide any evidence or cite to any published statements to support the assertion the proposed reclamation slopes are not adequate to ensure future slope stability. Impact 4.7-1 (Draft EIR pages 4.7-29 et seq.) states that the final reclamation of slopes within the Quarry have been designed to achieve adequate slope stability. This conclusion is based on peer-reviewed geotechnical studies. The commenter also cites issues regarding emergency repairs to slides and compliance with SMARA. As fully discussed in Master Response M3, the Project is intended to abate the NOVs and come into compliance with SMARA.

P14-16 The commenter suggests that San Francisco garter snake should be included in the Draft EIR assessment. The San Francisco garter snake was considered in Appendix A of WRA's 2011 Biological Resources Assessment, but excluded from a detailed assessment in that document, as the known range of the subspecies does not extend south into Santa Clara County. The nearest recorded occurrence of San Francisco garter snake is

approximately eight miles north of the Project Area. Based on this information, this subspecies was not included in the EIR assessment of special-status species, and would not be impacted by the Project.

P14-17 The comment includes several pages of information pertaining to vested rights. The commenter is referred to Master Response M1(A).

P14-18 This comment does not address the adequacy or accuracy of the Draft EIR. The Project examined by the Draft EIR is a proposed amendment to the existing Reclamation Plan for the Quarry, published in December 2011. Past plans for development of the Project Area are not examined in the Draft EIR, as they are not relevant to the proposed RPA. As explained in Draft EIR Section 1.1 (page 1-1), the "December 2011 application supersedes all prior applications for amendment of the 1985 Reclamation Plan." See Master Response M4.

P14-19 Comment noted. This comment does not address the adequacy or the accuracy of the Draft EIR. See Response P14-18.

Date: February 21, 2012
To: Rob Eastwood
Santa Clara County Planning Office, County Government Center
70 W. Hedding St., 7th Floor, East Wing, San Jose, CA 95110
Re: Comments and questions for the Lehigh Permanente Quarry Reclamation Plan Amendment (RPA) Project Draft Environmental Impact Report (EIR) (SCH#2010042063)

A California Environmental Quality Act (CEQA) review 13-years after the illegal expansion of an open pit mining operation is confirmation of a lead agency's failure to lead. Before the Santa Clara County Board of Supervisors (Board) retroactively certifies the Lehigh Permanente Quarry (Lehigh/Quarry) RPA EIR, they had better figure out whether or not their constituents are being poisoned by the Quarry's past and present illegal activities. P15-1

Illegal demolitions: According to a public records request, at least 10 structures on an adjacent parcel formerly owned by Kaiser Metals Corp. and Kaiser Aluminum and Chemical Co. (Kaiser), were demolished without a Final Inspection; their permit status is "incomplete." **(Exhibit A)** P15-2

Left: Kaiser's World War II munitions and chemical factory. **Right:** After the illegal demolition of the factory, leaching mining material was dumped within 250 ft of the Permanente Creek without pollution control measures. **Source:** Google Earth 1948 and 2004 P15-3

After dodging CEQA and the Surface Mining and Reclamation Act (SMARA), new owner Hanson Cement began illegally grading and covering up the Kaiser parcel, where hazardous materials had been used and stored since World War II, with tons of mining waste. The Kaiser address (23333 Stevens Creek Blvd.) was eliminated; the Quarry's name and operator were changed to Lehigh; and the parcel's hazardous materials legacy misleadingly changed to "the Quarry's historic 70-year old East Materials Storage Area (EMSA)." The simple truth is Lehigh's so-called "historic EMSA" wasn't included in the Quarry's original 1985 Reclamation Plan because no mining activities were taking place on that parcel to be reclaimed until after the illegal demolitions and expansion. P15-4

Without an honest and thorough environmental review, a potential public and environmental health emergency will continue to be concealed from the public, and possibly a future housing development. Therefore, the current condition of the "EMSA" is an insufficient CEQA baseline. Fortunately, County regulations, when enforced, require "incomplete" demolition permits to be "renewed," which will ensure that the RPA EIR baseline is not based on a manipulation. P15-5 P15-6 P15-7

The County has been reckless in their lack of enforcement of CEQA and SMARA **(Exhibit B)**. Was it really just a coincidence that the County failed to perform their required annual SMARA inspection the exact same year 9 structures were illegal demolished in 1998? A full 2 years and 7 months elapsed before the County resumed inspections in 2000, filing what appears to be a fraudulent report with the State Office of Mine Reclamation (OMR): "Stream Protection = OK. Tailings and Mine Waste Management = OK. Building, Structure, Equipment Removal = Not Applicable. Number of Violations = Zero." **(Exhibit C)** P15-8

After the illegal hills of mining waste became visible from miles away, a concerned citizen alerted the County – and was completely ignored. But for the citizen's persistence in contacting the OMR (which led to the first SMARA Notice of Violation in 2006) this parcel's hazardous materials legacy would have been completely concealed from the public. As a matter of fact, the Quarry expansion continues on unabated and without financial penalty, courtesy of a backdoor "AGREEMENT" made in 2009 between the County and Lehigh (no public hearing). **(Exhibit D**)

P15-9

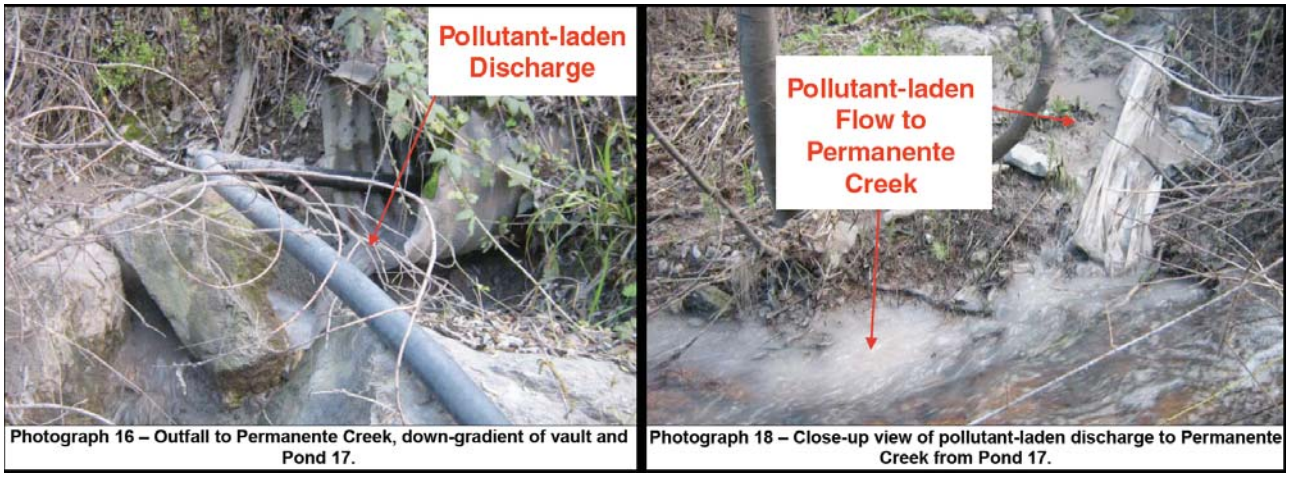
P15-10

"EMSA" mining waste: A view from Rancho San Antonio Park's PG&E Trail. **Source:** QuarryNo

This "AGREEMENT" is the epitome of complicit negligence: Immediately adjacent to the mining waste is the Rancho San Antonio County Park and Open Space Preserve, which welcomes upwards of 500,000 visitors annually. In other words, unregulated particulate matter/fugitive dust has been blowing into the lungs of unsuspecting hikers, joggers and equestrians for over a decade; the distance from the "EMSA" to the closest public access trail is just 550 ft.

P15-11

Illegal discharges of pollutants: On August 24, 2011, the Sierra Club issued a Notice of Intent to Sue "Lehigh… for significant and ongoing violations of the Clean Water Act" **(Exhibit E)**: "Due to chronically elevated levels of selenium and toxicity immediately downstream from the Permanente facility, the EPA recently approved the listing of Permanente Creek as impaired for these pollutants… Pollutants illegally discharged by Lehigh into Permanente Creek also enter Santa Clara County's underground drinking water supply as they flow across the unconfined areas of the Santa Clara Subbasin aquifer. **The Santa Clara Subbasin aquifer is the primary reservoir of drinking water for San Jose and surrounding cities**." [Emphasis added]



Photograph 16 – Outfall to Permanente Creek, down-gradient of vault and Pond 17.

Photograph 18 – Close-up view of pollutant-laden discharge to Permanente Creek from Pond 17.

P15-12

Pollutant-laden discharges flow from Lehigh into the Permanente Creek. **Source:** U.S. Environmental Protection Agency (EPA) Inspection Report, Lehigh Southwest Cement Co., February 10, 2011

Lehigh readily admits they discharge water that contains – by their own measure – harmful levels of pollutants into the Permanente Creek, while also claiming to have a "valid permit" to do so. Not surprisingly, the Regional Water Quality Control Board (RWQCB) disagrees:

"Lehigh repeatedly asserts that the Facility's discharges of quarry bottom water, wash-down water, and dust suppression water are in compliance... The Industrial General Storm Water Permit specifically prohibits all three of these self–admitted discharges from the Lehigh facility. Lehigh is grossly mistaken in its assertion that the Facility is permitted to discharge these three types of non-storm water flows."

P15-12

On December 19, 2011, the Sierra Club filed a lawsuit in federal court, asking that Lehigh be forced to stop dumping untreated wastewater containing dangerous toxins into Permanente Creek, as well as pay multi-millions in fines for violating the Clean Water Act.

P15-13

After the Board's careless disregard for the Quarry's past and present illegal activities, yet another "failure to exercise a sense of concern for future generations" (aka Love Canal) would be unthinkable. As required by law, the "owner or agent" of the illegal demolitions must be ordered by the County to "renew" their "incomplete" demolition permits. This might ensure a legitimate environmental review baseline, one that could determine whether or not the citizens of Santa Clara County are being poisoned by these unconscionable acts.

P15-14

Questions

Before the Lehigh RPA EIR is certified, will the County:

1) Order Lehigh to amend their RPA to reflect the hazardous materials legacy of the "EMSA"?

P15-15

2) Order Lehigh to stop their pollutant-laden discharges into the Permanente Creek?

P15-16

3) Determine if there are poisonous substances (pollutants) contained in the "EMSA" mining waste?

P15-17

4) Produce certified proof that the illegally demolished structures, and their hazardous chemical contents, were disposed of properly off-site rather than buried under millions of tons of mining waste?

P15-18

5) Order core sample testing of Lehigh's 3510-acre landholding to determine whether or not Santa Clara County's primary drinking water aquifer is being poisoned as a consequence of the documented illegal acts that have taken place since the 1985 Reclamation Plan baseline: illegal demolitions, illegal expansion, and illegal pollution discharges?

P15-19

Prior to the illegal demolitions:

6) Did the owner or agent submit the required certification of filing to the County for the State Water Resources Control Board (SWRCB) Notice of Intent (NOI) to Comply with the Statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activity?

7) Did the owner or agent submit to the County's Building Inspection Office a completed copy of the Bay Area Air Quality Management District's demolition notification form – <u>including a completed Asbestos Survey Report</u>?

8) Did the owner or agent contact PG&E regarding disconnection of utilities, and obtain a plumbing permit clearance signature from the County's Environmental Health Services for septic tank abandonment?

P15-20

9) For environmental review purposes under CEQA, did the owner or agent obtain the required clearance signature from the County's Planning Office for the Identification of Structures for Potential Historic Significance prior to demolishing this World War II munitions factory and chemical laboratory?

P15-20

10) Did the owner or agent complete Part II of the Identification of Structures for Potential Historic Significance form as required for structures older than 50 years, and submit photographs of each elevation of the structures?

Sincerely,

Susan Sievert
A resident of Santa Clara County, California

Cc: Lisa P. Jackson, U.S. EPA Administrator

ATTACHMENTS

Exhibit A: Public Records Request for Permanente Quarry Demolition Permits, February 10, 2011

Exhibit B: Office of Mine Reclamation 30-day Pending Removal from the AB 3098 List, Reclamation Plan Non-compliance, Permanente Quarry, Mine ID #91-43-0004, July 20, 2011

Exhibit C: Santa Clara County's Annual Surface Mining and Reclamation Act Inspection Report for the Permanente Quarry, covering the years 1998, 1999, 2000

Exhibit D: 2009 "Agreement" between Santa Clara County and Lehigh Southwest Cement Company

Exhibit E: Sierra Club's Notice of Intent to Sue for Violations of the Clean Water Act at Lehigh Southwest Cement Company's Permanente Plant in Santa Clara County, California, August 24, 2011

Letter P15

County of Santa Clara
Department of Planning and Development
County Government Center, East Wing
70 West Hedding Street, 7th Floor
San Jose, California 95110

	Administration	Development Services	Fire Marshal	Planning
Phone:	(408) 299-6740	(408) 299-5700	(408) 299-5760	(408) 299-5770
Fax:	(408) 299-6757	(408) 279-8537	(408) 287-9308	(408) 288-9198

February 10, 2011

RE: **Public records request for demolition permit for:**

Site Address: 0 Stevens Creek Blvd./24001 Stevens Creek Blvd., Cupertino

Assessor Parcel No.: 351-10-005

Present Jurisdiction: County

Bldg. Permit #	Date	Description	Status
19658	06/25/74	Demolish	Incomplete
76991	02/27/98	Demolish Storage Bldg.	Incomplete
76992	02/27/98	Demolish Office Bldg.	Incomplete
76993	02/27/98	Demolish Office Bldg.	Incomplete
76994	02/27/98	Demolish Office Bldg.	Incomplete
76995	02/27/98	Demolish Storage Bldg.	Incomplete
76996	02/27/98	Demolish Storage Bldg.	Incomplete
76997	02/27/98	Demolish Office Bldg.	Incomplete
76998	02/27/98	Demolish Office Bldg.	Incomplete
76999	02/27/98	Demolish Office Bldg.	Incomplete

P15-21

Respectfully,

Michael L. Harrison

Michael L. Harrison,
Acting Building Official

Attachment

*Please see other side

Letter P15

COMPLETED:	The project has received a final inspection by office.
INCOMPLETE:	The project has not received a final inspection by this office. If the last inspection was made more than six months, ago, the building permit will have to be renewed by the owner or agent.
JURISDICTION:	If the parcel was annexed to a city, information regarding construction will have to be obtained from the noted city.
NO PERMIT:	A building permit has not been issued by this office, for work at this address. In order to legalize construction, the owner or his agent has to apply for a building permit. For more information, please ask for a building permit information handout.
PRIOR TO: 1947	Buildings constructed prior to 1947 were not required to have a permit.

P15-21

NATURAL RESOURCES AGENCY

EDMUND G. BROWN, JR., GOVERNOR

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

OFFICE OF MINE RECLAMATION

801 K STREET • MS 09-06 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 323-9198 • FAX 916 / 445-6066 • TDD 916 / 324-2555 • WEB SITE conservation.ca.gov

July 20, 2011

Via Email: Scott.Renfrew@LehighHanson.com

Via Certified Mail: 7010 2780 0000 4767 7882

Mr. Scott Renfrew
Designated Agent
Lehigh Southwest Cement Company
24001 Stevens Creek Boulevard
Cupertino, CA 95014

Dear Mr. Renfrew:

30-DAY PENDING REMOVAL FROM THE AB 3098 LIST, RECLAMATION PLAN NON-COMPLIANCE, PERMANENTE QUARRY, MINE ID #91-43-0004

P15-21

The purpose of this letter is to bring to your attention a matter of AB 3098 list eligibility pursuant to the Surface Mining and Reclamation Act of 1975 (SMARA) Section 2717(b) regarding the Permanente Quarry (Quarry). The Quarry is actively operated by the Lehigh Southwest Cement Company. The County of Santa Clara (County) is the SMARA lead agency for this surface mining operation.

On October 10, 2006, the County issued the Quarry an Order to Comply (OTC)/Notice of Violation (NOV) requiring the operator to prepare an amended reclamation plan and submit it for approval in accordance with a Compliance Schedule. Violations identified in the order included instability of the pit slopes and surface mining operations occurring outside the approved reclamation boundary. Based on that schedule, the Quarry should have come into compliance by December 2007. Subsequently, the schedule was extended for an additional two years to allow for completion of geotechnical investigations.

While still under the October 10, 2006 Order to Comply, the operator expanded operations outside the approved reclamation plan boundary and began dumping materials in the East Materials Storage Area (EMSA). The County issued a NOV on June 20, 2008 to the Quarry operator for the illegal stockpiling material outside the approved reclamation plan boundary.

In a status letter to the State Mining & Geology Board (SMGB), dated June 9, 2011, the County indicated that the CEQA review of the amended reclamation plan is underway.

The current target date for achieving full compliance with SMARA at the Quarry is June 2012. The letter states that this is the earliest date in which the Final Environmental Impact Report (FEIR) is expected to be certified, depending on the volume of public comments received by the County. This "best case" schedule is approximately five years longer than the OTC/NOV allowed for achieving compliance, and well after the original violations were brought to the County's attention.

Public Resources Code (PRC) Section 2770(a) provides that no person shall conduct surface mining operations unless a permit is obtained from, and a reclamation plan and financial assurances for reclamation have been submitted to, and approved by, the lead agency for the operation. Surface mining operations must be conducted in accordance with the approved reclamation plan. Except as provided under PRC Section 2714, any surface mining operations conducted without an approved reclamation plan is a violation of SMARA.

We understand that the County is reviewing two reclamation plans for the Quarry, one for the EMSA, and a more comprehensive reclamation plan. These plans cover two parts of the same operation. However, pursuant to California Code of Regulations (CCR) Section 3502(d) a surface mining operation as defined in PRC Section 2735 and Title 14 CCR Section 3501, shall have no more than one approved reclamation plan applicable to the operation.

P15-21

Further, CCR Section 3502(g) provides that, should an expansion of an operation into an area not covered by an approved reclamation plan be determined by the lead agency to be a substantial deviation, an amended reclamation plan shall be prepared that ensures adequate reclamation for the surface mining operation. The EMSA should not be treated as a separate reclamation amendment, but included in a single amended reclamation plan which includes all areas disturbed by surface mining operations.

The Department of Conservation's Office of Mine Reclamation (OMR) periodically publishes a list of mining operations that meet the requirements of PRC Section 2717(b). This list is generally referred to as the AB 3098 list, in reference to the 1992 legislation that established it. The Public Contract Code prohibits state agency purchases of mined materials produced by mining operations that are not included on the AB 3098 list. Sections 10295.5 and 20676 of these statutes also prohibit the sale of such materials to local government agencies. The requirements for inclusion on the AB 3098 list include compliance with the financial assurance requirements developed pursuant to PRC Section 2773.1.

This letter serves as official notice that, if the violations noted in the OTC extend beyond 30 days after the date of this notice, the Quarry will be removed from the AB 3098 List. The appropriate steps that the Lehigh Southwest Cement Company must take to resolve this violation is to:

1. Prepare and submit to the lead agency for approval, a reclamation plan amendment that encompasses all the area disturbed by surface mining operations, including those areas conducted outside the approved reclamation plan boundary. The Quarry will not be list eligible until the proposed reclamation plan amendment has been approved by the County.

2. Submit to the lead agency for approval, a revised financial assurance cost estimate (FACE) that includes the cost of reclaiming all the area disturbed by surface mining operations conducted outside the reclamation plan boundary. The Quarry will not be list eligible until the revised financial assurance has been approved by the County.

Proof of the adequacy of the FACE must be submitted to OMR by the lead agency, not by the mine operator. The submission must be in accordance with the SMGB financial assurance guidelines.

Reinstatement to the AB 3098 list requires an approved reclamation plan and financial assurances that cover the affected surface mining operation pursuant to PRC section 10295.5 (a). Prior to reinstatement, the Department will need to verify that the surface mining operations being conducted at the Quarry are covered by an approved reclamation plan and adequate financial assurances. P15-21

In summary, the Permanente Quarry, CA Mine ID #91-43-0004, is scheduled to be removed from AB 3098 list 30 days after the date of this notice unless the OTC violations are corrected.

If you have any questions regarding this letter, please contact Bret Koehler at (916) 323-9198.

Sincerely,

Kenneth E. Trott, Manager
Reporting and Compliance Unit

cc: Marvin Howell, Lehigh Southwest Cement Company
Gary Rudholm, County of Santa Clara
Stephen Testa, State Mining & Geology Board

State of California
DEPARTMENT OF CONSERVATION
OFFICE OF MINE RECLAMATION
MRRC-1 Page 2 of 2 (Rev. 04/97)

SURFACE MINING INSPECTION REPORT

VI. Is the operation in compliance with provisions of the approved Reclamation Plan and Mining Permit with respect to:	OK	VN	NI	NA
Wildlife Habitat	✓			
Revegetation	✓			
Agricultural Land				✓
Stream Protection	✓			
Tailings and Mine Waste Management	✓			
Building, Structure, and Equipment Removal				✓
Topsoil Salvage, Maintenance, and Redistribution	✓			
Backfilling, Regrading, Slope Stability, and Recontouring	✓			
Drainage, Diversion Structures, Waterways, and Erosion	✓			
Other (list or explain below)				

CA Mine ID #: 91-43-0004

Weather Code(s): CR

Duration of Inspection: 2.0 hr.

Approximate Disturbed Acreage: 200

Status of Operation Code(s): A

Status of Reclamation Code(s): R

P15-21

VII. Comments/Description of Violation(s) and Corrective Measure(s) Required [NOTE: please indicate if you have attached notice(s) of violation(s) and correction order(s), in lieu of description on this form]:

The previous inspection of the site took place on Nov. 2, 1997. This inspection report is to cover the calendar years of 1998, 1999 and 2000.

VIII. Number of Violations: 0	Inspector's Signature: Harry Rudhohm	Date Signed: 7-27-2000

DISTRIBUTION: White–Operator Green–State (by Lead Agency) Pink–Lead Agency Goldenrod–State (by Operator) Canary–BLM or USFS (if required)

97 90880

AGREEMENT

THIS AGREEMENT is made this 14th day of April, 2009, by and between the County of Santa Clara, a political subdivision of the State of California (hereinafter referred to as the "County") and the undersigned duly authorized representatives of Lehigh Southwest Cement Company and Hanson Permanente Cement, Inc. (hereinafter referred to as "Company") regarding the Permanente Quarry.

RECITALS

A. The Company owns and operates the Permanente Quarry ("Quarry"), which is located within the jurisdiction of the County.

B. In March 1985, the County approved a Reclamation Plan for the Quarry ("Reclamation Plan").

C. In October 2006, the County issued an Order to Comply/Notice of Violation ("2006 Order") pursuant to the Surface Mining and Reclamation Act of 1975 ("SMARA"), Pub. Res. Code § 2710 *et seq.*,to the Quarry owner/operator requiring the processing of an amendment to the Reclamation Plan to encompass mining-related disturbance outside of the approved reclamation plan (except for the cement plant), and set forth a compliance schedule for the amendment. A copy of the 2006 Order is attached as Exhibit A to this Agreement.

P15-21

D. In May 2008, the County issued a modification to the compliance schedule included in the 2006 Order ("2008 Schedule Modification"). A copy of the 2008 Schedule Modification is attached as Exhibit B to this Agreement. The 2008 Schedule Modification called for the Company to file a reclamation plan amendment by February 2010, with final County action on the amendment to take place in 2011.

E. In June 2008, the County issued a Notice of Violation ("2008 NOV") related to the placement of overburden material in an area known as the East Materials Storage Area ("EMSA"). A copy of the 2008 NOV is attached as Exhibit C to this Agreement. Among other things, the 2008 NOV instructed the Company to cease depositing material in the EMSA.

F. Due to operational needs at the Quarry, the Company desires to continue using the EMSA. The County is amenable to allowing the Company to use the EMSA pending final action on a reclamation plan amendment, provided the Company files and diligently pursues a reclamation plan amendment for the EMSA. Accordingly, the County and the Company agree as follows:

File 2250--09P

AGREEMENT

1. With respect to the Reclamation Plan amendment for the EMSA ("EMSA Amendment"), the parties agree as follows:

A. Not later than April 20, 2009, the Company shall submit to the County an application for the EMSA Amendment. Upon a timely request by Company to meet with County staff prior to April 20, 2009 to discuss the requirements for the application, County representatives will make themselves available for such a meeting.

B. Within thirty (30) days of the Company's submittal, the County shall make a completeness/incompleteness determination specifying in writing the information, if any, needed to make the application complete. The Parties intend to meet during the first week of May to facilitate the County's completeness review.

C. If the County deems the application incomplete, the Company shall respond to the County's incompleteness determination by providing a resubmittal within thirty (30) days after the incompleteness determination.

D. Within thirty (30) days of the Company's resubmittal, the County shall review the Company's resubmittal and determine the completeness/incompleteness of the application.

P15-21

E. In the event the County still deems the application incomplete, the Company shall be required to continue working in good faith with the County to provide the additional material within thirty (30) day resubmittal/review cycles as outlined above. However, if the County determines that the Company has not produced a complete application by July 20, 2009, the County shall assess, starting as of June 20, 2009, a penalty of $250/day, which daily penalty shall be doubled every thirty days thereafter, until such time as a complete application is submitted to the County and deemed complete by the County. The penalty shall cease when the County deems the application complete.

2. Upon execution of this Agreement, the Company may recommence use of the EMSA as depicted on Exhibits D and E, subject to the stipulations and understandings set forth in this Agreement, pending final action by the County on the EMSA Amendment, and the language in the 2008 NOV instructing the Company to cease depositing material in the EMSA is modified to conform to this Agreement.

3. Nothing in this Agreement shall be interpreted in a manner that indicates that the County will approve the EMSA Amendment or will allow the Company to continue using the EMSA if the EMSA Amendment application is denied or if the Company withdraws the EMSA Amendment application prior to the County taking final action on the application. Nor shall anything in this Agreement be interpreted as a waiver

of the County's legal authority, including but not limited to its enforcement authority under SMARA.

4. Due to timing requirements for geotechnical studies, the County agrees to amend and reissue the compliance schedule issued with the 2006 Order and revised pursuant to the 2008 Schedule Modification to extend the date for submission of the Quarry's overall Reclamation Plan amendment application from February 2010 to May 2010.

5. This Agreement is binding on the Company's successors in interest with respect to the Quarry property and operations.

IN WITNESS WHEREOF, the parties have executed this Agreement, in counterpart, on the day and year first hereinabove written.

LEHIGH SOUTHWEST CEMENT COMPANY,

By: _____

(SEAL)

ATTEST: _____

APPROVED AS TO FORM:

_____

Mark D. Harrison
Counsel for Company

P15-21

COUNTY OF SANTA CLARA,
A political subdivision of the State of California

By: _____
Jody Hall Esser
Director, Department of Planning & Development

APPROVED AS TO FORM AND LEGALITY:

_____

County Counsel

Letter P15

Reed Zars
Attorney at Law
910 Kearney Street, Laramie, WY 82070
307-745-7979

August 24, 2011

VIA CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. Henrik Wesseling, Plant Manager
Lehigh Southwest Cement Company
Hanson Permanente Cement, Inc.
Permanente Plant
24001 Stevens Creek Boulevard
Cupertino, CA 95014

Dr. Bernd Scheifele, Chairman
HeidelbergCement
Berliner Strasse 6
69120 Heidelberg
Germany

RE: Notice of Intent to Sue for Violations of the Clean Water Act at Lehigh Southwest Cement Company's Permanente Plant in Santa Clara County, California.

Dear Mr. Wesseling and Dr. Scheifele,

We are writing on behalf of Sierra Club to notify you of its intent to file suit against Lehigh Southwest Cement Company, Hanson Permanente Cement, Inc., Lehigh Hanson, Inc., and HeidelbergCement Group ("Lehigh") to enjoin and penalize significant and ongoing violations of the Clean Water Act at your Permanente Quarry and Cement Plant in Santa Clara County, California. Lehigh is liable for the continuous, unpermitted discharge into Permanente Creek of millions of gallons of polluted quarry water, containing elevated levels of selenium and other toxic and conventional pollutants, for at least the last five years. Lehigh is also liable for the continuous, unpermitted discharge of pollutants into Permanente Creek from tons of mine tailings and waste that have been dumped into Permanente Creek. These wastes act similar to coffee grounds, clogging Permanente Creek and continuously discharging a brew of harmful chemicals such as selenium and other toxic and conventional pollutants into its waters.

P15-22

Both of these types of continuous, unpermitted discharges have caused and/or contributed to significant exceedences of water quality standards for selenium and toxicity in Permanente Creek, have caused and/or contributed to Permanente Creek's state and federal listing as an impaired water body due to the presence of such pollutants, and have substantially diminished the creek's ability to sustain aquatic life including but not limited to steelhead trout and the California red-legged frog, both of which are federally listed as threatened species.

Pollutants illegally discharged by Lehigh into Permanente Creek also enter Santa Clara County's underground drinking water supply as they flow across the unconfined areas of the Santa Clara Subbasin aquifer. The Santa Clara Subbasin aquifer is the primary reservoir of drinking water for San Jose and surrounding cities.

The Clean Water Act at 33 U.S.C. § 1365(a)(1), authorizes citizens to bring suit to enjoin violations of an effluent standard or limitation and to seek civil penalties for such violations. The definition of effluent standard or limitation includes the discharge of pollutants into waters of the United States without a permit. Committee to Save Mokelumne River v. East Bay Utility Dist., 1993 U.S. Dist. LEXIS 8364, 11, n. 7 (E.D. Cal. 1993); aff'd, 13 F.3d 305, 309 (9th Cir. 1993), cert. denied, 115 S. Ct. 198 (1994). Violators of the Act are also subject to an assessment of civil penalties of up to $32,500 per day per violation for all violations occurring through January 12, 2009, and up to $37,500 per day per violation for all violations occurring after January 12, 2009, for each violation, pursuant to Sections 309(d) and 505(a) of the Act. 33 U.S.C. §§ 1319(d), 1365(a) and 40 C.F.R. §§ 19.1 - 19.4.

To the extent required by the Clean Water Act at 33 U.S.C. § 1365(a)(1), we are writing to notify you that Sierra Club intends to file suit in the applicable federal district court anytime 60 days after the postmark date of this letter to enjoin and penalize the violations described below.

P15-22

I. Background

Kaiser Cement Company opened the main Permanente quarry and original cement plant in 1939. Hanson Corporation purchased the quarry and cement plant from Kaiser in 1986. Lehigh Southwest Cement Company is the operator of the facility. Today Lehigh claims the quarry and plant provide over 50 percent of the concrete used in the Bay Area.

Permanente Creek runs from its headwaters in the Coast Range east through the middle of the quarry property, then north through the cities of Los Altos and Mountain View before draining into the San Francisco Bay.

Letter P15

From http://www.lehighpermanente.com/#/virtual-tour/4537662984.

II. The Violations

A. Unpermitted Quarry Discharges

P15-22

According to Lehigh's own statements, the company has been discharging without a proper permit, and continues to discharge without a proper permit, pollutants generated by its quarry mining operations directly into Permanente Creek. Permanente Creek is a water of the United States. In particular, Lehigh's quarry mining operations have exposed pollutants to both rain and ground water. As these waters flow over and through Lehigh's disturbed soils and rock, pollutants such as selenium, arsenic, molybdenum, nickel and manganese, residual blasting agent (ANFO), and other toxic elements and compounds, are picked up by the water and are collected at the bottom of the quarry pit. Lehigh then pumps the contaminated pit water on a regular basis from the quarry pit through a pipe into a waste pond (Pond 4) and thence through a pipe into Permanente Creek. Permanente Creek flows into the San Francisco Bay. Lehigh employs no pollution control measures to reduce or eliminate selenium and other toxic substances that are dissolved and suspended in its wastewater. As Lehigh explained to the Regional Water Quality Control Board, San Francisco Bay Region ("Water Board"):

> [T]he quarry dewatering process routes water to Pond 4, where it then discharges to Permanente Creek, almost continuously or regularly depending on the time of year, the volume of storm water and groundwater that collects in the quarry bottom. This regular dewatering process is interrupted only when regular maintenance of the pumping system or other aspects of the storm water management system require maintenance.

Lehigh Response to the Water Board, December 13, 2010, at page 6, attached hereto as **Exhibit A**. A map showing the location of the quarry pit, Pond 4, and the pipe that discharges selenium and other toxic pollutants from the pit and Pond 4 is attached hereto as **Exhibit B**.

According to Lehigh in that same response, "[t]he average *daily flow* into Pond 4 can range from 250,000 to 2,500,000 gallons." **Exhibit A** (emphasis added).

Not only that, Lehigh also admits that the wastewater it has been discharging into Permanente Creek, and that it continues to discharge into Permanente Creek, is contaminated with selenium[1] in concentrations that greatly exceed water quality standards. Again, according to Lehigh:

> The results of the metals analyses indicate that water being collected in the quarry may contain concentrations of selenium that exceed water quality standards, and, when discharged through the quarry dewatering system pursuant to the SWPPP [Storm Water Pollution Prevention Plan], could be contributing to exceedances of the water quality standards for selenium in Permanente Creek.

Exhibit C, Report of Potential Exceedance of Water Quality Standards, Geosyntec Consultants, March 17, 2010, p. 8. P15-22

Lehigh's qualification that the water it is discharging into Permanente Creek "could" contain concentrations of selenium above water quality standards is unnecessary. Although not a necessary element to establish liability under the Clean Water Act, Lehigh's own sampling evidence shows that selenium concentrations in its wastewater *are* in excess of water quality standards.

The water quality standards applicable to Permanente Creek are set forth in the 2007 San Francisco Bay Basin Water Quality Control Plan ("Basin Plan") and the California Toxics Rule at 40 C.F.R. §131.38. Both the Basin Plan and the California Toxics Rule establish a chronic total selenium standard of 5.0 micrograms per liter in fresh water. **Exhibit D**. Due to chronically elevated levels of selenium and toxicity immediately downstream from the Permanente facility, EPA recently approve the listing of Permanente Creek as impaired for these pollutants. **Exhibit E**, EPA Approval Letter, November 12, 2010.

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[1] "[S]elenium is a naturally occurring element, common in the environment. It is problematic only in high concentrations, but at certain levels has toxic effects. Selenium impacts the reproductive cycle of many aquatic species, can impair the development and survival of fish, and can even damage gills or other organs of aquatic organisms subjected to prolonged exposure. It can also be toxic to humans, causing kidney and liver damage, and damage to the nervous and circulatory systems." *Ohio Valley Envtl. Coalition, Inc. v. Hobet Mining, LLC,* 723 F. Supp. 2d 886, 900 (S.D. W.Va. 2010).

Water quality testing performed by Lehigh in January of 2010 found that the concentration of dissolved selenium in Pond 4 was 82 micrograms per liter, well over ten times the applicable 5.0 micrograms per liter water quality standard. (Had Lehigh properly analyzed for total selenium rather than just the dissolved component, this value likely would have been higher.) As explained above, Lehigh discharges the contaminated water in Pond 4 directly into Permanente Creek without employing any measures to reduce selenium concentrations. **Exhibit C**, Report of Potential Exceedance, Table 2-1 and Appendix A, page 4 of 16.

Lehigh has an Industrial General Storm Water Permit issued by the Water Board, but that permit, as its name indicates, only applies during specified storm events and not to the on-going, non-storm water discharges from Pond 4 described here. The Water Board emphatically confirmed this fact on February 18, 2011:

> Lehigh repeatedly asserts that the Facility's discharges of quarry bottom water, wash-down water, and dust suppression water are in compliance with the Industrial General Storm Water Permit. The Industrial General Storm Water Permit specifically prohibits all three of these self-admitted discharges from the Lehigh facility. *Lehigh is grossly mistaken in its assertion that the Facility is permitted to discharge these three types of non-storm water flows*.

Exhibit F, Water Board staff review and response to Lehigh's letter of December 13, 2010, in response to our "13267" letter of November 29, 2010, p. 1 (emphasis added).

P15-22

Because Lehigh pumps the water from its quarry pit into Pond 4 on a continuous or regular basis, and because Pond 4 is the functional equivalent of a full bathtub, the continuous pumping of quarry water contaminated with selenium and other toxic substances inexorably results in the continuous discharge of pollutants through a pipe directly into Permanente Creek. Lehigh has no permit authorizing this continuous discharge. Therefore, Lehigh has violated the Act every day, for each pollutant, for at least the last five years when it has actively pumped and discharged water-borne selenium and other toxic substances from its quarry to Pond 4 and thence to Permanente Creek without a permit.

B. Unpermitted Stream Fill Discharges

According to Lehigh's own reports, Permanente Creek has been used, and continues to be used, as a disposal area for quarry mining wastes. Mine tailings, overburden and other wastes have been dumped, and continue to be dumped into Permanente Creek throughout the stream's path within Lehigh's property. Lehigh's March 11, 2011 "Permanente Creek Long-Term Restoration Plan" documents many of these stream disposal sites. An annotated stream profile diagram, taken from Figure 2-5 in Lehigh's Restoration Plan and attached hereto as **Exhibit G**, shows the

location of some of the more notorious mine tailing and overburden waste disposal sites at Lehigh's quarry along the various sections of Permanente Creek.

Mining wastes have been dumped into Permanente Creek by bulldozers, dump trucks and other mining equipment, with the assistance of gravity. The disposal sites in Permanente Creek include, but are not limited to, those shown on **Exhibit G**, attached hereto. The disposal sites continuously discharge, release and otherwise add their toxins into the creek's waters much like coffee grounds in a percolator. As the waters of Permanente Creek flow over and through the mining wastes dumped into the creek, pollutants such as selenium, arsenic, molybdenum, nickel, manganese, residual blasting agent (ANFO), and other toxic elements and compounds, are dissolved into and suspended in the water. These added pollutants flow downstream through Lehigh's property, through public parks and neighborhoods, and finally into San Francisco Bay. The mine tailings and other rock and sediment wastes that physically remain in the creek bed and adjacent wetlands, or that are carried to various downstream locations during higher flow events, are also unpermitted pollutants that exist in the water column, banks and wetlands of Permanente Creek.

According to Lehigh's May 2010 Hydrologic Investigation, appended to its Reclamation Plan Amendment submitted to Santa Clara County on May 21, 2010, the average concentration of dissolved pollutants in Permanente Creek increases significantly as the creek flows through Lehigh's mining wastes. **Exhibit H**. For example, the water in Permanente Creek downstream of most of Lehigh's pollutant discharges at monitoring location SW-2 contains from three to over 100 times the dissolved concentrations of arsenic, selenium, nickel, manganese and molybdenum compared to the water upstream of most of Lehigh's discharges at monitoring location SW-1. See **Exhibit H**, Figure 6.2 (monitoring locations); Table 6.6 (average pollutant values for monitoring locations); and Figures 6.13 and 6.14 (bar charts illustrating significant increase in pollution from SW-1 to SW-2).

P15-22

Lehigh has no permit authorizing the continuous discharge of dissolved and suspended pollutants from mine wastes dumped into Permanente Creek described above. Lehigh has no permit for the mine wastes that continuously clog the bed, banks and wetlands of Permanente Creek described above. Therefore Lehigh has violated the Act every day at each disposal site for at least the last five years as a result of such unpermitted discharges.

III. Offer to review information.

To the extent you have evidence that shows, contrary to the allegations in this letter, that Lehigh is in full compliance with all applicable requirements we urge you to provide it to us so that we may potentially avoid, or at least limit, litigation on these issues.

IV. Conclusion

Lehigh has been operating, and continues to operate the Permanente facility in violation of the Clean Water Act. We will seek an injunction to end the illegal, unpermitted discharges alleged in this letter, to restore the hydrologic and aquatic integrity of Permanente Creek, and to recover, on behalf of the United States, the maximum civil penalty for Lehigh's Clean Water Act violations for at least the last five years, as allowed by the applicable statute of limitations.

The address of Sierra Club is 85 Second Street, Second Floor, San Francisco, CA 94105. Sierra Club has individual members who have been, and continue to be, injured by the excessive and unlawful discharges from Lehigh's Permanente facility into Permanente Creek described above. Those injuries are fairly traceable to Lehigh's unlawful discharges, and can be redressed, at least in part, through the cessation of such discharges. If you have any questions regarding the allegations in this notice letter, believe any of the foregoing information to be in error, wish to discuss the exchange of information consistent with the suggestion above, or would otherwise like to discuss a settlement of this matter prior to the initiation of litigation, please contact the attorneys below.

P15-22

Yours sincerely,

REED ZARS

Reed Zars
Attorney at Law
910 Kearney Street
Laramie, WY 82070
307-745-7979

GEORGE HAYS BY RZ

George Hays
Attorney at Law
236 West Portal Avenue, #110
San Francisco, CA 94127
415-566-5414

pc: by certified mail:

Lisa Jackson, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dorothy Rice, Executive Director
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Eric Holder, U.S. Attorney General
U.S. Department of Justice
950 Pennsylvania Avenue, N.W.
Washington, DC 20530-0001

Jared Blumenfeld, Regional Administrator
U.S. EPA – Region 9
75 Hawthorne Street
San Francisco, CA 94105

Bruce Wolfe, Executive Officer
San Francisco Bay
Regional Water Quality Control Board
1515 Clay St., Suite 1400
Oakland, CA 94612

Registered Agent
Lehigh Southwest Cement Company
Corporation Service Company
2730 Gateway Oaks Dr., Suite 100
Sacramento, CA 95833

pc: by regular mail

Santa Clara County Board of Supervisors
70 West Hedding Street
San Jose, CA 95110

P15-22

Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Stevens & Permanente Creeks Watershed Council
2353 Venndale Avenue
San Jose, CA 95124

Midpeninsula Regional Open Space District
330 Distel Circle
Los Altos, CA 94022-1404

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

Letter P15

Exhibits Provided in Enclosed CD

Exhibit A: Lehigh Response to the San Francisco Bay Regional Water Quality Control Board, December 13, 2010, page 6.

Exhibit B: Map showing the location of the quarry pit, Pond 4, and the pipe that discharges selenium and other toxic pollutants from the pit and Pond 4.

Exhibit C: Report of Potential Exceedance of Water Quality Standards, Geosyntec Consultants, March 17, 2010, p. 8.

Exhibit D: 2007 San Francisco Bay Basin Water Quality Control Plan ("Basin Plan") excerpts, and the California Toxics Rule at 40 C.F.R. §131.38.

Exhibit E: EPA approval letter listing Permanente Creek as impaired for selenium and toxicity, November 12, 2010.

Exhibit F: Water Board staff review and response to Lehigh's letter of December 13, 2010, in response to our "13267" letter of November 29, 2010, p. 1.

Exhibit G: Permanente Creek stream profile diagram showing examples of mine waste dump sites that continuously discharge pollutants into the creek.

Exhibit H: Hydrologic Investigation, Attachment F to Lehigh Reclamation Plan Amendment submitted to Santa Clara County on May 21, 2010, excerpts including Figure 6.2, Table 6.6, and Figures 6.13 and 6.14.

P15-23

3.4.15 Comment Letter P15: Susan Sievert

P15-1 The commenter expresses concerns that past illegal mining operations in the Project Area are not addressed in the EIR. The Draft EIR describes the NOVs issued by the County in 2006 and 2008 in Chapter 2, *Project Description*, on page 2-8. Regarding the compliance status of the Quarry and the County's authority to enforce compliance, see Master Response M3(A).

P15-2 The commenter's information about removal of structures without appropriate permits is noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A). Quarry violations are addressed in Master Response M3 regarding compliance status. Permits, approvals, and consultations expected to be required for approval of the Project are listed in Table 1-1 on Draft EIR page 1-3, and include a demolition permit from the Santa Clara County Department of Conservation and Development.

P15-3 The past use of the site for a munitions and chemical factory is disclosed in the Draft EIR and considered as part of the baseline condition. See Response A4-5. Assertions of illegal demolition and dumping of mining material near Permanente Creek are noted. Consistent with SMARA, the reclamation obligation dates back only to 1975 (14 Cal. Code Regs. §3505(b)). Consistent with CEQA, the analysis reviews the significance of direct and indirect Project impacts as well as the significance of incremental, Project-specific impacts in combination with the effects of past, present, and future projects. The Applicant's compliance status with respect to the County's demolition permit requirements and the requirements of the Clean Water Act, Porter-Cologne Water Quality Control Act and other laws are beyond the scope of this EIR.

P15-4 The status of the EMSA as a violation of SMARA is disclosed in the Draft EIR and described in Master Response M3(A). As described in Master Response M1(A) and Master Response M4(A), the vested surface mining operation is not part of the Project.

Environmental conditions within and near the Project Area that relate to hazards and hazardous materials are described in Draft EIR Section 4.9 (page 4.9-1 et seq.). As explained therein, regulatory agency records of hazardous materials sites in the vicinity of the Project Area were reviewed to identify sites where known releases have occurred that could affect soil or groundwater conditions in the Project Area. The information presented is based on database searches of the SWRCB Geotracker and the DTSC Envirostor databases. These databases identify facilities with known hazardous materials use or releases including federal Superfund sites, state response sites, voluntary cleanup sites, corrective action sites, leaking underground storage tank sites, other cleanup sites, land disposal sites, military cleanup sites, permitted underground storage tank facilities, DTSC cleanup sites, and DTSC-permitted hazardous waste permits. The Project Area was not identified on any of the regulatory agency lists searched.

P15-5 Draft EIR Section 4.3, *Air Quality*, presents the results of a health risk assessment performed to examine the potential health risks created by the Project (pages 4.3-21 et seq.) Air Quality Impact 4.3-3 finds that the potential for the Project to expose people to increased levels of toxic air contaminants, which could lead to an increase in the risk of cancer, would be less than significant with mitigation incorporated. Air Quality Impact 4.3-4 finds that the potential for the Project to expose people to increased levels of toxic air contaminants, which would increase acute and chronic health risks, would be less than significant. Air Quality Impact 4.3-5 finds that the potential for the Project to increase emissions of PM2.5, which could adversely affect human health, would be less than significant with mitigation incorporated.

Regarding the commenter's concern about a future housing development, the Project does not include a housing development as a component of the Project. Therefore, a potential housing development was not analyzed in the Draft EIR.

P15-6 The baseline for the EMSA is not the "current condition," as stated by the commenter. Draft EIR Section 4.0 (page 4.0-3 et seq.) identifies the actual existing physical conditions to provide a point of comparison of pre-Project conditions (the baseline) and post-Project conditions to ensure that changes caused by the proposed reclamation activities are seen in context and any and all potential significant environmental effects can be identified and analyzed accurately. For the purposes of analyzing the Project in the Draft EIR, and for reasons described in detail on pages 4.0-3 and 4.0-4 of the Draft EIR, the County has determined that the appropriate date for establishing the baseline for purposes of evaluating the Project's environmental effects is June 2007, the date the County first issued a NOP to evaluate the environmental effects associated with amendment of the Applicant's existing, approved reclamation plan. See Master Response M2(B).

P15-7 This comment has been addressed. See Response P15-2.

P15-8 The Draft EIR describes the NOVs issued by the County in 2006 and 2008 in Chapter 2, *Project Description*, on page 2-8. Regarding the compliance status of the Quarry and the County's authority to enforce compliance, see Master Response M3(A).

P15-9 The Draft EIR describes the NOVs issued by the County in 2006 and 2008 in Chapter 2, *Project Description*, on page 2-8. Regarding the compliance status of the Quarry and the County's authority to enforce compliance, see Master Response M3(A).

P15-10 This comment does not address the adequacy or accuracy of the analysis provided in the Draft EIR. Dissatisfaction with past County actions relating to the 2008 NOV, which is described in Master Response M3(A), is noted.

P15-11 The comment does not suggest that the dust and particulate matter in the air referenced in the comment are attributable to the proposed reclamation activities, the direct, indirect and cumulative effects of which are analyzed in the Draft EIR. Specifically, the

Draft EIR analyzes Project-related air quality impacts on recreational users in Draft EIR Section 4.3, *Air Quality*, and Section 4.16, *Recreation*. The Draft EIR further analyzes cumulative effects to air quality, including air quality related health risks, in Section 6.2.3 (page 6-15 et seq.). This analysis evaluates the incremental impacts of the Project in combination with the incremental impacts of other projects in the cumulative scenario, including the Cement Plant.

P15-12 Please refer to Master Response M6 for a discussion of the Project Area's proximity to the Santa Clara Subbasin. Master Response M5 discusses selenium discharges from the Quarry pit. The Draft EIR does not analyze the impacts of Cement Plant operations or industrial discharges from Cement Plant operations except to the extent that the Cement Plant is an existing facility that is included in the cumulative impact analysis.

P15-13 The County is aware of the lawsuit. This comment about alleged Clean Water Act violations does not address the adequacy or accuracy of the Draft EIR, and so no further response is provided.

P15-14 This comment has been addressed. See Response P15-9.

P15-15 Concerning prior uses of the site in the vicinity of the EMSA, see Response A4-5. For the reasons provided therein, the County declines to order the Applicant to amend its proposed RPA in response to this comment.

P15-16 The RWQCB is responsible for regulating discharges from the Lehigh facility to Permanente Creek. This is accomplished under Lehigh's current NPDES permit. [Order No. R2-2008-0011, NPDES Permit No. CAG982001 (Aggregate Mining, Sand Washing, and Sand Offloading General Permit)]. Cessation of Lehigh's discharges to Permanente Creek is not required prior to certification of the EIR for the proposed RPA.

P15-17 Concerning prior uses of the site in the vicinity of the EMSA, see Response A4-5. As a surface mining overburden stockpile, the EMSA contains rock materials substantially similar to other parts of the Project Area, including the Quarry pit and the WMSA. Poisonous substances have not been identified in this area, although pollutants, such as selenium, have. This is discussed in Draft EIR Section 4.10 (page 4.10-1 et seq.).

P15-18 The request to produce certified proof of proper prior disposal of materials generated by past illegal acts is beyond the scope of this EIR. The County declines this request.

P15-19 The purpose of the Draft EIR is to analyze the potential direct, indirect, and cumulative environmental effects of implementing the proposed RPA relative to baseline conditions. The Project considered in the Draft EIR is reclamation of the 1,238.7-acre area (the Project Area) within the Applicant's overall 3,510-acre property. The primary aquifer in the Santa Clara Subbasin is located over 5 miles east of the Project Area. Core drilling on the Applicant's property would not encounter the primary drinking

water aquifer of the Santa Clara Subbasin. The Lehigh Permanente Quarry is located over bedrock of the Franciscan Complex and not over the water bearing alluvial sediments located in the Santa Clara Valley. See Master Response M6. It not possible (and would be outside the scope of the EIR) to address the "documented illegal acts" mentioned in the comment without additional information.

P15-20 The comment poses several questions regarding actions taken by Quarry management prior to past building demolitions at the Quarry site. As described in Draft EIR Chapter 2, *Project Description*, the scope of the Draft EIR covers the RPA submitted in December of 2011; it does not include the past demolition of buildings to which the commenter refers. Violations of the 1985 Reclamation Plan, including County-issued NOVs pertaining to SMARA, are detailed in the Draft EIR on page 2-8, and further discussed in Master Response M3. See also Master Response Master Response M4 which discusses components excluded from the Project description.

P15-21 This comment has been addressed. See Response P12-8.

P15-22 Receipt of the August 24, 2011, notice of intent to sue the Applicant under the Clean Water Act is acknowledged. However, because the notice pre-dates the issuance of the Draft EIR and does not bear on the adequacy or accuracy of the environmental analysis documented within it, no further response is provided.

P15-23 The list of exhibits provided with the August 24, 2011, notice of intent to sue is acknowledged. The County did not receive these materials with the comment letter and would not have found them to be relevant to the adequacy or accuracy of the environmental analysis included in the Draft EIR. See Response P15-22.

> From: Barbie <westb@mac.com>
> Date: Tue, 21 Feb 2012 13:34:24 -0800
> To: <rob.eastwood@pln.sccgov.org>
> Subject: Public Comment on Permanente Quarry Reclamation Plan
> Amendment
> Draft Environmental Impact Report (DEIR)
>
> Dear Rob:
>
> We have two comments on the Permanente Quarry Reclamation Plan
> Amendment
> DEIR.
>
> 1. For the benefit of all Santa Clara County residents, the
> significant
> mining scars that are very visible when traveling in a generally
> westerly
> direction on Stevens Creek Blvd., Highway 280, or Highway 85 should be
> mitigated with re-vegetation as soon as mining operations have
> stopped on
> the area. Please do not make Santa Clara County residents suffer
> with those
> visual scars for 20 to 30 years when all mining operations have
> stopped
> before active re-vegetation is initiated. Rather, the mining operator
> should start the re-vegetation as soon as feasible in all areas that
> are no
> longer being actively mined. Also, re-vegetation could start at the
> mountain tops if the lower areas are still being mined.

P16-1

>
> 2. Upon completion of mining operations, Permanente creek needs to be
> restored to its original pre-mining condition across all lands
> covered by
> the Amended Reclamation Plan.

P16-2

>
> Thank you for your consideration of these comments,
>
>
> Dennis & Barbara West
> 10670 Cordova Road
> Cupertino, CA 95014
> westb@me.com
>

3.4.16 Comment Letter P16: Dennis and Barbara West

P16-1 As discussed in Draft EIR Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*, Stevens Creek Boulevard and SR 85 provide views of the WMSA. Regarding requiring mitigation to commence revegetation in the WMSA for aesthetic reasons, see Response O2-1.

I-280 provides views of the EMSA. Under the Project, Reclamation of the EMSA would commence during Reclamation Phase 1, and be complete prior to the commencement of Phase 2 (2020). As such, reclamation would commence immediately upon Project approval.

P16-2 The reaches of Permanente Creek located within the Applicant's land holdings are subject to two reclamation efforts as described in the Draft EIR. The first is the reclamation of the Permanente Creek Restoration Area (PCRA) (Section 2.7.8 page 2-26) and the Permanente Creek Long-Term Restoration Plan (Section 6.1.2.1 page 6-7). These two efforts would restore reaches of the creek that have undergone mining-related damage in the past. While the reclamation efforts may not be able to achieve "pre-mining conditions" due to the length of time mining has been ongoing, the reclamation would correct obvious mining-related damage and stabilize the hydrologic system to reduce further erosion and sedimentation.

From: <JLucas1099@aol.com>
Date: Tue, 21 Feb 2012 14:29:49 -0500 (EST)
To: <Rob.Eastwood@pln.sccgov.org>
Subject: Lehigh Permanente Quarry Reclamation Plan Amendment DEIR # 2010042063

Rob Eastwood, Principal Planner February 21, 2012
County of Santa Clara, Planning Office
70 West Hedding Street, East Wing, 7th floor
San Jose, CA 95110

RE: Lehigh Permanente Quarry Reclamation Plan Amendment (Consolidated) (State Mine ID# 91-43-004) DEIR # 2010042063

Dear Rob Eastwood,

In regards areas of concern about adequacy in Santa Clara County's environmental review of the reclamation plan amendment for a Lehigh Permanente Quarry Reclamation Plan, please accept the following comments.

~ Groundwater monitoring wells to assess levels of COC's from present quarry operations introduced into watershed of Black Mountain and Monte Bello Ridge are located above facility

P17-1

rather than downstream of it. This results in misrepresentation of critical groundwater quality data necessary for Reclamation Plan review. P17-1

~ In consideration of the high susceptability of Santa Clara Valley's unconfined aquifer in this area and that the nucleus (some 17) of CalWater's prime regional deep drinking water wells lie just one mile downhill, it is basic for any integrity in this environmental analysis to sink at least a dozen monitoring wells downstream of quarry in an arc and direct line, following railroad ravine, to intersection of Stevens Creek and #280 and #85. EPA protocols for this level of groundwater investigation are available. Without such data the EIR is deficient. P17-2

~ Geology of quarry site in EIR is not adequately profiled in regards delineation of faults and fissures that might be acerbated by deep quarrying activities and hasten introduction of COC's to groundwater flows.The constraints of these physical features need to be scientifically assessed and reported in supplement to EIR. P17-3

~ Recent slides and slope failures need to be precisely shown on detailed drawings of site. Correlation with heavy rain years or regional quake activity might give regulatory perspective for best management practices. Mention needs to be made of 1982-83 site activities that resulted in downstream flooding of Blach School. P17-4

~ The reference to sediment yields from this East Fork of Permanente Creek compared to average sediment yields is erroneously stated. In USGS study, "Effects of Limestone Quarrying and Cement-Plant Operations on Runoff and Sediment Yields in the Upper Permanente Creek Basin, Santa Clara County, California" it was found to be twenty times greater than the West Fork in wet year of 1986, and the West Fork has high yield. Quantification of sediment loads needs to be specific in EIR, such as 1986's 53,000 tons of sediment yield. P17-5

~ In consideration of excessive loads of sediment capable of being released in high storm events (likely to be more intense in consideration of global warming trends) it would seem a responsible conservative measure to create a terraced delta below facility to slow and entrap any such mudslide deluge. This possibly 350' deep terraced delta would be thickly vegetated with willows and native species. Feel this is reclamation alternative that needs inclusion in this plan, with the strong recommendation for immediate implementation. P17-6

~ Did not find rainfall data for quarry site, that depicted full range of precipitation in wet and dry years. Believe this is needed to safely assess extensive tonnage of soils proposed for recontouring and backfilling quarry for reclamation plan compliance. Maryknoll gage has been in existence long enough to provide significant data? P17-7

~ Also, do not find Permanente Creek corridor revegetation/restoration documentation in reclamation plan. There needs to be a geomorphic analysis of present creek channel in comparison with historic conditions. The creek restoration efforts need to coordinate with historic channel meander lengths, water levels and cfs. If revegetation is not planned in accordance with natural dynamics of the stream, nothing will hold over time. Also one can never underestimate the importance of a 50 to 75 foot buffer of vegetation in restoring stream health and water quality. This should be implemented now in order to mature sufficiently in reclamation plan. Santa Clara Valley Water District staff can advise on sources for obtaining vegetation native to watershed. P17-8 P17-9

~ Reclamation Plan EIR has discrepancies in assessing prevalence and health of the red-legged frog colony that exists throughout quarry site. As this is an endangered species it is essential that regulatory wildlife agencies do a professional evaluation of present colony, said to have been Santa Clara County's biggest, with continuing quarterly assessments throughout the life of this reclamation plan. Another critical aspect to the well-being of the red-legged frog colony is the recent focus on selenium levels in permanente Creek. The susceptability of the species to selenium levels in its habitat must be mandated guiding criteria in EIR plan. P17-10

~ References to impacts on recreation in DEIR appear incomplete. That is, did not find mention of P17-11

De Anza Trail which passes through (at base of quarry operations) to Rancho San Antonio Preserve, where Santa Clara County foothill bike trail is also located. Historically the Stevens Creek Road connecting with Monte Bello Ridge Road passed through the quarry site and as ultimately might be restored as recreation corridor, it should be referenced in this EIR reclamation scenario in regards safety and as trail from valley floor to sea.
Downstream parks that need also to be considered for health and safety concerns are Rancho San Antonio County Park, MidPeninsula San Antonio Open Space Preserve, Los Altos Heritage Oaks Park, and City of Mountain View's Cuesta Annex, McKelvey Park and Shoreline Parks. Impact to SCVWD recreation unclear.

P17-11

As seem to be still coming out of general malaise from flu, would like to close comments for present, and submit details on chapter and verse for some of these points at later time, this afternoon. Thank you for your kind consideration of concerns in regards this long term reclamation plan.

Sincerely,

Libby Lucas
174 Yerba Santa Ave.,
Los Altos, CA 94022

------ End of Forwarded Message

From: Marina Rush
To: Sean Hungerford; Marvin E. Howell; Janna Scott; Claire Myers; Patrick Angell; Elizabeth Pianca
Subject: Fwd: Lehigh Permanente Quarry Reclamation Plan Amendment DEIR comment continued
Date: Tuesday, February 21, 2012 5:21:51 PM

------ Forwarded Message
From: <JLucas1099@aol.com>
Date: Tue, 21 Feb 2012 19:52:09 -0500 (EST)
To: <Rob.Eastwood@pln.sccgov.org>
Subject: Lehigh Permanente Quarry Reclamation Plan Amendment DEIR comment continued

Rob Eastwood, Principal Planner
County of Santa Clara Planning Office February 21, 2012

RE: Lehigh Permanente Quarry Reclamation Plan Amendment DEIR

Dear Rob Eastwood,

As documentation for source of comments submitted to you earlier today, please include following items.

~ USGS Report 89-4130 evaluated daily sediment yields from East Fork of Permanente Creek on page 41, with summation for year 1986 of 53,240 tons of sediment, but with West Fork yield at 2870 tons, page 19. 1986 was a wet year but was no 100 year storm event. A 100-year scenario needs to be assessed in DEIR. P17-12

~ An Analysis of the Sensitivity to Contamination of the Santa Clara Valley Groundwater Aquifers Based on the USEPA Drastic Methodology, December 1999, Roger Pierno, Santa Clara Valley Water District depicts location of major CalWater drinking water wells (near #280 & #85) and the Aquifer Protection Vadose Zone. P17-13

~ Flatland Deposits - Their Geology and Engineering Properties and Importance to Comprehensive Planning, Geological Survey Peofwaaional Paper 943 by E.J. Helley features in Figure 48, a map of Areas favorable for ground water recharge in Santa Clara County. (Page and Wire 1969) which depicts region downstream of quarry as favorable and highly favorable for groundwater recharge. P17-14

~ California Department of Water Resources map of Evaluation of Ground Water Resources of South Bay shows Santa Clara Area of aquifer with adjacent West Side Subarea which locates 'zone of ground water cascade' (area of high percolation into deep drinking water aquifer) as it intercepts Permanente Creek. P17-15

~ Permanente Creek Restoration Area documentation in DEIR is too vague to give confidence in ultimate stability of slopes in this upper watershed. Please consider implementation of 50 foot terraces or benches, sufficiently compacted to sustain bushes and trees with viable root systems. This might be designed as a Guggenheim Museum corkscrew spiralling up of benches to ease maintenance or else be pure terraces. Do not believe that hydroseeding is going to stabilize these slopes, but mandate use of approved native seed. P17-16

~ Billions of tons of backfill referenced in some alternatives would not be sound in case of high storm events. P17-17

~ Though De Anza Historic Trail is referenced, it is qualified as not a public trail option as being on P17-18

private quarry property. When historic Stevens Creek Road to Monte Bello Ridge was given over to Quarry the lower De Anza Trail use should have been obtained as this element is essential to recreation circulation in area. P17-18

~ P. 4.7-38 Inaccurately claims that no active fault passes through project area yet in Loma Prieta quake the Jesuit Seminary building in Rancho San Antonio was rendered uninhabitable and had to be removed. P17-19

~ P. 4.10-5 Selenium studies need to be conducted on red-legged frogs both in Permanente Creek and in the 26 (or 28) ponds that are referenced in DEIR. As an endangered species they are the indicator species. P17-20

~ In Mitigation measures and the discussion of significant and unavoidable impacts human health must be included in this analysis and in this matter this DEIR is seriously deficient. Water quality analysis needs to be conducted in wells below quarry site in ravine under railroad tracks as well as in 2 and 1/2 miles of Permanente Creek's percolation unconfined aquifer zone between quarry and Foothill Expressway. (Air quality gages at Calero Reservoir are out of air basin so not acceptable reference data.) P17-21

Will send this on now along with water resource stream data. Thank you for your diligence in all this.

Libby Lucas

------ End of Forwarded Message

From: Marina Rush
To: Janna Scott; Claire Myers; Elizabeth Pianca; Patrick Angell; Marvin E. Howell; Sean Hungerford
Subject: Fwd: Santa Clara Valley Conservation District Historic Permanente Creek Flow ...
Date: Tuesday, February 21, 2012 5:22:58 PM

------ Forwarded Message
From: <JLucas1099@aol.com>
Date: Tue, 21 Feb 2012 19:57:04 -0500 (EST)
To: <Rob.Eastwood@pln.sccgov.org>
Subject: Fwd: Santa Clara Valley Conservation District Historic Permanente Creek Flow ...

Rob,

Attached please find old stream gage data on Permanente Creek that believe illustrates wide range of flows that must be analysed in an appropriate assessment of impacts of COC's and on synergistic complications that need to be looked for in cumulative impacts to stream channel and underground aquifer water quality. P17-22

Libby Lucas, 174 Yerba Santa Ave., Los Altos, Ca 94022

------ End of Forwarded Message

From: JLucas1099@aol.com
Date: February 6, 2012 11:31:39 AM PST
To: administration@losaltos.ca.gov, administration@losaltosca.gov
Cc: dpedro@losaltoshills.ca.gov
Subject: Santa Clara Valley Conservation District Historic Permanente Creek Flow Data

Attachment 1 - Permanente Quarry letter submitted by Libby Lucas

Not sure if it helps discussion, but did review old Santa Clara Valley Water Conservation District Permanente Creek flow records for period 1938 through 1961 and daily flow rate of 8 cfs or above occurred less than 10 % of time, and it looks as if there is no daily flow to record at all in a third of these months. P17-23

If you would like a break down, here goes:
Loyola Corners

1938 - 39 92 acre feet flow for year 0 days of flow 8 cfs or over 10 months no flow " "
1939 - 40 4170 acre feet flow " " 70 days of flow " " " " 6 months " " " "
1940 - 41 8803 acre feet " " " 145 days of flow " " " " 3 mth" ", 1 mth 2.0cfs, 1 mth 1.0cfs
1941 - 42 5159 acre feet " " " 88 days of flow " " " " 2 mth" ", 4 mth 2.0cfs daily average
1942 - 43 3117 acre feet " " " 68 days of flow " " " " 2 mth. 1.0 cfs, 2 P17-24

mth 0.5 cfs av flow
1943 - 44 516 acre feet " " " 2 days of flow 8 cfs or over 3 mth 0.5 cfs, 7 mth 0.25 cfs " "
1944 - 45 1426 acre feet " " " 15 days of flow " " " " 6 mths record flows Loyola Corners
1944 - 45 289 acre feet " " " 0 days of flow " " " " 5 mths record " " Holly Ranch
1945 - 46 1039 acre feet " " " 8 days of flow " " " " 50 days no flow " "
1946 - 47 282 acre feet " " " 0 days of flow " " " " 5 mths no flow " "
1947 - 48 69 acre feet " " " 0 days of flow " " " " 9 mths no flow " "
1948 - 49 599 acre feet " " " 7 days of flow 8 cfs or over 8 mths no flow " "
1949 - 50 305 acre feet " " " 0 days of flow " " " " 7 mths no flow " "
1950 - 51 2603 acre feet " " " 41 days of flow " " " " 4 mths no flow " "
1951 - 52 4353 acre feet " " " 92 days of flow " " " " 4 mths no flow " "
1952 - 53 2028 acre feet " " " 38 days of flow " " " " 4 mths no flow " "
1953 - 54 498 acre feet " " " 0 days of flow " " " " 5 mths no flow " "
1954 - 55 207 acre feet " " " 0 days of flow " " " " 5 mths no flow " "
1955 - 56 5000 acre feet " " " 87 days of flow " " " " 4 mths no flow " "
1956 - 57 371 acre feet " " " 5 days of flow " " " " 4 mths no flow " "
1957 - 58 6279 acre feet " " " 98 days of flow " " " " 2 mths no flow " "
1958 - 59 166 acre feet " " " 0 days of flow " " " " 1 mth no flow " "
1959 - 60 382 acre feet " " " 4 days of flow 8 cfs or over 2 mths 0.1 cfs average flow " "
1950 - 61 61 acre feet " " " 0 days of " " " " " 5 mths no flow " "

P17-24

If any questions on this data please do not hesitate to reply.

Main concern I continually find in routine white-wash assessments of stream flows is that they average out overall data when we know California has flashy streams that will only become flashier with global warming.

P17-25

Libby Lucas

3.4.17 Comment Letter P17: Libby Lucas

P17-1 See Master Response 6 pertaining to groundwater. The comment is not entirely clear, but this response assumes that the commenter is referring to the groundwater wells installed by the Applicant south of Permanente Creek (HG-4, HG-6, HG-7, HG-9, and HG-10) see Draft EIR, Figure 4.10-2). These wells were installed to assess local geology and were used to assess groundwater quality in geologic material similar to that underlying the Project Area. These wells provide useful information as to groundwater chemistry that can be translated to study of the conditions in the Project Area. These wells were not intended to assess groundwater quality down-gradient of the current Quarry operations.

P17-2 See Master Response M6 pertaining to groundwater.

P17-3 The commenter suggests that the EIR does not adequately profile the faults and fissures in the Project Area. The commenter is referred to Section 4.7.1 of the Draft EIR for a description of the geologic and seismic setting of the Project site that incorporates details collected from an independent review of Project-specific geological data, in addition to analyses and findings that have been developed by the Applicant's geotechnical consultants Golder Associates and Terraphase Engineering. In particular, both figures included in the section show regional and local faults to the Project site. Figure 4.7-1 shows faults on a regional scale and Figure 4.7-2 shows both strands of the Berrocal Fault at the local scale of the Quarry. The commenter is reminded that the environmental impacts related to continued surface mining in the Project Area, including continued deepening and excavations along the south and east walls of the Quarry pit are not included as part of the Project evaluated in this Draft EIR (see also Master Response M4, *Project Description*). The presence of faults and fissures, including contacts between major rock types within the Quarry, were incorporated into the slope stability models used in the geotechnical investigation performed by Golder Associates (2011).

Descriptions and illustrations of faults, geology, and landslides presented in the Draft EIR are accurate and based on review of data collected over decades of mining operations. Technical details are contained in the referenced geotechnical reports which are a part of the public record.

P17-4 The commenter suggests showing recent slides on a map and raises concerns over potential flooding resulting from mining activities. The commenter also mentions a need to discuss the 1982-1983 flooding of Blach School. Draft EIR Figure 4.7-1 (page 4.7-3) shows the location of existing areas mapped as landslides, including all of the major slides discussed in the Draft EIR Section 4.7, *Geology, Soils, and Seismicity*. An historical account of the 1982-1983 flooding of Blach School referenced by the commenter is not necessary for an adequate description of the geologic setting. Years 1982-1983 were a very strong El Nino season where near record seasonal rainfall totals

were reported over a large portion of California. Flooding and earth flows occurred throughout the Bay Area as a result of excessive rainfall that overwhelmed the capacity of municipal storm drains and flood control facilities in the region. The commenter has provided no information or data to indicate Quarry operations had any effect on the occurrence or severity of flooding at the school.

P17-5 The comment is concerned with a passage in the Draft EIR (Section 4.10.1.2, page 4.10-12) that states: "*Nolan and Hill (1989) concluded that the sediment yield (i.e., tons per square mile) in the southern headwater area of Permanente Creek was approximately 3.5 times higher than that which would be expected under natural conditions."* Contrary to the comment, this was not erroneously stated. In this statement, Nolan and Hill are comparing the sediment yields in the Permanente Creek (main branch) to the West Branch and recognizing that in the main branch, which flows through the Project Area, the sediment yields are higher because the West Branch is in a more natural state. Nolan and Hill attribute the increase in the main fork to additional sediment availability rather than an increase in runoff. The value of "20 times greater" discussed in the comment refers to the sediment yield in Permanente Creek compared to the West Fork during the winter of 1986. The winter of 1986 was a wet year and this area experienced record rainfall, excessive runoff, and flooding. Sediment yields in Permanente Creek were 20 times greater than in the West Branch as would be expected for a drainage with more available sediment in a year of extreme rainfall. The Draft EIR adequately characterizes the difference in sediment yields between the West Fork and Permanente Creek (Section 4.10.1.2) and additional quantification of sediment yield for extremely wet rainfall years would add no value to the analysis of the Project. Overall, the Project would contribute to the reduction of sediment yields in the Permanente Creek.

P17-6 Under the Project conditions, which are analyzed in the Draft EIR, the potential for the Project Area to experience excessive loads of sediment and "mudslide deluges" would be considerably reduced and would be unlikely under reclamation conditions. Interim sediment control and surface water runoff measures would also reduce the potential for excessive sediment yields during reclamation activities. A terraced delta, as described in the comment, is not necessary to reduce the potential for excessive sediment yields post-reclamation and could cause additional environmental impacts.

P17-7 Precipitation is generally discussed in the Draft EIR, Section 4.10.1.1 on page 4.10-1 but a full range of precipitation data is not necessary to support the analysis of the Project in the Draft EIR. It is not clear why the comment believes precipitation data is needed to "safely assess extensive tonnage of soils proposed for recontouring and backfilling quarry for reclamation plan compliance." While precipitation data may be useful for engineering planning and design of reclamation slopes, for instance, its absence from the Draft EIR does not constitute a deficiency in the CEQA analysis. The Maryknoll gage, Station 54, SCVWD Alert ID 1522 began recording data on July 1, 1955.

P17-8 Restoration efforts along Permanente Creek that are considered part of the Project include the reclamation of the Permanente Creek Reclamation Area (PCRA), which is discussed in the Draft EIR (Section 2.7.8 page 2-26) and the Permanente Creek Long-term Restoration Plan, which is not part of the Project but is discussed in the cumulative analysis section of the Draft EIR (Section 6.1.2.1 page 6-7). In 1999, the San Francisco Bay RWQCB issued Cleanup and Abatement Order No. 99-018 regarding the "discharge of concrete and other wastes into Permanente Creek" from the Permanente Quarry, aggregate plant, and Cement Plant. The order required the implementation of interim and long-term corrective actions, most of which have been satisfied. To fulfill the last requirement, Lehigh/ Hanson proposed the Permanente Creek Long-term Restoration Plan to the Regional Board in March 2011 (URS Corporation, 2011).

P17-9 The commenter's statements regarding revegetation along Permanente Creek is noted. The commenter is referred to the Permanente Creek Reclamation Area discussion in the proposed Reclamation Plan Amendment as well as Attachment B (Revegetation Plan) of the Reclamation Plan Amendment for further detailed on proposed revegetation of the creek.

P17-10 The commenter suggests that ongoing quarterly surveys be conducted for California red-legged frog throughout the implementation of the RPA, and the susceptibility of frogs to selenium be analyzed. Extensive survey efforts have been conducted within the Permanente Quarry property to describe available habitat for and the distribution of California red-legged frogs. Surveys consistent with USFWS protocol for the species were conducted along Permanente Creek in 2006 by Mark Jennings, a herpetologist with extensive experience with this species. Prior to these surveys, California red-legged frogs were determined to be present at distinct locations within the Quarry, and incidental observations by WRA biologists following the 2006 surveys have consistently observed frogs. The described and anticipated distribution of California red-legged frogs in the Project Area includes some managed ponds and portions of lower Permanente Creek and Monte Bello Creek.

As identified in Mitigation Measure 4.10-1b, the mandatory water quality testing program is sufficient to confirm that surface water discharges do not exceed Basin Plan Benchmark values for general water chemistry and dissolved and total metals, including selenium. Reclamation of the Quarry pit, EMSA, and WMSA areas shall not be considered complete until five years of water quality testing indicate, to the satisfaction of the Director of Planning and Development, that selenium in surface water runoff and any point source discharges has been reduced below all applicable water quality standards, including Basin Plan Benchmarks. If standards are within Basin Plan Benchmarks, it follows that there would be no associated chemical impacts to California red-legged frogs and other aquatic organisms, and further surveys would not be required for this species.

P17-11 Draft EIR Section 4.16 addresses impacts to recreational areas. The "De Anza" Trail referenced in the comment is described on Draft EIR page 4.16-2: "The Countywide Trails Master Plan Update Map indicates that one segment of the planned Regional Trail Route R1-A (Juan Bautista de Anza National Historic Trail-Northern Recreation Retracement Route) runs east of the EMSA on land that is outside of the Project Area, but within the site boundary." This trail segment is designated as a "trail route within other public lands" a designation intended for uses such as hiking, off-road bicycling, and equestrian use, according to the CWTMP (see Response A1-1).

The comment does not specify what health and safety impacts are not analyzed for the downstream parks listed in the comment. However, the health and safety impacts analyzed in Sections 4.3 (*Air Quality)*, 4.9 (*Hazards and Hazardous Materials)*, 4.10 (*Hydrology and Water Quality)*, and 4.13 (*Noise)*, include these recreational areas. For example, analysis in Section 4.3, *Air Quality* (p. 4.3-1 et seq.) considers effects within the boundaries of the San Francisco Bay Area Air Basin (Bay Area Air Basin) and the Santa Clara Valley climatological subregion (Draft EIR, p. 4.3-1), which encompasses the Project Area and all recreational areas listed in the comment. Analysis in Section 4.10, *Hydrology and Water Quality*, includes the Permanente Creek Watershed (see Figure 4.10-1, page 4.10-2), which encompasses the recreational areas listed in the comment.

Stevens Creek Boulevard (cited in the comment as "Stevens Creek Road") is not a designated recreational area, and as such, was not analyzed as one in the Draft EIR. The Montebello Open Space Preserve is discussed in Section 4.1 (*Aesthetics, Visual Quality, and Light and Glare*), and Section 4.16 (*Recreation*). The health and safety impacts analyzed in Sections 4.3 (*Air Quality)*, 4.4 (*Biological Resources)*, 4.9 (*Hazards and Hazardous Materials)*, 4.10 (*Hydrology and Water Quality)*, and 4.13 (*Noise)*, would include users of this recreational area.

Bicycle lanes, including those on Foothill Boulevard and Stevens Creek Boulevard, are discussed in Draft EIR Section 4.17, *Transportation/Traffic*.

P17-12 See Response P17-5. The comment states that the Draft EIR needs to assess the "100-year scenario." This response assumes that the comment is requesting that the Draft EIR include an analysis of a 100-year storm event (or a storm with a 1 percent chance of occurring within a given year). The 100-year precipitation event and 100-year peak flows were considered in the drainage analysis completed by the Applicant for the Project and drainage facilities are designed in accordance with the 2007 Santa Clara County Drainage Manual (Chang Consultants, 2011). The drainage analysis is discussed in the Draft EIR, (Impact 4.10-4, page 4.10-48) and in Master Response M7. It should be noted that the Project would reclaim much of the Project Area and the potential for high sediment loads during large storm events would be greatly reduced, especially considering detention Basin 40A proposed as mitigation

(see Mitigation Measure 4.10-4, page 4.10-47) for the reclaimed quarry pit, as discussed in Master Response M7.

P17-13 Comment noted. See Master Response M6 pertaining to groundwater.

P17-14 Upon review of the reference cited in the comment (USGS Professional Paper 943) it appears that the "favorable to highly favorable" region for groundwater recharge mentioned in the comment is along Steven's Creek, not Permanente Creek. While the region located about 2 miles east of the Project Area is underlain by older alluvium and is considered a recharge area, it is not the same "favorable recharge area" area shown on the USGS Professional Paper 942. Also, see Master Response M6 pertaining to groundwater.

P17-15 Comment Noted. See Master Response M6 pertaining to groundwater.

P17-16 The comment claims that the Permanente Creek Restoration Area documentation is too vague and that 50-foot terraces or benches should be incorporated to sustain bushes and trees in the revegetation plan. The analysis presented in the Draft EIR acknowledges the uncertainties regarding the ultimate effectiveness of reclamation efforts within the PCRA in improving slope stability (see Draft EIR page 4.7-36, third paragraph). However, as required under CEQA, the impacts of reclamation within the PCRA are compared to the baseline setting, which consists of side slopes that have locally experienced shallow slumping and side-casting of overburden and fills from upslope. While slope stability factors may not be substantially improved as a result of interim RPA activities, final reclamation would result in similar or slightly improved slope stability factors relative to the baseline setting. In other words, final reclamation of the PCRA would not substantially worsen or exacerbate existing conditions.

The establishment of benches (or "Guggenheim corkscrew" design) as suggested by the commenter would require unnecessary slope disturbances along the north side of the Permanente Creek ravine. The activities proposed within the PCRA are designed to remove slumped or side-cast overburden material where possible without causing further disturbances, and reseeding slopes. Benching the slopes in the manner suggested would require developing new access roads for heavy equipment, and would result in substantial new cuts and fills. These activities would introduce the potential for further downslope migration of overburden and fill material that would not otherwise occur. The information presented in the Draft EIR regarding the condition and slope disturbances within the PCRA (Draft EIR pages 4.7-19 et seq.) is sufficient to support the conclusions made in the impact analysis (Draft EIR pages 4.7-36 et seq.).

P17-17 This comment is not clear but this response assumes that it is in reference to the Central Materials Storage Area (CMSA) presented as Alternative 2 in the Draft EIR (Section 3.3.1.2, page 3-9). The CMSA would be engineered to ensure that slopes would have an acceptable factor of safety and stormwater would be removed from the slopes using appropriate conveyance facilities. The CMSA would be designed to

remain stable in high precipitation events. As stated on page 3-10 of the Draft EIR, "During the development of the CMSA, its elevations would range from 775 to 1,270 feet amsl. Final overall slopes would be 2.6(H):1.0(V) or flatter. Benches generally would be established at 40-foot vertical intervals. Interbench slopes would be 2H:1V. The static factor of safety (FOS) for global stability (crest of slope to toe of slope) would be approximately 1.7; the static FOS for interbench slopes would be 1.4. These factors are considered acceptable. Seismically-induced displacements would range from 3 to 13 inches, which also is considered acceptable."

P17-18 Regarding the official designation of the portion of the De Anza Trail in the vicinity of the Project, see Response A1-1. The commenter's assertion that De Anza trail use should have been obtained when historic Stevens Creek Road to Monte Bello Ridge was given to the Quarry is noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

P17-19 The comment claims that Draft EIR page 4.7-38 inaccurately states that no active fault passes through the Project Area, citing damage to the Jesuit Seminary building in Rancho San Antonio from the Loma Prieta earthquake. This comment is noted. Damage to a building during a large earthquake is not necessarily evidence than an active fault underlies the site. The commenter is referred to Draft EIR Section 4.7.1.3, which discusses earthquake and fault terminology (including definitions of active and potentially active faults), lists significant regional faults, and describes the onsite faults, which are defined as potentially active, both in the setting and the impact analysis. The statement that no active faults pass through the Project Area on Draft EIR page 4.7-28 is made in the context of the California Alquist-Priolo Earthquake Fault Zoning Act, which has zoned faults known to be active (see explanation of surface fault rupture on Draft EIR page 4.7-21). To clarify this point, the first sentence of the second paragraph of Draft EIR page 4.7-28 is modified as follows:

> No ~~active~~ faults <u>zoned under the Alquist-Priolo Earthquake Fault Zoning Act as active faults</u> pass through the Project Area; thus, adverse impacts from fault rupture are unlikely.

P17-20 As discussed in the Draft EIR, the potential impacts of selenium contamination from the Project on aquatic habitat are considered significant and unavoidable (Section 4.4), as well as cumulatively significant (Section 6.2.4). The required water quality studies that are described in Response P17-10 are sufficient to determine potential chemical impacts to the aquatic environment, including potential impacts to California red-legged frogs. As such, the need for specific selenium studies on California red-legged frogs is unwarranted. Were a specific problem identified with the aquatic habitat such as dead or malformed fish or wildlife, the mandatory water quality testing program would provide an appropriate response that may include chemical testing of dead organisms. As described in Master Response M5, the County has further evaluated the

interim selenium water quality impact as well as the feasibility of the provision of an on-site water treatment facility to address this impact.

While the Draft EIR recognizes that the California red-legged frog is afforded protection under its federal threatened status, this does not necessarily mean that it is an indicator species for selenium concentrations in the Creek. An indicator species is defined as one that signals the biological conditions in a watershed through its own health or condition. Typical indicator species recognized by the EPA include various fish, invertebrates, periphyton (benthic algae), and macrophytes (aquatic plants).

P17-21 Risks to human health, and mitigation measures required to reduce or avoid significant impacts to human health, are discussed in Section 4.3.5.2 of the Draft EIR, beginning on page 4.3-21. The commenter does not identify why they believe the Draft EIR is deficient in this regard and no further response can be provided. The last part of this comment appears to comingle water quality monitoring with air quality monitoring. Assuming the comment pertains to air quality, the air quality monitoring station that was used in the Draft EIR to describe existing conditions is identified in Table 4.3-1 on page 4.3-2 of the Draft EIR, which provides a 4-year summary of monitoring data for ozone and particulates at the Jackson Street station. The Jackson Street station is in San Jose, which is well within the Bay Area air basin and representative of the Project Area. Air gages at the Calero Reservoir, which the commenter asserts are not acceptable reference data, are not cited at all in the Draft EIR air quality analysis.

P17-22 The comment provides several years of data for Permanente Creek flows that demonstrate flows in this creek can vary considerably depending on the year. The Santa Clara Valley Water District takes into consideration historic stream gage data when analyzing storm flows for flood control projects. The RWQCB is the responsible agency for ensuring the Applicant eliminates or reduces constituents of concern from stormwater to remain in compliance with its NPDES permit. The Project would reduce certain constituents of concern, such as selenium, in Permanente Creek through reclamation of mining areas and the reduction of erosion and sedimentation (Draft EIR, Impact 4.10-1 and 2 page 4.10-29 and 42). See Master Response M6 pertaining to groundwater for further discussion of the surface water groundwater interaction.

P17-23 This comment has been addressed. See Response P17-22.

P17-24 This comment has been addressed. See Response P17-22.

P17-25 This comment has been addressed. See Response P17-22.

IF this GETs into your Respiratory System it will Set FAST)

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

Dry-Packaged Fast-Setting Cement Based Products

MATERIAL SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
One Securities Centre
3490 Piedmont Road, Suite 1300
Atlanta, GA 30329

Emergency Telephone Number
(770) 216-9580

Information Telephone Number
(770) 216-9580

MSDS J2
Revision: Dec-11

QUIKRETE® Product Name	Code #
Fast-Setting Concrete Mix	1004-50
Post Haste	1004-65
Concrete Resurfacer	1131-40
Multipurpose Concrete Resurfacer	1131-45
All-Star 10 Minute Instant Post Mix	1005-51
All-Star Fast Setting Concrete Mix	1004-50
Bonded Topping Mix	1133-04, 1018, 1017
Commercial Grade FastSet™ Cement	1124-92
Commercial Grade FastSet™ Non-Shrink Grout	1585-09
Commercial Grade FastSet™ Repair Mortar	1241-60
Commercial Grade FastSet™ Concrete Mix	1004-51
Commercial Grade FastSet™ DOT Mix	1244-56
Commercial Grade FastSet™ DOT Mix – Extended	1244-81
Commercial Grade FastSet™ All-Crete	1585-59
Commercial Grade FastSet™ DOT Deck Repair – Polymer Modified	1244-58
Polymer Modified Structural Concrete – Extended Set	1242-85
Commercial Grade FastSet™ Repair Mortar – Zip And Mix	1241

P18-1

Product Use: Portland cement-based, rapid-setting materials for general construction or repair.

SECTION II - HAZARD IDENTIFICATION

Route(s) of Entry: Inhalation, Skin, Ingestion
Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and affect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.
Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis.

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Carcinogenicity: Since Portland cement and blended cements are manufactured from raw materials mined from the earth (limestone, marl, sand, shale, etc.) and process heat is provided by burning fossil fuels, trace, but detectable, amounts of naturally occurring, and possibly harmful, elements may be found during chemical analysis. Under ASTM standards, Portland cement may contain 0.75 % insoluble residue. A fraction of these residues may be free crystalline silica. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings:		
	NTP:	Known carcinogen
	OSHA:	Not listed as a carcinogen
	IARC Monographs:	Group 1 Carcinogen
	California Proposition 65:	Known carcinogen

P18-1

NTP: The National Toxicology Program, in its "Ninth Report on Carcinogens" (released May 15, 2000) concluded that "Respirable crystalline silica (RCS), primarily quartz dusts occurring in industrial and occupational settings, is *known to be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC, 1997; Brown *et al.*, 1997; Hind *et al.*, 1997)

IARC: The International Agency for Research on Cancer ("IARC") concluded that there was "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources", and that there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans* (Group 1)." The IARC evaluation noted that "carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, "Silica, Some Silicates." (1997)

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. (May contain trace (<0.05 %) amounts of chromium salts or compounds including hexavalent chromium, or other metals found to be hazardous or toxic in some chemical forms. These metals are mostly present as trace substitutions within the principal minerals)

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure.

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

QUIKRETE®
CEMENT & CONCRETE PRODUCTS™

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Portland Cement	65997-15-1	5	5
Lime	01305-62-0	5	5
Silica Sand, crystalline	14808-60-7	$\frac{10}{\%SiO_2+2}$	0.05 (respirable)
May contain one or more of the following ingredients:			
Amorphous Silica (From fly Ash)	07631-86-9	$\frac{80}{\%SiO_2+2}$	10
Alumina (From Fly Ash)	01344-28-1	5	5
Limestone Dust	01317-65-3	5	5
Calcium Sulfate	10101-41-4 or 13397-24-5	5	5
Calcium Sulfoaluminate	65997-16-2	15	10

P18-1

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M^3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 40-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline Silica.

SECTION IV – First Aid Measures

Eyes: Immediately flush eye thoroughly with water. Continue flushing eye for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.
Skin: Wash skin with cool water and pH-neutral soap or a mild detergent. Seek medical treatment if irritation or inflammation develops or persists. Seek immediate medical treatment in the event of burns.
Inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside. Inhalations of large amounts of Portland cement require immediate medical attention.
Ingestion: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

SECTION V - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.
Auto-ignition Temperature: Not Applicable
Flash Points: Not Applicable

SECTION VI – ACCIDENTAL RELEASE MEASURES

If spilled, use dustless methods (vacuum) and place into covered container for disposal (if not contaminated or wet). Use adequate ventilation to keep exposure to airborne contaminants below the exposure limit.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Do not allow water to contact the product until time of use. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended.

SECTION VIII – EXPOSURE CONTROL MEASURES

Engineering Controls: Local exhaust can be used, if necessary, to control airborne dust levels.

Personal Protection: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water. Precautions must be observed because burns occur with little warning -- little heat is sensed.

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WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

Exposure Limits: Consult local authorities for acceptable exposure limits.

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to gray-brown colored powder; Some products contain coarse aggregates.

Specific Gravity:	2.6 to 3.15	**Melting Point:**	>2700°F
Boiling Point:	>2700°F	**Vapor Pressure:**	Not Available
Vapor Density:	Not Available	**Evaporation Rate:**	Not Available
Solubility in Water:	Slight	**Odor:**	Not Available

SECTION X - REACTIVITY DATA

Stability: Stable.
Incompatibility (Materials to Avoid): Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires
Hazardous Decomposition or By-products: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.
Hazardous Polymerization: Will Not Occur.
Condition to Avoid: Keep dry until used to preserve product utility.

SECTION XI – TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation, Ingestion
Toxicity to Animals:
LD50: Not Available
LC50: Not Available
Chronic Effects on Humans: Conditions aggravated by exposure include eye disease, skin disorders and Chronic Respiratory conditions.
Special Remarks on Toxicity: Not Available

SECTION XII – ECOLOGICAL INFORMATION

Ecotoxicity: Not Available
BOD5 and COD: Not Available

Products of Biodegradation: Not available
Toxicity of the Products of Biodegradation: Not available
Special Remarks on the Products of Biodegradation: Not available

SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302).

SECTION XIV – TRANSPORT INFORMATION

Not hazardous under U.S. DOT and TDG regulations.

SECTION XV – OTHER REGULATORY INFORMATION

US OSHA 29CFR 1910.1200: Considered hazardous under this regulation and should be included in the employers' hazard communication program
SARA (Title III) Sections 311 & 312: Qualifies as a hazardous substance with delayed health effects
SARA (Title III) Section 313: Not subject to reporting requirements
TSCA (May 1997): Some substances are on the TSCA inventory list
Federal Hazardous Substances Act: Is a hazardous substance subject to statues promulgated under the subject act
Canadian Environmental Protection Act: Not listed
Canadian WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations (Class D2A, E- Corrosive Material) and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This product has been classified according to the hazard criteria of the Controlled Products Regulation (CPR). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the CPR.

SECTION XVI – OTHER INFORMATION

HMIS-III:

Health –
0 = No significant health risk
1 = Irritation or minor reversible injury possible
2 = Temporary or minor injury possible
3 = Major injury possible unless prompt action is taken
4 = Life threatening, major or permanent damage possible

Flammability-
0 = Material will not burn
1 = Material must be preheated before ignition will occur
2 = Material must be exposed to high temperatures before ignition
3 = Material capable of ignition under normal temperatures
4 = Flammable gases or very volatile liquids; may ignite spontaneously

Physical Hazard-
0 = Material is normally stable, even under fire conditions
1 = Material normally stable but may become unstable at high temps
2 = Materials that are unstable and may undergo react at room temp
3 = Materials that may form explosive mixtures with water
4 = Materials that are readily capable of explosive water reaction

QUIKRETE®

CEMENT & CONCRETE PRODUCTS™

Abbreviations:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CPR	Controlled Products Regulations (Canada)
DOT	Department of Transportation
IARC	International Agency for Research
MSHA	Mine Safety and Health Administration
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicity Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TWA	Time-weighted Average
WHMIS	Workplace Hazardous Material Information System

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NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. END OF MSDS.

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Cement

From Wikipedia, the free encyclopedia

In the most general sense of the word, a **cement** is a binder, a substance that sets and hardens independently, and can bind other materials together. The word "cement" traces to the Romans, who used the term *opus caementicium* to describe masonry resembling modern concrete that was made from crushed rock with burnt lime as binder. The volcanic ash and pulverized brick additives that were added to the burnt lime to obtain a hydraulic binder were later referred to as cementum, cimentum, cäment and cement.

Lafarge cement plant in Contes, France.

Cement used in construction is characterized as **hydraulic** or **non-hydraulic**. Hydraulic cements (*e.g.*, Portland cement) harden because of hydration, chemical reactions that occur independently of the mixture's water content; they can harden even underwater or when constantly exposed to wet weather. The chemical reaction that results when the anhydrous cement powder is mixed with water produces hydrates that are not water-soluble. Non-hydraulic cements (*e.g.*, lime and gypsum plaster) must be kept dry in order to retain their strength.

The most important use of cement is the production of mortar and concrete—the bonding of natural or artificial aggregates to form a strong building material that is durable in the face of normal environmental effects.

Concrete should not be confused with cement, because the term *cement* refers to the material used to bind the aggregate materials of concrete. Concrete is a combination of a cement and aggregate.

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Contents

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  - 1.1 Early uses
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History of the origin of cement

Early uses

It is uncertain where it was first discovered that a combination of hydrated non-hydraulic lime and a pozzolan produces a hydraulic mixture (see also: Pozzolanic reaction), but concrete made from such mixtures was first used by the Ancient Macedonians[1][2] and three centuries later on a large scale by Roman engineers.[3] They used both natural pozzolans (trass or pumice) and artificial pozzolans (ground brick or pottery) in these concretes. Many excellent examples of structures made from these concretes are still standing, notably the huge monolithic dome of the Pantheon in Rome and the massive Baths of Caracalla.[4] The vast system of Roman aqueducts also made extensive use of hydraulic cement.[5]

Although any preservation of this knowledge in literary sources from the Middle Ages is unknown, medieval masons and some military engineers maintained an active tradition of using hydraulic cement in structures such as canals, fortresses, harbors, and shipbuilding facilities.[6][7] The technical knowledge of making hydraulic cement was later formalized by French and British engineers in the 18th century.[6]

Modern cement

Modern hydraulic cements began to be developed from the start of the Industrial Revolution (around 1800), driven by three main needs:

- Hydraulic cement render (stucco) for finishing brick buildings in wet climates.
- Hydraulic mortars for masonry construction of harbor works, etc., in contact with sea water.
- Development of strong concretes.

In Britain particularly, good quality building stone became ever more expensive during a period of rapid growth, and it became a common practice to construct prestige buildings from the new industrial bricks, and to finish them with a stucco to imitate stone. Hydraulic limes were favored for this, but the need for a fast set time encouraged the development of new cements. Most famous was Parker's "Roman cement".[8] This was developed by James Parker in the 1780s, and finally patented in 1796. It was, in fact, nothing like any material used by the Romans, but was a "Natural cement" made by burning septaria – nodules that are found in certain clay deposits, and that contain both clay minerals and calcium carbonate. The burnt nodules were ground to a fine powder. This product, made into a mortar with sand, set in 5–15 minutes. The success of "Roman Cement" led other manufacturers to develop rival products by burning artificial mixtures of clay and chalk.

John Smeaton made an important contribution to the development of cements when he was planning the construction of the third Eddystone Lighthouse (1755–9) in the English Channel. He needed a hydraulic mortar that would set and develop some strength in the twelve hour period between successive high tides. He performed an exhaustive market research on the available hydraulic limes, visiting their production sites, and noted that the "hydraulicity" of the lime was directly related to the clay content of the limestone from which it was made. Smeaton was a civil engineer by profession, and took the idea no further. Apparently unaware of Smeaton's work, the same principle

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was identified by Louis Vicat in the first decade of the nineteenth century. Vicat went on to devise a method of combining chalk and clay into an intimate mixture, and, burning this, produced an "artificial cement" in 1817. James Frost,[9] working in Britain, produced what he called "British cement" in a similar manner around the same time, but did not obtain a patent until 1822. In 1824, Joseph Aspdin patented a similar material, which he called Portland cement, because the render made from it was in color similar to the prestigious Portland stone.

Setting time and "early strength" are important characteristics of cements. Hydraulic limes, "natural" cements, and "artificial" cements all rely upon their belite content for strength development. Belite develops strength slowly. Because they were burned at temperatures below 1250 °C, they contained no alite, which is responsible for early strength in modern cements. The first cement to consistently contain alite was made by Joseph Aspdin's son William in the early 1840s. This was what we call today "modern" Portland cement. Because of the air of mystery with which William Aspdin surrounded his product, others (*e.g.,* Vicat and I.C. Johnson) have claimed precedence in this invention, but recent analysis[10] of both his concrete and raw cement have shown that William Aspdin's product made at Northfleet, Kent was a true alite-based cement. However, Aspdin's methods were "rule-of-thumb": Vicat is responsible for establishing the chemical basis of these cements, and Johnson established the importance of sintering the mix in the kiln.

William Aspdin's innovation was counterintuitive for manufacturers of "artificial cements", because they required more lime in the mix (a problem for his father), a much higher kiln temperature (and therefore more fuel), and the resulting clinker was very hard and rapidly wore down the millstones, which were the only available grinding technology of the time. Manufacturing costs were therefore considerably higher, but the product set reasonably slowly and developed strength quickly, thus opening up a market for use in concrete. The use of concrete in construction grew rapidly from 1850 onwards, and was soon the dominant use for cements. Thus Portland cement began its predominant role.

In the US the first large scale use of cement was Rosendale cement a natural cement mined from a massive deposit of a large dolostone rock deposit discovered in the early 19th century near Rosendale, New York. Rosendale cement was extremely popular for the foundation of buildings (*e.g.*, Statue of Liberty, Capitol Building, Brooklyn Bridge) and lining water pipes. But its long curing time of at least a month made it unpopular after World War One in the construction of highways and bridges and many states and construction firms turned to the use of Portland cement. Because of the switch to Portland cement, by the end of the 1920s of the 15 Rosendale cement companies, only one had survived. But in the early 1930s it was soon discovered that Portland cement while it had a faster setting time was not as durable, especially for highways, to the point that some states stopped building highways and roads with cement. An engineer, Bertrain H. Wait, whose company had worked on the construction of the New York Cities Catskill Aqueduct, and was impressed with the durability of Rosendale cement, came up with a blend of both Rosendale and synthetic cements which has the good attributes of both: it was highly durable and had a much faster setting time. Mr. Wait convinced the New York Commissioner of Highways to construct an experimental section highway near New Paltz, New York, of one sack of Rosendale to six sacks of synthetic cement, and it was proved a success and for decades hence the Rosendale-synthetic cement blend became common use in highway and bridge construction.[11]

Types of modern cement

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Portland cement

Main article: Portland cement

Cement is made by heating limestone (calcium carbonate) with small quantities of other materials (such as clay) to 1450 °C in a kiln, in a process known as calcination, whereby a molecule of carbon dioxide is liberated from the calcium carbonate to form calcium oxide, or quicklime, which is then blended with the other materials that have been included in the mix. The resulting hard substance, called 'clinker', is then ground with a small amount of gypsum into a powder to make 'Ordinary Portland Cement', the most commonly used type of cement (often referred to as OPC).

Portland cement is a basic ingredient of concrete, mortar and most non-speciality grout. The most common use for Portland cement is in the production of concrete. Concrete is a composite material consisting of aggregate (gravel and sand), cement, and water. As a construction material, concrete can be cast in almost any shape desired, and once hardened, can become a structural (load bearing) element. Portland cement may be grey or white.

Portland cement blends

Portland cement blends are often available as inter-ground mixtures from cement manufacturers, but similar formulations are often also mixed from the ground components at the concrete mixing plant.[12]

Portland blastfurnace cement contains up to 70 % ground granulated blast furnace slag, with the rest Portland clinker and a little gypsum. All compositions produce high ultimate strength, but as slag content is increased, early strength is reduced, while sulfate resistance increases and heat evolution diminishes. Used as an economic alternative to Portland sulfate-resisting and low-heat cements.[13]

Portland flyash cement contains up to 35 % fly ash. The fly ash is pozzolanic, so that ultimate strength is maintained. Because fly ash addition allows a lower concrete water content, early strength can also be maintained. Where good quality cheap fly ash is available, this can be an economic alternative to ordinary Portland cement.[14]

Portland pozzolan cement includes fly ash cement, since fly ash is a pozzolan, but also includes cements made from other natural or artificial pozzolans. In countries where volcanic ashes are available (e.g. Italy, Chile, Mexico, the Philippines) these cements are often the most common form in use.

Portland silica fume cement. Addition of silica fume can yield exceptionally high strengths, and cements containing 5–20 % silica fume are occasionally produced. However, silica fume is more usually added to Portland cement at the concrete mixer.[15]

Masonry cements are used for preparing bricklaying mortars and stuccos, and must not be used in concrete. They are usually complex proprietary formulations containing Portland clinker and a number of other ingredients that may include limestone, hydrated lime, air entrainers, retarders, waterproofers and coloring agents. They are formulated to yield workable mortars that allow rapid and consistent masonry work. Subtle variations of Masonry cement in the US are Plastic Cements and Stucco Cements. These are designed to produce controlled bond with masonry blocks.

Expansive cements contain, in addition to Portland clinker, expansive clinkers (usually sulfoaluminate clinkers), and are designed to offset the effects of drying shrinkage that is normally encountered with hydraulic cements. This allows large floor slabs (up to 60 m square) to be prepared without contraction joints.

White blended cements may be made using white clinker and white supplementary materials such as high-purity metakaolin.

Colored cements are used for decorative purposes. In some standards, the addition of pigments to produce "colored Portland cement" is allowed. In other standards (e.g. ASTM), pigments are not allowed constituents of Portland cement, and colored cements are sold as "blended hydraulic cements".

Very finely ground cements are made from mixtures of cement with sand or with slag or other pozzolan type minerals that are extremely finely ground together. Such cements can have the same physical characteristics as normal cement but with 50% less cement particularly due to their increased surface area for the chemical reaction. Even with intensive grinding they can use up to 50% less energy to fabricate than ordinary Portland cements.[16]

Non-Portland hydraulic cements

Pozzolan-lime cements. Mixtures of ground pozzolan and lime are the cements used by the Romans, and can be found in Roman structures still standing (e.g. the Pantheon in Rome). They develop strength slowly, but their ultimate strength can be very high. The hydration products that produce strength are essentially the same as those produced by Portland cement.

Slag-lime cements. Ground granulated blast furnace slag is not hydraulic on its own, but is "activated" by addition of alkalis, most economically using lime. They are similar to pozzolan lime cements in their properties. Only granulated slag (i.e. water-quenched, glassy slag) is effective as a cement component.

Supersulfated cements. These contain about 80% ground granulated blast furnace slag, 15 % gypsum or anhydrite and a little Portland clinker or lime as an activator. They produce strength by formation of ettringite, with strength growth similar to a slow Portland cement. They exhibit good resistance to aggressive agents, including sulfate.

Calcium aluminate cements are hydraulic cements made primarily from limestone and bauxite. The active ingredients are monocalcium aluminate $CaAl_2O_4$ ($CaO \cdot Al_2O_3$ or CA in Cement chemist notation, CCN) and mayenite $Ca_{12}Al_{14}O_{33}$ ($12\ CaO \cdot 7\ Al_2O_3$, or $C_{12}A_7$ in CCN). Strength forms by hydration to calcium aluminate hydrates. They are well-adapted for use in refractory (high-temperature resistant) concretes, e.g. for furnace linings.

Calcium sulfoaluminate cements are made from clinkers that include ye'elimite ($Ca_4(AlO_2)_6SO_4$ or $C_4A_3\$$ in Cement chemist's notation) as a primary phase. They are used in expansive cements, in ultra-high early strength cements, and in "low-energy" cements. Hydration produces ettringite, and specialized physical properties (such as expansion or rapid reaction) are obtained by adjustment of the availability of calcium and sulfate ions. Their use as a low-energy alternative to Portland cement has been pioneered in China, where several million tonnes per year are produced.[17][18] Energy requirements are lower because of the lower kiln temperatures required for reaction, and the lower amount of limestone (which must be endothermically decarbonated) in the mix. In addition, the lower limestone content and lower fuel consumption leads to a CO_2 emission around half that associated with Portland clinker. However, SO_2 emissions are usually significantly higher.

"Natural" cements correspond to certain cements of the pre-Portland era, produced by burning argillaceous limestones at moderate temperatures. The level of clay components in the limestone (around 30–35 %) is such that large amounts of belite (the low-early strength, high-late strength mineral in Portland cement) are formed without the formation of excessive amounts of free lime. As with any natural material, such cements have highly variable properties.

Geopolymer cements are made from mixtures of water-soluble alkali metal silicates and aluminosilicate mineral powders such as fly ash and metakaolin.

The setting of cement

Cement sets when mixed with water by way of a complex series of hydration chemical reactions still only partly understood. The different constituents slowly hydrate and crystallise while the interlocking of their crystals gives to cement its strength. After the initial setting, immersion in warm water will speed up setting. In Portland cement, gypsum is added as a compound preventing cement flash setting. The time it takes for cement to set varies; and can take anywhere from twenty minutes for initial set, to twenty-four hours, or more, for final set.

Safety issues

Bags of cement routinely have health and safety warnings printed on them because not only is cement highly alkaline, but the setting process is exothermic. As a result, wet cement is strongly caustic and can easily cause severe skin burns if not promptly washed off with water. Similarly, dry cement powder in contact with mucous membranes can cause severe eye or respiratory irritation. Cement users should wear protective clothing.[19][20][21]

Cement industry in the world

See also: List of countries by cement production

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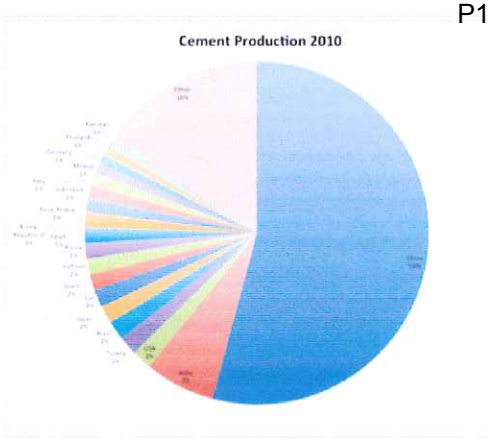
In 2010 the world production of hydraulic cement was 3,300 million tonnes. The top three producers were China with 1,800, India with 220 and USA with 63.5 million tonnes for a combined total of over half the world total by the world's three most populated states.[22]

For the world capacity to produce cement in 2010 the situation was similar with the top three states (China, India and USA) accounting for just under half the world total capacity.[23]



Global Cement Production in 2010

China

"For the past 18 years, China consistently has produced more cement than any other country in the world. [...] (However,) China's cement export peaked in 1994 with 11 million tonnes shipped out and has been in steady decline ever since. Only 5.18 million tonnes were exported out of China in 2002. Offered at $34 a ton, Chinese cement is pricing itself out of the market as Thailand is asking as little as $20 for the same quality."[24]

In 2006 it was estimated that China manufactured 1.235 billion tonnes of cement, which was 44% of the world total cement production.[25] "Demand for cement in China is expected to advance 5.4% annually and exceed 1 billion tonnes in 2008, driven by slowing but healthy growth in construction expenditures. Cement consumed in China will amount to 44% of global demand, and China will remain the world's largest national consumer of cement by a large margin."[26]

In 2010, 3.3 billion tonnes of cement was consumed globally. Of this, China accounted for 1.8 billion tonnes. [27]

Africa

See also: Cement in Africa

Environmental impacts

Cement manufacture causes environmental impacts at all stages of the process. These include emissions of airborne pollution in the form of dust, gases, noise and vibration when operating machinery and during blasting in quarries, and damage to countryside from quarrying. Equipment to reduce dust emissions

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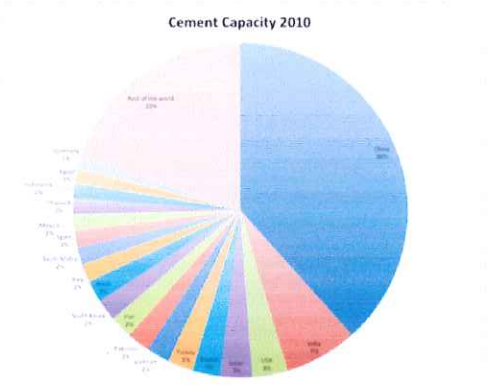
during quarrying and manufacture of cement is widely used, and equipment to trap and separate exhaust gases are coming into increased use. Environmental protection also includes the re-integration of quarries into the countryside after they have been closed down by returning them to nature or re-cultivating them.

CO_2 emissions

Cement manufacturing releases CO_2 in the atmosphere both directly when calcium carbonate is heated, producing lime and carbon dioxide,[28] and also indirectly through the use of energy if its production involves the emission of CO_2. The cement industry is the second largest CO_2 emitting industry behind power generation. The cement industry produces about 5% of global man-made CO_2 emissions, of which 50% is from the chemical process, and 40% from burning fuel.[29] The amount of CO_2 emitted by the cement industry is nearly 900 kg of CO_2 for every 1000 kg of cement produced. [30] The high proportion of carbon dioxide produced in the chemical reaction leads to large decrease in mass in the conversion from limestone to cement. So, to reduce the transport of heavier raw materials and to mimimize the associated costs, it is more economical for cement plants to be closer to the limestone quarries rather than to the consumer centers.[31]

In certain applications, lime mortar, reabsorbs the same amount of CO_2 as was released in its manufacture, and has a lower energy requirement in production than mainstream cement. Newly developed cement types from Novacem[32] and Eco-cement can absorb carbon dioxide from ambient air during hardening.[33] Use of the Kalina cycle during production can also increase energy efficiency.



Global Cement Capacity in 2010

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Cement output in 2004

Heavy metal emissions in the air

In some circumstances, mainly depending on the origin and the composition of the raw materials used, the high-temperature calcination process of limestone and clay minerals can release in the atmosphere gases and dust rich in volatile heavy metals, a.o, thallium,[34] cadmium and mercury are the most toxic. Heavy metals (Tl, Cd, Hg, ...) are often found as trace elements in common metal sulfides (pyrite (FeS_2), zinc blende (ZnS), galena (PbS), ...) present as secondary minerals in most of the raw materials. Environmental regulations exist in many countries to limit these emissions. As of 2011 in the United States, cement kilns are "legally allowed to pump more toxins into the air than are hazardous-waste incinerators."[35]

Heavy metals present in the clinker

The presence of heavy metals in the clinker arises both from the natural raw materials and from the use of recycled by-products or alternative fuels. The high pH prevailing in the cement porewater ($12.5 < pH < 13.5$) limits the mobility of many heavy metals by decreasing their solubility and increasing their sorption onto the cement mineral phases. Nickel, zinc and lead are commonly found in cement in non-negligible concentrations.

Use of alternative fuels and by-products materials

A cement plant consumes 3 to 6 GJ of fuel per tonne of clinker produced, depending on the raw materials and the process used. Most cement kilns today use coal and petroleum coke as primary fuels, and to a lesser extent natural gas and fuel oil. Selected waste and by-products with recoverable calorific value can be used as fuels in a cement kiln, replacing a portion of conventional fossil fuels, like coal, if they meet strict specifications. Selected waste and by-products containing useful minerals such as calcium, silica, alumina, and iron can be used as raw materials in the kiln, replacing raw materials such as clay, shale, and limestone. Because some materials have both useful mineral content and recoverable calorific value, the distinction between alternative fuels and raw materials is not always clear. For example, sewage sludge has a low but significant calorific value, and burns to give ash containing minerals useful in the clinker matrix.[36]

See also

- BET theory
- Cement chemist notation
- Cement render
- Fly ash
- Geopolymers
- Portland cement
- Rosendale cement

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- Portland Cement Association (US) (http://www.cement.org/)
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P18-1

3.4.18 Comment Letter P18: Terry Hertel

P18-1 The County acknowledges receipt of the Quikrete concrete information and Wikipedia cement information. See Response P5-1.

> From: Tim Brand <tkbrand@sbcglobal.net>
> Date: Tue, 21 Feb 2012 16:13:13 -0800
> To: "rob.eastwood@pln.sccgov.org" <rob.eastwood@pln.sccgov.org>
> Subject: comment to Lehigh DEIR
>
>
> 1) The Health Risk Assessment figures in the DEIR do not consider
> synergistic effects from toxins. This is a well known mechanism,
> exploited in medicine for treatment of both cancer and AIDS. On
> February 6, 2012, at the Los Altos/Los Altos Hills forum, Brian
> Bateman,
> BAAQMD responded to a question about this by saying that the data for
> these synergistic effects at low dose concentrations were not
> available
> like they were for the high level doses used in medicine. He did not
> deny their applicability to our health; he merely said they did not
> have
> rules on how to quantify the effects at this time.
> The EIR should present the "whole record" so that the public and SCC
> can
> assess the impact honestly, not merely the part of the record that has
> been blessed by our regulatory agencies. Please consider the
> synergistic effects of the toxins from the increased air and water
> pollution as well as how they add to the cumulative effects.

P19-1

>
> 2) I am also attaching a 2/18/2012 article in the NYTimes which
> states a
> similar problem in the way our regulatory agencies have been assessing
> the dangers from particulate matter. This article is particularly
> applicable to the diesel exhaust. Please make sure to include this
> NYTimes article and include the findings from the study in the
> Proceedings of the National Journal of Science which will be published
> shortly, and consider the mechanisms it shows when calculating the
> health impact.

P19-2

>
> Timothy Brand
> 10161 Lebanon Drive
> Cupertino, CA 95014
>
>
>

February 18, 2012

Scientists Find New Dangers in Tiny but Pervasive Particles in Air Pollution

By FELICITY BARRINGER

Fine atmospheric particles — smaller than one-thirtieth of the diameter of a human hair — were identified more than 20 years ago as the most lethal of the widely dispersed air pollutants in the United States. Linked to both heart and lung disease, they kill an estimated 50,000 Americans each year. But more recently, scientists have been puzzled to learn that a subset of these particles, called secondary organic aerosols, has a greater total mass, and is thus more dangerous, than previously understood.

A batch of new scientific findings is helping sort out the discrepancy, including, most recently, a study led by scientists at the University of California, Irvine, and the Pacific Northwest National Laboratory in Richland, Wash., that is scheduled to be released on Tuesday. It indicates that the compounds' persistence in the atmosphere was under-represented in older scientific models.

"If the authors' analysis is correct, the public is now facing a false sense of security in knowing whether the air they breathe is indeed safe," said Bill Becker, of the National Association of Clean Air Agencies.

Taken together, the findings of the new study and of a handful of others published in the past two years could mean that two decades' worth of pollution-control strategies — focused on keeping tiny particles from escaping into the atmosphere — have addressed only part of the problem.

Scientists and regulators say that new models, strategies and technologies would be needed to address the secondary organic aerosol particles, which are formed not during combustion but later, in the wake of interactions between pollutants and natural chemical compounds.

Paul Shepson, a professor of analytical and atmospheric chemistry at Purdue University and one of the reviewers of the Irvine paper, called it "highly significant in scientific terms," adding that current models of fine particulates "grossly underpredict" their density, "sometimes by as much as a factor of 10."

P19-2

A former regulator agreed. "There's no doubt this is important stuff," said Jeffrey R. Holmstead, who ran the Environmental Protection Agency's air and radiation program during the administration of President George W. Bush. "It may be harder than we thought" to clean the fine particles out of the air and protect public health, he said, "but if we really know what's causing it, we can focus our efforts more."

Mr. Holmstead added that the findings could significantly affect the future design and implementation of air-pollution control strategies and that regulators would have to rethink the models that inform air quality rules.

This new information has scientists questioning whether climate change modeling should be adjusted as well.

The E.P.A. has announced that it is reassessing the national ambient air quality standards for fine particulates, which were last set in 2006 at levels higher than the agency's staff and scientific advisers had recommended. The agency's most recent data show that airborne particles decreased 27 percent from 2000 to 2010.

A spokeswoman for the E.P.A. said the agency usually declined to comment on individual studies, preferring to incorporate them into its larger analyses during the rulemaking process.

P19-2

The Irvine study of the formation of secondary compounds in the atmosphere, which will be published in the Proceedings of the National Academy of Science, upends previous assumptions about the fate of the byproducts of the pollution from internal-combustion engines. These gaseous byproducts were thought to incorporate themselves into tiny airborne drops of liquid that would then dissipate quickly as the drops evaporated.

The new study finds instead that they attach themselves more tightly to airborne organic particles, creating tiny tar balls that evaporate more slowly and persist longer than anyone had thought. E.P.A. models built on these assumptions now appear to understate the total amount of fine particles, according to Barbara J. Finlayson-Pitts, a professor at Irvine and one of the study's authors.

"If you're going to use models in a predictive sense, you need to make sure they are getting the right answer for the right reasons," she said. "Right now most models are not getting the right answer."

Allen Robinson, a professor of engineering and public policy at Carnegie Mellon University, focuses his work on fine particulates and their regulation. "We haven't been trying to control a lot of the organics," he said of the subset of particles that is the subject of the new findings.

Emissions of coal-fired power plants do not play a role in the formation of these organic particles, several scientists said, but they do come into play in the formation of sulfide-based particles.

P19-2

3.4.19 Comment Letter P19: Timothy Brand

P19-1 The commenter suggests that there may be synergistic interactions between toxins that could result in adverse health effects even when the concentration or dose of any individual toxin is below its threshold level. The commenter is correct that currently available health risk assessment techniques do not have a mechanism to consider such synergistic toxicity, as there are no established dose-response tables on which to base this combined effect. Further, outside the research environment, no accepted methodology currently exists for identifying or quantifying any such synergistic effects. The health risk assessment for the Draft EIR was conducted in accordance with the current technical guidelines developed by federal, state, and regional agencies, including USEPA, CalEPA, OEHHA Air Toxics Hot Spots Program Guidance, and the BAAQMD's Health Risk Screening Analysis Guidelines. These guidance documents represent the current state of the practice for the assessment of health risks from toxic air contaminants such as those emitted by the Project. In the absence of any established synergistic effects data, and without any available analytical method to identify and quantify such effects, the health risk assessment approach in the Draft EIR is the best available method to identify and disclose the potential health risks that would be associated with Project-related toxic air contaminants.

P19-2 This comment and the attached *New York Times* article identify ongoing research into the sources, fate, and effects of fine particulates in the atmosphere. In particular, the *New York Times* article discusses a subset of fine particulates called secondary organic aerosols formed from gaseous byproducts of internal combustion engines. The article describes that this research is recent and ongoing and has not yet been reviewed by the USEPA for consideration of possible revisions to the National Ambient Air Quality Standards for fine particulates. Thus, it would be premature for this CEQA analysis to attempt to quantify the potential significance of secondary aerosols in the absence of any established regulatory standards. Further, whatever the potential effects, it should be noted that there is nothing unique about the Project that would be expected to contribute a disproportionate amount of secondary aerosols compared with other internal combustion engine emission sources (construction equipment, trucks, highway vehicles, etc.) that are common in an urban environment. In fact, using Project-related PM2.5 emissions as a surrogate for total engine exhaust emissions, Project-related emissions would decrease compared to baseline (see Tables 4.3-3 and 4.3-4 on page 4.3-20 of the Draft EIR). Thus, any potential impact from Project-related secondary aerosols would also be expected to decrease compared to baseline. Nonetheless, while this comment does not result in any revisions to the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

From: Frank Geefay <fgeefay@yahoo.com>
Reply-To: Frank Geefay <fgeefay@yahoo.com>
Date: Tue, 21 Feb 2012 18:01:24 -0800 (PST)
To: Rob Eastwood <rob.eastwood@pln.sccgov.org>
Subject: Public Comment for Lehigh Reclamation Plan Amendment

Dear Sir/Mam,

I am a long time resident of Cupertino and am concerned that not enough is being incorporated into the present Reclamation Plan to completely pay for the reclamation when Lehigh decided to vacate their mining operations and cement plant. According to the Reclamation Plan Amendment amendment draft dated 12/7/2011 (see attachment) the Financial Assurance (FA) funds Lehigh submitted to the County are as follows (last page of report):

2010 August : $11,439,992 which included EMSA and Disturbed areas
2011 April : $13,438,624

Then according to Gary Rudholm the FA jumped to $47.7 million on February 8, 2012.

I cannot understand why the sudden jump in FA of more than 4 times in a 2 year period of time. According to the 2010 FA that amount included the EMSA and Disturbed Area. Even if there was an error and the EMSA and Disturbed areas were actually part of the 2012 FA how can the amount increase by 4 times? Is the disturbed areas and EMSA 4 time larger than the mining area of the current Reclamation Plan?

How accurate are your methods of estimating the FA? If you are underestimating the FA then more than likely taxpayers will be picking up the balance. Is this correct or is Lehigh obliged to pick up the tab if not enough money is in the FA?

I am very concerned that even $47.7 million is inadequate to pay for the reclamation of a surface mine almost 3 miles long and half a mile wide. This is almost the distance from Foothill Expressway and Lawrence Expressway. I am very concerned that we taxpayers will end up with the tab for much of the reclamation. If you have been underestimating the reclamation costs from 2011 and earlier then what assurance do we have that you current amount of $47.7 million is accurate? Is there enough money for unforeseen reclamations?

P20-1

I also learned that the Cement Plan and all its facilities are not covered by the reclamation plan. Does this mean that after the completion of the reclamation we will still be stuck with all the cement plant structures and disturbed property not included in the Reclamation Plan? It may end up more expansive to demolish these hazardous structures and clean up any toxic wast manufacturing facilities such as this are famous for abandoning. Who will pick up the tab? So even if the surface mine were to be successfully restored we would end up with an abandoned cement plant which will pose a danger to anyone curious enough to explorer the abandon facility. This is totally unacceptable. An abandoned cement plant surrounded by a vegetated mine will still be a hazard and an eyesore. There are rock crushers and other structures connected by long conveyor belts scattered throughout the property which will pose significant hazard to the curious. Who is liable if someones child were to be injured or worst? P20-2

I strongly urge the County to look more seriously at the true cost of the reclamation and FA to make sure it is conservative enough to cover unforeseen contingencies. I would also urge that the Cement plant and all disturbed properties not specified in the reclamation plan be included or somehow accounted for. Once the mine and facilities are abandoned what remains will remain forever. P20-3 P20-4

Best Regards,
Frank Geefay
7961 Sunderland Dr.,
Cupertino Ca. 95014
Phone: 408-996-7013

P20-5

3.23 Financial Assurances (§3702)

Financial assurances will be required to ensure that reclamation is performed in accordance with this Amendment. The financial assurance may be in the form of surety bonds, irrevocable letter of credit, trust funds, or other forms of financial assurances approved by the Lead Agency. The financial assurance is reviewed annually by the operator, the lead agency and the Office of Mine Reclamation to determine if adjustments to the estimate are necessary.

The County approved the financial assurance estimate dated August 2010 totaling $11,439,992. This estimate covers existing disturbed lands within the Permanente ownership as well as activities scheduled under the Permanente Quarry Reclamation Plan Amendment dated March 2007 and the 2009 EMSA Amendment. An updated estimate, totaling $13,438,624 was provided to the County in April 2011. Upon approval of this Amendment, the financial assurances will be adjusted as necessary.

3.24 Administrative Requirements

Lead Agency Information:

Lead Agency:	County of Santa Clara Planning Office
Staff Contact:	Gary Rudholm, Senior Planner
Telephone:	(408) 299-5770
Address:	70 West Hedding Street East Wing 7th Floor San Jose, CA 95110

3.25 Statement of Responsibility

Lehigh Southwest Cement Company accepts responsibility for reclamation as set forth in this Amendment.

Marvin E. Howell, Director of Land Use and Planning

Dated: December 7th, 2011

3.4.20 Comment Letter P20: Frank Geefay

P20-1 The commenter requests additional information regarding how the FACE was determined and its adequacy to ensure that reclamation is performed in accordance with the proposed RPA. See Master Response M1(C) which describes FACE requirements under SMARA.

P20-2 The commenter is correct that the Cement Plant is not a part of the Project Area. As explained in the Draft EIR, the separately-permitted Permanente Cement Plant located on the site is outside the Project Area and would not be subject to the RPA (Draft EIR Section ES.4.1, page ES-3; Section 2.3.2, *Existing Land Uses in the Vicinity of the Project*, page 2-7). See also, Draft EIR Section 2.2.2, page 2-2 ("The Cement Plant and other areas of the site that are not within the Project Area are not part of the Project."). See Master Response M4(B) pertaining to project description adequacy and features that are not part of the proposed reclamation plan amendment.

The Cement Plant would continue to operate during reclamation of the Quarry, and would not be abandoned as the commenter suggests. Effects associated with the continued operation of the Cement Plant are considered in the Draft EIR as part of the cumulative scenario. See, Draft EIR Section 6.1.2, *Projects Considered in the Cumulative Scenario*. Liability issues pertaining to injury at the Cement Plant are outside the scope of this EIR (see Master Response M2(A)).

P20-3 This comment has been addressed. See Response P20-1.

P20-4 This comment has been addressed. See Response P20-2.

P20-5 The County acknowledges receipt of the Financial Assurance, Administrative Requirements, and Statement of Responsibility sections of the RPA, dated December 7, 2011.

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Concrete

From Wikipedia, the free encyclopedia

Concrete is a composite construction material composed primarily of aggregate, cement and water. There are many formulations that have varied properties. The aggregate is generally a coarse gravel or crushed rocks such as limestone, or granite, along with a fine aggregate such as sand. The cement, commonly Portland cement, and other cementitious materials such as fly ash and slag cement, serve as a binder for the aggregate. Various chemical admixtures are also added to achieve varied properties. Water is then mixed with this dry composite which enables it to be shaped (typically poured) and then solidified and hardened into rock-hard strength through a chemical process known as hydration. The water reacts with the cement which bonds the other components together, eventually creating a robust stone-like material. Concrete has relatively high compressive strength, but much lower tensile strength. For this reason is usually reinforced with materials that are strong in tension (often steel). Concrete can be damaged by many processes, such as the freezing of trapped water.

Concrete is widely used for making architectural structures, foundations, brick/block walls, pavements, bridges/overpasses, motorways/roads, runways, parking structures, dams, pools/reservoirs, pipes, footings for gates, fences and poles and even boats. Famous concrete structures include the Burj Khalifa (world's tallest building), the Hoover Dam, the Panama Canal and the Roman Pantheon.

Concrete technology was known by the Ancient Romans and was widely used within its empire. After the Empire passed, use of concrete became scarce until the technology was re-pioneered in the mid-18th century.

The environmental impact of concrete is a complex mixture of not entirely negative effects; while concrete is a major contributor to greenhouse gas emissions, recycling of concrete is increasingly common in structures that have reached the end of their life. Structures made of concrete can have a long service life. As concrete has a high thermal mass and very low permeability, it can make for energy efficient housing.

Contents

- 1 History
  - 1.1 Additives
- 2 Composition
  - 2.1 Cement
  - 2.2 Water
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  - 2.4 Reinforcement
  - 2.5 Chemical admixtures
  - 2.6 Mineral admixtures and blended cements

Outer view of the Roman Pantheon, still the largest unreinforced solid concrete dome.[1]

A modern building: Boston City Hall (completed 1968) is constructed largely of concrete, both precast and poured in place.

Opus caementicium lying bare on a tomb near Rome. In contrast to modern concrete structures, the concrete walls of Roman buildings were covered, usually with brick or stone.

P21-1

- 3 Concrete production
  - 3.1 Mixing concrete
  - 3.2 Workability
  - 3.3 Curing
- 4 Properties
- 5 Concrete degradation
- 6 Environmental and health
- 7 Concrete recycling
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P21-1

History

The word concrete comes from the Latin word "concretus" (meaning compact or condensed), the perfect passive participle of "concrescere", from "con-" (together) and "crescere" (to grow).

Concrete was used for construction in many ancient structures.[2]

During the Roman Empire, Roman concrete (or *opus caementicium*) was made from quicklime, pozzolana and an aggregate of pumice. Its widespread use in many Roman structures, a key event in the history of architecture termed the Roman Architectural Revolution, freed Roman construction from the restrictions of stone and brick material and allowed for revolutionary new designs in terms of both structural complexity and dimension.[3]

> Concrete, as the Romans knew it, was a new and revolutionary material. Laid in the shape of arches, vaults and domes, it quickly hardened into a rigid mass, free from many of the internal thrusts and strains that troubled the builders of similar structures in stone or brick.[4]

Hadrian's Pantheon in Rome is an example of Roman concrete construction.

Modern tests show that *opus caementicium* had as much compressive strength as modern Portland-cement concrete (ca. 200 kg/cm^2).[5] However, due to the absence of steel reinforcement, its tensile strength was far lower and its mode of application was also different:

> Modern structural concrete differs from Roman concrete in two important details. First, its mix consistency is fluid and homogeneous, allowing it to be poured into forms rather than requiring hand-layering together with the placement of aggregate,

which, in Roman practice, often consisted of rubble. Second, integral reinforcing steel gives modern concrete assemblies great strength in tension, whereas Roman concrete could depend only upon the strength of the concrete bonding to resist tension.[6]

The widespread use of concrete in many Roman structures has ensured that many survive to the present day. The Baths of Caracalla in Rome are just one example. Many Roman aqueducts and bridges have masonry cladding on a concrete core, as does the dome of the Pantheon.

Some have stated that the secret of concrete was lost for 13 centuries until 1756, when the British engineer John Smeaton pioneered the use of hydraulic lime in concrete, using pebbles and powdered brick as aggregate. However, the Canal du Midi was built using concrete in 1670.[7] Likewise there are concrete structures in Finland that date back to the 16th century.[*citation needed*] Portland cement was first used in concrete in the early 1840s.

Additives

Concrete additives have been used since Roman and Egyptian times, when it was discovered that adding volcanic ash to the mix allowed it to set under water. Similarly, the Romans knew that adding horse hair made concrete less liable to crack while it hardened and adding blood made it more frost-resistant.[8]

In modern times, researchers have experimented with the addition of other materials to create concrete with improved properties, such as higher strength or electrical conductivity.

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Composition

There are many types of concrete available, created by varying the proportions of the main ingredients below. In this way or by substitution for the cemetitious and aggregate phases, the finished product can be tailored to its application with varying strength, density, or chemical and thermal resistance properties.

Recently the use of recycled materials as concrete ingredients has been gaining popularity because of increasingly stringent environmental legislation. The most conspicuous of these is fly ash, a by-product of coal-fired power plants. This use reduces the amount of quarrying and landfill space required as the ash acts as a cement replacement thus reducing the amount of cement required.

The *mix design* depends on the type of structure being built, how the concrete will be mixed and delivered and how it will be placed to form this structure.

Cement

Main article: Cement

Portland cement is the most common type of cement in general usage. It is a basic ingredient of concrete, mortar and plaster. English masonry worker Joseph Aspdin patented Portland cement in 1824; it was named because of its similarity in color to Portland limestone, quarried from the English Isle of Portland and used extensively in London architecture. It consists of a mixture of oxides of calcium, silicon and aluminium. Portland cement and similar materials are made by heating limestone (a source of calcium) with clay and grinding this product (called *clinker*) with a source of sulfate (most commonly gypsum).

In recent years, alternatives have been developed to help replace cement. Products such as PLC (Portland Limestone Cement),[9] which incorporate limestone into the mix, are being tested. This is due to cement production being one of the largest producers of global green house gas emissions.

Water

Combining water with a cementitious material forms a cement paste by the process of hydration. The cement paste glues the aggregate together, fills voids within it and allows it to flow more freely.

Less water in the cement paste will yield a stronger, more durable concrete; more water will give a freer-flowing concrete with a higher slump. Impure water used to make concrete can cause problems when setting or in causing premature failure of the structure.

Hydration involves many different reactions, often occurring at the same time. As the reactions proceed, the products of the cement hydration process gradually bond together the individual sand and gravel particles and other components of the concrete, to form a solid mass.

Reaction:

Cement chemist notation: $C_3S + H \rightarrow C\text{-}S\text{-}H + CH$
Standard notation: $Ca_3SiO_5 + H_2O \rightarrow (CaO)\cdot(SiO_2)\cdot(H_2O)(gel) + Ca(OH)_2$
Balanced: $2Ca_3SiO_5 + 7H_2O \rightarrow 3(CaO)\cdot 2(SiO_2)\cdot 4(H_2O)(gel) + 3Ca(OH)_2$

Aggregates

Main article: Construction aggregate

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Fine and coarse aggregates make up the bulk of a concrete mixture. Sand, natural gravel and crushed stone are used mainly for this purpose. Recycled aggregates (from construction, demolition and excavation waste) are increasingly used as partial replacements of natural aggregates, while a number of manufactured aggregates, including air-cooled blast furnace slag and bottom ash are also permitted.

Decorative stones such as quartzite, small river stones or crushed glass are sometimes added to the surface of concrete for a decorative "exposed aggregate" finish, popular among landscape designers.

The presence of aggregate greatly increases the robustness of concrete above that of cement, which otherwise is a brittle material and thus concrete is a true composite material.

Redistribution of aggregates after compaction often creates inhomogeneity due to the influence of vibration. This can lead to strength gradients.[10]

Reinforcement

Main article: reinforced concrete

Concrete is strong in compression, as the aggregate efficiently carries the compression load. However, it is weak in tension as the cement holding the aggregate in place can crack, allowing the structure to fail. Reinforced concrete solves these problems by adding either steel reinforcing bars, steel fibers, glass fiber, or plastic fiber to carry tensile loads. Thereafter the concrete is reinforced to withstand the tensile loads upon it.

Installing rebar in a floor slab during a concrete pour.

Chemical admixtures

Chemical admixtures are materials in the form of powder or fluids that are added to the concrete to give it certain characteristics not obtainable with plain concrete mixes. In normal use, admixture dosages are less than 5% by mass of cement and are added to the concrete at the time of batching/mixing.[11] The common types of admixtures[12] are as follows.

- Accelerators speed up the hydration (hardening) of the concrete. Typical materials used are $CaCl_2$, $Ca(NO_3)_2$ and $NaNO_3$. However, use of chlorides may cause corrosion in steel reinforcing and is prohibited in some countries, so that nitrates may be favored.
- Retarders slow the hydration of concrete and are used in large or difficult pours where partial setting before the pour is complete is undesirable. Typical polyol retarders are sugar, sucrose, sodium gluconate, glucose, citric acid, and tartaric acid.
- Air entrainments add and entrain tiny air bubbles in the concrete, which will reduce damage during freeze-thaw cycles, thereby increasing the concrete's durability. However, entrained air entails a trade off with strength, as each 1% of air may result in 5% decrease in compressive strength.
- Plasticizers increase the workability of plastic or "fresh" concrete, allowing it be placed more easily, with less consolidating effort. A typical plasticizer is lignosulfonate. Plasticizers can be used to reduce the water content of a concrete while maintaining workability and are sometimes called *water-reducers* due to this use. Such treatment improves its strength and durability characteristics. Superplasticizers (also called *high-range water-reducers*) are a class of plasticizers that have fewer deleterious effects and can be used to increase workability more than is practical with traditional plasticizers. Compounds used as superplasticizers include sulfonated naphthalene formaldehyde condensate, sulfonated melamine formaldehyde condensate, acetone formaldehyde condensate and polycarboxylate ethers.
- Pigments can be used to change the color of concrete, for aesthetics.
- Corrosion inhibitors are used to minimize the corrosion of steel and steel bars in concrete.
- Bonding agents are used to create a bond between old and new concrete (typically a type of polymer) .
- Pumping aids improve pumpability, thicken the paste and reduce separation and bleeding.

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Mineral admixtures and blended cements

There are inorganic materials that also have pozzolanic or latent hydraulic properties. These very fine-grained materials are added to the concrete mix to improve the properties of concrete (mineral admixtures),[11] or as a replacement for Portland cement (blended cements).[13]

Blocks of concrete in Belo Horizonte, Brazil.

- Fly ash: A by-product of coal-fired electric generating plants, it is used to partially replace Portland cement (by up to 60% by mass). The properties of fly ash depend on the type of coal burnt. In general, siliceous fly ash is pozzolanic, while calcareous fly ash has latent hydraulic properties.[14]
- Ground granulated blast furnace slag (GGBFS or GGBS): A by-product of steel production is used to partially replace Portland cement (by up to 80% by mass). It has latent hydraulic properties.[15]
- Silica fume: A by-product of the production of silicon and ferrosilicon alloys. Silica fume is similar to fly ash, but has a particle size 100 times smaller. This results in a higher surface to volume ratio and a much faster pozzolanic reaction. Silica fume is used to increase strength and durability of concrete, but generally requires the use of superplasticizers for workability.[16]
- High reactivity Metakaolin (HRM): Metakaolin produces concrete with strength and durability similar to concrete made with silica fume. While silica fume is usually dark gray or black in color, high-

reactivity metakaolin is usually bright white in color, making it the preferred choice for architectural concrete where appearance is important.

Concrete production

The processes used vary dramatically, from hand tools to heavy industry, but result in the concrete being placed where it cures into a final form. Wide range of technological factors may occur during production of concrete elements and their influence to basic characteristics may vary. [17]

Concrete plant facility (background) with concrete delivery trucks.

When initially mixed together, Portland cement and water rapidly form a gel, formed of tangled chains of interlocking crystals. These continue to react over time, with the initially fluid gel often aiding in placement by improving workability. As the concrete sets, the chains of crystals join and form a rigid structure, gluing the aggregate particles in place. During curing, more of the cement reacts with the residual water (hydration).

This curing process develops physical and chemical properties. Among these qualities are mechanical strength, low moisture permeability and chemical and volumetric stability.

Mixing concrete

See also: Volumetric concrete mixer

Thorough mixing is essential for the production of uniform, high quality concrete. For this reason equipment and methods should be capable of effectively mixing concrete materials containing the largest specified aggregate to produce *uniform mixtures* of the lowest slump practical for the work.

Separate paste mixing has shown that the mixing of cement and water into a paste before combining these materials with aggregates can increase the compressive strength of the resulting concrete.[18] The paste is generally mixed in a *high-speed*, shear-type mixer at a w/cm (water to cement ratio) of 0.30 to 0.45 by mass. The cement paste premix may include admixtures such as accelerators or retarders, superplasticizers, pigments, or silica fume. The premixed paste is then blended with aggregates and any remaining batch water and final mixing is completed in conventional concrete mixing equipment.[19]

High-energy mixed (HEM) concrete is produced by means of high-speed mixing of cement, water and sand with net specific energy consumption of at least 5 kilojoules per kilogram of the mix. A plasticizer or a superplasticizer is then added to the activated mixture, which can later be mixed with aggregates in a conventional concrete mixer. In this process, sand provides dissipation of energy and creates high-shear conditions on the surface of cement particles. This results in the full volume of water interacting with cement. The liquid activated mixture can be used by itself or foamed (expanded) for lightweight concrete.[20] HEM concrete hardens in low and subzero temperature conditions and possesses an increased volume of gel, which drastically reduces capillarity in solid and porous materials.

Workability

Main article: Concrete slump test

Workability is the ability of a fresh (plastic) concrete mix to fill the form/mold properly with the desired work (vibration) and without reducing the concrete's quality. Workability depends on water content,

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aggregate (shape and size distribution), cementitious content and age (level of hydration) and can be modified by adding chemical admixtures, like superplasticizer. Raising the water content or adding chemical admixtures will increase concrete workability. Excessive water will lead to increased bleeding (surface water) and/or segregation of aggregates (when the cement and aggregates start to separate), with the resulting concrete having reduced quality. The use of an aggregate with an undesirable gradation can result in a very harsh mix design with a very low slump, which cannot be readily made more workable by addition of reasonable amounts of water.

Pouring and smoothing out concrete at Palisades Park in Washington DC.

Workability can be measured by the concrete slump test, a simplistic measure of the plasticity of a fresh batch of concrete following the ASTM C 143 or EN 12350-2 test standards. Slump is normally measured by filling an "Abrams cone" with a sample from a fresh batch of concrete. The cone is placed with the wide end down onto a level, non-absorptive surface. It is then filled in three layers of equal volume, with each layer being tamped with a steel rod in order to consolidate the layer. When the cone is carefully lifted off, the enclosed material will slump a certain amount due to gravity. A relatively dry sample will slump very little, having a slump value of one or two inches (25 or 50 mm). A relatively wet concrete sample may slump as much as eight inches. Workability can also be measured by using the flow table test.

Slump can be increased by addition of chemical admixtures such as plasticizer or superplasticizer without changing the water-cement ratio[21]. Some other admixtures, especially air-entraining admixture, can increase the slump of a mix.

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High-flow concrete, like self-consolidating concrete, is tested by other flow-measuring methods. One of these methods includes placing the cone on the narrow end and observing how the mix flows through the cone while it is gradually lifted.

After mixing, concrete is a fluid and can be pumped to the location where needed.

Curing

In all but the least critical applications, care needs to be taken to properly *cure* concrete, to achieve best strength and hardness. This happens after the concrete has been placed. Cement requires a moist, controlled environment to gain strength and harden fully. The cement paste hardens over time, initially setting and becoming rigid though very weak and gaining in strength in the weeks following. In around 3 weeks, typically over 90% of the final strength is reached, though strengthening may continue for decades.[22] The conversion of calcium hydroxide in the concrete into calcium carbonate from absorption of CO_2 over several decades further strengthen the concrete and making it more resilient to damage. However, this reaction, called carbonation, lowers the pH of the cement pore solution and can cause the reinforcement bars to corrode.

A concrete slab ponded while curing.

Hydration and hardening of concrete during the first three days is critical. Abnormally fast drying and shrinkage due to factors such as evaporation from wind during placement may lead to increased tensile stresses at a time when it has not yet gained sufficient strength, resulting in greater shrinkage cracking. The early strength of the concrete can be increased if it is kept damp during the curing process. Minimizing stress prior to curing minimizes cracking. High-early-strength concrete is designed to hydrate faster, often by increased use of cement that increases shrinkage and cracking. Strength of concrete changes (increases) up to three years. It depends on cross-section dimension of elements and conditions of structure exploitation.[23]

During this period concrete needs to be kept under controlled temperature and humid atmosphere. In practice, this is achieved by spraying or ponding the concrete surface with water, thereby protecting the concrete mass from ill effects of ambient conditions. The pictures to the right show two of many ways to achieve this, ponding – submerging setting concrete in water and wrapping in plastic to contain the water in the mix. Additional common curing methods include wet burlap and/or plastic sheeting covering the fresh concrete, or by spraying on a water-impermeable temporary curing membrane.

Properly curing concrete leads to increased strength and lower permeability and avoids cracking where the surface dries out prematurely. Care must also be taken to avoid freezing, or overheating due to the exothermic setting of cement. Improper curing can cause scaling, reduced strength, poor abrasion resistance and cracking.

Properties

Main article: Properties of concrete

Concrete has relatively high compressive strength, but much lower tensile strength. For this reason is usually reinforced with materials that are strong in tension (often steel). The elasticity of concrete is relatively constant at low stress levels but starts decreasing at higher stress levels as matrix cracking develops. Concrete has a very low coefficient of thermal expansion and shrinks as it matures. All concrete structures will crack to some extent, due to shrinkage and tension. Concrete that is subjected to long-duration forces is prone to creep.

Tests can be made to ensure the properties of concrete correspond to specifications for the application.

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Concrete degradation

Main article: Concrete degradation

Concrete can be damaged by many processes, such as the expansion of corrosion products of the steel reinforcement bars, freezing of trapped water, fire or radiant heat, aggregate expansion, sea water effects, bacterial corrosion, leaching, erosion by fast-flowing water, physical damage and chemical damage (from carbonation, chlorides, sulfates and distillate water).[*citation needed*]

Concrete spalling caused by the corrosion of rebar

Environmental and health

Main article: Environmental impact of concrete

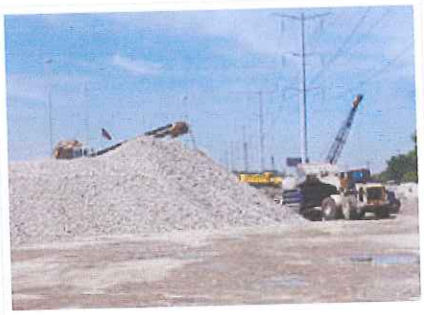
The environmental impact of concrete is a complex mixture of not entirely negative effects. A major component of concrete is cement, which has its own its own environmental and social impacts.

The cement industry is one of two primary producers of carbon dioxide, a major greenhouse gas. Concrete is used to create hard surfaces which contribute to surface runoff, which can cause heavy soil erosion, water pollution and flooding. Concrete is a primary contributor to the urban heat island effect, but is less so than asphalt. Concrete dust released by building demolition and natural disasters can be a major source of dangerous air pollution. The presence of some substances in concrete, including useful and unwanted additives, can cause health concerns due to toxicidity and radioactivity. Wet concrete is highly alkaline and must be handled with proper protective equipment.

Concrete recycling

Main article: Concrete recycling

Concrete recycling is an increasingly common method of disposing of concrete structures. Concrete debris was once routinely shipped to landfills for disposal, but recycling is increasing due to improved environmental awareness, governmental laws and economic benefits.



Recycled crushed concrete being loaded into a semi-dump truck to be used as granular fill.

Concrete, which must be free of trash, wood, paper and other such materials, is collected from demolition sites and put through a crushing machine, often along with asphalt, bricks and rocks.

Reinforced concrete contains rebar and other metallic reinforcements, which are removed with magnets and recycled elsewhere. The remaining aggregate chunks are sorted by size. Larger chunks may go through the crusher again. Smaller pieces of concrete are used as gravel for new construction projects. Aggregate base gravel is laid down as the lowest layer in a road, with fresh concrete or asphalt placed over it. Crushed recycled concrete can sometimes be used as the dry aggregate for brand new concrete if it is free of contaminants, though the use of recycled concrete limits strength and is not allowed in many jurisdictions. On 3 March 1983, a government funded research team (the VIRL research.codep) approximated that almost 17% of worldwide landfill was by-products of concrete based waste.

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Use of concrete in infrastructure

Mass concrete structures

These large structures typically include gravity dams, such as the Hoover Dam, the Itaipu Dam and the Three Gorges Dam, arch dams, navigation locks and large breakwaters. Such large structures, even though individually placed in formed horizontal blocks, generate excessive heat and associated expansion; to mitigate these effects post-cooling[24] is commonly provided in the design. An early example at Hoover Dam, installed a network of pipes between vertical concrete placements to circulate cooling water during the curing process to avoid damaging overheating. Similar systems are still used; depending on volume of the pour, the concrete mix used, and ambient air temperature, the cooling process may last for many months after the concrete is placed. Various methods also are used to pre-cool the concrete mix in mass concrete structures.[24]

Concrete that is poured all at once in one form (so that there are no weak points where the concrete is "welded" together) is used for tornado shelters.

Pre-stressed concrete structures

Main article: Pre-stressed concrete

Pre-stressed concrete is a form of reinforced concrete that builds in compressive stresses during construction to oppose those found when in use. This can greatly reduce the weight of beams or slabs, by better distributing the stresses in the structure to make optimal use of the reinforcement. For example a horizontal beam will tend to sag down. If the reinforcement along the bottom of the beam is pre-stressed, it can counteract this.

In pre-tensioned concrete, the pre-stressing is achieved by using steel or polymer tendons or bars that are subjected to a tensile force prior to casting, or for post-tensioned concrete, after casting.

Concrete textures

When one thinks of concrete, the image of a dull, gray concrete wall often comes to mind. With the use of form liner, concrete can be cast and molded into different textures and used for decorative concrete applications. Sound/retaining walls, bridges, office buildings and more serve as the optimal canvases for concrete art. For example, the Pima Freeway/Loop 101 retaining and sound walls in Scottsdale, Arizona, feature desert flora and fauna, a 67-foot (20 m) lizard and 40-foot (12 m) cacti along the 8-mile (13 km) stretch. The project, titled "The Path Most Traveled," is one example of how concrete can be shaped using elastomeric form liner.

40-foot cacti decorate a sound/retaining wall in Scottsdale, Arizona

Building with concrete

Concrete is one of the most durable building materials. It provides superior fire resistance, compared with wooden construction and can gain strength over time. Structures made of concrete can have a long service life. Concrete is the most widely used construction material in the world with annual consumption estimated at between 21 and 31 billion tonnes.[*citation needed*]

Concrete is used more than any other man-made material in the world.[25] As of 2006, about 7.5 billion cubic meters of concrete are made each year—more than one cubic meter for every person on Earth.[26]

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Concrete powers a US$35 billion industry, employing more than two million workers in the United States alone.[*citation needed*] More than 55,000 miles (89,000 km) of highways in the United States are paved with this material. Reinforced concrete, prestressed concrete and precast concrete are the most widely used types of concrete functional extensions in modern days.

Energy efficiency

Energy requirements for transportation of concrete are low because it is produced locally from local resources, typically manufactured within 100 kilometers of the job site. Similarly, relatively little energy is used in producing and combining the raw materials (although large amounts of CO_2 are produced by the chemical reactions in cement manufacture). The overall embodied energy of concrete is therefore lower than for most structural materials other than wood.

Once in place, concrete offers significant energy efficiency over the lifetime of a building.[27] Concrete walls leak air far less than those made of wood-frames[*citation needed*]. Air leakage accounts for a large percentage of energy loss from a home. The thermal mass properties of concrete increase the efficiency of both residential and commercial buildings. By storing and releasing the energy needed for heating or cooling, concrete's thermal mass delivers year-round benefits by reducing temperature swings inside and minimizing heating and cooling costs[*citation needed*]. While insulation reduces energy loss through the building envelope, thermal mass uses walls to store and release energy. Modern concrete wall systems use both external insulation and thermal mass to create an energy-efficient building. Insulating Concrete Forms (ICFs) are hollow blocks or panels made of either insulating foam or rastra that are stacked to form the shape of the walls of a building and then filled with reinforced concrete to create the structure.

Fire safety

Concrete buildings are more resistant to fire than those constructed using wood or steel frames,[*citation needed*] since concrete does not burn. Concrete reduces the risk of structural collapse and is an effective fire shield, providing safe means of escape for occupants and protection for fire fighters.

Options for non-combustible construction include floors, ceilings and roofs made of cast-in-place and hollow-core precast concrete. For walls, concrete masonry technology and Insulating Concrete Forms (ICFs) are additional options. ICFs are hollow blocks or panels made of fire-proof insulating foam that are stacked to form the shape of the walls of a building and then filled with reinforced concrete to create the structure.

Concrete also provides the best resistance of any building material to high winds, hurricanes, tornadoes due to its lateral stiffness that results in minimal horizontal movement.[*citation needed*]

Earthquake safety

As discussed above, concrete is very strong in compression, but weak in tension. Larger earthquakes can generate very large shear loads on structures. These shear loads subject the structure to both tensional and compressional loads. Concrete structures without reinforcing, like other unreinforced masonry structures, can fail during severe earthquake shaking. Unreinforced masonry structures constitute one of the largest earthquake risks globally.[28] These risks can be reduced through seismic retrofitting of at-risk buildings, (e.g. School buildings in Istanbul, Turkey[29]).

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World records

The world record for the largest concrete pour in a single project is the Three Gorges Dam in Hubei Province, China by the Three Gorges Corporation. The amount of concrete used in the construction of the dam is estimated at 16 million cubic meters over 17 years. The previous record was 12.3;million cubic meters held by Itaipu hydropower station in Brazil. [30][31][32][33]

The world record for concrete pumping was set on 7 August 2009 during the construction of the Parbati Hydroelectric Project, near the village of Suind, Himachal Pradesh, India, when the concrete mix was pumped through a vertical height of 715 m (2,346 ft).[34][35]

The world record for largest continuously poured concrete raft was achieved in August 2007 in Abu Dhabi by contracting firm Al Habtoor-CCC Joint Venture. The pour (a part of the foundation for the Abu Dhabi's Landmark Tower) was 16,000 cubic meters of concrete poured within a two day period.[36] The previous record (close to 10,500 cubic meters) was held by Dubai Contracting Company and achieved 23 March 2007.[37]

The world record for largest continuously poured concrete floor was completed 8 November 1997, in Louisville, Kentucky by design-build firm EXXCEL Project Management. The monolithic placement consisted of 225,000 square feet (20,900 m^2) of concrete placed within a 30 hour period, finished to a flatness tolerance of F_F 54.60 and a levelness tolerance of F_L 43.83. This surpassed the previous record by 50% in total volume and 7.5% in total area.[38][39]

The record for the largest continuously placed underwater concrete pour was completed 18 October 2010, in New Orleans, Louisiana by contractor C. J. Mahan Construction Company, LLC of Grove City, Ohio. The placement consisted of 10,224 cubic yards of concrete placed in a 58 hour period using two concrete pumps and two dedicated concrete batch plants. Upon curing, this placement will allow the 50,180-square-foot (4,662 m^2) cofferdam to be dewatered approximately 26 feet (7.9 m) below sea level to allow the construction of the IHNC GIWW Sill & Monolith Project to be completed in the dry.[*citation needed*]

See also

- Anthropic rock
- Biorock
- Brutalist architecture, encouraging visible concrete surfaces
- Bunding
- Cement
  - Geopolymers, a class of synthetic aluminosilicate materials
  - Hempcrete, a mixture with hemp hurds
  - Mudcrete, a soil-cement mixture
  - Papercrete, a paper-cement mixture
  - Portland cement, the classical concrete cement
- Cement accelerator
- Concrete canoe
- Concrete curing
- Concrete leveling
- Concrete mixer
- Concrete masonry unit
- Concrete moisture meter
- Concrete recycling
- Concrete step barrier
- Construction
- Diamond grinding of pavement
- Efflorescence
- Fireproofing
- Foam Index
- Form liner
- Formwork
  - Controlled permeability formwork
- High performance fiber reinforced cementitious composites
- High Reactivity Metakaolin
- International Grooving & Grinding Association
- LiTraCon
- Mortar
- Plasticizer
- Prefabrication
- Pykrete, a composite material of ice and cellulose
- Shallow foundation
- Silica fume
- Translucent concrete
- Whitetopping
- World of Concrete
- Types of concrete
  - Aerated autoclaved concrete
  - Asphalt concrete
  - Seacrete
  - Decorative concrete
  - ferrocement
  - Fiber reinforced concrete
  - Lunarcrete
  - Precast concrete
  - Prestressed concrete
  - Ready-mix concrete
  - Reinforced concrete
  - Roller-compacted concrete
  - Salt-concrete
  - Terrazzo

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Lime (material)

From Wikipedia, the free encyclopedia

Lime is a general term for calcium-containing inorganic materials, in which carbonates, oxides and hydroxides predominate. Strictly speaking, lime is calcium oxide or calcium hydroxide. It is also the name for a single mineral (native lime) of the CaO composition, occurring very rarely.[1] The word "lime" originates with its earliest use as building mortar and has the sense of "sticking or adhering."[2] Lime can also refer to a sticky substance (birdlime) smeared on branches to catch small birds.

Limestone quarry in Brønnøy, Norway.

These materials are still used in large quantities as building and engineering materials (including limestone products, concrete and mortar) and as chemical feedstocks, among other uses. Lime industries and the use of many of the resulting products date from prehistoric periods in both the Old World and the New World.

P21-1

The rocks and minerals from which these materials are derived, typically limestone or chalk, are composed primarily of calcium carbonate. They may be cut, crushed or pulverized and chemically altered. "Burning" (calcination) converts them into the highly caustic material *quicklime* (calcium oxide, CaO) and, through subsequent addition of water, into the less caustic (but still strongly alkaline) *slaked lime* or *hydrated lime* (calcium hydroxide, $Ca(OH)_2$), the process of which is called *slaking of lime*.

When the term is encountered in an agricultural context, it probably refers to agricultural lime. Otherwise it most commonly means slaked lime, as the more dangerous form is usually described more specifically as quicklime or *burnt lime*.

Contents

- 1 Lime production process
- 2 See also
- 3 References
- 4 External links

Lime production process

- Limestone is extracted from quarries or mines.
- Part of the extracted stone, selected according to its chemical composition and granulometry, is calcinated at about 1000°C in different types of kiln, fired by such fuels as natural gas, coal, fuel oil, lignite, etc.

Quicklime is produced according to the reaction: $CaCO_3$ + heat → $CaO + CO_2$. Lime is used extensively for waste water treatment with ferrous sulphate.

- Quicklime can be hydrated, i.e., combined with water.

Hydrated lime, known as slaked lime, is produced according to the reaction: $CaO + H_2O \rightarrow Ca(OH)_2$

See also

- calcium oxide, the main component of dry mineral lime.
- calcium hydroxide, the hydrated form.
- gypsum: a similar mineral.
- sascab: a building and paving material (Central America).
- hydraulic lime
- Lime plaster
- Lime mortar
- Lime wash
- Plastering

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External links

- The National Lime Association (US & Canada) (http://www.lime.org)
- The British Lime Association (http://www.britishlime.org.uk)
- The European Lime Association (EULA) (http://www.eula.eu)
- Glossary by Robert W. Piwarzyk, Santa Cruz Public Libraries, Ca (http://www.santacruzpl.org/history/work/limeglos.shtml)

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3.4.21 Comment Letter P21: Terry Hertel

P21-1 This comment has been addressed. See Response P5-1.

3.5 Responses to Oral Comments

THE COUNTY OF SANTA CLARA

IN RE:

LEHIGH SOUTHWEST CEMENT COMPANY

DRAFT ENVIRONMENTAL IMPACT REPORT

2250-10P(M1)-10

_____/

SANTA CLARA COUNTY PLANNING COMMISSION HEARING

DATE:	February 2, 2012
TIME:	1:45 p.m.
LOCATION:	Santa Clara County Board of Supervisors' Chambers 70 West Hedding Street First Floor San Jose, California 95110
REPORTED BY:	Diane S. Martin Certified Shorthand Reporter License Number C-6464

A P P E A R A N C E S:

SANTA CLARA COUNTY PLANNING COMMISSION:

JOHN VIDOVICH, Vice Chair
MARY ANN RUIZ
DENNIS CHIU
SCOTT LEFAVER, Chair

Nancy Clark
Carolyn Walsh
Elizabeth Pianca
Rob Eastwood
Marina Rush
Gary Rudholm

--oOo--

February 2, 2012

Santa Clara County Planning Commission Hearing

San Jose, California

--oOo--

MR. LEFAVER: This is item number 7, 2250-10P(M1)-10EIR Lehigh Southwest Cement Company. The project staff is Rob Eastwood. This is to accept public comment on the Permanente Quarry Rehabilitation Plan Amendment Draft Environmental Impact Report, and this is for the location at 24001 Stevens Creek Boulevard in Cupertino, and the supervisor district is supervisor district 5.

Could we please have a -- do we have a staff report on this?

GARY RUDHOLM: Yes, good afternoon. Marina Rush is the project planner on this, and she will provide a brief overall presentation. Of course, the bulk of this item is dedicated to taking public comments. So with that I'll turn it over.

MR. LEFAVER: Thank you.

Marina.

MARINA RUSH: Apologies, Commissioner. The wrong PowerPoint was installed on the computer, but we can go ahead and get started.

The purpose of the meeting today is a public meeting to accept the public comments regarding the analysis and findings of the Draft Environmental Impact Report that was prepared for the proposed Lehigh Permanente Quarry Reclamation Plan Amendment.

During the Draft Environmental Impact Report process we do take public comments, and we hold a hearing here at Santa Clara County during that public review period, and that's what the purpose of today's meeting is.

Under the Surface Mining and Reclamation Act the reclamation plan is required to reclaim mine lands to a beneficial end use. So wherever lands have been mined, they do have to be reclaimed back to a reasonable use as required under the state law.

The proposal that's before us from the applicant is to amend a reclamation plan that was adopted in 1985 for the quarry, Permanente Quarry. At that time it was estimated that the reclamation plan would last for approximately 25 years, and since then we've had a series of proposals that have come in from Lehigh with slight modifications.

What's before you is the current proposal that came in in the summer, July of 2011, and was amended slightly in December 2011, and that's what's been analyzed in the Draft EIR.

The proposed Reclamation Plan Amendment includes approximately 1,239 acres of land out of their 3200 acres of ownership, continuous ownership out there.

Of the 1,239, 637 of these acres are existing mine lands that would be reclaimed, and approximately 600 acres would an open space or undisturbed lands.

The primary areas to be reclaimed consist of the original quarry pit, which is still a current and active mining pit that's being used.

A materials storage area where overburden is deposited to the west of the quarry pit, called the West Materials Storage Area. Second overburdened deposit area to the east, which is an area closest to the Cupertino city limits. And that's called the East Materials Storage Area.

A surge pile and rock plant where rocks are broken down to create aggregate that's then sold out in the industry.

A crusher and quarry office support area

that's up near the main quarry pit. An area that's located south of Permanente Creek where the owners had done some exploration activities, and those areas and that activity needs to be reclaimed as well.

And then also disturbed areas that are in and around the Permanente Creek corridor.

This is an exhibit that shows those general areas. As you can see, the West Materials Storage Area is to the west, and the East Materials Storage Area is all the way to the east. You can see kind of an outline of some of the residential areas of Cupertino along that area.

The Reclamation Plan -- Reclamation Plan has to have a time frame included in it. This Reclamation Plan Amendment is proposed in a 20-year time period. It will be reclaimed in three different phases.

In the first phase reclamation will begin immediately on the East Materials Storage Area in yellow. And the areas in blue is where they will continue mining during that first phase.

You'll also see, barely, the exploration areas south of the creek are also actively being reclaimed. And some portions along the creek

corridor.

In phase 2 active reclamation then moves towards the eastern edge of the main quarry, and you can barely see, but there are yellow hash marks in areas where they're going to begin reclaiming during phase 2 where they're going to be taking the overburden from the West Materials Storage Area, and backfilling into the main pit on the western face of the wall.

At this point the East Materials Storage Area will be reclaimed along with some other portions along the creek.

And then in the third and final phase, areas in green are those that have been reclaimed, and the areas in yellow is where they will be actively reclaiming.

What is an Environmental Impact Report? I just wanted to touch base that as we all know, an Environmental Impact Report is an informational document that's used by the public and decision makers when making choices with a project. It's a full disclosure document that identifies any impacts associated with the project. It identifies feasible mitigation measures, if there are any, where you can minimize or avoid damages resulting

from the project.

The term "significant impact" means substantial, adverse damage to the physical environment.

The areas that were addressed in this Draft EIR are those listed there.

And the Draft Environmental Impact Report does identify, for example, some areas where mitigation measures can lessen the significant impacts. For example, in noise and health hazards there were mitigation measures that were identified related to equipment; changes to the equipment that would help reduce some of those; or times of operation; as well as water quality impacts following reclamation.

The Environmental Impact Report also includes alternatives, and the alternatives included in ours is the no-project alternative that's required by CEQA; an alternative called the Central Material Storage Area, where it would basically stop deposits in the East Materials Storage Area, and then as an alternative location, have any additional overburden put into the Central Material Storage Area, so that the East Material Storage Area would begin reclamation right away.

And then the third alternative that was analyzed was a complete backfill of the quarry pit, which would have the West Materials Storage Area overburden backfilled into the pit, as well as the East Material Storage Area backfilled overburden.

Significant and unavoidable impacts are impacts that are unavoidable because no mitigation or partial mitigation is feasible. The Draft EIR has identified significant and unavoidable impacts for the following areas.

Visual impacts during the reclamation stage. There are adverse impacts to some historical resources on the property.

Selenium in Permanente Creek during reclamation would continue.

And also alteration of the existing drainage pattern would result in potential for increased flooding.

The Draft EIR was released on December 23rd for public review and comment, and the public comment period closes on February 21st, 2012 at end of business day.

We've got copies of the EIR that we sent out to all the agencies as well as they're able to be viewed at Cupertino, Los Altos, Saratoga

libraries; the County planning office, and then electronic versions on the County's Web site, which is downloadable.

We also held a community outreach meeting last week, and there were several hard copies brought to that meeting, and electronic versions that were brought and taken by the public.

So today the Planning Commission's role is to take oral comments. We do have a court reporter here that will be transcribing all the comments that are received, as well as this meeting will be videotaped so that we'll have a video of it.

If we could have the comments that are written be submitted to the county's office and address that's on the screen above you, or by e-mail or by fax.

Next steps after the comment period closes, are that the County will prepare a final EIR. We'll evaluate, prepare written responses to all the comments that are received to be included in this final EIR.

If necessary, revisions will be made to the text, and a mitigation, monitoring and reporting program would be proposed.

The Planning Commission hearing is targeted

for March 22nd for action by the Planning Commission. The Commission at that hearing would certify the EIR as complete, and would take an action on the reclamation plan.

MR. LEFAVER: Thank you.

Any questions of staff? I'm going to wait until the lights come on. Thank you.

Again, thank you, all. This is a hearing before the Planning Commission to receive your oral comments on the Draft Environmental Impact Report dealing specifically with the reclamation plan that is -- that the Draft Environmental Impact Report addresses.

Written comments are best, the best way, and we will certainly take your oral comments, and they will be responded, but if you could also write your comments at some point so the staff can make sure to get an understanding of what your items that you want to bring up are, that would be a good, good way to proceed.

We as a Planning Commission will be here. We will be listening to your oral comments, and we will not be responding; but only listening.

Again, this is strictly to deal with the Environmental Impact Report that's before us that

is the reclamation plan. We would appreciate if you would focus on that and deal with that particular item, the reclamation plan.

We have a number of people who wish to speak. If you do wish to speak, please put your name on one of these, and it will be brought to me, and I will call them in order as I receive them.

The individual speakers will have two minutes to speak. We do have one group that is here, and they will have three minutes to speak.

So I will start with the group, and we will hear your comments on the reclamation plan.

So starting with the group, Bill Almon, if you could come up here and speak first with us. Give your comments, we would appreciate it.

BILL ALMON: Thank you.

MR. LEFAVER: Thank you.

BILL ALMON: My name is Bill Almon.

MR. LEFAVER: I'm going to have you raise the -- there you go.

BILL ALMON: My name is Bill Almon. I represent a group called QuarryNo, and we appreciate this opportunity to talk to you. I would like to start by talking and addressing the improvements to the EIR. The original EIR was

PH-1

submitted by Lehigh. The County's action has now improved that from our point of view. It now has 47 billion dollar bonding, and it has a requirement that the pit be filled. PH-1

What we're talking about here though is something kind of unusual. We're talking about cleaning up a toxic spill, a spill that's lasted 27 years; will go on to last another 10 to 20 years. We're cleaning up a toxic spill. We are not addressing, because this is the reclamation plan, what causes a toxic spill. PH-2

The EIR we believe is flawed. We are required by CEQA to address both indirect and direct impacts on the environment. There is 100,000 diesel truck trips per year. That impact is not in the EIR. PH-3

In addition to that, we have a cumulative CEQA issue, which says that anything that is reasonably expected in the future should be considered. A new pit is reasonably expected; has only been withdrawn to speed up this process that's before you. That should be included. PH-4

The health risk assessment is flawed. It is old. Goes back to data from two years ago. It does not address hexavalent chromium, which has PH-5

been found now in three different samples over two years in the Lehigh water.

The air model used by the air district to compute the emissions and the impact on health, the air district now has concluded -- it's called AERMOD, A-E-R-M-O-D. They've concluded it's flawed, and they've got to come up with a new model. In addition, again, 100,000 trucks are not addressed.

This is very significant for the County. The County is out of compliance on particulate 2.5. The air quality district, not us, says that the impact in 2010 alone was 3 billion dollars on Santa Clara County. 3 billion dollars.

Two contributors to that. The main one is the kiln at Lehigh. That kiln produces the largest amount of nitric oxide in the air quality district, which includes nine counties that has no mitigation capability. That can be corrected with mitigation, but it's not in the plan.

In addition, the trucks. We would advise that the trucks should be mitigated by replacing them with trucks from the air quality district. The air quality district this year is supplying 247 trucks free to the trucking companies that handle

PH-5

PH-6

PH-7

the Port of Oakland.

Thank you.

MR. LEFAVER: Mr. Almon, thank you for your comments, and thank you for being specific. You were very succinct. I appreciate it. Thank you.

BILL ALMON: We will be submitting these in writing. Again, thank you for the opportunity.

MR. LEFAVER: Thank you.

The next speaker, please. I'm going to call two out. If the second speaker can get ready to come up, we would appreciate it.

Cathy, is it Helgerson?

CATHY HELGERSON: Yes.

MR. LEFAVER: Cathy, can you please? You were up here before. Welcome back.

And after her, if I could have Terry Hertel please get ready.

Cathy, hi.

CATHY HELGERSON: I brought some -- can I give you this?

MR. LEFAVER: If you could give that. Thank you. Hi.

CATHY HELGERSON: What I'd like to bring up is that there is going to be a Superfund site, okay. I'm working on that with the EPA. The West

PH-7

PH-8

Materials Storage Area, the East Materials Storage cannot be implemented at this time, as far as I'm concerned. It has to be put off. I don't know how long. I'm going to summarize this because I sent you my letter here. PH-8

There is a 15-mile radius that they will be looking at, especially because of the water. There's dust everywhere. We're getting it, eating it and breathing it 24/7. There is a cancer epidemic because of this. And also there have been many spare-the-air days. PH-9

We need to do something about the East Materials Storage Area. We can't wait five or ten years until they empty the old pit. We can't survive with the new pit they want to propose and destroy all these trees that have acted as a buffer. PH-10

And there is an aluminum plant and an ammunitions factory under the East Materials Storage Area that has been covered up. I have old pictures here of when it first started, and I noticed that they were destroying their little hill that was there. It's now an astronomical mound of pollution, and you can see that in the pictures I've given you. It's extremely ugly from Stevens PH-11 PH-12

Creek Boulevard and Snelling. I've got pictures there that you can see how awful it is; that they have ruined our scenic view.

The people are upset about this. Santa Clara County overlooks what's happening to us. They will not listen. They will not comply with what's underneath the East Materials Storage Area. The San Andreas Fault line is two miles, according to your report, from the pit, and if there is a new pit dug, it will be even closer. It will be probably causing the next major earthquake in California, and we can't risk this.

There are many fault lines around this.

Thank you.

MR. LEFAVER: Thank you. And your written comments will be part of the record as well.

CATHY HELGERSON: And you can keep the pictures.

MR. LEFAVER: And the pictures. Thank you.

Terry? And after Terry we have Dave Singhal, please.

TERRY HERTEL: Good afternoon.

MR. LEFAVER: Welcome.

TERRY HERTEL: My name is Terry Hertel. Thanks for listening to me. I live at 10015 Byrne

PH-12

PH-13

PH-14

Avenue, and I look right at that cement plant. I want to show you some exhibits. This is only about one winter. This is the filter out of my heater. I got filters like this at work in Sunnyvale, and they don't get near as dirty, and that's all cement.

PH-15

In my house where the vents are in the roof I have piles of cement that's been collecting for 30 years.

So I'd like to address the trucks. I travel to work down Stevens Creek down Foothill and follow your trucks on a regular basis, and the traffic is getting worse and worse and worse. From about 8 o'clock in the morning, or a little earlier all the way down past The Blue Pheasant, you've got a traffic jam, and it's getting worse every month, and part of it is the trucks. And there is a school on Foothill where people are always trying to get out and right at Cristo Rey.

PH-16

If anybody wants to see some of the plant operations at night, take a drive down Cristo Rey back up in there.

I've had five heart operations, and pretty well believe that it's because of the dust that I'm inhaling at night. At 4:30 in the morning,

PH-17

actually around 4:20 every day I'm woken up. I'm awakened by the sound of the diesel engines. It sounds like the diesel engines at Donner Summit, and the crushing. And if any of you are around there and you have an iPhone or an iPad, they have a measuring device for sound and vibration, and every day I'm taking those measurements, and you ought to see the vibration going on.

I have an artificial tree. The limbs are falling off the artificial tree because of the vibration. I have tables. The tables are coming apart. I have to put them back together.

So that's the end of my time. I think what you really need to do is get a vote on this and shut that place down.

MR. LEFAVER: Thank you.

TERRY HERTEL: I've got some clothes here, too.

MR. LEFAVER: Again, if we can focus on the reclamation plan, which is what we're taking information on in your oral comments, we would appreciate it. So talk about the reclamation plan.

Thank you. Dave?

DAVE SINGHAL: Hi. I'm Dave Singhal. There is a timely matter I should thank you for, as

PH-17

PH-18

my wife was just recognized as a community leader for her work with cancer connections. She is the director and founder of the cancer center at El Camino Hospital, and she couldn't be here this afternoon because she has a surgery at 1:30, but she wanted me to convey some things. I'm not a scientist so I don't really understand the stuff in detail so just bear with me.

What it gets down to is when people look at multiple chemicals and toxins together, there are two ways of looking at the risks. One is you add them up. You know, there is a one in some X percent chance for each of these one by one. You add them up. That's called additive.

The other more modern technique is what is called synergistic. And sometimes one toxin actually negates the effect of another toxin, but you don't find that. You don't find the toxins in the cigarette one fighting the other and you're actually better off.

Usually what happens is because of the way toxins work, one can actually lower the resistance of your body to the other. That somehow three toxins at very low doses can have the effect of one at a super high dose. Okay, that's called

PH-19

synergistic toxicity.

The studies that have been done to date do not reflect a synergistic toxic review of the matter. The document actually says it's been considered, and if you double click into that, it says, sorry, but we are not able to find or produce or work on a study to this effect, but when you have very toxic -- well, certain level of the chemicals are very toxic. They're presented as borderline. They're at the safe level. They're pretty high, but they're at the safe level, and when you add up these safe levels together they're still in the safe level because they're not doing the synergistic study.

PH-19

Please consider her work. Her name, by the way, is Shyamali Singhal, and you'll see in your documentation her letter that she wrote. Thank you.

MR. LEFAVER: Thank you. Very, very significant, and tell your wife she did a good job.

DAVE SINGHAL: Thank you very much.

MR. LEFAVER: Could we have Mr. Barry Chang, please, and after Mr. Chang if we could have Rhoda Fry.

Mr. Chang, welcome.

BARRY CHANG: Thank you very much. My name is Barry Chang. I'm with the Bay Area for Clean Environment. It's a nonprofit tax exempt public charity organization.

This proposal here, there's a couple issues here. Number one, the proposed amendment to reclamation plan, the Draft EIR does not have a scoping meeting. That's obviously it's against the CEQA law. The CEQA requires a scoping meeting for EIR, but this one doesn't have it. And the staff will argue, "Well, it's not much different from the previous proposal." Come on, give me a break. The new proposal is a 20-acre pit mine.

This is an amendment to the current one, number one. It's totally different. You should have a scoping meeting for the EIR. That wasn't done. Wasn't followed. Number one.

PH-20

Number two, this report cannot prove it, because it does not pass a clean -- the Federal Clean Water Act. If you go back to SMARA, look at the state Surface Mine and Reclamation Act, it's clearly stated any reclamation plan approval need to pass the Federal Clean Water Act. And this plan does not.

PH-21

When Bill was saying that toxic overspill,

PH-22

it's not overspill. Bill was so nice. It's an illegal dumping from Lehigh purposely dumping into the Permanente Creek for over the past seven years, and those waters gets into the underground aquifer, and we all drink this water, and that's a public health hazard. And the County is not doing anything about it. PH-22

Number three, County has issued two notices of violation to this cement plant about the quarry operation. Nothing. Nothing has done. No fine, no enforcement. So what are you talking about here? You get another one? You are not going to enforce, why you bother? Just let them have whatever they want. PH-23

Thank you.

MR. LEFAVER: Thank you.

Rhoda Fry, please. And after Rhoda it's Marvin Howell.

Ms. Fry, hi.

RHODA FRY: The Draft EIR ignores NOP comments and communications from previous reports, including documents written by staff. PH-24

Due to regulation we will pay more for building products which subsidize government jobs, but we're not getting our return on investment. PH-25

Rather, we're getting the illusion of the effective regulation. This is not okay. PH-25

According to the OMR, Lehigh has been out of compliance for over a decade for numerous infractions. During this time the mountain of mining waste grew and grew without review for visual or health impacts. PH-26

Certainly you would not allow 30 acres of skyscrapers to pop up without review. Lehigh has managed to side step this simplest of regulations like getting permits for building structures or getting rid of them. Or inspections for those that did not receive permits. This is particularly troublesome at the emphasis site, the former headquarters of Kaiser Aluminum, which manufactured munitions during World War II, various silicon, phosphate, fertilizer with imported serpentine and pressed aluminum products. PH-27

The company was fined by the County and got attention from the EPA, among other agencies.

Which leads me to the history section of Draft EIR. It ain't history. It's fiction. Failing to mention the toxic history or the historic 50-year-old headquarters and laboratory burned by arson and more is a major oversight. Yet PH-28

all this data resides in the County coffers. Considering there is a plan to remove a bunch of dirt up there, we have to ask what's in it?

There are also unpermitted ponds. What are the cumulative impacts of running more or less water through them? I implore you to set aside this EIR and launch a full investigation so we can understand why the County has not regulated this facility. Do you really want your names on this? Please. Let's get to the bottom of this debacle.

I have copies for you. This is four pages of the 111 that were in the NOP comments. I hope you read the NOP comments because there's a lot of good stuff in there, particularly from the Midpeninsula Open Space District and Susan Siefert.

MR. LEFAVER: Thank you. Be sure you get your written comments to staff.

Mr. Howell, and after Mr. Howell could I have Mr. Henrik Hesseling, please.

Mr. Howell, hi.

MARVIN HOWELL: Hi, good afternoon. My name is Marvin Howell. I am the director of land use planning permitting for Lehigh western region. I appreciate the opportunity to talk to you today, and maybe point out a couple specific things about

PH-28

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PH-31

the reclamation plan that I'm very proud of.

First of all, at this point the EIR and reclamation plan already incorporates many of the comments that the County and Lehigh have received from the public. The plan provides for just over 600 acres of reclamation of active mining area, but it also sets aside about 600 acres of buffer, which will not be disturbed.

PH-32

And I want to make it very clear that we own 3,500 acres of land at the site, and this Reclamation Plan Amendment will not provide for new mining anywhere within our ownership.

PH-33

The plan backfills the existing mining area to an elevation of about that of Permanente Creek, so it stabilizes the existing quarry walls, and returns the stormwater function of that area back to what it was naturally. And because the pit utilizes fill from the West Materials Storage Area, it addresses concerns about the view shed to the north of our property. In fact, when our work is completed, the West Materials Storage Area will be returned to the approximate elevations that existed there before mining began late 1800s.

PH-34

I just want to finish by saying that I've been in the mining industry for 30 years now, and

PH-35

I'm very proud of this reclamation plan; proud of the work that our team has done, and the County of Santa Clara has done. I think the planning department is to be commended on the production of the EIR.

PH-35

Thank you.

MR. LEFAVER: Thank you, Mr. Howell.

Mr. Hesseling. And after Mr. Hesseling, Libby Lucas, please.

Did I get your name right?

HENRIK WESSELING: Close.

Good afternoon, Honorable Planning Commission. My name is Henrik Wesseling. As department manager of the Permanente Quarry I am responsible for the operation.

This reclamation plan describes in every detail how we will reclaim our quarry and mining operation; how this will be prepared for its future private open space use. In preparation for this reclamation plan we teamed up with many well-known experts in their field of expertise: geologists, hydrologists, biologists and noise experts. Each of these specialists provided very detailed reports for this reclamation plan.

PH-36

We felt it was our duty to provide as

thorough a work product to the County as possible. Not only to meet, but to exceed the high standards of Santa Clara County.

We've gone to a great length to make this reclamation plan a model of our company's commitment to environmental stewardship. We installed vegetation test plots back in 2010 to evaluate different seed mix from the local seeds, plants, and to soil compositions, and have carefully analyzed the performance of a variety of native plants.

With this reclamation plan we will plant 1700 oak trees; 8600 pine trees; and reclaim 637 acres and plant shrubs and grasses.

The Permanente plant and the quarry is vital to the Bay Area and all of California.

The United States is the biggest importer of cement worldwide. No other country has imported as much building materials to build schools and infrastructure. Everyone understands that imported building materials come to the far greater environmental impact, and due to the higher distance -- or the longer distance and the higher emissions.

Thank you very much.

PH-36

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PH-38

MR. LEFAVER: Thank you. Thank you for your comments.

Ms. Lucas? Libby Lucas. There you are. Sorry. Hi.

LIBBY LUCAS: I'm Libby Lucas. I'm a Los Altos resident.

I guess just as preliminary, I haven't got my written comments ready for you today. But there are two areas that I feel are still very, very disturbing. One is the coordination of the water district's flood control project. And in the reclamation plan EIR they mention that the yield from this east fork of Permanente Creek is 3.5 times more than the west fork, and it really -- the report they're quoting pointed out that under the '86 heavy rain scenario it was 20 times more sediment yield coming from the east fork than the west fork, and in that one year they measured 53,000 tons, and you get that as sort of a wave going downstream, and it is really very deadly going through neighborhoods and the downtown Mountain View particularly, where it ends up.

PH-39

And I think that what you need for a buffer is not the buffer they're talking about, but terracing below the entire project area with very

PH-40

thick, thickets of willows, something to catch the sediment if indeed you have an earthquake because you are on two or three earthquake fractures that come out of the San Andreas Fault, and it's a very volatile area if you're going to look at global warming and the intensity of rainstorms that we haven't begun to see materialize like they have elsewhere in the world and in the United States. PH-40

The second aspect is the fact that the underground groundwater movement has not been accurately assessed for pollutants. Basically there are 17 cow water drinking water wells below this area that the groundwater is feeding into, and the selenium, arsenic, mercury may not be showing up so terribly badly now, but it's cumulative. PH-41

We've been working on the Moffet Field Superfund cleanup for over 20 years, and they haven't begun to take care of that toxic underground plume.

So I would just say that you have to have a really solid barrier for all the contaminants that are coming out of this plant so that it does not further impact that groundwater.

Thank you very much.

MR. LEFAVER: Thank you.

Our last speaker is Tim Brand. Mr. Brand? Mr. Brand, welcome.

TIM BRAND: Thank you. I have a very hoarse voice. I apologize.

My name is Tim Brand, and I have witnessed the manner in which this cement company operates for the past 26 years. They don't follow the rules. They do what they want, when they want to and deal with the consequences using lawyers and public officials who now work for them after they've left office. Two of them are here tonight, Sandra James, ex-mayor of Cupertino, and Jim Cunneen, ex-state assemblyman, who now work for them. Sandra is sitting with the other professional liars from Lehigh Cement tonight. PH-42

The appendix of this EIR is much better reading than the body of the EIR. Numerous people and organizations have sent in lists of the past ongoing serious violations of the law that the cement company has committed with little or no repercussions. They decided to building a mountain of mining waste near our homes, for example, called the EMSA in utter violation of their existing reclamation plan. And they will not suffer a single consequence. PH-43

What is particularly upsetting to this community is that they did it right in front of our face while we protested loudly.

The EIR should be a realistic estimate of the impacts of the project; not merely the impact of the intended project because we have ample evidence that Lehigh does not respect the plan. The road to hell is paved with good intentions.

To estimate the real impacts of the project, the report should provide a detailed accounting of all the violations this company has committed and how well the corrective action turned out.

Bear in mind in the case of the illegal mountain outside our homes, the corrective action is to change the plan to legalize their past action with no penalties using this new Reclamation Plan Amendment as the vehicle.

The EIR should also look, for example, at how well the West Material Storage Area has been reclaimed. It hasn't, despite the fact that it was in their plan and required by the 1985 plan.

A great deal of public input regarding this subject can be found in the EIR appendix, but little or none in the body of the EIR report

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itself. Here are some examples.

MR. LEFAVER: Excuse me. Thank you, Mr. Brand.

TIM BRAND: Okay.

MR. LEFAVER: Just to make sure you get your written comments to the staff.

TIM BRAND: Okay.

MR. LEFAVER: It sounds like you have some more.

TIM BRAND: I have a lot more.

MR. LEFAVER: Okay. Thank you.

We do have one more speaker, and that's Mr. Latshaw. Thank you, Mr. Lachon.

GARY LATSHAW: Thank you for the time.

I speak to you as a resident of Cupertino and a volunteer with the Sierra Club. So one of the comments is about selenium. Written comments which we'll submit subsequently. There is the word infeasible used in terms of achieving the objectives of five micrograms per liter of selenium content. We think this needs a new look at before the final.

The second comment is about milestones. The milestones in the current EIR are many years: nine years, five years. I think it would be very

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beneficial to put in monthly, or in worst case quarterly milestones. That would go a long way with both the County monitoring what's going on, and establishing some sort of credibility in the community of Cupertino and surrounding cities.

PH-49

Also as discussed in the last public hearing that there is a financial assurance of 47.8 million dollars. That's a lot of money. I think it should reveal -- you should reveal the source of that guarantee.

PH-50

Finally is the EIR separates out the cement plant operation, very specifically identified. This is really unrealistic in evaluating the total impact of the environment. This is particularly disturbing since in recent months or days I've learned, over the last few months, Lehigh has been importing other limestone for processing. So we have to look at the combined. That was told to me verbally by the Bay Area Air Quality Management District.

PH-51

So thank you very much for your time.

MR. LEFAVER: Thank you very much, and thank you for being very specific and articulate. I appreciate it.

I have no more comments filled out at this

time. If there is anyone else who wishes to speak and give me, the Commission and the staff your comments, I'd appreciate it.

Seeing none, we'll conclude the acceptance of oral comments at this time, and I will close this public meeting dealing with the Draft Environmental Impact Report for the reclamation plan.

Just a reminder that written comments can be submitted to staff until February 21. And those comments will certainly be welcome.

That does close this public meeting for the draft environmental impact report.

(The hearing was adjourned at 2:32 p.m. this date.)

--- oOo ---

I, DIANE S. MARTIN, duly authorized to administer oaths pursuant to Section 2093(b) of the California Code of Civil Procedure, do hereby certify: That the witness in the foregoing deposition was administered an oath to testify to the whole truth in the within-entitled cause; that said deposition was taken at the time and place therein cited; that the testimony of the said witness was reported by me and was thereafter transcribed under my direction into typewriting; that the foregoing is a complete and accurate record of said testimony; and that the witness was given an opportunity to read and correct said deposition and to subscribe the same.

Should the signature of the witness not be affixed to the deposition, the witness shall not have availed himself/herself of the opportunity to sign or the signature has been waived.

I further certify that I am not of counsel nor attorney for any of the parties in the foregoing deposition and caption named nor in any way interested in the outcome of the cause named in said caption.

Dated: _____, 2012,

_____

DIANE S. MARTIN, CSR NO. 6464

Honorable President and Members of the
Santa Clara County Board of Supervisors
February 6, 2011
Page 1 of 2

From: Shyamali Singhal, MD, PhD, FACS
www.surgical-oncologist.com

Via Electronic Mail

Dear County Supervisor,

Re: Lehigh Synergistic Toxicity Data Not Considered

As founder and Director of the El Camino Hospital Cancer Center, I am constantly seeking novel approaches to improve the treatment of cancer, through both surgical and pharmacologic means. In addition, I am on constant surveillance for ways to reduce the incidence of cancer in our community so that our fellow citizens need not ever walk through the doors of my clinic. My training as a clinician-scientist, with a medical degree in Surgical Oncology and a Ph.D. in Molecular Pharmacology, has been invaluable in these efforts.

It has come to my attention that you will shortly be voting on a measure, which requires the parties involved to demonstrate that continuing mining and operations of the Quarry and Plant will have 'no adverse impact on neighborhood health.' *I have studied the analysis from BAAQMD and do NOT believe their analysis successfully demonstrates 'no adverse impact on health;' their methodology fails to accurately account for synergistic toxicity. In addition, several of the assumptions inherent in their models are highly suspect*.

Radar Scope Carcinogens from Lehigh's HRA Sep 2010

The National Cancer Institute (NCI) has published a list of critically dangerous carcinogens (cancer inducing chemicals). Lehigh emits five of the six Nasties! The following carcinogens from Lehigh's HRA contribute more than 1 part in 200 (>0.5%) to the total risk, even when assuming that total toxin risk is additive.

NCI Official "Nasties": Arsenic, Beryllium, Cadmium, Chromium, Nickel. Plus
Benzene
1,3-Butadiene
Diesel particulate matter
Ethylene dibromide
Naphthalene
2,3,4,7,8-PeCDF (Pentafuran) and 2,3,7,8-TCDF (Tetrafuran)
Vinyl Chloride

Synergistic Toxicity

Furthermore, it has been well established that multiple toxins may act synergistically. Specifically, consider the scenario where toxins A and B are present at 10% of their lethal doses. If A and B showed merely additive effect one might argue the total toxicity to be 20%. However, a synergistic effect, could easily lead to 25% toxicity or even 100% toxicity. This can occur as a first toxin impairs the immune system in a way that lowers the threshold of action of a second toxin. Consequently, the interactions AMONG toxins make the risks far worse than just adding the individual risks of each toxin.

BAAQMD is not currently considering the potential impacts of combinations of the above toxins. The rationale for ignoring synergistic effects has been the impracticality creating a matrix 'dose-response' study. Such a study would require thousands of volunteers to test the effects of multiple carcinogens. It is true that such a study design impractical. However, modern epidemiological studies use more sophisticated bio-statistics, global information systems, mass spectrometry, AnOVa, factor analysis, etc. to circumvent the limitations imposed in traditional multifactorial study design.

OEHHA and BAAQMD Are Not Providing Synergistic Toxicity Data

OEHHA agrees that they must consider synergistic toxicity. But because OEHHA can't find any dose-response studies on these multiple carcinogens, their "synergistic toxicity" simply adds the individual risks of the toxins (*Ref. 2*). That's not synergistic toxicity. More modern methods are available and should be implemented to study the problem. **Without an accurate estimate of toxicity, it is impossible to argue definitively that Lehigh's proposed action poses no adverse impact.**

As I understand it, for you to vote to give vested rights to Lehigh to dig a new pit, case law (*Ref. 3*) requires Lehigh to prove it poses no adverse impact on neighborhood health. BAAQMD and OEHHA say it doesn't pose such risk, but that's only because *their methods are flawed for carcinogens making their conclusion unusable.*

I know you care as much as I do about the health of everyone in the county. My colleagues and I are happy to introduce you to researchers at Stanford and other institutions who can help Santa Clara County and OEHHA adopt the recommended modern methods.

Scientists knew for years that smoking caused cancer, but it took over 25 years for the research to reach the control agencies. Now we regret the harm that was done during that lost period.

Even if your district does not contain the Quarry and Plant, there's a second-hand smoke aspect here. I hope each Supervisor would say to the other: Yes, you may be OK with the plume of carcinogens in your district, but it drifts over to mine, and I am not OK with it.

Sincerely,

Shyamali Singhal MD PhD

Shyamali Singhal, MD, PhD, FACS
Los Altos, California

References:

Ref. 1: "Air Toxics Hot Spots Risk Assessment Guidelines Part II: Technical Support Document for Cancer Potency Factors" (May 2009) http://www.oehha.ca.gov/air/hot_spots/2009/TSDCancerPotency.pdf
5. Dose-Response. A basic tenet of toxicology is that increasing exposure or dose generally increases the response to the toxicant. While dose-response curves vary in shape and are not necessarily always monotonic, an increased gradient of response with increased exposure makes it difficult to argue that the factor is not associated with the disease. To argue otherwise necessitates that an unknown factor varies consistently with the dose of the substance and the response under question. While increased risk with increasing levels of exposure is considered to be a strong indication of causality, absence of a graded response does not exclude a causal relationship (IARC, 2006).

Ref. 2: OEHHA Technical Support Document for Acute Reference Exposure Levels d_rel1.pdf that states (***emphasis added***): For many facilities a large number of chemicals may be emitted or may be present in the air at the location of the receptor or exposed population. To assess the cumulative impact of several chemicals present at the same time, it is important to consider the interaction of effects of the toxicants. Unless specific information is available to the contrary, the ***interaction of two or more chemicals is assumed to be additive*** for a given toxicological endpoint. This may underestimate the effect in the cases in which interactions are synergistic or overestimate it if the effects are not additive or are antagonistic.

Ref. 3: Case Law - Hansen Brothers Enterprises, Inc. v. Board of Supervisors, 12 Cal.4th 533, available here: that to continue excavation operations…[Lehigh]… must prove that the continued operations do not, and/or will not, have a substantially different and adverse impact on the neighborhood.

Responses to Oral Comments

PH-1 Comment noted.

PH-2 The comment raises a concern about a 27-year old toxic spill, but provides insufficient specifics about what has spilled where or how it relates to the accuracy or adequacy of the Draft EIR to enable the County to provide a specific response. Accordingly, this general response is provided. The environmental setting described in Draft EIR Section 4.9.1 for purposes of the analysis of hazards and hazardous materials discloses the list of regulatory agency records searches that were conducted to identify sites where known releases have occurred that could affect soil or groundwater conditions in the Project Area. These searches include records of the State Water Resources Control Board (SWRCB) Geotracker (SWRCB, 2011a) and the California Department of Toxic Substances Control (DTSC) Envirostor (DTSC, 2011) databases, which identify federal Superfund sites; state response sites; voluntary cleanup sites; corrective action sites; leaking underground storage tank (LUST) sites; other cleanup sites; land disposal sites; military cleanup sites; permitted underground storage tank (UST) facilities; DTSC cleanup sites; and DTSC-permitted hazardous waste permits. As stated in the Draft EIR (see, page 4.9-3), "The Project Area was not identified on any of the regulatory agency lists searched."

PH-3 Comment addressed. See Response P3-1.

PH-4 Regarding whether a new quarry pit is reasonably foreseeable future project, see Master Response M2(C).

PH-5 The commenter is mistaken. Emissions of hexavalent chromium were included in the Draft EIR health risk assessment for the Project. Table 2 on page E-6 of Draft EIR Appendix E provides the complete list of metals found to be present in soil samples from the Project site and included in the health risk assessment. Hexavalent chromium is listed in the table as Chromium VI.

PH-6 The commenter does not provide any evidence or cite any published statements to support the assertion that the BAAQMD has found the AERMOD model to be flawed. To the contrary, the BAAQMD *CEQA Air Quality Guidelines* specifically recommend the use of the ISCST3 and AERMOD models in assessing the potential impacts of industrial facilities. See the response to Comment P3-1 for information regarding the truck trips that were included in the AERMOD modeling analysis.

PH-7 The commenter states that the County is out of compliance on PM2.5. The data in Table 4.3-2 on page 4.3-9 of the Draft EIR acknowledges that the Bay Area Air Basin is designated nonattainment for the Federal 24-hour and California annual PM2.5 standards. The commenter states that there are two primary contributors to PM2.5 in the County, the Cement Plant kiln and the trucks. Emissions associated with operation of the Cement Plant are not included in the Project air quality analysis since the

Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. Therefore, under CEQA there is no nexus between the Project and the Cement Plant that would allow mitigations to be applied to the Cement Plant. With regard to trucks, the commenter suggests replacing them with free trucks from the BAAQMD. Under CEQA, there is no nexus between the Project and the trucks associated with the Cement Plant, so even if this mitigation approach were feasible it could not be included as a Project mitigation in the EIR. Moreover, there are no Project-related air quality or health risk impacts identified in the Draft EIR for which the impacts are not less than significant or can be mitigated to less than significant with the mitigation measures already identified, so there is no need for further mitigation in this regard. Finally, the truck replacement program referred to by the commenter is limited to replacement of Bay Area port (drayage) trucks registered in the CARB Drayage Truck Registry with 2004 model year engines and is not applicable to other on-road trucks.

PH-8 See Response O1-3.

PH-9 See Response P5-2.

PH-10 The commenter expresses the opinion that something must be done about the EMSA prior to five to ten years from now. Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A). Regarding the potential for a new pit and associated impacts, see Response P4-6.

PH-11 See responses P4-7 and P4-8.

PH-12 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

PH-13 See responses P4-7 and P4-8.

PH-14 See Response O1-47.

PH-15 See Response P5-2.

PH-16 See Response P5-1.

PH-17 See responses P5-1 and P5-2.

PH-18 Comment noted.

PH-19 The commenter references details provided in a separate letter prepared by his wife, Dr. Shyamali Singhal. That letter, included at the end of the public hearing transcript as supplemental information for Comment PH19, addresses concerns with the health risk

assessment that was prepared for the Lehigh Cement Plant, not for the health risk assessment prepared as part of the Draft EIR for the Project. Regardless, the issue raised in the letter is relevant to the Project because similar procedures were used in the two risk assessments and many of the same toxic air contaminants are involved. Therefore, this response addresses both the comment and the supplemental letter.

The commenter suggests that there may be synergistic interactions between toxins that could result in adverse health effects even when the concentration or dose of any individual toxin is below its threshold level. However, while the commenter identifies six Project-related toxins that are considered environmental carcinogens by the National Cancer Institute (NCI), neither the commenter nor the NCI reference cited in the letter identifies any known synergistic effects between these toxins. Consequently, the commenter is correct that currently available health risk assessment techniques do not have a mechanism to consider such synergistic toxicity, as there are no established dose-response tables on which to base this combined effect. The commenter notes that there may be modern research methods which could be applied to study the problem. However, outside the research environment, no accepted methodology currently exists for identifying or quantifying any such synergistic effects. The health risk assessment for the Draft EIR was conducted in accordance with the current technical guidelines developed by federal, state, and regional agencies, including USEPA, CalEPA, OEHHA *Air Toxics Hot Spots Program Guidance*, and the BAAQMD's *Health Risk Screening Analysis Guidelines*. These guidance documents represent the current state of the practice for the assessment of health risks from toxic air contaminants such as those emitted by the Project. In the absence of any established synergistic effects data, and without any available analytical method to identify and quantify such effects, the health risk assessment approach in the Draft EIR is the best available method to identify and disclose the potential health risks that would be associated with Project-related toxic air contaminants.

PH-20 The County held a public scoping meeting on August 30, 2011, at 7:00 pm at the City of Cupertino Quinlan Center, Cupertino Room, at 10185 North Stelling Road in Cupertino (Draft EIR Appendix A, page 3).

The proposed RPA is not a "20-acre pit mine." Instead, it would reclaim all areas of the site consistent with SMARA that have been affected by surface mining operations. A description of the Project is provided in Draft EIR Chapter 2. Differences between the Project and past reclamation proposals are summarized in the Draft EIR (see, e.g., Section 1.4.1, page 1-4).

PH-21 Regarding the relation between the RPA and the Clean Water Act, see master responses M1(B) and M3(B). See also Response O5-1

PH-22 See Master Response M6 regarding groundwater impacts from the Project.

PH-23 As discussed in Master Response M4(B), OMR made a determination in 2007 that the Cement Plant is distinct from the surface mining operation. The County agrees. Consistent with this determination, the Cement Plant is not within the Project Area and would not be reclaimed as a part of the Project. Accordingly, issues associated with the Cement Plant are not properly within the scope of the Project or this EIR.

Discussion of the Quarry operator's compliance status with respect to the 1985 Reclamation Plan, including the NOVs issued by the County in October 2006 and June 2008 for conducting surface mining activities outside the boundaries of an approved reclamation plan, are discussed in Draft EIR Section 1.4.1 (page 1-4 et seq.) and Draft EIR Section 2.4 (page 2-7 et seq.). See also Master Response M3 which addresses commenter concern that, despite the issuance of multiple notices from the County and the RWQCB that violations of applicable laws have occurred, no enforcement, remedial action, or levying of penalties against the Quarry operator have occurred.

PH-24 See Response 12-1.

PH-25 See Response 12-2.

PH-26 This comment has been addressed. See Response P12-3.

PH-27 This comment has been addressed. See Response P12-3.

PH-28 This comment has been addressed. See responses P12-4 and P1-2.

PH-29 Please refer to Response P12-6.

PH-30 This comment has been addressed. See Response P12-7.

PH-31 The County acknowledges receipt of the four pages of documents, which are addressed in responses P12-8 and P12-9.

PH-32 Comment noted. Opportunities for public comment on the Draft EIR issue areas are described in Draft EIR Chapter 1, *Introduction*, page 1-4 et seq.

PH-33 Comment noted. Regarding new mining allowed on the Project site, see Master Response M1(A) on vested rights.

PH-34 Comment noted.

PH-35 Comment noted.

PH-36 Comment noted. The Draft EIR describes the revegetation component of the Project program in Chapter 2, *Project Description*, page 2-33 et seq. WRA Environmental Consultants prepared a Revegetation Plan on behalf of the Applicant (WRA, 2011b) that

provides specific guidance on soil composition and depth, species planting palette, and revegetation success criteria. The test plot program is described on Draft EIR page 2-5.

PH-37 Comment noted. See Response PH36.

PH-38 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

PH-39 This comment has been addressed. See Response P17-5.

PH-40 This comment has been addressed. See responses P17-6 and O1-47.

PH-41 This comment has been addressed. See Master Responses M6 on groundwater.

PH-42 Comment noted. Although this comment does not address the adequacy or accuracy of the Draft EIR, the County will consider it as part of its decision-making process on the Project. See Master Response M2(A).

PH-43 See responses P12-1 regarding scoping comments submitted on the four NOPs published pertaining to the Project Area. Discussion of the Quarry operator's compliance status with respect to the 1985 Reclamation Plan, including the NOVs issued by the County in October 2006 and June 2008 for conducting surface mining activities outside the boundaries of an approved reclamation plan, are discussed in Draft EIR Section 1.4.1 (page 1-4 et seq.) and Draft EIR Section 2.4 (page 2-7 et seq.). See also Master Response M3 which addresses commenter concern that, despite the issuance of multiple notices from the County and the RWQCB that violations of applicable laws have occurred, no enforcement, remedial action, or levying of penalties against the Quarry operator have occurred.

PH-44 The Draft EIR provides an appropriately conservative analysis of direct, indirect, and cumulative impacts of the Project and alternatives on a resource by resource basis. Discussion of the quarry operator's compliance status with respect to the 1985 Reclamation Plan, including the Notices of Violation (NOVs) issued by the County in October 2006 and June 2008 for conducting surface mining activities outside the boundaries of an approved reclamation plan, are discussed in Draft EIR Section 1.4.1 (page 1-4 et seq.) and Draft EIR Section 2.4 (page 2-7 et seq.). The Draft EIR explains that if the proposed reclamation plan amendment is approved, then the areas identified in the NOVs would be included within an approved reclamation plan boundary and the NOVs thereby would be abated. See also, Master Response M1(B). To ensure effective, enforceable implementation of the mitigation measures imposed by the County pursuant to the EIR for the Project, the County has prepared a MMRCP, which will be included with the County's Findings of Fact and Conditions of Approval for the Project.

PH-45 Comment noted. As described in Draft EIR Chapter 2, *Project Description*, the scope of the Draft EIR covers the RPA submitted in December of 2011; it does not include the 1985 Reclamation plan. Impacts are analyzed relative to the baseline established for the Project, which was June 2007 (see Response O8-1). Violations of the 1985 Reclamation Plan, including County-issued NOVs pertaining to SMARA, are detailed in the Draft EIR on page 2-8, and further discussed in Master Response M3.

PH-46 This comment has been addressed. See Response PH45.

PH-47 This comment has been addressed. See Response O6-37.

PH-48 This comment has been addressed. See Master Response M5 regarding selenium.

PH-49 If the Project were approved as proposed, final reclamation of the Permanente Quarry would occur in accordance with the phases described in Draft EIR Section 2.7.1 (page 2-14 et seq.). For Alternative 1, reclamation activities would be phased as described in Draft EIR Section 3.3.1.1. See, for example, Draft EIR page 3-5, which states, "The Complete Backfill Alternative would be similar to the Project in all respects except that overburden materials stored in the EMSA would be backfilled into the Quarry pit upon the conclusion of mineral extraction activities" and "Under Alternative 1, the approximately 4.8 million cubic yards of overburden stored in the EMSA would be returned to the Quarry pit during reclamation Phase 2." For Alternative 2, reclamation activities would be phased as described in Draft EIR Section 3.3.1.2 (page 3-9 et seq.), including the initiation of reclamation of the eastern and central portions of the EMSA immediately upon reclamation plan approval. For the No Project Alternative, reclamation activities would be phased as summarized in Table 3-3 and described in Draft EIR Section 3.3.1.3 (page 3-14 et seq.). The comment does not provide data or other information supporting the opinion that these phasing schedules are inadequate. As explained in Master Response M1(B), the County conducts annual inspections of the Permanente Quarry to evaluate compliance under SMARA, and will continue to do so until final reclamation is complete. Separate from and independent of its monitoring activities under SMARA, the County will be monitoring compliance with the mitigation measures imposed under CEQA pursuant to the MMRCP included with the County's Findings of Fact and Conditions of Approval for the Project.

PH-50 The commenter requests additional information pertaining to financial assurances. See Master Response M1(C), which provides information on how the financial assurances cost estimate was determined and its adequacy to ensure that reclamation could be performed in accordance with the proposed RPA.

PH-51 Potential environmental impacts associated with operation of the adjacent Cement Plant are not included in the Project analysis since the Cement Plant is a separately-permitted industrial use, and because the Project would not affect the Cement Plant's use permit, operating permits, or regulatory status. However, the Cement Plant is included in the cumulative analysis in Draft EIR Chapter 6.

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CHAPTER 4
Revisions to the Draft EIR

4.1 Introduction

The following changes have been made to the previously published text of the Draft EIR. These changes include: minor corrections made to improve writing clarity, grammar, and consistency; clarifications, additions, or deletions resulting from specific responses to comments; and text changes to update information in the Draft EIR. These text revisions are organized by the chapter and page number (provided on the left-hand side of the page, below) that appear in the Draft EIR. An explanation of the change, including identification of where it would be made, is presented in *italics*. The specific additions and deletions use the following conventions:

- Text deleted from the EIR is shown in ~~strike out text~~.
- Text added to the EIR is shown in <u>underline text</u>.

4.2 Text Changes

4.2.1 Executive Summary

ES-17 *The following text changes have been made to Table ES-3, starting on page ES-17:*

4.9-3: Sedimentation <u>and detention</u> basins planned for erosion <u>and flood</u> control at the Project site could provide breeding grounds for vectors.	Less than significant	None required	Less than significant

ES-17

4.10-1: Post-reclamation conditions in the <u>East Materials Storage Area (</u>EMSA), <u>West Materials Storage Area (</u>WMSA), and Quarry pit would increase selenium concentrations in Permanente Creek to levels exceeding baseline conditions and RWQCB Basin Plan objectives.	Significant	**4.10-1a:** Professional Geologist Verification of Non-Limestone-Containing Material Use. **4.10-1b:** Verification Water Quality Monitoring.	Less than significant

ES-17

4.10-2: Interim reclamation activities within the Project Area would contribute concentrations of selenium, Total Dissolved Solids (TDS), and selenium in Permanente Creek.	Significant	**4.10-2a:** Interim Stormwater Control and Sediment Management. **4.10-2b:** EMSA Interim Stormwater Monitoring Plan. **4.10-2c:** Monitoring and Determination of BMP Effectiveness for the EMSA. **4.10-2d:** Monitoring and Determination of BMP Effectiveness for the WMSA and Quarry Pit. 4.10-2e: Design, Pilot Testing and Implementation of Selenium Treatment Facility or Alternative for the EMSA and/or the WMSA and Quarry Pit.	Significant and Unavoidable

ES-17

4.10-4: The Project would alter the existing drainage pattern of the site, which could cause ~~result~~ increased storm water runoff rates and on- or offsite flooding.	Significant	**4.10-4:** Construction of Onsite Detention Facility.	Less than s~~S~~ignificant ~~and unavoidable~~

ES-18

~~**Impact 6-2:** Incremental Project-specific activities could contribute to downstream flooding.~~	~~Significant~~	~~**6-2:** Construction of Onsite Detention Facility.~~	~~Significant and unavoidable~~

ES-21 *The following text changes have been made to Table ES-4:*

Hydrology and Water Quality	Impacts related to water quality would be less than significant with mitigation except for selenium-related impacts to water quality in Permanente Creek, which would be significant and unavoidable until final reclamation is complete. ~~Drainage and flooding impact would be significant and would be unavoidable if adequate detention facility is not feasible.~~ Groundwater impacts would be less than significant. **Preferred.**	Impacts related to long term selenium leaching to surface water would be less than under the Project; however, ~~the larger area and higher slopes would result in more severe drainage and flooding impacts, and~~ the longer interim period before WMSA and EMSA reclamation could result in more severe interim impacts to water quality. **Not Preferred.**	Impacts to hydrology and water quality would be similar to or slightly less than the Project. **Preferred.**	The interim period before reclamation would be longer than for the proposed Project; the extended timeframe would result a longer period of selenium-related water quality impacts. ~~Downstream flooding impacts resulting from backfilling the Quarry pit would be similar to the proposed Project but would occur several years later.~~ **Not Preferred.**

4.2.2 Chapter 1, Introduction

1-1 *The last sentence in the first paragraph has been amended as follows:*

> This document assesses the direct, indirect, and cumulative environmental impacts that could occur as a result of the slope stability, revegetation, drainage and erosion control, structure dismantling and removal, monitoring, and other reclamation activities proposed in the Reclamation Plan Amendment submitted by Lehigh to Santa Clara County (County) in July 2011 and updated on December 13, 2011 (EnviroMINE, Inc., 2011).

1-3 *Table 1-1 has been modified as follows:*

San Francisco Bay Regional Water Quality Control Board (RWQCB)	The RWQCB would implement the Section 401 Certification on the SWRCB's behalf. It is the Water Board's practice to cover all impacts to Waters of the State in a single permit that includes Clean Water Act Section 401 certification as well as Waste Discharge Requirements (WDRs) issued pursuant to its authority under the Porter-Cologne Water Quality Control Act (Water Code §13000 et seq.).

1-9 *The third reference from the end has been corrected as follows:*

> EnviroMINE, Inc., 2011. Reclamation Plan Amendment for Permanente Quarry, State Mine ID # 91-43-0004, December 13~~7~~.

4.2.3 Chapter 2, Project Description

2-1 *The first paragraph in Section 2.1 of the Draft EIR has been revised as indicated below:*

> The primary areas to be reclaimed are the Quarry pit, two overburden disposal areas referred to as the West Materials Storage Area (WMSA) and the East Materials Storage Area (EMSA), the crusher/Quarry office area, surge pile, Rock Plant, approximately 284-acres located south of Permanente Creek of which approximately 19.5 acres ~~that~~ have been disturbed by prior exploratory activities (Exploration Area), and approximately 25.9-acres adjacent to Permanente Creek (Permanente Creek Restoration Area or PCRA).

2-30 *Draft EIR Tables 2-6, 2-7, and 2-9 (page 2-30 et seq.) have text that exceeds the printable area of the page. The tables have been corrected as follow:*

TABLE 2-6
PRCA SUBAREA 4 RECLAMATION TREATMENTS

Activity	Description
Revegetation	Disturbed areas would be hydroseeded with the seed mix listed below. The hydroseed slurry would include a bonded fiber matrix. Riparian vegetation would be hand-planted at the toe of the slope in areas where sufficient hydrology exists.
South-Creek Revegetation	Areas of mining disturbance on the south side of the creek would be seeded using a broadcast seeder or by hand-seeding in areas above the ordinary high water mark.
Slope BMPs	Erosion blankets would be placed across the slope for erosion control. Fiber rolls would be staked in place and spaced at 15-foot intervals in disturbed areas where the slope angle is 2.0H:1.0V or flatter, and at 10-foot intervals in disturbed areas that are steeper than 2.0H:1.0V. Additionally, silt collected at the toe of the slope would be removed by hand by work crews where possible.
Monitoring and Maintenance	Revegetation and erosion controls added to PCRA treatment areas on the northern and southern sides of the creek would be monitored and maintained according to the reclamation performance standards set forth in Section 2.8.
Creek Restoration	In Phase 3, creek restoration would occur to remove overburden and silts. The removal of overburden and silts would involve the following restoration measures: • Remove overburden material and sediment deposits. • Create a stable channel, subject to geotechnical and groundwater investigations as needed to determine the location of bedrock and other constraints on channel design. • Establish a new bankfull bench and floodplain. • Install step pools, drop structures and other stream control devices as needed for a stable channel. • Revegetate riparian areas.

SOURCE: EnviroMINE, Inc., 2011b (Table 15)

TABLE 2-7
PRCA SUBAREA 5 RECLAMATION TREATMENTS

Activity	Description
Slide Removal	Slide material near the foundation of the historic crusher would be removed using an excavator. The excavator arm would reach down from the main access road and remove slide material. Areas downslope of this activity would be prepared with silt fencing to prevent material rollback.
Revegetation	Disturbed areas would be hydroseeded with the seed mix listed below. The hydroseed slurry would include a bonded fiber matrix. Riparian vegetation would be hand-planted at the toe of the slope in areas where sufficient hydrology exists.
South-Creek Revegetation	Areas of historic mining disturbance on the south side of the creek would be seeded using a broadcast seeder or by hand-seeding in areas above the ordinary high water mark.
Slope BMPs	Fiber rolls would be staked in place and spaced at 15-foot intervals in disturbed areas where the slope angle is 2.0H:1.0V or flatter, and at 10-foot intervals in disturbed areas that are steeper than 2.0H:1.0V. Additionally, silt collected at the toe of the slope would be removed by hand by work crews where possible.
Monitoring and Maintenance	Revegetation and erosion controls added to PCRA treatment areas on the northern and southern sides of the creek would be monitored and maintained according to the reclamation performance standards set forth in Section 2.8.

TABLE 2-7 (Continued)
PRCA SUBAREA 5 RECLAMATION TREATMENTS

Activity	Description
Creek Restoration	In Phase 3, creek restoration would occur to remove an old crusher foundation next to the creek and overburden fills. The removal of the crusher foundation would involve the following restoration measures: • Removal of the concrete structure. • Establish a bankfull bench in the location of the former structure. • The removal of overburden fills would involve the following restoration measures: • Remove overburden material and sediment deposits. • Create a stable channel, subject to geotechnical and groundwater investigations as needed location of bedrock and other constraints on channel design. • Establish a new bankfull bench and floodplain. • Install step pools, drop structures and other stream control devices as needed for a stable c • Revegetate riparian areas.

SOURCE: EnviroMINE, Inc., 2011b (Table 16)

TABLE 2-9
PRCA SUBAREA 7 RECLAMATION TREATMENTS

Activity	Description
Revegetation	Disturbed areas would be hydroseeded with the seed mix listed below. The hydroseed slurry would include a bonded fiber matrix. Riparian vegetation would be hand-planted at the toe of the slope in areas where sufficient hydrology exists.
Slope BMPs	Fiber rolls would be staked in place and spaced at 15-foot intervals in disturbed areas where the slope angle is 2.0H:1.0V or flatter, and at 10-foot intervals in disturbed areas that are steeper than 2.0H:1.0V. Additionally, silt collected at the toe of the slope would be removed by hand by work crews where possible.
Monitoring and Maintenance	Revegetation and erosion controls added to PCRA treatment areas on the northern side of the creek would be monitored and maintained according to the reclamation performance standards set forth in Section 2.8.
Creek Restoration	In Phase 3, creek restoration would occur to remove the Pond 13 outflow and to replace the downstream half-culvert with a wider and more natural creek channel. The removal of the Pond 13 outflow would involve the following restoration measures: • Recontouring of the pond floor and sides to establish a new bankfull bench and stable chan • Removal of pond infrastructure and any accumulated sediment. • Install step pools, drop structures and other stream control devices as needed for a stable c • Revegetate riparian areas. The replacement of the downstream half-culvert would involve the following restoration measures: • Remove half culvert and surrounding fill material. • Establish a new bankfull bench and floodplain. • Install step pools, drop structures and other stream control devices as needed for a stable c • Revegetate riparian areas.

SOURCE: EnviroMINE, Inc., 2011b (Table 18)

2-38 *The second sentence of the first paragraph under the Stormwater and Erosion Control subheading has been revised as follows:*

In ~~November~~ December 2011, Chang Consultants prepared an updated Drainage Report on behalf of the Applicant that identifies a series of Best Management Practices (BMPs) to achieve these goals (Chang Consultants, 2011), and in March 2010, URS Corporation prepared a Storm Water Pollution Prevention Plan (SWPPP) on behalf of the Applicant that covers existing operations on the site (URS, 2010).

2-48 *Table 2-17 has been revised as follows:*

TABLE 2-17
PROPOSED FIVE-YEAR PERFORMANCE STANDARDS FOR REVEGETATION IN THE PCRA

	Hydroseed Areas Shrub/Grassland Mix		Riparian Area
	Shrub	Herb	Trees/Shrubs
Richness (average species per plot)	2	2	2 ~~NA~~
Canopy Cover	45%	45%	45% ~~NA~~
Density (average individuals per acre)	200	NA	200 ~~NA~~
Percent Survival of planted individuals	NA	NA	60%
~~Percent Survival~~			

SOURCE: WRA Environmental Consultants, 2011b (Table 18)

2-50 *The second reference has been revised as follows:*

Chang Consultants, 2011. *Drainage Report for the Permanente Quarry*, December 12~~November 30~~.

2-50 *The sixth and seventh references have been corrected as follows:*

EnviroMine, Inc., 2011b. *Reclamation Plan Amendment for Permanente Quarry (State Mine ID # 91-43-004*, December 13~~7~~.

Golder Associates, Inc., 2011. *Geotechnical Evaluations and Design Recommendations (Revision~~ed~~ 1.1)*, *Permanente Quarry Reclamation Plan Update*, *Santa Clara County*, *California*, prepared for Lehigh Southwest Cement Company, Cupertino, CA, December 7 ~~November~~.

2-51 *The second reference from the end has been corrected as follows:*

WRA Environmental Consultants, 2011a. *Biological Resources Assessment Lehigh Permanente Quarry*, December 12.

4.2.4 Chapter 3, Description of Alternatives

No text changes have been made to Chapter 3, *Description of Alternatives.*

4.2.5 Chapter 4, Environmental Analysis

4.1 Aesthetics, Visual Quality, and Light and Glare

No text changes have been made to Section 4.1, *Aesthetics, Visual Quality, and Light and Glare*.

4.2 Agriculture and Forestry Resources

4.2-13 *The second reference from the end has been corrected as follows:*

> WRA Environmental Consultants, 2011a. *Biological Resources Assessment Lehigh Permanente Quarry*, December 12.

4.3 Air Quality

4.3-15 *The following paragraph has been inserted at the end of Section 4.3.3.1, Criteria Pollutants, at the bottom of page 4.3-15:*

> BAAQMD adopted updated *California Environmental Quality Act (CEQA) Air Quality Guidelines*, including new thresholds of significance in June 2010 and revised in May 2011 (BAAQMD, 2011a), which advise lead agencies on how to evaluate potential air quality impacts with the adopted new thresholds of significance. The thresholds BAAQMD adopted were called into question by a minute order issued January 9, 2012 in *California Building Industry Association v. BAAQMD*, Alameda Superior Court Case No. RGI0548693. The minute order states that "The Court finds [BAAQMD's adoption of thresholds] is a CEQA project, the court makes no further findings or rulings." Subsequently, on March 5, 2012, the judge in the case issued a final decision and judgment which ruled that the BAAQMD CEQA Guidelines constitute a project under CEQA and that the District must "set aside all approvals in [the resolution approving the Guidelines] and … not disseminate these or any new approvals of officially sanctioned air quality thresholds of significance until the District fully complies with CEQA." The claims made in the case concerned the CEQA impacts of adopting the thresholds; i.e., how the thresholds would affect land use development patterns. Those issues are not relevant to the scientific soundness of the BAAQMD's analysis of what levels of pollutants should be deemed significant, or the threshold to use in assessing any air quality or health risk impact the Project would have on the existing environment. These thresholds are based on substantial evidence identified in Appendix D of the Guidelines and are therefore used within this EIR. The County agrees that those thresholds are supported by substantial evidence, and is unaware of any other established thresholds that have the same or greater level of scientific rationale.

4.4 Biological Resources

4.4-12 *The second sentence under the Jurisdictional Waters and Wetlands subheading has been revised as follows:*

Within the Project Area, the PCRA contains stream and wetland habitat that are considered wetlands under the CWA and the Porter-Cologne Act, and so are subject to the jurisdiction of the USACE, RWQCB, and CDFG. The settling ponds noted above are not considered waters of the U.S. or of the State.

4.4-15 *The second paragraph under the Special Status Amphibians heading has been revised as follows:*

CRLF surveys were conducted by herpetologist Dr. Mark Jennings at the site in 1997, 2000, 2006, 2007, 2008, 2009, and 2010 (WRA, 2011). Within the Project Area, CRLF were positively identified in Ponds 14 and 22, which are located along lower Permanente Creek in the northeast portion of the Quarry, approximately 300 feet east of the EMSA. CRLF were also detected in Pond 13, an in-stream pond in the central portion of the Project Area. Outside the Project Area but on the site, CRLF were identified in Pond 21 and in Monte Bello Creek in the southern portion of the site. Dr. Jennings concludes that it would be difficult and unlikely for CRLF to disperse through the intermediate landscape between these two occupied areas of the site, because the landscape is dominated by heavily trafficked roads, paved industrial areas, and unvegetated arid slopes. Furthermore, the ephemeral nature of the intervening creeks and ponds (specifically of the sediment pond in the EMSA), the long distance (1.75 miles), and the steep terrain precludes CRLF movement between the lower Permanente Creek and Monte Bello Creek drainages (WRA, 2011). ~~Based on these results, CRLF are not expected within the Project Area.~~ While CRLF movement and habitat use would be limited through most of the Project Area, frogs could move into vegetated upland areas directly surrounding Pond 13.

4.4-22 *The following text has been added above the subheading Sensitive Natural Communities:*

…species where a Natural Communities Conservation Plan has been approved and is being implemented to ensure protection of those species.

Beneficial Use and Water Quality Objectives (CWA §303)

The RWQCB is responsible for the protection of the beneficial uses of waters within the San Francisco Bay region, including the Project Area. The RWQCB uses its planning, permitting, and enforcement authority to meet this responsibility and has adopted the Basin Plan (RWQCB, 2007) to implement plans, policies, and provisions for water quality management.

In accordance with State policy for water quality control, the RWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes,

and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. Beneficial uses relevant to biological resources for Permanente Creek include Cold Freshwater Habitat, Fish Spawning, and Wildlife Habitat. Nearby Stevens Creek has been designated with the above beneficial uses, as well as Warm Freshwater Habitat. RWQCB Resolution No. R2-2010-0100 proposes the addition of Preservation of Rare and Endangered Species to Permanente Creek; while this beneficial use is not yet officially designated for Permanente Creek, any Project activities near the Creek that could impact this beneficial use would be subject to RWQCB jurisdiction.

4.4-23 *The following text revisions have been made to clarify the RWQCB's regulatory authority:*

Dredging, filling, or excavation of federal jurisdiction waters and waters only subject to state jurisdiction~~isolated waters~~ constitutes a discharge of waste to waters of the State. Under the Porter-Cologne Act, anyone who discharges waste or proposes to discharge waste within any region that could affect the quality of the waters of the state must file a "report of waste discharge" with the applicable Regional Water Quality Control Board. The regional board then would issue a single permit that includes both Clean Water Act Section 401 certification and ~~(called "~~waste discharge requirements~~" or~~ (WDRs). Impacts and mitigation to all State waters are based on both the 401 certification and WDRs. This permit would implement~~ing~~ relevant water quality control plans and take~~ing~~ into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, and the need to prevent nuisances (Water Code §13263).

4.4-28 *The third paragraph under the Streams and Ponds subheading has been revised as follows:*

CRLF had been found to inhabit four off-stream sediment settling ponds, as well as an in-stream pond~~including~~ (Pond 13), and portions of Permanente Creek (WRA, 2006a). Additionally, Pond 13 is designated as potential CRLF breeding habitat, ~~This~~ which is consistent with the conclusions of the Habitat Assessment conducted in the Project Area in ~~2010~~2011.~~, which concludes the creek does not support aquatic or upland dispersal habitat for CRLF in this region.~~

4.4-30 *The text at the top of page 4.4-30 has been revised as follows:*

(a) Have a substantial adverse effect on any state or federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

4.4-36 *The following analysis has been added to the discussion under Draft EIR Impact 4.4-4:*

Impact 4.4-4: Project activities could result in adverse effects on special status aquatic organisms. *(Less than Significant Impact)*

As described above in Section 4.4.2.3, *Special-status Species*, CRLF is the only special status aquatic species of concern in the Study Area. ~~However, no CRLF have been found during surveys in the Project Area.~~ Limited ~~U~~upland migration habitat for CRLF is ~~not~~ present in the Project Area, preventing significant movements of this species in the Project Area (WRA, 2011). However, Pond 13 could support breeding CRLF, which could relocate into upland areas near the pond. PCRA Sub-Area 7 occurs in close proximity to Pond 13, and while no major ground disturbance is proposed, hydroseeding and BMP installation in PCRA Sub-Area 7 could injure or harass any CRLF present. ~~Consequently, it is considered unlikely for the species to occur in the Project Area and therefore no direct impacts to special status aquatic species would be expected to result from Project activities.~~ The Applicant has incorporated three Applicant Proposed Measures which would partially address this potential impact (WRA, 2011):

(1) To minimize disturbance to dispersing or foraging CRLF, all grading activity shall be conducted during the dry season, generally between May 1 and October 15, or before the onset of the rainy season, whichever occurs first, unless exclusion fencing is utilized. Construction that commences in the dry season may continue into the rainy season if exclusion fencing is placed around the construction zone to keep the frog from entering the construction area.

(2) Pre-construction surveys for CRLF shall be conducted prior to construction activities. If CRLF are observed in the construction area or access areas, they shall be removed from the area by a USFWS permitted biologist and temporarily relocated to nearby suitable aquatic habitat.

(3) Because dusk and dawn are often the times when CRLF are most actively foraging, all restoration activities shall cease one half hour before sunset and shall not begin prior to one half hour after sunrise. Additionally, restoration activities shall not occur during rain events, as CRLF are most likely to disperse during periods of precipitation.

Further, as described in Impact 4.9-2 (see Section 4.9, *Hazards and Hazardous Materials*), the Applicant's Stormwater Pollution Prevention Plan (SWPPP) includes provisions to prevent the discharge of pollutants caused by equipment operation, fueling, and maintenance as well as a description of containment controls and site-specific erosion and sediment control criteria. The SWPPP would be revised following Project approval to include the final suite of protective measures that would be implemented in the PCRA and the rest of the Project Area. Final measures are expected to include the following: good housekeeping practices such as clearly labeling hazardous materials containers and storing in an uncluttered area so leaks and spills can be quickly detected and addressed; placing

drip pans under leaking equipment; checking construction equipment for leaks regularly; maintaining spill containment and cleanup equipment onsite and training of construction personnel in proper material handling, storage, cleanup, and disposal procedures. These procedures would also help avoid potential impacts to CRLF in the areas around Pond 13.

Finally, the use of jute netting (or similar material) for erosion control is preferred over plastic monofilament which can entangle CRLF and other wildlife. Mitigation Measure 4.10-2a (see Section 4.10, *Hydrology and Water Quality*) requires the use of jute netting (or similar material) and prohibits the use of plastic monofilament materials for erosion control in the PCRA.

Collectively, the Applicant Proposed Measures together with Project SWPPP requirements and the requirements of Mitigation Measure 4.10-2a provide sufficient protection for CRLF in the Project Area and this impact is considered less than significant. The potential for indirect impacts on aquatic habitat is discussed under Impact 4.4-8, below.~~, and determined to be less than significant.~~

4.4-37 *Starting with the second paragraph under Impact 4.4-5, the text has been revised as follows:*

As discussed in the Section 4.10, *Hydrology and Water Quality*, the Project would span a period of about 20 years. During that time, active ground disturbance would occur in the Project Area as a result of excavation, grading, contouring, hauling, and, in the PCRA, boulder removal from Permanente Creek and affected upslope areas. If the appropriate type of limestone were to be exposed to air and precipitation, then selenium could be produced and reach Permanente Creek in the form of runoff. This would cause a significant adverse impact to aquatic habitat. The implementation of Mitigation Measures 4.10-2a ~~and~~ through 4.10-2~~b~~e would reduce the potential for this impact to occur during the 20-year Project.

> **Mitigation Measure 4.4-5: Selenium-related Impacts to Aquatic Habitat.** Implement Mitigation Measures 4.10-2a: Interim Stormwater Control and Sediment Management~~, and~~; 4.10-2b: EMSA Interim Stormwater Monitoring Plan; Mitigation Measure 4.10-2c: Monitoring and Determination of BMP Effectiveness for the EMSA; Mitigation Measure 4.10-2d: Monitoring and Determination of BMP Effectiveness for the WMSA and Quarry Pit; and Mitigation Measure 4.10-2e: Design, Pilot Testing, and Implementation of Selenium Treatment Facility or Alternative for the EMSA and/or the WMSA and Quarry Pit.

Significance after Mitigation: Significant and Unavoidable. Implementation of Mitigation Measure 4.10-2a would establish additional BMPs to ensure that over the 20-year duration of the Project a rigorous stormwater and sediment control implementation plan is developed and implemented. Implementation of Mitigation

Measure 4.10-2b would supplement preexisting surface water monitoring required by the General Industrial Storm Water and Sand and Gravel NPDES Permit and be designed specifically to monitor surface water during reclamation activities in active and inactive excavation and backfill areas. Implementation of this mitigation is expected to reduce sediment and TDS to acceptable levels such that interim impacts from sediment and TDS would be less than significant. However, there is insufficient evidence at this time regarding the efficacy of these measures with regard to selenium-containing runoff. While Mitigation Measures 4.10-2c through 4.10-2e require the design and testing of a pilot-scale treatment facility to remove selenium, considerable uncertainty remains regarding the feasibility of installing a full-scale treatment system that would be adequately effective in reducing the potential for selenium impacts to aquatic species in Permanente Creek. ~~Together, these measures would reduce the potential for stormwater runoff to deliver sediment and selenium to Permanente Creek during the Project activities, but would not be sufficient to fully eliminate the possibility.~~ Therefore, this interim impact would remain significant and unavoidable until final reclamation is complete.

4.4-42 *Starting with the second sentence of the second paragraph, the text has been revised as follows:*

Installation of outfall pipes or energy dissipaters discharging water from two proposed sediment basins are constructed within a drainage identified as T13 in the wetland delineation would result in significant impacts on federal and state potentially jurisdictional waters or wetlands. These direct impacts would be mitigated to less-than-significant levels through implementation of Mitigation Measures 4.4.8a and 4.4.8b.

Mitigation Measure 4.4-8a: Wetland Identification and Avoidance. A qualified wetland biologist shall physically delineate all federal and state waters and wetland features mentioned above and indentified in the 2008 wetland delineation (WRA, 2008). This shall occur before any PCRA activities begin, and when feasible, reclamation activities shall completely avoid these areas. Silt fence shall be installed between jurisdictional waters or wetlands and areas sprayed with hydroseed to prevent filling of wetlands with tackifier or other hydroseed material. Use of hand-seeding or working with hand tools may be required to avoid equipment impacting wetlands.

Mitigation Measure 4.4-8b: Wetland Mitigation Plan. If avoidance of jurisdictional waters or wetlands is not feasible, the following measures shall be implemented:

A qualified wetland biologist shall prepare a ~~wetland~~ Mitigation and Monitoring Plan (MMP) for impacts to wetlands and waters under state or federal jurisdiction. The MMP shall outline the anticipated mitigation obligations for temporary and permanent impacts to waters of the state

and/or U.S., including wetlands, resulting from PCRA activities. The MMP shall include:

- Baseline information;
- Anticipated habitat enhancements to be achieved through compensatory actions, including whether mitigation will occur within the Project Area along Permanente Creek or at an offsite location, as well as ~~including~~ mitigation site location and hydrology;
- When possible, a preference for mitigation within the Permanente Quarry property, for impacts to both jurisdictional waters and wetlands;
- Performance and success criteria for habitat enhancement of Permanente Creek or other waterways to compensate for impacts to Other Waters, including:
    - A replanting plan for appropriate native riparian woody vegetation, including but not limited to arroyo willow, white alder, California wild rose, and snowberry, bigleaf maple, western creek dogwood, and Oregon ash;
    - An 80% overall revegetation planting success for all mitigation areas over a ten-year period;
    - A minimum overall mitigation ratio of 1.1:1 acres for permanent impacts and 1:1 acres for temporary impacts;
    - Plantings that are self-reliant, exhibit average or better health and vigor and have observable growth in stems and leaves at least two years prior to the end of the ten-year monitoring period;
    - Visual inspection of all revegetation sites during each growing season, with qualitative and quantitative measures of plant cover and performance;
    - Observations of total percent plant cover in the planting area, natural recruitment of native species, and establishment of new non-native species; and
    - Annual monitoring reports submitted to CDFG and RWQCB documenting revegetation conditions, including recommendations to adapt maintenance and replacement of failed plantings.
- Performance and success criteria for wetland creation or enhancement including, but not limited to, the following:
    - At least 70 percent survival of installed plants for each of the first three years following planting.
    - Performance criteria for vegetation percent cover in Years 1-4 as follows: at least 10 percent cover of installed plants in Year 1; at least 20 percent cover in Year 2; at least 30 percent cover in Year 3; at least 40 percent cover in Year 4.

- Performance criteria for hydrology in Years 1-5 as follows: Fourteen or more consecutive days of flooding, ponding, or a water table 12 inches or less below the soil surface during the growing season at a minimum frequency of three of the five monitoring years; OR establishment of a prevalence of wetland obligate plant species.
- Invasive plant species that threaten the success of created or enhanced wetlands ~~should~~ shall not be allowed to contribute relative cover greater than 35 percent in year 1, 20 percent in years 2 and 3, 15 percent in year 4, and 10 percent in year 5.

4.4-44 *The first full paragraph, starting with the eighth sentence, has been received to read:*

In a technical memo prepared by the Project engineer (Chang, 2010), annual precipitation in the Permanente watershed is of sufficient quantity to fill Pond 17 ~~which supports CRLF~~. A calculation of monthly evaporation rates in the same memo shows that a maximum of 2.5 feet of water would evaporate from the pond over the dry summer months. This would leave over 3 feet of water in the pond, an amount sufficient to potentially support CRLF breeding and development. However, current conditions at Pond 17 do not support CRLF, as no CRLF have been observed in surveys to date (Jennings, 2006; WRA, 2011).

4.4-47 *The third reference from the bottom has been corrected as follows:*

EnviroMINE, Inc., 2011. *Reclamation Plan Amendment for Permanente Quarry (State Mine ID #91-43-0004)* ~~(Comprehensive RPA)~~, December 13~~7~~, 2011.

4.4-48 *The following reference has been added to Section 4.9, Biological Resources:*

Leidy, R.A. *Ecology, Assemblage Structure, Distribution, and Status of Fish in Streams Tributary to the San Francisco Estuary, California*. San Francisco Estuary Institute. Contribution No. 530. San Francisco, California, 2007.

San Francisco Bay Regional Water Quality Control Board (RWQCB), *San Francisco Bay Basin (Region 2) Water Quality Control Plan*, January 18, 2007.

Santa Clara County, *Santa Clara County Planning Office Guide to Evaluating Oak Woodlands Impacts*, last updated March 8, 2010.

4.4-48 *The fifth reference from the bottom has been corrected as follows:*

WRA, Inc., 2011. *Biological Resources Assessment, Lehigh Permanente Quarry*, December 12.

4.5 Cultural and Paleontological Resources

No text changes have been made to Section 4.5, *Cultural and Paleontological Resources*.

4.6 Energy Conservation

No text changes have been made to Section 4.6, *Energy Conservation.*

4.7 Geology, Soils, and Seismicity

4.7-19 *The following paragraph has been inserted following the description of the Mid-Peninsula Slide (2001):*

> **"West Area" Slides.** The "West Area" landslides are located west of the Main 1987 Slide between elevation 1400 and 1700 feet above mean sea level. The landslide boundary extends upslope of the haul road that leads to the WMSA. Golder's evaluation of the slide indicates that the failure primarily involved older waste fill material placed during the early development of this area of the quarry. Specifically, the older fill was placed in a previously existing natural canyon underlain by in-place limestone to provide access to the western area of the site. Subsequently and over time, the old fill materials have failed in a piecemeal fashion (slumping of the older fill from the headscarp) and washed out of the canyon primarily due to erosional processes rather than deep-seated landsliding. These wall failures appear to be progressing upslope and Golder has observed cracks on the lower-most benches of the WMSA. The headscarp area of the slide is comprised of waste rock fill which is unstable in its current configuration.

4.7-28 *To clarify the first sentence of the second paragraph on page 4.7-28, the text has been revised as follows:*

> No ~~active~~ faults zoned under the Alquist-Priolo Earthquake Fault Zoning Act as active faults pass through the Project Area; thus, adverse impacts from fault rupture are unlikely.

4.7-30 *The following text has been added before the East Materials Storage Area discussion within the analysis of Impact 4.7-1:*

> **West Material Storage Area**
>
> The eastern-most cross section Golder analyzed within the WMSA (Section W-1) includes the "West Area" landslides. The stability of Section W-1 is associated with the adjacent west Quarry wall, and beginning in Phase 1 of the proposed RPA when stockpiling within the EMSA ceases, overburden material would begin to be used as backfill along the western areas of the Quarry pit (including the canyon at the base of the "West Area" slides). Beginning in Phase 2, material regrading of the WMSA would begin, which would include excavation of failed material on the east end of the WMSA. This process would result in the removal of overburden material prone slides and a buttress at the base. Golder's analysis along Cross Section W-1 indicates the final reclaimed slope would have a static FOS of 1.79. Given the West Area slides are currently unstable or marginally stable, final reclamation would significantly improve the stability of the east

slope of the WMSA and the West Area slides compared to existing conditions, and would meet the stability requirements under SMARA.

4.7-37 *Mitigation Measure 4.7-1 has been revised as follows:*

Mitigation Measure 4.7-1: Avoidance and containment of shallow slumps and/or fall-back of overburden material. In all areas requiring the use of excavators for grading within the PCRA (e.g., access road in-sloping, installation/repair of sedimentation basins, and removal of slide debris), the Applicant and/or its contractor shall begin excavations from the top of slope and proceed downward. The Applicant and/or its contractor shall not undercut sloped materials unless no other option is feasible as determined by a registered geotechnical engineer (e.g., excessively sloped or otherwise inaccessible terrain). In all areas of the PCRA where excavations would occur in sloped materials, the Applicant and/or its contractor shall install barriers immediately downslope of the activity. Downslope barriers shall be designed and installed in a manner that would be adequate to prevent overburden and/or native materials from falling, sloughing or sliding further downslope, or into Permanente Creek. Such measures may consist of temporary interlocking soldier piles, wooden shoring systems, wire mesh or other containment measures(s), and the Applicant and/or its contractor shall not be permitted to conduct excavation or grading activities downgradient of the barrier, or prior to its installation. The ultimate location, design and installation method of such measures shall be prepared and certified, or reviewed and approved by a California State registered ~~civil~~ geotechnical engineer.

4.7-42 *The sixth reference from the bottom has been corrected as follows:*

Golder Associates. 2011a. *Geotechnical Evaluations and Design Recommendations (Revision 1.1), Permanente Quarry Reclamation Plan Update, Santa Clara County, California*, prepared for Lehigh Southwest Cement Company, Cupertino, CA, December 7~~November~~.

4.8 Greenhouse Gas Emissions

4.8-9 *The following paragraph has been inserted under the first paragraph:*

BAAQMD adopted updated *California Environmental Quality Act (CEQA) Air Quality Guidelines*, including new thresholds of significance in June 2010 and revised in May 2011 (BAAQMD, 2011), which advise lead agencies on how to evaluate potential air quality impacts with the adopted new thresholds of significance. The thresholds BAAQMD adopted were called into question by a minute order issued January 9, 2012 in *California Building Industry Association v. BAAQMD*, Alameda Superior Court Case No. RGI0548693. The minute order states that "The Court finds [BAAQMD's adoption of thresholds] is a CEQA project, the court makes no further findings or rulings." Subsequently, on March 5, 2012, the

judge in the case issued a final decision and judgment which ruled that the BAAQMD CEQA Guidelines constitute a project under CEQA and that the District must "set aside all approvals in [the resolution approving the Guidelines] and … not disseminate these or any new approvals of officially sanctioned air quality thresholds of significance until the District fully complies with CEQA." The claims made in the case concerned the CEQA impacts of adopting the thresholds; i.e., how the thresholds would affect land use development patterns. Those issues are not relevant to the scientific soundness of the BAAQMD's analysis of what levels of pollutants should be deemed significant, or the threshold to use in assessing any GHG impact the Project would have on the existing environment. These thresholds are based on substantial evidence identified in Appendix D of the Guidelines and are therefore used within this EIR. The County agrees that those thresholds are supported by substantial evidence, and is unaware of any other established thresholds that have the same or greater level of scientific rationale.

4.8-13 *Measure 2 under Mitigation Measure 4.8-1b has been revised as follows:*

2. Use of the Overland Conveyor System, powered by electric motors, to move more than 75 percent of the waste rock from the West Materials Storage Area (WMSA) to reclaim the Quarry pit.

4.9 Hazards and Hazardous Materials

4.9-16 *The following changes have been made to the Impact 4.9-3 discussion:*

Impact 4.9-3: Sedimentation and detention basins planned for erosion and flood control at the Project site could provide breeding grounds for vectors. *(Less than Significant Impact)*

To control drainage from the site, ~~and~~ prevent sedimentation of receiving water bodies, and prevent downstream flooding, the Applicant would install new temporary sedimentation basins for storm water runoff in the Quarry pit and along the south-facing slope of the WMSA, and a detention basin in the Quarry pit. If not properly managed, these ~~sedimentation~~ basins could provide a source of standing water that could provide breeding grounds for mosquitoes, which can be vectors for disease transmission.

As proposed, the ~~siltation~~ sedimentation basins would be designed to drain completely after storm events. Because Basin 40A, the proposed detention basin, would be designed to temporarily store runoff water and release it over the period of hours or days, the amount of longer-term ponding would be inconsequential. In addition, the bottom of Basin 40A would be sloped to further avoid excessive ponding between storm events and during dry periods. ~~and, t~~Therefore, the proposed basins would not contain standing water for sufficient periods of time to provide breeding grounds that would promote mosquito population growth. ~~Similarly, sedimentation basins would not contain vegetation that could be an~~

~~attractant to mosquitoes.~~ The~~se~~ proposed sedimentation basins would operate until site vegetation is established and then would be reclaimed as described in the Project Description. Some long term maintenance of Basin 40A would likely be required to remove sediment and reestablish drainage slopes. However, over time, the amount of sediment trapped by the basin would likely decrease considerably as vegetation is established over the surrounding reclaimed slopes.

4.10 Hydrology and Water Quality

All text changes to Section 4.10, *Hydrology and Water Quality*, are shown in the updated section provided as **Appendix F** of this Final EIR.

4.11 Land Use and Planning

No text changes have been made to Section 4.11, *Land Use and Planning*.

4.12 Mineral Resources

4.12-7 *The top reference has been corrected as follows:*

> Golder Associates. 2011. *Geotechnical Evaluations and Design Recommendations (Revision 1.1), Permanente Quarry Reclamation Plan Update, Santa Clara County, California*, prepared for Lehigh Southwest Cement Company, Cupertino, CA, December 7~~November~~.

4.13 Noise

No text changes have been made to Section 4.13, *Noise.*

4.14 Population and Housing

No text changes have been made to Section 4.14, *Population and Housing.*

4.15 Public Services

No text changes have been made to Section 4.15, *Public Services.*

4.16 Recreation

4.16-2 *The following revision has been made to Section 4.16.1.2, second paragraph, beginning on line 4:*

> This trail segment is designated as "trail route within other public lands ~~private property~~," a designation intended for uses such as hiking, off-road bicycling, and equestrian use, according to the CWTMP.

4.17 Transportation/Traffic

No text changes have been made to Section 4.17, *Transportation/Traffic*.

4.18 Utilities and Service Systems

4.18-7 *Table 4.18-1 has been modified as follows:*

TABLE 4.18-1
PROPOSED PONDS IN THE PROJECT AREA

Basin	Proposed Location	Description
40A	Quarry pit final floor (990 foot elevation)	*Basin floor length*: ~~86~~1,000 feet *Basin floor width*: ~~43~~700 feet *Storage volume*: ~~22,892~~ 4,340,000 cubic feet (cf) *Minimum outlet pipe*: 72-inch HDPE *~~Minimum d~~Depth*: 10 feet (approx.) This ~~sedimentation/de-siltation pond would release flows to PCRA Subarea 6 via pipes installed under the access road. The outfall pipe would release to engineered grouted rip-rap pads, which would dissipate the outflow energy.~~ desiltation and detention basin would temporarily store runoff water and release it over the period of hours or days to a discharge area composed of an 18-foot by 24-foot rip-rap pad 1.4 feet thick underlain by a 1-foot-thick filter blanket of 3/8-inch gravel. Water exiting the drainage area would then enter Permanente Creek.

4.18-7 *The paragraph under Table 4.18-1 has been modified as follows:*

> …~~The p~~Proposed ponds 40B, 40C, and 40I would be installed temporarily (Chang, 2011), maintained until areas of disturbance are revegetated sufficiently to allow for self-sustained erosion control, and then would be reclaimed. Natural reclamation would occur over a period of years, meaning that they would be allowed to accumulate sediment, and revegetation would occur (WRA, 2011). Pond 40A would require some long-term maintenance to remove sediment and reestablish drainage slopes. However, over time, the amount of sediment trapped by the basin would likely decrease considerably as vegetation is established over the surrounding reclaimed slopes ~~be actively revegetated with wetlands vegetation to serve as eventual wetland habitat as described in the Revegetation Plan (WRA, 2011)~~.

4.18-8 *The analysis under Impact 4.18-1 has been modified as follows:*

> Construction of the proposed stormwater drainage facilities would be accomplished during the dry season in previously-disturbed areas, away from sensitive environmental areas. The construction of sedimentation and detention basins would involve the use of backhoes and excavators to excavate stockpiled material and, in the case of Ponds 40B and 40C, the installation of a concrete or other impervious lining.

4.18-11 *The references have been corrected as follows:*

Chang Consultants. 2011. *Drainage Report for the Permanente Quarry*, December 12~~6~~.

City of San Jose Environmental Services. 2011, *Construction and Demolition Recycling and Certified Facilities List.* Available online at http://www.sjrecycles.org/construction-demolition/cddd.asp. Accessed October 3, 2011.

County of Santa Clara. 1994. *Santa Clara County General Plan Charting a Course for Santa Clara County's Future: 1995–2010*, adopted December 1994.

EnviroMINE, Inc. 2011a. *Reclamation Plan Amendment for Permanente Quarry (State Mine ID # 91-43-004*, December 13~~7~~.

4.2.6 Chapter 5, Comparison of Alternatives

5-2 *The fourth bullet from the top of the page has been revised as follows:*

- Hydrology and Water Quality, relating to increased concentrations of selenium in Permanente Creek prior to final reclamation~~, and alteration of the existing drainage pattern resulting in increased stormwater runoff rates and on-or offsite flooding post-reclamation~~.

5-4 *The following text changes have been made to Table 5-1:*

Hydrology and Water Quality	Impacts related to water quality would be less than significant with mitigation except for selenium-related impacts to water quality in Permanente Creek, which would be significant and unavoidable until final reclamation is complete. ~~Drainage and flooding impact would be significant and would be unavoidable if adequate detention facility is not feasible.~~ Groundwater impacts would be less than significant. **Preferred.**	Impacts related to long term selenium leaching to surface water would be less than under the Project; however, ~~the larger area and higher slopes would result in more severe drainage and flooding impacts, and~~ the longer interim period before WMSA and EMSA reclamation could result in more severe interim impacts to water quality. **Not Preferred.**	Impacts to hydrology and water quality would be similar to or slightly less than the Project. **Preferred.**	The interim period before reclamation would be longer than for the proposed Project; the extended timeframe would result a longer period of selenium-related water quality impacts. ~~Downstream flooding impacts resulting from backfilling the Quarry pit would be similar to the proposed Project but would occur several years later.~~ **Not Preferred.**

4.2.7 Chapter 6, Cumulative Impacts

6-17 *The first paragraph under the Biological Resources heading has been modified as follows:*

> The geographic context for analysis of cumulative impacts on biological resources encompasses the eastern side of the Santa Cruz Mountains and the Santa Clara Valley adjacent to San Francisco Bay, within a 5-mile radius of the Project Area. In regards to aquatic impacts, this context would extend to the lower reaches of Stevens Creek, as well as San Francisco Bay, which are both hydrologically connected to Permanente Creek.

6-18 *The first sentence of the third paragraph on page 6-18 has been revised as follows:*

> With regard to short-term impacts from selenium runoff to Permanente Creek, Stevens Creek, and San Francisco Bay, the Project's individual contribution has been determined to be significant and unavoidable.

6-21 *The second paragraph under Section 6.2.7 has been amended as follows to further clarify conclusions of the cumulative effects analysis of the Project:*

> Three of the projects in the cumulative scenario are adjacent to or within the Project site: cumulative projects (1) surface mining within the Project Area, (2) operation of the Permanente Cement Plant adjacent to the Project Area, and (3) restoration of Permanente Creek within and adjacent to the Project area. Cumulative effects with respect to slope stability would occur only if the impacts of one project compound or worsen the impacts of one or more other projects in the cumulative scenario. Continuing surface mining operations within the Quarry pit would occur concurrently along with Phase 1 of the proposed Project. On its own, continued mining of the pit is expected to result in steeper overall slopes along the pit walls, particularly on the pit's east and southeast sides. Continued surface mining operations (and the accompanying deepening of the pit) within the Quarry pit would continue to present threats to the overall stability of quarry walls. Existing landslides within the quarry could continue to experience periodic movements, and new areas of instability could occur – such conditions are inherent in hard rock quarry operations and typically are identified during regular inspections of working slopes and mitigated with temporary measures as required to protect workers.
>
> However, Phase 1 of the Project (which would include stabilization, removal and restoration activities along Permanente Creek to address water quality concerns), would not compound or worsen the adverse slope stability effects of surface mining within the Project area. The beginning of Phase 1 would entail the continuing build-up of the EMSA and would not affect the stability of the Quarry pit. Further, when stockpiling within the EMSA ceases, Lehigh would begin to

stockpile excess overburden within the West Area Slides, thereby buttressing areas within the southwestern portion of the Quarry pit. While this activity would be in close proximity with the continuing surface mining operation, it would not compound or worsen existing instabilities. In fact, it would provide additional buttressing material to the Quarry pit as surface mining operations proceed. While the timing of continued surface mining would overlap with reclamation Phase 1, the impacts of each are not cumulative in nature because they are physically separate and constitute different activities. Therefore, there would be no cumulative impact as a result of this overlap.

~~However, m~~With respect to cumulative impacts on erosion and soil loss, ~~M~~mining activity-related erosion control measures ~~are~~would be implemented, operated, and maintained within and adjacent to the Project Area. It is not anticipated that these cumulative projects would result in significant impacts to geology or soil resources within or outside of the Project Area. Furthermore, as discussed in Section 4.7, Geology and Soils, implementation of the Project overall would improve slope stability in the WMSA and the Quarry pit above baseline conditions, and successful reclamation of the Project Area would return erosion and soil loss to pre-mining conditions.

6-24 *The follow text revisions have been made to Section 6.2.10, pages 6-24 to 6-25, second full paragraph through the end of the section:*

Regarding drainage, the Permanente Creek Flood Protection Project (Cumulative Project #27) also would affect flow rates to Permanente Creek. However, the Permanente Creek Flood Protection Project is likely to improve flow and reduce the potential of localized flooding along the upper reaches of Permanente Creek. Under the proposed Project, implementation of Mitigation Measure 4.10-4 would ensure that impacts to Permanente Creek and subsequent downstream flooding would be less than significant with mitigation incorporated. Therefore, when considered in combination with the impacts of other projects in the cumulative scenario, the Project's incremental contribution to downstream flooding would be less than significant.

~~Aside from water quality impacts, the issue of drainage is perhaps most profound because the Project, when completed, would result in higher storm water flows leaving the site and entering Permanente Creek. This is in large part due to the backfilling of the Quarry pit, which under baseline conditions, acts like a large detention basin for the majority of site drainage. Once filled, stormwater that would otherwise be detained in the Quarry pit would be discharged to Permanente Creek. The impact of drainage is considered significant and unavoidable unless it is feasible to construct a detention basin capable of managing sediment and detaining peak flows from a 100-year event. While various detention basins are proposed for the Project and the drainage plan is~~

~~designed to meet SMARA and Santa Clara County Drainage standards, the potential of downstream flooding would still exist unless mitigated.~~

~~Impact 6-2: Incremental Project-specific activities could contribute to downstream flooding. (Significant and Unavoidable Impact)~~

~~The Permanente Creek Flood Protection project is also likely to improve flow and reduce the potential of localized flooding along the upper reaches of Permanente Creek. Following Phase 3 of Project implementation, when storm flows no longer are captured in the Quarry pit, they would be discharged to Permanente Creek. This additional flow would cause an exceedence of the 100-year peak flow in a FEMA 100-year flood hazard zone located on the site and could exacerbate a flooding condition downstream and offsite. While the Permanente Flood Control Project may lessen the effects of future flooding in this reach of Permanente Creek, it is not known whether it would ameliorate flooding that could result from the increased 100-year peak flows released from the Project Area after the completion of reclamation. Therefore, when considered in combination with the impacts of other projects in the cumulative scenario, the Project's incremental contribution to downstream flooding would be cumulatively considerable.~~

> **~~Mitigation Measure 6-2: Construction of Onsite Detention Facility.~~** ~~The Applicant shall design and construct facilities that would manage runoff on the site, reduce excessive discharges to Permanente Creek and develop the capacity to detain and release the 100-year flow using on-site detention ponds while optimizing groundwater infiltration. Desiltation ponds proposed in other smaller Project Areas such as the EMSA, also shall be engineered to function as detention basins and manage 100-year peak flow to the extent practical. These mechanisms would be in place to control and manage 100-year flows to Permanente Creek and verify that these flows are not are increased.~~

~~Significance after Mitigation:~~ ~~Significant and unavoidable. Implementation of Mitigation Measure 6-2 would provide the necessary facilities to reduce offsite storm water discharge during the 100-year storm event. However, because it is unknown whether this mitigation measure is feasible, the impact would remain significant and unavoidable.~~

6-31 *The sixth reference from the top has been corrected as follows:*

> EnviroMINE, Inc. 2011. *Reclamation Plan Amendment for Permanente Quarry State Mine ID# 91-43-0004*, December 13~~7~~.

4.2.8 Chapter 7, Other CEQA Considerations

7-2 *The second bullet from the top of the page has been revised as follows:*

- **Hydrology:** Interim reclamation activities within the Project Area would contribute concentrations of selenium, Total Dissolved Solids (TDS), and sediment in Permanente Creek. Implementation of Mitigation Measures 4.10-2a and 4.10-2b is expected to reduce sediment and TDS to acceptable levels such that interim impacts from sediment and TDS would be less than significant. However, there is insufficient evidence at this time regarding the efficacy of these measures with regard to selenium-containing runoff. ~~would reduce the potential for stormwater runoff to deliver sediment and selenium to Permanente Creek during the Project activities, but would not be sufficient to fully eliminate the possibility.~~ Mitigation Measures 4.10-2c through 4.10-2e require the design and testing of a pilot-scale treatment facility to remove selenium. However, considerable uncertainty remains regarding the feasibility of installing a full-scale treatment system that would be adequately effective in reducing selenium discharge to acceptable levels. Therefore, this interim impact would remain significant and unavoidable until final reclamation is completed. ~~In addition, the Project would alter the existing drainage pattern of the site, which could result in increased storm water runoff rates and on- or off-site flooding. The 100-year discharge to the Quarry floor was calculated at 235 cfs for the proposed reclaimed condition in Phase 3. Without detention, this peak flow would discharge to Permanente Creek and constitute a 230.5 cfs increase from the approved maximum discharge of 4.5 cfs under existing conditions. This magnitude of increased runoff from the site would result in potential downstream flooding, hydromodification effects along Permanente Creek and potential adverse flow effects at the Permanente Diversion structure. Implementation of Mitigation Measure 4.10-4 would provide the necessary facilities to reduce offsite stormwater discharge during the 100-year storm event to less than significant. However, if this is not determined to be feasible, the impact would remain significant and unavoidable.~~

4.2.9 Chapter 8, Report Preparers

No text changes have been made to Chapter 8, *Report Preparers.*

4.2.10 Chapter 9, Glossary and Acronyms

No text changes have been made to Chapter 9, *Glossary and Acronyms.*

4.2.11 Appendices

Appendix E *Table 7 from Appendix E has been updated with the most recent toxicity values:*

TABLE 7
TOXICITY VALUES

Pollutant	Inhalation Slope Factor (mg/kg-day)	Acute REL ($\mu g/m^3$)	Chronic REL ($\mu g/m^3$)
Acrolein (with DPM)		2.5	
Arsenic	12.0	~~0.19~~ 0.20	~~0.03~~ 0.015
Beryllium	8.4		~~0.003~~
Cadmium	15.0		~~0.02~~
Chromium VI	510		~~0.2~~
Crystalline silica			3
DPM	1.1		5
Copper		100	
Cadmium	15.0		
Lead	0.042		
Mercury		~~1.8~~ 0.6	~~0.09~~ 0.03
Nickel	0.91	6.0	0.05
Selenium			20
Vanadium		30.0	

SOURCE: California Office of Environmental Health Hazards Assessment Toxicity Criteria Database, 2011~~1~~2. http://www.oehha.ca.gov/tcdb/