State of California
DEPARTMENT OF CONSERVATION
OFFICE OF MINE RECLAMATION
MRRC-1 (4/97) Page 1 of 5 (Rev. 07/13)

SURFACE MINING INSPECTION REPORT

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

I. Mine Name (As Shown on Approved Reclamation Plan)	Inspection Date:	CA MINE ID#
Stevens Creek Quarry	09-15-2016*	91- 43-0007

II. Mine Operator		Telephone
Stevens Creek Quarry, Inc.		(408) 253-2512 ext 210
Onsite Contact Person		**Telephone**
Jason Voss		(408) 640-6160
Mailing Address		
12100 Stevens Canyon Rd		
City	**State**	**ZIP Code**
Cupertino	CA	95014
E-mail Address (optional)		
Jvoss@scqinc.com		

III. Designated Agent		Telephone
Jason Voss		(408) 640-6160
Mailing Address		
same as above		
City	**State**	**ZIP Code**
same as above	same as above	same as above
E-mail Address (optional)		
same as above		

IV. SMARA Lead Agency Name (City, County, BCDC, or SMGB)		
Santa Clara County		
Inspector		**Telephone**
James Baker, Steve Beams, Rob Salisbury, Kit Custis, Nash Gonzalez		(408) 299-5774
Title	**Organization**	
County Geologist and Supervising Inspector	Planning Office, Department of Planning & Development	
Mailing Address		
70 W Hedding Street, East Wing, 7th Floor		
City	**State**	**ZIP Code**
San Jose	CA	95110
E-mail Address (optional)		
jim.baker@pln.sccgov.org		

V. Does the operation have:	P	NR	No	Yes
A Permit to Mine	☐	☐	☐	**Permit # - Start and Expiration Dates** 1253-16-62-94P (Start: 12/17/1996, expires 02/18/2015; renewable)
Vested Right to Mine	☐	☒	☐	**Year of Lead Agency determination** Mediated Agreement adopted 10/08/2002
A Reclamation Plan	☐	☒	☐	**RP#** 1996-16-62-94P **Date Approved** 12/17/1996
Reclamation Plan Amendment	☐	☒	☐	**RP Amendment # (as applies)** 1253-16-62-07P (R2) **Date Approved or Status of Amendment** 05/14/2009

Has the Operator filed a Mining Operation Annual Report (Form MRRC-2) this Year? Check One: ☑Yes ☐No **Year of Most Recent Filed Annual Report:** 2015

VI. Is this Operation on Federal Land? Check One: If "Yes," Provide One or Both of the Federal Mine Land Identification Numbers Below:	☐Yes ☑No
California Mining Claim Number (CAMC#): N/A	**Latitude/Longitude at Mine Entrance (Decimal Degrees):** 37° 17.785'N / 122° 05.071'W
U.S. Forest Service or BLM Identification Number (Plan of Operations #) : N/A	**Status of Plan of Operations (Current/Expired/In Process):** N/A

DISTRIBUTION: Lead Agency sends copies of Inspection notice & completed MRRC-1 to operator, operator's designated agent, BLM or USFS (if required) & retains original.

INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

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

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

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

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

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

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

BLOCK V: Check the appropriate boxes.

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

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

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

DISTRIBUTION INSTRUCTIONS:

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

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

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

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

SURFACE MINING INSPECTION REPORT

VII. Financial Assurance		Inspection Date: 09-15-2016*	CA MINE ID#: 91- 43-0007	
Type of Financial Assurance Mechanism(s)	**Financial Assurance Mechanism Number(s)**	**Amount of Mechanism**	**Date of Expiration**	**Date of Lead Agency Approval of Mechanism**
Surety Bond	Liberty Mutual #70000907	$2,304,756.29	none	11-30-2015
Total Amount of Mechanism(s)		$2,304,756.29		

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

July 2015, pending amount $2,304,756.29. County review complete and DID NOT certify the FACE calculations are in keeping with the FA Guidelines, SMARA Section 2774(c). Revisions due to County by 11/01/2015.

Has there been a change of operator since last inspection? If yes provide the date of notice.	**If yes, has the new operator posted a Financial Assurance Mechanism?**	**Does new operator's Notice of Change include a statement of responsibility for reclamation?**
☐Yes ☑No	☐Yes ☐No	☐Yes ☐No
Date of Change:	**If not, describe status of new operators Financial Assurance Mechanism:** N/A	

Date and Amount of Most Recent Approved Financial Assurance Cost Estimate:	**Date:** 11-30-2015 **Amount:** $2,304,756.29
■ **Financial Assurance Cost Estimate Pending Review with Lead Agency?**	**Date Submitted/Explanation/Amount of pending estimate:** Operator revised FACE July 2015 to $2,304,756.29. 2016 FACE submitted on February 28, 2017. County is reviewing the 2016 FACE and will submit it to the DMR when it is certified as in keeping with SMARA.
☐ **Financial Assurance Cost Estimate Appealed by Operator?**	**Date Submitted to State Mining and Geology Board or Lead Agency for Appeal/Explanation:** N/A
☐ **Other?**	N/A

INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

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

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

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

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

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

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

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

SURFACE MINING INSPECTION REPORT

VIII. Non-SMARA facility operations conditions solely of local concern (e.g. hours of operation) do not need to be noted here. See Instructions for Block VIII on reverse side of page. **[Use separate sheet(s) where necessary. Refer to item numbers below]**		CA MINE ID # **91-** 43-0007	
Potential Reclamation Plan Requirements:	List Reclamation Plan Requirements (Recommended to be filled out prior to field inspection)	Note Site Conditions and Compliance Issues (Note additional comments on Page 5 as necessary)	VN?
1) General Information a) Permitted Mineral Product(s) b) Approved Production Amount (Annual/Gross) c) End Date of Operations Per RP d) Permit end date e) End Use	Mineral products: aggregate No limit of product as set forth by County approvals. End of operations is not defined in the reclamation plan. End use pursuant to the Reclamation Plan is Open Space. The mine operator applied for a Reclamation Plan Amendment to add end date. The application is under review by the lead agency.	Inspectors observed active mining operations. Operator has current use permit to operate recycling facility for concrete, asphalt, and dirt. Those operations were also active during the inspection. See Attachment A for more discussion.	☐
2) Boundaries a) Property Boundary b) Permit Boundary c) Rec. Plan Boundary (RPB) d) Setbacks	Property and reclamation plan boundaries are shown in Figures 6 and 8 of the reclamation plan approved in May 2009. The property boundary of Parcel A was subsequently modified in a lot line adjustment approved by the County, 2013, to coincide with the reclamation plan boundary.	Inspectors observed a 47 feet tall earthen dam between Upper and Middle settling ponds has been included within the property via recording of a lot line adjustment. Inspectors observed failure of a portion of the perimeter access road along the northern high cut wall is very close to the property and Rec Plan boundary. Survey confirmed ground cracks are located outside (north of) the property boundary. See Attachment A for more discussion.	☑
3) Slopes – Grading a) Fill Slopes – Note Condition of: i) Slopes – Working (max/current) ii) Slopes – Reclaimed iii) Compaction b) Cut Slopes – Note Condition of: i) Slopes – Working (max./current) ii) Slopes – Reclaimed	Max. working slopes 1.5:1 as shown on Figures 6 and 8 of 2009 reclamation plan amendment (RPA), and on Sheet 2 of 6 of the RPA drawings by Resource Design Technology. Reclaimed in Parcel A to be 1.5:1 slopes as shown in Figure 11, and will vary from 2:1 to 3:1 in Parcel B, as shown in Figure 13 of the RPA, and on Sheet 3 of 6 of the RPA drawings by Resource Design Technology. See also Appendix D of the RPA (Slope Stability Report) for further information.	Mining was active during the field visit. Inspectors observed open cracks and vertically displaced scarps on west and north slopes of the quarry pit. See Attachment A for more discussion.	☐
4) Erosion Control a) BMPs b) Grading c) Vegetation	Erosion control is managed through re-vegetation of disturbed slopes as set forth in the RPA, Section 4, and by managing onsite surface water runnoff as shown on Sheet 6 of 6 of the RPA drawings by Resource Design Technology. Erosion control and BMPs are also detailed in Table WQ-4 of the Initial Study for the RPA.	Inspectors observed fill and recent graded areas. These areas needed erosion control measures to be installed prior to rain season. See attachment A for more discussion.	☐
5) Ponds a) Design – Function b) Capacity (area/depth/volume) c) Maintenance	RPA drawing 6 of 6 by Resource Design Technology shows six basins at full excavation and three permanent ponds at final reclamation.	Inspectors observed Upper and Middle Basins water levels at capacity. Lower basin and settling ponds are clean and free of vegetation. There may be capacity issues with rain season. See Attachment A for more discussion.	☐
6) Stream & Wetland Protection a) Buffers (distance to channel) b) Berms (distance/length/height) c) Best Management Practices d) Drainage e) Grading & Slopes f) Stockpiles g) Stream Diversions	Stream protection is addressed in the RPA through erosion control and surface water management as described RPA Initial Study, implementation of a Storm Water Pollution Prevention Program (SWPPP), approved by the San Francisco Water Control Board in 1997.	Inspectors observed Upper, Middle and Lower Basins in the creek channel, 47 feet high earthen dam is located between basins. Material stockpile located on Parcel A is hydro-seeded.	☐
7) Sensitive Wildlife & Plant Protection a) List Species b) Protection Measures	Sensitive wildlife and plant species are described in the 2009 RPA intial study, and addressed through mitigation measures, were are incorporated into the RPA as Conditions of Approval 14 through 17 (see Attachment B).	Mitigation measures are triggered when new areas of disturbance occur through mine or reclamation operations within a 9.5 acre expansion area authorized by the 2009 RPA. County inspectors observed several new areas of disturbance that require mitigation.	☐

INSTRUCTIONS FOR COMPLETING SURFACE MINING INSPECTION REPORT

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BLOCK VIII: INSTRUCTIONS FOR EACH DATA COLUMN:

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

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

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

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

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

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

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

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

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

SURFACE MINING INSPECTION REPORT

VIII. Non-SMARA facility operations conditions solely of local concern (e.g. hours of operation) do not need to be noted here. See Instructions for Block VIII on reverse side of page. **[Use separate sheet(s) where necessary. Refer to item numbers below]**		CA MINE ID # **91-** 43-0007	
Potential Reclamation Plan Requirements:	List Reclamation Plan Requirements (Recommended to be filled out prior to field inspection)	Note Site Conditions and Compliance Issues (Note additional comments on Page 5 as necessary)	VN?
8) Soil/Overburden Stockpile Management a) Topsoil i) Location ii) Slope Stability iii) BMPs b) Overburden i) Location ii) Slope Stability iii) BMPs c) Topsoil Application i) Amendments ii) Depth iii) Moisture iv) Application Methods	Stockpiles of topsoil and overburden are shown in the Existing Conditions, Figures 3 and 4 for Parcel A and Parcel B of the quarry respectively. A stockpile is located in the east portion of Parcel A that includes topsoil. Stockpiles in the southwesterly and southeasterly corners of Parcel B are shown on Sheet 6 of 6 of the RPA drawings by Resource Design Technology. These stockpiles are mostly overburden material that may be used for fill, as part of final reclamation.	Stockpile on Parcel A is vegetated from hydro-seed in previous years. The vegetation from the hydro-seeding appeared to effectively prevent erosion, and protect the material underneath. Inspectors did not observe BMPs in place on some fill areas located on Parcel B. County reviewing confirmation that volume of fill available on-site is sufficent to fill the current pit to required finish slopes. See Attachment A for further information.	☐
9) Revegetation a) Test Plots b) Species Mix c) Density d) Percent Cover e) Species Richness f) Protection g) Success Monitoring h) Invasive Species Control	The approved Reclamation Plan Amendment revised the plant list of vegetation to be used for revegetation of disturbed areas during reclamation. The plant list is included in Section 4.3 of the RPA (Table 1, "Revised Revegetation Palette"). Location of vegetation types is shown in Figures 16 and 17 of the RPA, as well as Sheet 5 of 6 of the drawings by Resource Design Technology.	Test plots to test for and ensure success of revegetation plan have been constructed. First round of oak germination appeared successful. See Attachment A for further information.	☐
10) Structures	Structures not shown on the reclamation plan to remain following reclamation of the quarry must be removed.	Inspectors observed new retaining walls for crusher and power poles. Operator indicated they will be removed prior to final reclamation.	☐
11) Equipment	Equipment used for mining purposes must be removed following reclamation of the quarry.	Crusher and related conveyors were relocated and retaining wall constructed in southwest portion of Parcel B. Retaining wall constructed to protect power poles at western boundary. Another retaining wall was being constructed to support the perimeter road at the northern property line. County Building Official determined no permit was required for "temporary" wall.	☐
12) Closure of Adits	The mine does not include adits; none are required to be addressed through reclamation.	N/A. The mine does not include adits; none are required to be addressed through reclamation.	☐
13) Other Reclamation Plan Requirements	N/A	N/A	☐

SURFACE MINING INSPECTION REPORT

IX. List comments/description/sketches to support observations of mine site conditions, including violations. Where any violations are noted, list in numerical order, along with suggested corresponding corrective actions. Also describe preventative measures recommended by the inspector to avoid or remedy potential violations. Indicate if you have attached photos, sketches, and/or notice(s) of violation(s) or other documents to this form.
(Add additional sheets as necessary)

*(Follow-up inspections were conducted on 10-11-2016, 11-2-2016, 12-7-2016, 1-17-2017, 2-8-2017 and 3-01-2017.)

The following attachments include additional information:

Attachment A - Chronological List of Related Events

Attachment B - County's Discussion and Photographs
(Baker, 3-6-2017)

Attachment C - County's "2015 FACE - Stevens Creek Quarry" letter
(Marina Rush, 4-6-2015)

Attachment D - "Engineering Geologic Observations" report
(Derrega, 5-25-2016)

Attachment E - "Settling Basin Dams" letter
(DWR, 6-16-2016)

Attachment F - County's "Information Required ..." letter
(Eastwood, 10-26-2016)

Attachment G - Operator's request for revised timetable
(Jason Voss, 11-1-2016)

Attachment H - County's approval of revised timetable
(Rob Eastwood, 11-4-2016)

Attachment I - Original and Modified Timeline (Deadlines)

Attachment J - "Engineering Geologic Observations and Slope Stability Analysis along the Northern Slope ..." report
(Derraga, 1-30-2017)

CA MINE ID #
91- 43-0007

Inspection Date:
09-15-2016*

Weather Code(s):
CR

Duration of Inspection: *3 hours

Start Time: 9:00 AM

End Time: 12:00 PM

Status of Mine Code(s):
A

Status of Reclamation Code(s):
R

Approximate Acreage Under Reclamation:
2.4 acres

Approximate Acreage the lead agency has determined reclaimed in accordance with the approved reclamation plan: 0.0

Approximate Total Disturbed Acreage:
123 acres

Approximate Pre-SMARA Disturbed Acreage:

Disturbed Acreage Identified in Most Recent Financial Assurance Cost Estimate:
117.8 acres

Previous Inspection Date (and Number of Violations then Noted):
11-x-2015 (0)

Violations Corrected? (explain in block to left)
N/A

Inspection Attendees and Affiliations:

Jim Baker (Santa Clara County)
Steve Beams (Santa Clara County)
Rob Salisbury (Santa Clara County)
Kit Custis (Michael Baker Int.)
Nash Gonzalaz (Land Logistics)
Jason Voss (Stevens Creek Quarry)
Rich Voss (Stevens Creek Quarry)

X. Number of Current Violations:	Inspectors Signature:	If inspector is a contractor for the lead agency give license type and number:
0	Date Signed:	n/a

DISTRIBUTION: Lead Agency sends copies of Inspection notice & completed MRRC-1 to operator, operator's designated agent, BLM or USFS (if required) & retains original.

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

Enter California Mine ID Number and Date of Inspection.

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

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

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

I = Idle (Per § 2727.1)
AB = Abandoned (Per § 2770(h)(6))
NOP-C = Not in operation, reclamation completed
NP = Newly Permitted (must be no mining/disturbance)
NOP-NC = Not in operation, reclamation not completed

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

Status of Reclamation Codes:

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

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

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

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

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

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

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

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

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

ATTACHMENT A

Chronological List of Related Events

Chronological List of Related Events

Dates	Events
9-15-2016	County staff conducted Annual SMARA Inspection
10-11-2016	County staff conducted Follow-up Inspection and establish crack monitoring stakes
10-26-2016	County sent letter to Operator requesting information with due dates
11-01-2016	Operator sent email to County requesting modified due dates
11-02-2016	County staff conducted Follow-up Inspection and measure crack stakes
11-04-2016	County sent email approving Operator's request for modified due dates*
12-07-2016	County staff conducted Follow-up Inspection
12-14-2016	County sent email to Operator re: overdue items #2 thru #4
01-17-2017	County staff conducted Follow-up Inspection
01-31-2017	Operator submitted Slope Stability report (dated 1-30-2017)
02-08-2017	County staff conducted Follow-up Inspection
03-01-2017	County staff conducted Follow-up Inspection (from Peacock Ct.)

ATTACHMENT B

County's Discussion and Photographs

Attachment B

2016 Annual SMARA Inspection of

Stevens Creek Quarry
County File 1253-94P-07P-16PAM
State Mine ID #91-43-0007

Inspection Date: September 15, 2016

(with follow-up inspections on: October 11, 2016, November 11, 2016, December 7, 2016, January 17, 2017, February 8, 2017 and March 1, 2017)

Report Date: March 6, 2017

The mine entrance is located near latitude 37° 17.785'N and longitude 122° 05.071'W.

The initial 2016 annual SMARA inspection was conducted for approximately 3 hours on the morning of September 15, 2016. In attendance were James Baker (County Geologist) and Steve Beams (County Grading Inspector), Kit Custis (Michael Baker Int.), Nash Gonzalaz (Land Logistics), Jason Voss and Rich Voss (Stevens Creek Quarry). The mine was active (A) during the inspection. The weather during the inspection was clear (CR).

Follow-up inspections were conducted on October 11, 2016, November 11, 2016, December 7, 2016, January 17, 2017, February 8, 2017 and March 1, 2017* by Steve Beams (County Graning Inspector) and Chris Hoem (County Planner) to measure the crack-monitoring stakes, observe the progress of retaining wall construction and assess the effectivenss of erosion controls following periods of heavy rainfall. (*Due to the lack of access to the quarry, the inspection on March 1, 2017 involved taking photographs from Peacock Court located south of the quarry.)

BACKGROUND

Stevens Creek Quarry lies in a north-northwest trending canyon on the northeast of Monte Bello Ridge in the Santa Cruz Mountains. The access to the mine is off of Stevens Canyon Road, which runs along the west side of the Stevens Creek Reservoir and Stevens Creek County Park. The County approved the current Reclamation Plan, May 2009. The current mining operations occur in two areas commonly referred to as “Parcel A” and Parcel “B”. (See Reclamation Plan map Sheet 1.) Parcel A encompasses 51 acres on the southeast side and Parcel B, encompassing a combined 96 acres on the northwest. The mine operations and reclamation plan encompass approximately 147 acres of a 167-acre site. Parcel A is the southeastern portion of the mine and contains the mining operations offices, shops, and maintenance facilities. The County issued a Use Permit in 1996 for recycling concrete, asphalt, and soil; this recycling facility also located on Parcel A.

Quarrying also occurs on Parcel B where rock is extracted from a large, steep-walled pit and the crushing, screening and sorting operations occupy the floor of the pit. Mining in Parcel B extracts

primarily Franciscan greenstone for aggregate. The land to the north, east, and west sides of Parcel B is undeveloped land owned by Lehigh Southwest Cement Company.

SITE CONDITIONS

Recycling Operations: The northeastern portion of Parcel A was previously mined and is currently used for storage of over-burdden materials (to eventually be used to fill the main pit on Parcel B) and recycling of concrete, asphalt and topsoil that are brought to the site from nearby construction projects. Large stockpiles of these materials are placed along the northern portion of the Parcel B boundary and partially bury the finished mine slope. The recycling equipment is located north of the quarry offices on Parcel A. (See Photo 1.)

Slump Repair: An area located east of the recycling operation on Parcel A had a slump repair (2012) that is now buried and appears stable. (See Photo 2.)

Stockpile Parcel A: Inspectors observed large stockpile on Parcel A. (See Photo 3.) Based upon visual inspection, it is unclear if the volume of stockpiled materials observed on-site is sufficient to bring the final slopes of the current mine pit on Pacel B up to the approved Reclamation Plan standards. Operator states there is sufficient fill and has calculations to confirm (verbal communications with R. Voss). Operator submitted calculations with the revised FACE.

Re-vegetation: of 2.4 sloped acres along the northern boundary of Parcel A occurred several years ago, however, trees that were planted on the slopes did not survive the acclimation period. The operator attempted to have the 2.4 acres planted in previous years; however, insufficient survival of the plants prevented final planting. Operator installed a test plot area located top of the dam between the Upper Settling Basin and the Middle Settling Basin adjacent to upper access road. (See Photo 4.)

Settling Basins: As previously reported, storm water from the quarry is stored in a series of settling basins (Upper Settling Basin, Middle Settling Basin, Lower Settling Basin) located along the southern boundary of Parcel B. Two of these basins (Middle and Lower) are in Parcel A, the lowermost basin being the largest. The settling basins eventually discharge offsite from a southeastern basin adjacent to the mine entrance to the creek and eventually Stevens Creek Reservoir. Inspectors observed an earthen dam (approximately 47 feet high) between Upper Settling Basing and Middle Settling Basin. (See Photo 5.) The southern portions of the dam and Upper Settling Basin were previously determined to be located outside of property line and Reclamation Plan boundary.

The Operator recorded the lot line adjustment that modified the property line so that the entire Upper Settling Basin is within the mine property (oral communications with J. Voss). This also requires a Reclamation Plan Amendment (RPA) to modify the boundary, which can be processed with the RPA application. County requires the application be submitted as soon as possible. County recommends Operator research and consult with State Department of Water Resources, and other state agencies if applicable, to determine jurisidictional status of the dam. Operator agreed (verbal communication with R. Voss) to obtain status of dam and confirm status to County..

Stormwater BMPs: County observed ongoing erosion gullies located on fill slopes (Parcel B) above haul road. (See Photo 6.) County requires operator to implement soil stabilization measures and install adequate BMPs no later than November 1, 2015. Erosion control and BMP measures, including hydroseeding for winter, should be implemented at all locations where active grading or

disturbed soil (new crusher, fill slope near creek, etc.). County shall conduct a final inspection of the completed work.

Crusher and Retaining Wall: Mining is conducted in Parcel B in a north-northwest trending quarry where Franciscan greenstone bedrock is extracted. Equipment for crushing and sorting rock materials is located on Parcel B. Inspectors observed crusher equipment was relocated to the southeast portion of Parcel B. (See Photo 7.) Building permits were required for the foundation and the retaining wall.

Quarry Pit: Looking west at high wall cuts. Localized slumping has occurred between benches that will be buried by fill during reclamation. Looking down on northern slope of pit, localized cracking and erosion rills have formed in the slope. Operator submitted a geologic reports dated 5-30-2016 and 1-29-2017.

County inspectors observed a portion of the perimeter access road (located within a few feet of the northern property line and Reclamation Plan boundary) was disrupted by the headscarp of a large landslide. (See Photo 8.) County required the quarry operator to have the property line surveyed to determine whether or not ground cracks were outisde of the mine property. During subsequent inspections, County inspectors observed the progress of retaining wall construction and buttress fill placement. (See Photos 9, 10, 11, 12, and 13.) Consulting Geologist Derraga conducted an evaluation of the slope stability. The report containing those findings was submitted to the County on 2-1-2017. The report recommends that an additional width (200 feet) of buttress be added to the toe of the slope in order to achieve an acceptable factor of safety. The County is reviewing the report.

Portions of the "finished" high cut walls of the quarry pit have undergone progressive failure. A temporary retaining wall has been built near the head of one such failure in the center portion of the northern property line and a large buttress fill has been placed against the lower and middle portions of the slope below the wall. (The latest geologic report includes a slope stability analysis of the buttress. The County Geologist is reviewing that report.) Another slope failure has disrupted the high cut wall on the west side of the quarry pit. The headscarp of that failure is downhill of the retaining wall built to protect the radio shack located in the northwest corner of the parcel. (See Photo 14).

ACTION ITEMS

1. *Revegetation*: Operator has installed a nursery with an automatic watering system to germinate and raise native oak trees. (See Photo 9.) County recommends the Mine Operator establish vegetation test plots on quarried conditions similar to those that will exist for reclamation to prove the viability of proposed reclamation plantings. County recommends Mine Operator retain a botanist or qualified biologist for the installation and reporting to achieve results for revegetation in accordance with the standards of the Reclamation Plan.

2. *Mine Boundary*: County recommends the Mine Operator demarcate the property line with T-stakes painted in a bright color (e.g., orange) to ensure mining activities do not extend beyond the property line.

3. *Stormwater BMPs*: County inspectors observed fill slopes with no erosion control measures, primarily in area of new crusher and adjacent to haul road. County requires operator to implement soil stabilization measures and install adequate BMPs, including

hydroseeding, at all locations where active grading or disturbed soil have occurred. County will perform final inspection of completed work.

4. *Ponds, stream, earthen dam wall*: County inspectors observed several [in-creek] ponds, identified in the Reclamation Plan as Upper, Middle and Lower Settling Basins, and an earthen dam, approximately 47 feet tall. Upon County recommendation, Operator agreed to research and consult with State Department of Water Resources, and other applicable agencies, to determine jurisdictional status of the dam and report status to County.

5. *Geologic Assessment*: County inspectors observed open cracks and vertical displaced scarps on west and north slopes of the quarry pit. These are signs of slope instability. Operator agreed to obtain geological evaluation by a certified engineering geologist to complete a geological assessment to analyze potential instabilities or movement that may jeopardize reclamation (verbal communication with R. Voss October 6. 2015). Operator shall submitted Derraga's geologic report to the County on 2-1-2017. It is being reviewed by the County Geologist.

6. *Stockpile Cover Material*: County inspectors observed material stockpile on Parcel A consistent with the Reclamation Plan maps. Mine operator pointed out some additional stockpile material on Parcel B. Rough volume calculations conducted by a third-party engineer hired by the County, indicated the on-site volume of cover material may be insufficient to meet reclamation requirements for the current quarry pit. In the post inspection meeting, the Operator stated the calculations generated from a highly accurate cut/fill terrain model of the site indicate there is sufficient fill. The operator agreed to share the methodology and output of the terrain model with the County and the third-party engineer to rectify the discrepancy.

7. *Recycled materials stockpile*: The quarry has an approved use permit for recycling operations for concrete, asphalt and soil. The quarry operator shall provide the County a financial analysis demonstrating the value of the stockpiled materials exceeds the costs of removal and reclamation of the site.

8. *Slope failures of high walls:* Additional geologic investigation and analysis is required to evaluate the potential effect that failure of the finished slope towards the north side of the west high wall will have on the Reclamation Plan.

FINANCIAL ASSURANCE

As of the date of this report, the County of Santa Clara has not received the 2016 Financial Assurance Cost Estimate (FACE) for the Stevens Creek Quarry. The Operator has told the County that the 2016 FACE will be submitted soon. After the County recieves, reviews, and certifies the FACE as complete, County staff will forward the FACE under a separate cover letter to the Division of Mine Reclamation for its mandated 45-day review.

Photos:

Photo 1 (taken 9-15-2016): Recycling operation on Parcel A.

Photo 2 (taken 9-15-2016): Repaired slope between Parcel A and gun club.

Photo 3 (taken 9-15-2016): Stockpiled soil on Parcel A.

Photo 4 (taken 9-15-2016): Nursery for germinating native oak trees.

Photo 5 (taken 9-15-2016): Face of dam between upper and middle settling basins.

Photo 6 (taken 9-15-2016): Erosion rills on fill slope above main haul road.

Photo 7 (taken 1-28-2016 by Regional Water Quality Control Board): Relocated rock crusher.

Photo 8 (taken 9-15-2016): Headscarp of failure on north high wall and perimeter road.

Photo 9 (taken 10-11-2016): Construction of retaining wall on north high wall.

Photo 10 (taken 11-2-2016): Retaining wall on north high wall.

Photo 11 (taken 12-07-2016): Buttress fill below retaining wall on north high wall.

Photo 12 (taken 1-17-2017): Retaining wall on north high wall.

Photo 13 (taken 2-8-2017): Buttress fill below retaining wall on north high wall.

Photo 14 (taken 3-1-2017): Slope failure on western high cut wall.

ATTACHMENT C

County's "2015 FACE – Stevens Creek Quarry" letter

April 6, 2016

Christina Reese
State Office of Mine Reclamation
801 K Street, MS 09-06
Sacramento, CA 95814

[CERTIFED MAIL]

SUBJECT: 2015 Financial Cost Estimate - Stevens Creek Quarry
January 2016 - Supplement to July 2015 FACE
County Planning Office File #1253-15PAM
State Mine ID # 91-43-0007

Dear Ms. Reese:

The County received the 2015 Financial Assurance Cost Estimate (FACE) for the Stevens Creek Quarry (Mine ID #91-43-0007) in July 2015, and requested the mine operator provide additional documentation and/or modifications. The supplemental documentation, titled Supplement to July 2015, dated January 2016, Benchmark, is Attachment A to this letter. The County submits this documentation to the State Office of Mine Reclamation (OMR) for a 45-day review in accordance with SMARA, PRC §2774(c) and (d).

The 2015 FACE to reclaim the current quarry conditions increased $1,573,033.45 from the prior year, and totals $2,304,756.29. On November 30, 2015, the County approved the replacement surety bond totaling $2,304,756.29, issued by Liberty Mutual Insurance Company. A copy of the approval and surety bond is Attachment B to this letter.

Following is a summary of the 2016 Supplemental documentation and County's response:

1. Boundary Amendment and Dam: Mine operator filed for a pre-application for the lot line adjustment, March 2016, to assess the requirements for amending the parcel line near the upper settling basin. Following completion of the pre-application, the mine operator will apply for a lot line adjustment and record the amended parcel map. The process timing for both applications is approximately six months. **This item remains as an open issue pending recordation of the new Parcel Map.**

   Regarding the dam impoundment, the mine operator contacted the California Department of Water Resources. The County has not received a determination from the

Department of Water Resources. **This item remains as an open issue pending receipt of a determination from the Department of Water Resources.**

2. Stockpiled overburden and fill estimate: Stevens Creek quarry submitted a report estimating the amount of overburden on site and fill required estimate. This report is included in the Supplemental documentation. Based on the report, it appears there is adequate overburden to complete reclamation for the current state, and no import fill is necessary. **County accepts mine operator response.**

3. Geological assessment and monitoring: Mine operator submitted a report, prepared by Sandy Figures with Norfleet Consultants. This report is included in the Supplemental documentation. On March 18, 2016, the mine operator stated in verbal communications with the County inspector that they have contracted with Sadek Derrega, CEG, to prepare a new geological assessment. The estimated date for submittal to the County is end of April 2016. **This item remains as an open issue pending receipt of the new geological assessment report, submitted to the County Planning Office for review and comment by the County Geologist.**

4. Retaining wall for rock crusher relocation: The cost for demolition of the new rock crusher retaining wall would be the same as the prior rock crusher retaining wall, which is included in the 2015 FACE. Also, the mine operator applied for the building permits associated with the retaining wall and rock crusher in 2015, and these are in the County plan checking and review process. **County accepts the mine operator response.**

5. Recycled material stockpiles: Mine operator submitted a valuation report of the stockpiled material and cost estimate to remove the stockpile. The mine operator stated they are working to reduce the material stockpile height, verbal communications with the County on March 18, 2016. **County accepts the mine operator valuation report and verbal response to reduce the concrete stockpile.**

6. Scraper cost reduction: Mine operator provided clarification on the calculations. **County accepts the mine operator response.**

7. Task 1.3 clarification regarding water truck: Mine operator provided clarification on the calculations. **County accepts the mine operator response.**

8. Reclamation acreage: Mine operator provided clarification on the calculations. **County accepts the mine operator response.**

9. Sediment ponds material disposal cost estimate: Mine operator provided clarification on the calculations. **County accepts the mine operator response.**

The Mine Operator communicates the Stevens Creek Quarry will continue working to complete these remaining items. If you have any questions or comments in response to the enclosed documents, please contact me at (408)299-5784 or marina.rush@pln.sccgoc.org.

Sincerely,

Marina Rush, Senior Planner

cc. Jason Voss, Stevens Creek Quarry

Enc.

1. Attachment A: Stevens Creek Quarry Supplement to July 2015 Financial Cost Estimate, dated January 2016, prepared by Benchmark.

2. Attachment B: Stevens Creek Quarry Financial Assurance Approval, Santa Clara County, dated November 30, 2015.

ATTACHMENT D

Derrega's "Engineering Geologic Observations" report

Sadek M. Derrega, PG, CEG
Consulting Engineering Geologist
3285 Autumn Chase Circle
Stockton, CA 95219

May 25, 2016

Mr. Jason Voss
Stevens Creek Quarry, Inc.
Santa Clara County, California
JVoss@scqinc.com

Subject: Engineering Geologic Observations along the Northern Slope, the Southeastern Corner Slope ,and the Jaw Crusher Fill Slope within the Stevens Creek Quarry, Santa Clara County, California

Dear Mr. Voss:

In accordance with your request and authorization, we have performed a site reconnaissance and specifically observed and mapped the geologic conditions exposed along the following:

- The Northern Slope recently mined;
- The Southeastern Corner Slope where a Pacific Gas & Electric Company (PG&E) steel lattice tower is situated; and
- The Jaw Crusher Fill Slope.

Plate 1 presents a Site Vicinity Map.

INTRODUCTION

Our current scope of work did not include any subsurface exploration, laboratory testing or performing slope stability analysis of the above-noted slopes. This letter report is intended to address the Santa Clara County (County) review comments received during the latest SMARA inspection as they pertain to geologic issues related to the above-identified slope areas. This report is not intended to discuss the area or regional geologic setting of the quarry. The opinions and conclusions presented herein were primarily based on a reconnaissance-level engineering geologic assessment.

In addition to viewing the three noted slope areas with the County representatives during the SMARA inspection and two subsequent full days (April 23rd and 30th, 2016) of site slope reconnaissance and mapping, our Certified Engineering Geologist (CEG) also reviewed the following documents:

1. Historical Aerial photographs covering the site area and chronology of mining sequence.
2. A geologic map prepared by Brabb, E.E., Graymer, R.W., and Jones, D.L., 1998, of the U.S. Geological Survey (USGS) titled *Geology of the Palo Alto 30x60 Minute Quadrangle, California:* USGS Open-File Report 98-348.
3. California Geological Survey, 2002, Seismic Hazard Zone Report (SHZR) 068 for the Cupertino 7.5-Minute Quadrangle, Santa Clara County, California.
4. Bay Area Geotechnical Group (BAGG), Report Limited Geotechnical Engineering Investigation, October 20, 2015, Relocated "Jaw Crusher", Stevens Creek Quarry, Cupertino, California.
5. Bay Area Geotechnical Group (BAGG), February 23, 2016, Addendum Report Limited Geotechnical Engineering Investigation, Relocated "Jaw Crusher, Stevens Creek Quarry, Cupertino, California.
6. Norfleet Consultants (Norfleet), January 5, 2016, Movement on the North Slope of Stevens Creek Quarry, Fall, 2015.

PREVIOUS MAPPING AND SLOPE MOVEMENT

The Norfleet Consultants January 2016 letter report describes chronologic mining activities and slope movement along the mining rim slopes as far back as 2008. Our mapping and assessment of the slope areas identified above depict our recent field observations. The shown geologic contacts may not match or provide continuity of previous mapping done by others at the quarry.

OBSERVATIONS AND MAPPING

Our reconnaissance covered the entire rim and portions of the mined slopes of the quarry. In addition, we reconnoitered the hiking trails upslope and west of the Western Slope. We only observed a single type of bedrock, Franciscan Complex greenstone (metamorphosed basaltic flows) throughout the area covered by our reconnaissance. The greenstone's upper portion is stained yellowish brown due to penetration of the oxidation front and decay of the iron component within the

rock. With depth, the oxidation front ceases and gives way to a reducing environment with distinctive grayish and bluish rock color hues.

In general, the in-place greenstone varies from foliated and closely fractured (See Plate 2) to blocky, strong and well indurated (see Plate 3, Blocky Greenstone Bedrock). However, in-place greenstone was also observed heavily sheared and ground up in a soil-like matrix that supports variable sizes of coherent bedrock fragments and blocks. Slopes that are underlain by the sheared, mélange-like greenstone are more likely to fail when mined and/or wetted. The greenstone becomes polished, shiny, striated, dilated and distorted after it undergoes slope movement.

The Northern Slope

The Northern Slope is identified herein as the recently mined south-facing cut slope extending between the northeastern and northwestern corners, which mark the beginning of the Eastern and Western Slopes beyond. The approximate limits of the Northern Slope are shown on Plate 4, Geology of the Northern Slope.

The eastern portion of the Northern Slope is comprised of fill soil that has been placed there and mechanically compacted after the Eastern Slope was mined previously. The central section of the Northern Slope has experienced significant landslide downslope movement nearly along its entire slope height. The greenstone bedrock involved in slope movement appeared sheared, closely and highly fractured, dilated, polished, shiny, and weak.

The uppermost part of the landslide's headscarp is marked by an arcuate shape, open soil crack that is situated near the top of the slope along the north side of the perimeter access dirt roadway. The soil crack is located near the top of the slope and the slope switches dip to the north just beyond the soil crack and the head of the landslide.

The uppermost open soil crack marking the headscarp generally extended in an east/west trend along the north side of the dirt perimeter roadway and then crosses the dirt access road twice as it turns and trends toward the southeast along its eastern end and southwest along its western margin. The western margin of the open soil crack turns abruptly southward where shown on Plate 4 (Geology of the Northern Slope) to mark the western limit of the area that has experienced downslope movement. The eastern end of the open soil crack extends in a southeastern direction through the detention pond located along the

south side of the access road near the northeast corner of the quarry. The perimeter soil crack extended across the southern wall of the detention basin and beyond onto the level fill area and fill slope abutting the north/south trending access roadway before it terminates along the Eastern Slope beneath the fill buttress placed there after the Eastern Slope was mined. See Plate 5, Eastern End of Open Soil Crack. Additional landslide-related soil cracking was observed extending downslope in a north/south direction up the central section of the Northern Slope shearing and displacing intermediate slope benches.

The western part of the Northern Slope is triangular-shaped and it is comprised of in-place blocky (map symbol Fg) and well indurated and fresh greenstone bedrock. The greenstone appeared to be cemented with iron oxide in this area. This zone does not seem to have experienced downslope movement and while fractured, the greenstone remains coherent and strong. See Plates 4 (Geology of the Northern Slope) and 6 (Northwest Corner of Northern Slope). Geologically, the eastern end of the Northern Slope abuts the Eastern Slope, which is nearly fully comprised of fill (map symbol QAF). See Plate 7, Northeast Corner of Northern Slope). The western end of the Northern Slope abuts the Western Slope where foliated, sheared and faulted greenstone bedrock (map symbol Fg2) was observed. See Plate 6, Northwest Corner of Northern Slope.

The central portion of the Northern Slope has been experiencing slope movement but the construction of a compacted fill buttress along the toe of the entire length of the Northern Slope has stabilized the noted movement along the lower part of the slope. During the time of our site reconnaissance, the fill buttress construction continued as it was benched and keyed heavily to raise the fill prism and widen it especially near the base of the middle section where the slope has experienced movement and also near the toe portion of the western edge of the Northern Slope. See Plate 6, Northwest Corner of the Northern Slope. It is also important to note that the mining activities have ceased along the south-facing Northern Slope.

The Southeastern Corner Slope

The Southeastern Corner Slope where a Pacific Gas & Electric Company (PG&E) steel lattice tower is situated was visited by the consulting CEG during the SMARA inspection and observed again during our recent slope reconnaissance at the site.

The foundations of the PG&E steel lattice tower of concern were observed beyond the west-facing cut slope in this area. In addition, the tower is separated from the top of the slope by a horizontal bench that extends north/south separating the tower from the top of the slope. See Plate 8, Southeastern Corner Slope.

Surficial slumping was also observed in the area of the PG&E wooden monopole where the cut slope forms a south-facing section. The slumping is ongoing as portions of sheared greenstone bedrock that is highly and closely fractured detach and crumble as they fail. See Figure 9, Surficial Spalling Southeastern Corner.

The Jaw Crusher Fill Slope

A surficial slump was observed along the east-facing fill slope to the west of the Jaw Crusher. Aerial photographs show an arcuate shaped scarp farther up the slope. Our CEG observed the feature to be a surficial mudflow that originated higher up the slope and as the flow mobilized, it cascaded down the slope in a fluid-like state scarring it and depositing a minor amount of debris at the level of the Jaw Crusher's pad. BAGG's February 2016 referenced report concluded that minor surficial slumping could occur albeit the overall fill slope is considered stable globally. Plate 10 shows the minor mudflow while Plate 11 (Mudflow at the Jaw Crusher Slope) shows the same feature at the Jaw Crusher Pad elevation.

Our CEG also observed two additional areas where surficial slumping has occurred along temporary fill side-slope of the pond structure to the south of the Jaw Crusher structure.

Atop the Jaw Crusher's pad behind the soldier pile wall, the CEG observed extensional soil cracking indicating settlement of the fill prism behind the wall. The significant amount of settlement appeared to have occurred laterally along the extension of the wall to the northeast and southward. The minor soil creep and settlement is significant measuring about a foot. Minor settlement of the soil backfill was also observed immediately against the top of the wall but it appeared to be related to the movement along the lateral extension of the wall ends. The noted settlement maybe addressed by preventing the toe of the fill slope portion abutting the wall's steel plates from slipping downslope against the steel. See Plates 12 and 13, Jaw Crusher Pad and Jaw Crusher Fill Slope, respectively.

CONCLUSIONS

In general, the Northern Slope has undergone slope movement as a result of mining-related cuts made. Nearly all the previous and current slope failures are limited to the cut faces and tend to be relatively surficial. None of the failures observed during our reconnaissance extended farther upslope to form large-scale landsliding. Furthermore, once slopes are mined then fill buttresses are constructed against them to stabilize them as was done along the Eastern Slope and the southern margin of the Western Slope and is being currently done against the entire length of the Northern Slope, whether it is moving or not.

Mining has ceased along the Northern Slope and as the fill buttress construction progresses against the slope face, its potential for slope movement decreases significantly.

The Northern Slope

The eastern side of the Northern Slope is blanketed by fill that was placed there after mining the Eastern Slope. The central section of the Northern Slope has mobilized nearly along its entire height and a prominent open soil crack that marked the headscarp extended in an east/west direction along the north side of the perimeter dirt road.

The fill buttress that is currently under construction along the length of the toe of the Northern Slope should decrease the potential for slope reactivation as the buttress progresses upslope. Because the noted perimeter soil crack extended along the top of the Northern Slope, it is unlikely that the soil crack will extend northward beyond the top of the slope. In addition, the Northern Slope will no longer be mined.

The Southeastern Corner Slope

The PG&E steel lattice tower is setback from the top of the slope and the potential for slope movement to impact the tower is considered to be low. Furthermore, surficial spalling of intensely fragmented greenstone along the south-facing slope portion near the Southeastern Corner Slope is not expected to impact the power wooden monopole.

The Jaw Crusher Fill Slope

The mudflow west of and upslope of the Jaw Crusher discussed above was a surficial feature with a limited volume of debris. The potential for the mudflow to impact the Jaw Crusher structure is nil. Likewise, the two surficial slumps observed to the south of the Jaw Crusher along the pond's western side slope are localized features that will not impact the Jaw Crusher structure. but PONDS!

Soil creep and lateral settlement observed along the margins of the backfill along the extension of the wall against the steel wall plates is not considered structural and no deflection was observed under the tires of fully loaded mining trucks at the top of the Jaw Crusher pad area. The minor creep and the fill settlement associated with it occurring along the two ends of the soldier pile wall may be arrested by stabilizing the toe of the fill slope portion that abuts the steel plates of the wall.

LIMITATIONS

We have utilized accepted engineering geologic procedures used by professionals practicing in the San Francisco Bay Area at this time. Our observations and opinions and conclusions were made using that degree of care and skill ordinarily exercised under similar conditions by engineering geologists practicing in the area. No subsurface exploration, laboratory testing or slope stability analysis were performed as part of our current scope. The results of this report were based on reconnaissance-level mapping. No topographic base map of the area was available at the time of our reconnaissance. Why not?

CLOSURE

We trust that this letter provides the requested information at this time. If you have any questions, please contact us.

Very Truly Yours

Sadek M. Derrega, PG, CEG

Consulting Engineering Geologist

Attachments:

Plate 1 — Site Vicinity Map

Plate 2 — Foliated Greenstone Bedrock

Plate 3 — Blocky Greenstone Bedrock

Plate 4 — Geology of the Northern Slope

Plate 5 — Eastern End of Open Soil Crack

Plate 6 — Northwest Corner of Northern Slope

Plate 7 — Northeast Corner of Northern Slope

Plate 8 — Southeastern Corner Slope

Plate 9 — Surficial Spalling Southeastern Corner

Plate 10 — Jaw Crusher Fill Slope

Plate 11 — Mudflow at the Jaw Crusher Slope

Plate 12 — Jaw Crusher Pad

Plate 13 — Extensional Pad Cracking

STEVENS CREEK QUARRY	Project Number:	SCQ1	SITE VICINITY MAP	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	1
	Checked By:			
	Date:			

FOLIATED & OXIDIZED GREENSTONE (IN-PLACE).
NOTE TIGHT FOLIATIONS.

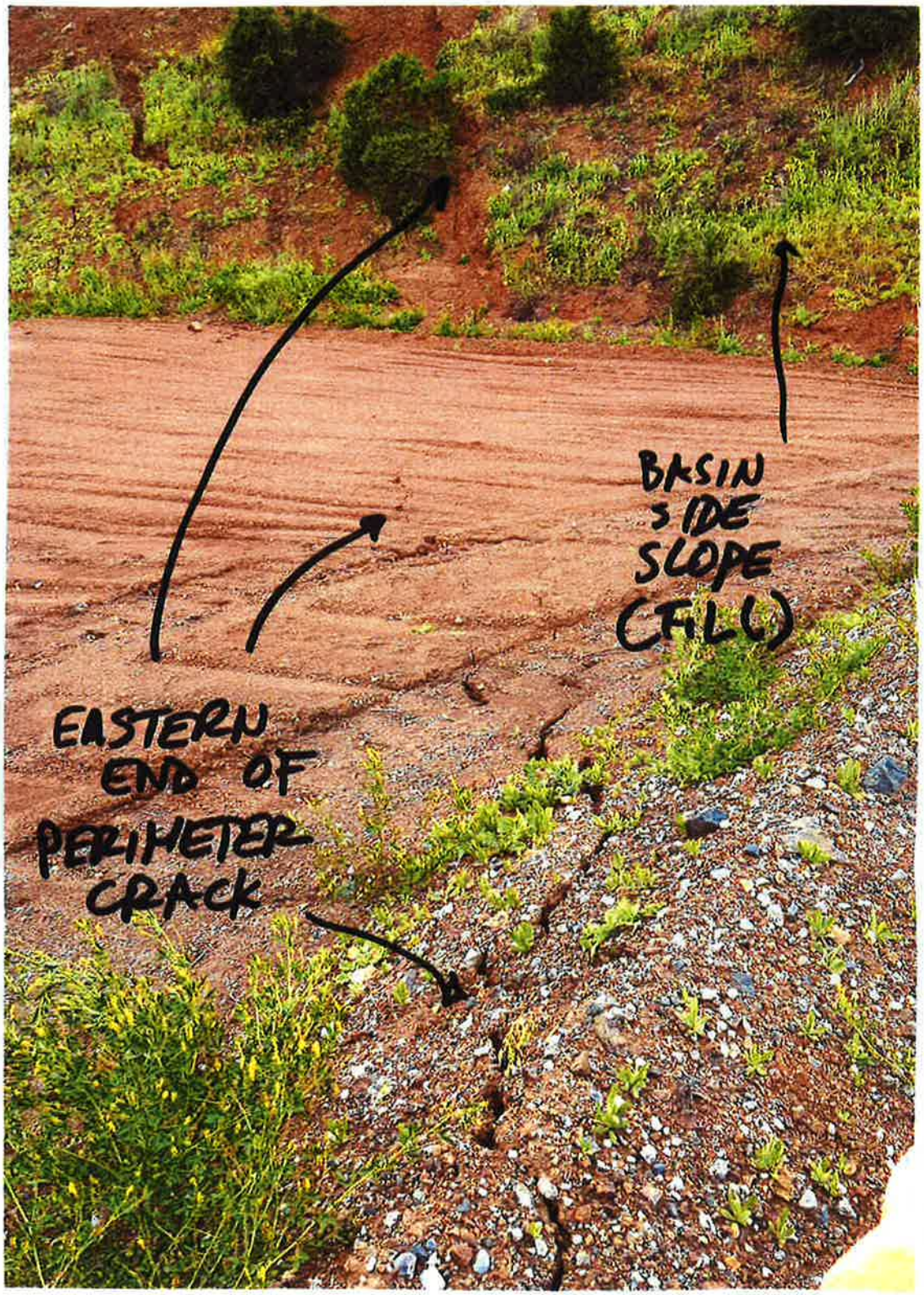
STEVENS CREEK QUARRY	Project Number:	SCQ-1	FOLIATED GREENSTONE BEDROCK	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	2
	Checked By:			
	Date:			

WESTERN PORTION OF NORTHERN SLOPE	Project Number:	SCQ-1	BLOCKY GREENSTONE BEDROCK	Plate
	Date:	MAY '16		
	Entry By:	SD	STEVENS CREEK QUARRY	3
	Checked By:		CUPERTINO, CALIFORNIA	
	Date:			

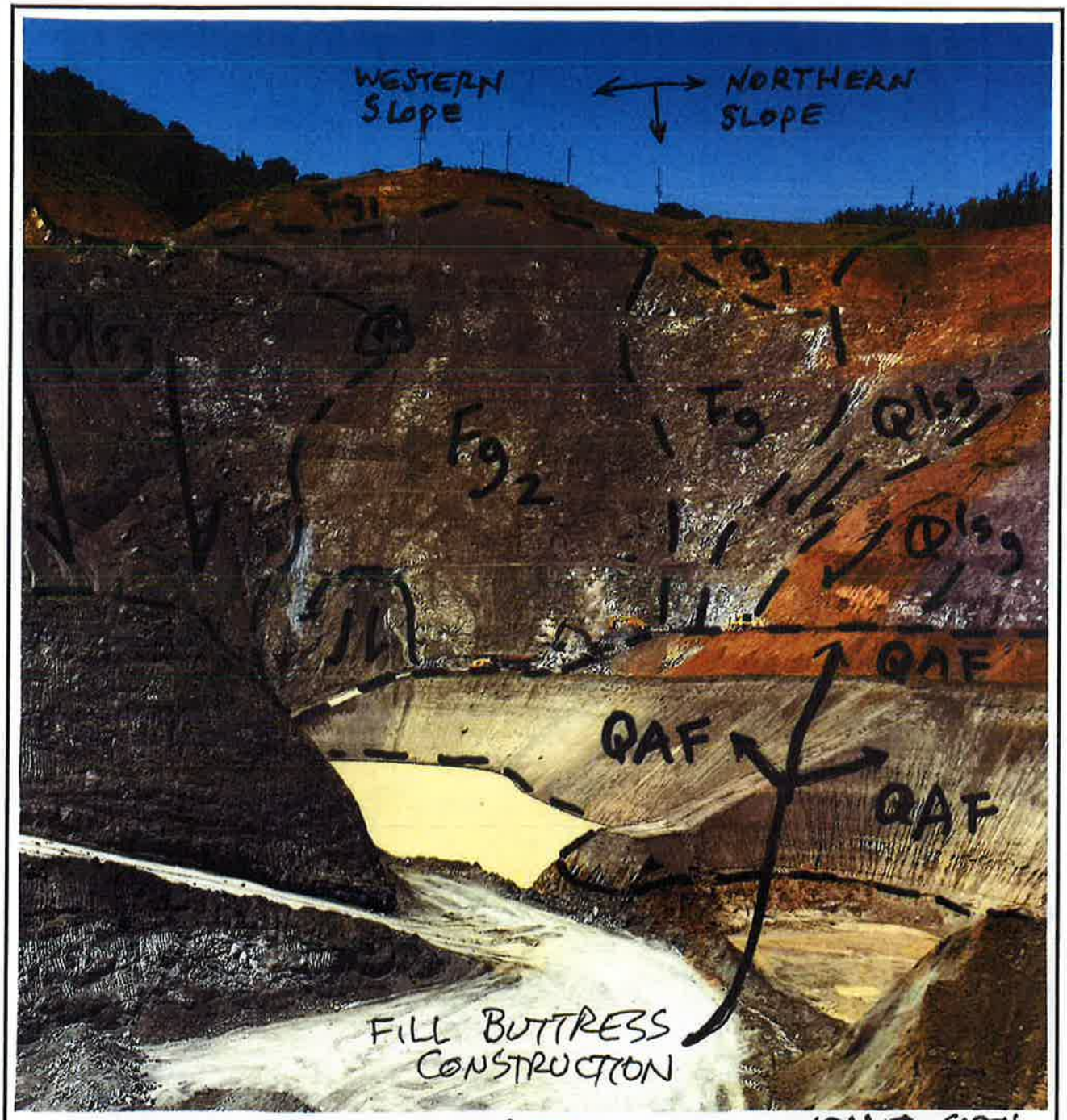
QAF: ENGINEERED FILL BUTTRESS
Qls F: LANDSLIDE IN FILL
Qls g: LANDSLIDE IN Greenstone

Fg: Blocky Greenstone BEDROCK
Fg1: Oxidized Greenstone BEDROCK
Fg2: SHEARED MELANGE-LIKE GREENSTONE BEDROCK

STEVENS CREEK QUARRY	N	MAY 2016 SD SCQ-1	GEOLOGY OF THE NORTHERN SLOPE CUPERTINO, CALIFORNIA	4



STEVENS CREEK QUARRY	Project Number:	SCQ-1	EASTERN END OF OPEN SOIL CRACK	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	5
	Checked By:			
	Date:			



QAF: ENGINEERED FILL BUTTRESS

Qlsg: LANDSLIDE IN GREENSTONE

Fg: FRANCISCAN GREENSTONE BEDROCK (BLOCKY)

Fg_1: OXIDIZED GREENSTONE

Fg_2: SHEARED GREENSTONE BEDROCK

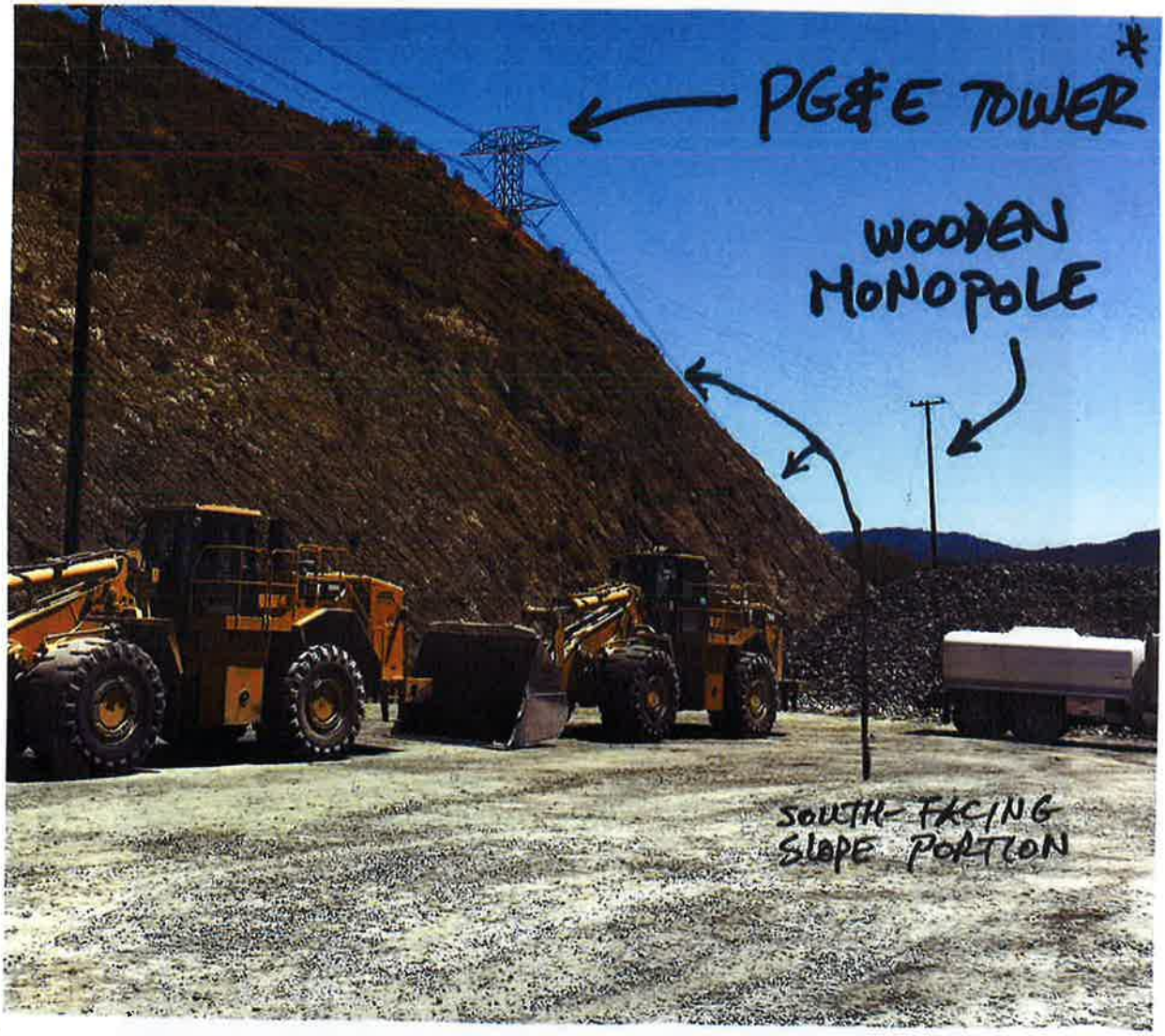
NORTHWEST VIEW

STEVENS CREEK QUARRY	Project Number:	SCQ-1	NORTHWEST CORNER of NORTHERN SLOPE	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	6
	Checked By:			
	Date:			

·SEE PLATE 6 FOR LEGEND

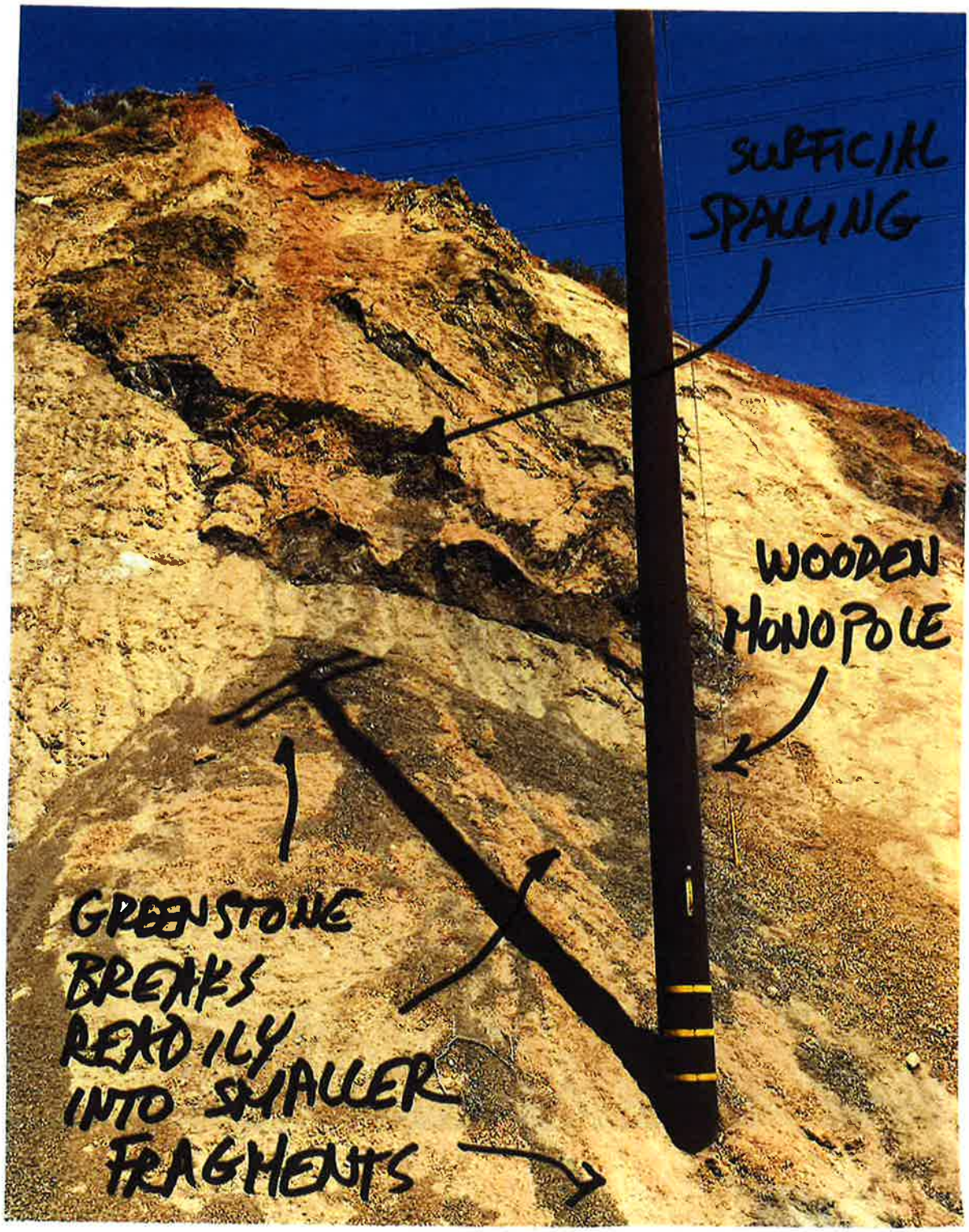
·EASTERN VIEW

STEVENS CREEK QUARRY	Project Number:	SCQ-1	NORTHEAST CORNER OF NORTHERN SLOPE	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	7
	Checked By:			
	Date:			

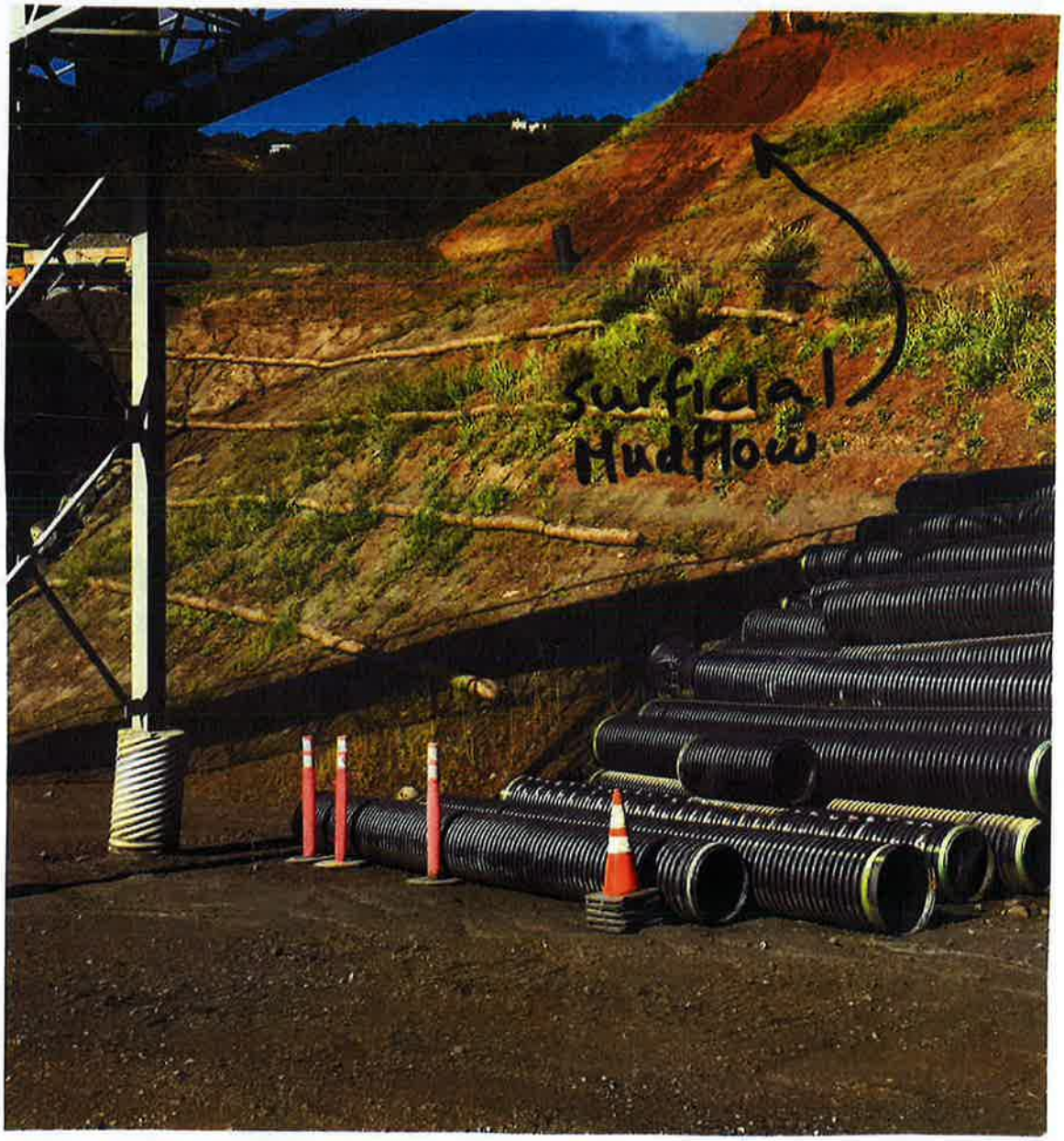


* THE PG&E STEEL LATTICE TOWER IS SETBACK BEYOND THE TOP OF SLOPE.

STEVENS CREEK QUARRY	Project Number:	SCQ-1	SOUTHEASTERN CORNER SLOPE	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	8
	Checked By:			
	Date:			

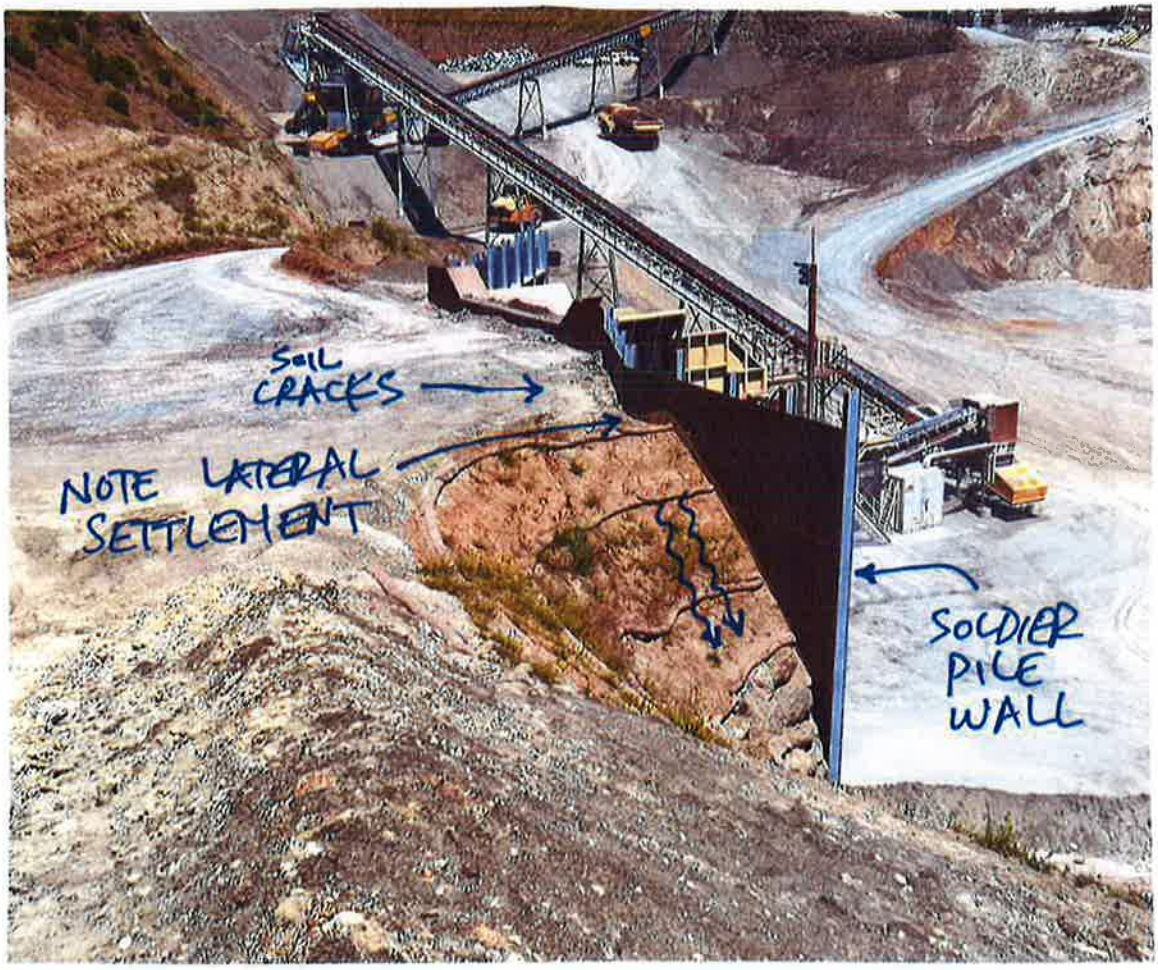


STEVENS CREEK QUARRY	Project Number:	SCQ-1	SURFICIAL SPALLING SOUTHEASTERN CORNER	Plate
	Date:	MAY-16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	9
	Checked By:			
	Date:			



STEVENS CREEK QUARRY	Project Number:	SCQ-1	JAW CRUSHER FILL SLOPE	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	10
	Checked By:			
	Date:			

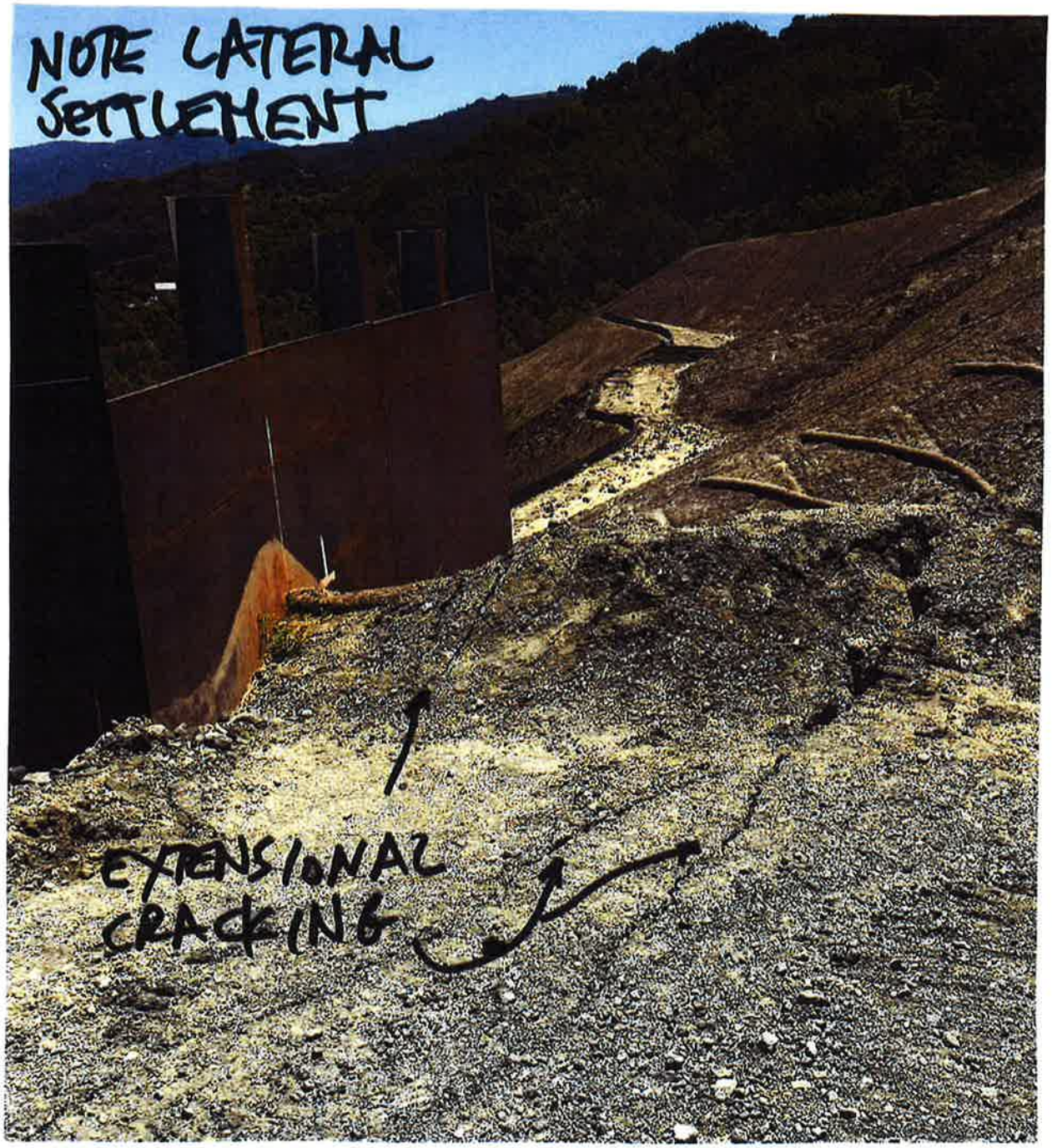
STEVENS CREEK QUARRY	Project Number:	SCQ-1	MUDFLOW AT THE JAW CRUSHER SLOPE	Plate
	Date:	MAY '16		
	Entry By:	SD		11
	Checked By:			
	Date:			



NORTH VIEW

MINOR CREEP & SETTLEMENT

STEVENS CREEK QUARRY	Project Number:	SCQ-1	JAW CRUSHER PAD	Plate
	Date:	MAY '16		
	Entry By:	SB	CUPERTINO, CALIFORNIA	12
	Checked By:			
	Date:			



SOUTHWARD VIEW FROM THE JAW CRUSHER PAD AREA.

STEVENS CREEK QUARRY	Project Number:	SCQ-1	EXTENSIONAL PAD CRACKING	Plate
	Date:	MAY '16		
	Entry By:	SD	CUPERTINO, CALIFORNIA	13
	Checked By:			
	Date:			

ATTACHMENT E

DWR's "Settling Basin Dams" letter

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY
EDMUND G. BROWN JR., *Governor*

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

JUN 16 2016

Mr. Jason Voss, Quarry Operations Manager
Stevens Creek Quarry, Inc.
12100 Stevens Canyon Road
Cupertino, California 95014

Upper Settling Basin Dam
Middle Settling Basin Dam (NIJ)
Lower Settling Basin Dam (NIJ)
Santa Clara County

Dear Mr. Voss:

On January 20, 2016, Area Engineer William Vogler inspected three dams located on Stevens Creek Quarry Inc.'s (SCQ) property in Cupertino, California at 12100 Stevens Canyon Road. The purpose of his inspection was to determine if the dams are under State jurisdiction for safety. We were informed of the larger dam we have designated as Upper Settling Basin Dam, located at Latitude 37.3005N and Longitude 122.091407W, by the Office of Mine Reclamation, California Department of Conservation. Mr. Vogler noted the two smaller dams located immediately downstream, designated as Middle and Lower Settling Basin Dams, during his inspection.

Dams that are 25 feet or more in height with a storage capacity of more than 15 acre-feet, and dams that are six feet or more in height with a storage capacity of more than 50 acre-feet are subject to State jurisdiction for safety. A copy of the "Statues and Regulations Pertaining to Supervision of Dams and Reservoirs 2004" is enclosed for you reference.

Mr. Vogler determined the Upper Settling Basin Dam is 55.0-feet in height, measuring from the spillway crest to the invert of the lower of the two outlet pipes located at the downstream toe. The total storage capacity was estimated to be 40 acre-feet, with approximately 27 acre-feet of reservoir sediment and 13 acre-feet of water above the sediment. Based on a grab sample of the slurry materials discharged to this basin, and due to the site characteristics, the sediment is likely flowable.

Sediments that are flowable can pose a threat to downstream life and property. Therefore, the Department will afford SCQ the opportunity to perform an investigation and evaluation of the sediments impounded by the Upper Settling Basin Dam to characterize whether they are flowable. If the sediments are determined to be flowable, they will be included in our reservoir capacity calculation and the dam will be subject to State jurisdiction. If the sediments are shown to be non-flowable, and we agree with the conclusion after reviewing the submitted information, we will not account for the sediments in our capacity calculation and the dam will be considered less than jurisdictional size, based on the criteria above. The investigation and evaluation must be performed by a civil engineer registered in California.

We have determined that the Middle Settling Basin has an approximate height of 8-feet and a storage capacity of 3.2 acre-feet, and the Lower Settling Basin Dams has an approximate height of 6-feet and a storage capacity of 20 acre-feet. Therefore, they are not subject to State jurisdiction for safety because they are less than jurisdictional size, based on the criteria above. As long as the heights and storage capacities of these dams are not increased, no further action with respect to these dams will be required of SCQ or taken by this Department. No alteration increasing the height or storage capacity of these dams to jurisdictional size may be made in the future without prior written approval from this Department.

By December 31, 2016, submit an engineer's investigation and evaluation for the flowability of the sediments in Upper Settling Basin Dam for our review. If we do not receive this information by the aforementioned date, the dam will be considered jurisdictional and SCQ will be informed of alternatives to abate the dam's illegal status.

If you have any questions or need additional information, you may contact Mr. Vogler at (916) 227-4625 or Regional Engineer Andrew Mangney at (916) 227-4631.

Sincerely,

ORIGINAL SIGNED BY

David A. Gutierrez, Chief
Division of Safety of Dams

Enclosures
Certified Mail

cc: (See attached list.)

cc: Ms. Barbara Evoy, Deputy Director
Division of Water Rights
State Water Resources Control Board
Post Office Box 2000
Sacramento, California 95812-2000

Ms. Lori Newquist, Emergency Services Coordinator
Hazard Mitigation Division
Governor's Office of Emergency Services
3650 Schriever Avenue
Mather, California 95655

Ms. Marina Rush, Senior Planner
Santa Clara County
Department of Planning and Development
70 West Hedding Street, 7th Floor, East Wing
San Jose, California 95110

Mr. Erin Garner, Engineering Geologist
Office of Mine Reclamation
Department of Conservation
801 K Street
Sacramento, California 95814

STATE OF CALIFORNIA
California Natural Resources Agency
DEPARTMENT OF WATER RESOURCES
P.O. Box 942836
SACRAMENTO, CA 94236-0001

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0001402891 JUN 20 2016

MS MARINA RUSH
SANTA CLARA COUNTY
DEPT OF PLANNING AND DEVELOPMENT
70 WEST HEDDING EAST WING 7TH FLOOR
SAN JOSE CA 95110

ATTACHMENT F

County's "Information Required …" letter

County of Santa Clara

Department of Planning and Development
Planning Office

County Government Center, East Wing, 7th Floor
70 West Hedding Street
San Jose, California 95110-1705
(408) 299-5770 FAX (408) 288-9198
www.sccplanning.org

October 26, 2016

Mr. Jason Voss
Stevens Creek Quarry
12100 Stevens Canyon Road
Cupertino, CA 95014

Via CERTIFIED MAIL and Email

SUBJECT: Stevens Creek Quarry – Information Required for SMARA Compliance

Mr. Voss:

This letter is intended to notify you as Quarry Operator that conditions recently observed by County Inspectors during annual SMARA inspections conducted at Stevens Creek Quarry are suspected to be in conflict with those required by the most recently approved Reclamation Plan Amendment (RPA approved on 5-14 2009). Specifically, there are active slope failures that are disrupting the required 25-foot wide "buffer" zone and the resulting ground cracks appear to be encroaching onto (and perhaps beyond) the northern property line of Parcel B.

We understand that you are undertaking constructive efforts to stabilize the slope failures and restore the perimeter road. However, the County requires documentation that demonstrates your efforts will prevent additional ground movement beyond the limits required by the existing RPA. Therefore, the County Planning Office directs Stevens Creek Quarry to comply with the following requirements:

1. Have your consulting Engineering Geologist determine the locations and the amounts of displacements of the most northerly ground cracks. Establish at least three (3) distributed monitoring stations that will allow periodic measurements of those displacements. Once the stations are established, the Quarry Operator must collect and report such measurements to the County Geologist on a weekly basis.

2. Have a licensed surveyor conduct a survey of the northern property line and any ground cracks located within the 25 foot wide "buffer" zone and/or north of the property line of Parcel B. Have your consulting Engineering Geologist coordinate with the survey crew to locate the ground cracks. Have the licensed surveyor install flagged stakes along the northern property line at roughly 100 foot intervals. At least one stake must be within 10 feet of the recently relocated power pole.

3. Have your consulting Engineering Geologist conduct a slope stability analysis of the beginning-of-failure geometry and the mitigated conditions that you are creating by building a buttress fill and retaining wall.

4. Pay the appropriate report review fee when submitting the resulting documents of #2 and #3 as two wet-signed originals and an electronic version (pdf on CD).

5. If the findings of the County Geologist's review indicate that an adjustment of the property line is necessary, then apply for a Lot Line Adjustment with the County Planning Office.

6. Apply for a Building Permit for the steel I-beams/retaining wall being constructed near the northern property line.

7. Apply for an amendment to the Reclamation Plan that includes the results of all of the above as determined necessary by the County Geologist.

As the field conditions are sensitive to weather and the rainy season has already begun, it is urgent that you comply with these requests in accordance with the following schedule:

Deadline	Actions
November 4, 2016	#1 Submit initial ground displacement measurements
November 18, 2016	#2 Submit survey of ground cracks and property line stakes
November 18, 2016	#3-#4 Submit slope stability analyses report and pay review fee
December 9, 2016	#5 Apply for Property Line Adjustment (if necessary)
November 11, 2016	#6 Apply for a Building Permit for the retaining wall
December 31, 2016	#7 Apply for a Reclamation Plan Amendment (if necessary)

The County appreciates your cooperation in taking these actions to bring Stevens Creek Quarry into compliance with the State Surface Mining and Reclamation Act. Failure to comply with these requirements and deadlines could result in the issuance of a Notice of Violation (NOV). If you have reason to believe you or your contractors will be unable to meet any of these deadlines, then within 48 hours of receiving this letter, you must request an extension and provide documented reasons to justify the extension.

Sincerely,

Rob Eastwood, Planning Office Manager

cc: California Office of Mine Reclamation

ATTACHMENT G

Operator’s email requesting revised timetable

From: Voss, Jason [mailto:JVoss@scqinc.com]
Sent: Tuesday, November 01, 2016 5:23 PM
To: Eastwood, Rob <Rob.Eastwood@PLN.SCCGOV.ORG>
Cc: Hoem, Christopher <christopher.hoem@pln.sccgov.org>
Subject: SMARA Compliance Letter

November 1, 2016

Mr. Rob Eastwood
70 West Hedding St., East Wing, 7th Floor
San Jose, CA 95110

Subject: Stevens Creek Quarry – Information Required for SMARA Compliance

Mr. Eastwood:

Stevens Creek Quarry Inc. is responding to the County's Letter dated October 26 (but not received until yesterday) regarding SMARA Compliance. The economy as a whole around the greater Bay Area is booming and SCQ's consultants necessary for the requested tasks are not readily available. We propose the following alternate timeline which we believe is more realistic:

By November 15 – Meet with County regarding Actions #6 and #7. We do not believe that a building permit is required for this temporary shoring, and already have on file an application to amend the Reclamation Plan. So we think that these two items would benefit from more dialogue to clarify what needs to be done, and when, before establishing deadlines.

By December 1 – Complete Actions #1 - #4.

By February 1 – Apply for Lot Line adjustment (if necessary – we believe it will not be). If an LLA is needed, we will need to have the adjustment area surveyed, prepare legal descriptions, and reach agreement with the neighbor (Lehigh) before we could submit an application. This would take some time under the best of circumstances, and Velimir, who would oversee the survey, is out of the country and will not be available until after Thanksgiving.

SCQ will be moving forward towards completing the County's requests. We will await word back from the County on the revised deadlines proposed.

Thank you,

Jason Voss, Quarry Operations Manager

Jason Voss
Stevens Creek Quarry, Inc
(408) 640-6160 - cell
(408) 253-2512 ext 210 - office
(408) 253-6445 - fax

ATTACHMENT H

County’s approval of revised timetable

Hoem, Christopher

From: Eastwood, Rob
Sent: Friday, November 04, 2016 5:50 PM
To: Voss, Jason
Cc: Hoem, Christopher
Subject: RE: SMARA Compliance Letter

Hi Jason –

The proposed modifications to the timelime are acceptable. My understanding from Chris and Steve Beams is that #1 has been accomplished.

Let me know if you need Chris or my help in facilitating a meeting with the Building department regarding a discussion on Actions #6 and 7.

-Rob

Rob Eastwood, AICP
Planning Manager, County of Santa Clara
(408) 299-5792
rob.eastwood@pln.sccgov.org

From: Voss, Jason [mailto:JVoss@scqinc.com]
Sent: Tuesday, November 01, 2016 5:23 PM
To: Eastwood, Rob <Rob.Eastwood@PLN.SCCGOV.ORG>
Cc: Hoem, Christopher <christopher.hoem@pln.sccgov.org>
Subject: SMARA Compliance Letter

November 1, 2016

Mr. Rob Eastwood
70 West Hedding St., East Wing, 7th Floor
San Jose, CA 95110

Subject: Stevens Creek Quarry – Information Required for SMARA Compliance

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Thank you,

Jason Voss, Quarry Operations Manager

Jason Voss
Stevens Creek Quarry, Inc
(408) 640-6160 - cell
(408) 253-2512 ext 210 - office
(408) 253-6445 - fax

ATTACHMENT I

Original and Modified Timeline (Deadlines)

Original and Modified Timeline

Original Due Dates	Revised Due Dates*	Actions	Complied
11-4-2016	12-1-2016	#1 - Submit ground displacement measurements	11-2-2016
11-11-2016	11-15-2016	#6 - Apply for Building Permit for retaining wall	not required
11-18-2016	12-1-2016	#2 - Submit survey of cracks and property line	xxxxxxxxx
11-18-2016	12-1-2016	#3 - Submit slope stability analysis report	1-31-2017
11-18-2016	12-1-2016	#4 - Pay report review fee	not yet
12-9-2016	2-1-2017	#5 - Apply for Property Line Adjustment (if necessary)	not determined
12-31-2016	11-15-2016	#7 - Apply for Reclamation Plan Amendment (if necessary)	not yet

*approved by Rob Eastwood on 11-4-2016

ATTACHMENT J

Derraga's "Engineering Geologic Observations and Analysis along the Northern Slope ..." report

Sadek M. Derrega, PG, CEG
Consulting Engineering Geologist
3285 Autumn Chase Circle
Stockton, CA 95219

January 30, 2017

Mr. Jason Voss
Stevens Creek Quarry, Inc.
Santa Clara County, California
JVoss@scqinc.com

Subject: Engineering Geologic Observations and Slope Stability Analysis Performed along the Northern Slope within the Stevens Creek Quarry, Santa Clara County, California

Dear Mr. Voss:

In accordance with your request and authorization, we have visited and observed the Northern Slope area and performed site reconnaissance and mapping during April 2016. Our observations and mapping results were presented in a letter report titled *Engineering Geologic Observations along the Northern Slope, the Southeastern Slope, and the Jaw Crusher Fill Slope within the Stevens Creek Quarry*, Santa Clara County, California dated May 25, 2016. Plate 1 is a Site Vicinity Map.

BACKGROUND

A Certified Engineering Geologist (CEG) performed the reconnaissance and obtained photographs of the observed geologic features. During the April 2016 visits, we observed the majority of the mined Northern Slope to be underlain by landslide deposits comprised of strongly foliated, dilated, and sheared Franciscan greenstone except along the western corner of the Northern Slope where the greenstone appeared cemented, strong and blocky. The entire Northern Slope has been cut at an approximate 1.5H:1V (Horizontal to Vertical) for a height exceeding 400 feet. Plate 4 of the May 2016 letter report presents our geologic mapping of the Northern Slope.

The mapped landslide deposits on the Northern Slope showed significant signs of recent fresh movement in the form of open extensional soil cracks marking the headscarp and margins and limits of the active landslide movement, displaced and

offset topographic benches, hummocky and angular topography, and back tilted blocks. Our observations along the top of the slope of the Northern Slope will be discussed below. Site Photographs taken during the April visits show the initial stages of the compacted fill buttress installation that was being constructed against the noted landslide deposits exposed on the mined Northern Slope.

The CEG returned at your request during October of 2016 to observe the conditions along the Northern Slope. The buttress was observed to have extended up against the failing slope significantly but additional movement along the upper reaches of the landslide upslope of the buttress damaged and severed the perimeter/rim dirt access road displacing a section downslope. No distress signs or cracking were observed on the fill buttress slope face by the CEG in April or October. The observed conditions and some selected Site Photographs taken during April and October of 2016 will be presented and discussed below.

Our current scope of work did not include any subsurface exploration or laboratory testing. This report is not intended to discuss the area or regional geologic setting of the quarry. This report presents our observations and documentation of the geologic conditions and features exposed at the time you requested us to observe and document the conditions. The CEG did not observe the construction of the base keyway of the buttress, the benching or over-excavation of landslide debris, the placement of fill, and did not verify the penetration of the basal failure surfaces of any landslides. Our observations relate specifically to the dates noted herein.

Our opinions and conclusions presented herein were primarily based on reconnaissance-level engineering geologic observations, experience with landslides in Franciscan terrain, the reviewed available published literature, and the stability analysis performed as part of our scope of work.

The CEG also reviewed the following documents:

1. Historical Aerial photographs covering the site area and chronology of mining sequence.
2. A geologic map prepared by Brabb, E.E., Graymer, R.W., and Jones, D.L., 1998, of the U.S. Geological Survey (USGS) titled *Geology of the Palo Alto 30x60 Minute Quadrangle, California:* USGS Open-File Report 98-348.
3. California Geological Survey, 2002, Seismic Hazard Zone Report (SHZR) 068 for the Cupertino 7.5-Minute Quadrangle, Santa Clara County, California.

4. Bay Area Geotechnical Group (BAGG), Report Limited Geotechnical Engineering Investigation, October 20, 2015, Relocated "Jaw Crusher", Stevens Creek Quarry, Cupertino, California.
5. Bay Area Geotechnical Group (BAGG), February 23, 2016, Addendum Report Limited Geotechnical Engineering Investigation, Relocated "Jaw Crusher, Stevens Creek Quarry, Cupertino, California.
6. Norfleet Consultants (Norfleet), January 5, 2016, Movement on the North Slope of Stevens Creek Quarry, Fall 2015.

NORTHERN SLOPE OBSERVATIONS (APRIL 2016)

The Northern Slope is identified herein as the recently mined south-facing cut slope extending between the northeastern and northwestern corners, which mark the beginning of the Eastern and Western Slopes beyond.

The central section of the Northern Slope has experienced significant landslide downslope movement nearly along its entire slope height ever since it was cut. The greenstone bedrock involved in slope movement appeared sheared, closely and highly fractured, dilated, polished, shiny, and weak.

The uppermost part of the landslide's headscarp was marked by an arcuate shape, open soil crack that is situated near the top of the slope along the north side of the perimeter access dirt roadway. The soil crack was located near the top of the slope and the slope switches dip to the north just beyond the soil crack and the head of the landslide impacting the central portion of the Northern Slope heavily.

The central portion of the Northern Slope has been experiencing slope movement but the initiation and construction of a compacted fill buttress along the toe of the entire length of the Northern Slope has stabilized the noted movement along the lower part of the slope, which has been buttressed. During the time of our April 2016 site reconnaissance, the fill buttress construction continued as it was benched and keyed heavily to raise the fill prism and widen it. See Site Photographs, Plates 2, 3 and 4.

In general, the Northern Slope has undergone slope movement as a result of mining-related cuts made. However, mining has ceased along the Northern Slope and as the fill buttress construction progressed against the slope face, its potential for slope movement decreases significantly.

NORTHERN SLOPE OBSERVATIONS (OCTOBER 2016)

During October 2016, the CEG observed the following:

- The Fill Buttress under construction against the entire Northern Slope continued as it approached the top of the slope. The upper portion appeared to be widened as the benching and keying continued upslope. See Site Photographs, Plates 5 and 6.
- The central portion of the Northern Slope has experienced significant downslope movement, which was appeared to be limited to the slope portion upslope of the top of the buttress at the time.
- No signs of slope movement were observed on the completed and compacted buttress slope face and the only signs of active slope movement were noted upslope beyond the buttress. See Site Photographs, Plate 6.
- The uppermost arcuate-shape extensional soil cracks marking the headscarp of the landslide have generally remained in the same location the CEG observed them during April 2016. The main headscarp crack is situated upslope of the PG&E monopole but downslope of the lone oak tree present near the top of the Northern Slope and shown on Site Photographs, Plates 3, 6, and 9. The soil cracks did not step northward beyond the break in slope marking the northern property line. No soil cracks or signs indicative of slope movement were observed beyond the top of slope on the other side beyond the quarry. It is unlikely, especially with the fill buttress constructed against the Northern Slope, that the slope movement will continue and that the soil cracking marking the top of the landslide will step over onto the adjacent property to the north.
- The upper portion of the landslide along the central section of the Northern Slope has mobilized significantly, encroached onto the perimeter dirt road and damaged it preventing westward access. A soldier pile wall with steel sheet metal welded onto steel I-beams had been constructed along the downslope side of the perimeter dirt roadway so that fill can be placed upslope of the wall to reestablish the road level. Recent soil cracking was observed on the downslope side of the concrete piers supporting the wall. No recent cracks appear to have occurred upslope of the soldier pile retaining wall pier line. Open soil cracks marking the top of the slide had formed before the installation of the wall. See Site Photographs, Plates10 and 11.
- Several large-diameter reinforced concrete "stitch" piers have been constructed in a half circle pattern on the downslope side (south) of the

PG&E wooden pole present along the top of the slope on the north side of the access dirt road. See Site Photographs, Plate 12.

- No distress signs were observed on the PG&E tower, no void along its base was observed indicating recent movement, no significant tilt was noted and no lag or tension was noted on the power lines or insulators. See Site Photographs, Plate 13.
- The uppermost soil crack marking the headscarp of the overall large landslide extended east/west across the dirt access road before it turned southward to form the margins of the landslide.
- The fill buttress appears to have stopped the Northern Slope from mobilizing down slope.

SLOPE STABILITY ANALYSIS

While the CEG observed no signs indicative of slope movement on the completed buttress slope face below the top of the fill on the two noted occasions we observed the slope, that does not indicate that the slope has acceptable factors of safety under static and seismic conditions.

It is important to note that this is a mined quarry slope and while the placed fill buttress does not exhibit acceptable long-term factors of safety, the constructed fill buttress slope should be considered a temporary one even though it may remain in this configuration for a prolonged period of time. On long-term basis, we understand that the mining plan includes backfilling this entire void to the south and the completed buttress face will be backfilled against fully.

The CEG prepared a geologic cross section, which was extended in a perpendicular fashion up the central portion of the Northern Slope. A topographic base map prepared by Kespry Drones at Work (Kespry), Stevens Creek Quarry, Inc., Parcel B, captured June 17, 2016 was provided to us, which we utilized to generate the section. Although the top of the fill buttress has not reached the level of the dirt access roadway at the time of our October reconnaissance, we modeled it as such since we understand that the buttress will be extended to the level as the construction and fill placement continued.

The depth of landslide was estimated based on the observed translational mode of failure, height and gradient of the overall slope, the location of the mapped headscarp, and experience with landslides in Franciscan terrain. The intent of the slope stability analysis was to provide a reasonable assessment of the factors of safety for the temporary buttress constructed against the failing Northern Slope.

Details pertaining to the width of the keyway, location and size of horizontal benching, and penetration of the basal failure plane, which we utilized in the cross section were provided to us and we understand that they were based on field measurements obtained by the technician who was performing the compaction testing during buttress construction. The CEG did not observe the keyway or buttress construction and did not observe or inspect the pier holes mentioned in this letter report.

Our scope included performing limited slope stability analysis of the buttressed Northern Slope to evaluate its factors of safety under static and seismic conditions.

General

Our slope stability analyses included assessing the stability of the more than 400-foot high, 1.5H: 1V fill buttress slope under static conditions.

We also performed pseudo-static slope stability analysis to calculate yield accelerations of the landslide under seismic conditions and calculated Newmark displacements in accordance with the recommendations described in California Geological Survey Special Publication, SP 117A (CGS, 2008).

Our slope stability analyses were conducted using the limit-equilibrium software program SLOPE/W 2012 (Version 8.13.0.9042). The Factor Of Safety (FOS) against slope failure was calculated using Spencer's method with a fully-specified slip surface constrained within the basal slip surface. Spencer's method is a two-dimensional, limit-equilibrium method that satisfies force equilibrium of slices and overall moment equilibrium of the potential sliding mass.

Shear Strength Properties of Earth Materials

No subsurface exploration/sampling or laboratory testing were performed as part of our scope. The shear strength properties of soil materials were determined based on the published literature and our engineering experience and judgment. A summary of shear strength properties of earth materials used in our slope stability analyses is presented in Table 1 below.

Table 1 - Summary of Shear Strength Properties of Earth Materials

Material Name	Total Unit Weight (pcf)	Friction Angle (degree)	Cohesion (psf)
Failure Plane	130	14	0
Franciscan Greenstone Bedrock	140	28	680
Engineered Fill	130	35	500
Landslide Debris	130	28	200

Stability Analysis Results

To assess the stability of the temporary 1.5H:1V fill buttress placed against the actively failing mined Northern Slope, we performed our analysis utilizing the slope topographic configuration obtained from the Kespry plan and the field measurements performed by others during construction of the buttress. A groundwater elevation of 781.5 feet was utilized in our slope stability analyses based on the level of groundwater shown on the Kespry plan. The computed FOS for the completed buttress configuration under static conditions was analyzed to be 0.69, indicating the 1.5H: 1V constructed fill slope is not stable under static conditions. The graphic output from SLOPE/W is presented on Plate 14.

The results of our slope stability analysis indicated that the 1.5H: 1V fill buttress slope is not considered stable under static conditions. To improve the stability of the completed fill slope buttress fill, we evaluated several remedial configurations and alternatives. We selected a remedial configuration that would improve the stability of the completed fill buttress constructed against the Northern Slope, based on the obtained FOS.

The stability analyses indicate that if a compacted fill prism measuring 200 feet in width is placed against the toe of the completed fill buttress constructed against the Northern Slope and the noted fill prism is raised to an approximate elevation of 925 feet above mean sea level (msl) then an acceptable FOS of 1.3 under static conditions can be achieved. It is our opinion that a FOS 1.3 is reasonable for a temporary quarry slope where there is no development and improvements and the slope is not open to the public. The graphic output from SLOPE/W is presented in Plate 15.

We also evaluated the performance of the constructed fill buttress with the conceptual 200-foot fill prism at the toe of the existing fill buttress under seismic

conditions. A yield acceleration of 0.11g was calculated with the graphic output from SLOPE/W is presented on Plate 16. The calculated Newmark displacement is about 100 cm (39.4 inches). The calculated magnitude of displacement indicates that the constructed fill buttress should be considered unstable under both static and seismic conditions.

ENGINEERING GEOLOGIC DISCUSSION & CONCLUSIONS

The Northern Slope is a quarry slope that has been mined to a significant height exceeding 400 feet at an over-steepened gradient of 1.5H:1V since it is considered a temporary slope even though it may remain in its current configuration for a prolonged period of time. This configuration is not permanent.

When performing slope stability analyses, it is not common to perform such analyses under seismic loading for temporary slopes generated during grading operations, keyway side slopes excavations or backcut slopes exposed during landslide repairs even if they are relatively high and over-steepened, because they are temporary and the likelihood of a major earthquake to occur is generally considered low. However, we analyzed the condition because the Northern Slope's current configuration may remain for a prolonged period of time depending on the planned sequence of mining activities.

The results of the stability analyses indicate that the current configuration of the fill buttress placed against the Northern Slope is not considered stable under static conditions and the obtained FOS of 0.69 implies that the slope is actively moving (FOS less than 1). However, the CEG saw no visible signs indicative of ongoing landslide movement during his reconnaissance done in April and October 2016. Cracks in the buttress may have developed since then though and if they have not then they may be developing as incipient cracks that could manifest themselves sometime in the future. To attain a FOS of 1.3, which we believe is adequate for a temporary quarry slope, a prism of fill measuring 200 feet in width may be placed against the toe of the buttress and raised to an approximate elevation of 925 feet above msl.

The Northern Slope is a mined temporary quarry slope and its current configuration has no structures along its top or toe, no public foot or vehicular traffic, and no accessible routes or hiking trails along its rim (except for the private perimeter road accessible only to quarry personnel, their representatives, and emergency crews). Furthermore, the Northern Slope is not expected to reactivate en masse and mobilize swiftly downslope, especially now that the fill buttress is blanketing it. This is based on performance history of this and other high and steep quarry temporary quarry slopes underlain by the same greenstone bedrock even under seismic conditions based on the calculated displacement magnitude. Finally, the landslide-related slope movement along the Northern Slope that was initiated after the mining was performed and has been ongoing for years has never extended upslope beyond the northern property line or impacted the adjacent site to the north. The upper arcuate soil crack marking the headscarp of the landslide that damaged the dirt access road has generally remained in the same position upslope of the PG&E power pole and downslope of the adjacent sole oak tree positioned slightly higher than the pole. See Site Photographs, Plate 3.

The upper central portion of the landslide deposits that were actively moving upslope of the top of the buttress as it was being constructed encroached on the dirt perimeter road and damaged it. In response and as noted above, a soldier pile wall with sheet metal lagging and supported on piers exceeding 30 feet in depth was constructed along the downslope side of the roadway where it was damaged and fill was placed along the north side of the wall to restore the roadway. A line of "stitch" piers has also been constructed immediately downslope of the PG&E wooden monopole located near the top of the slope. If a strong seismic event occurs and even if portions of the Northern Slope fail and impact the perimeter roadway restoration measures will be implemented by the quarry maintenance crews. Since the fill buttress has been raised to blanket the Northern Slope, landslide movement and reactivation that has been ongoing for years will most likely cease and migration of cracking farther to the north is considered unlikely. No tilting, separation, line and/or insulator sagging or tensioning has not been reported since the completion of the buttress and the construction of the concrete "stitch" piers downslope of the power pole.

Based on the above discussion, it is our opinion that the Northern Slope is not considered stable in its current configuration. However, it is a temporary slope and

if safe worker practices are adhered to and the public is kept away then the risk of slope failure may be considered tolerable knowing that fill will be placed against the Northern Slope to backfill the mined void along its southern side.

LIMITATIONS

We have utilized accepted engineering geologic procedures used by professionals practicing in the San Francisco Bay Area at this time. Our observations and opinions and conclusions were made using that degree of care and skill ordinarily exercised under similar conditions by engineering geologists practicing in the area. No subsurface exploration or laboratory testing were performed as part of our current scope and the limitations associated with our stability analyses have been identified in the text of this letter report. The conclusions of this letter report were based on literature review, reconnaissance-level mapping, provided topographic base map, experience with large-scale landslides in Franciscan Complex rocks, and the results of the stability analyses.

CLOSURE

We trust that this letter provides the requested information at this time. If you have any questions, please contact us.

Sincerely,

Sadek Derrega, PG, CEG
Certified Engineering Geologist

John Liao, Ph. D., PE, GE
Geotechnical Engineer

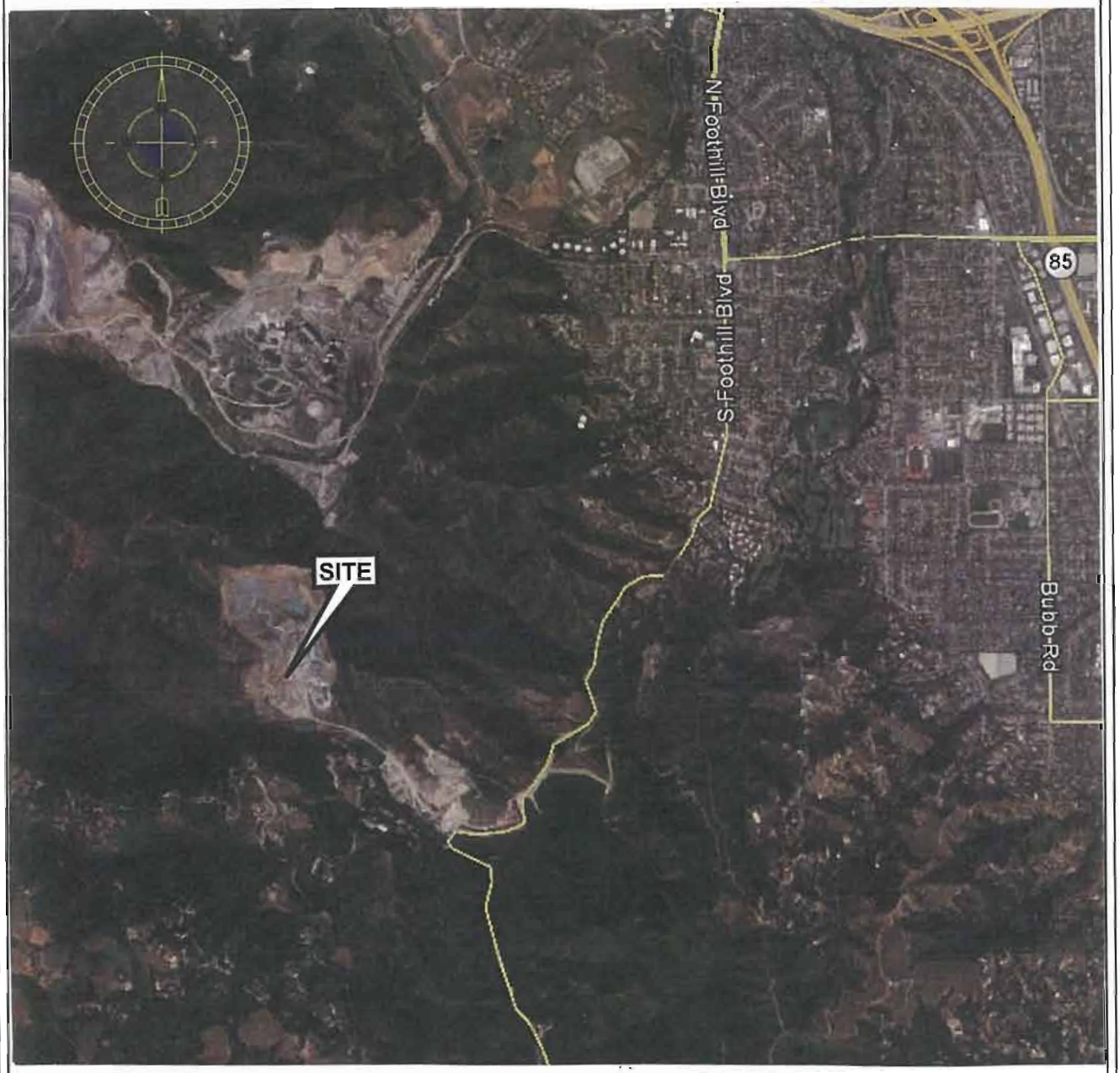
REFERNCES

California Geological Survey (CGS), 2008, Guidelines for Evaluating and Mitigating Seismic Hazards in California: Special Publication 117A

Plate 1 — Site Vicinity Map

Plates 2 through 13 — Site Photographs

Plate 14 through 16 — Slope Stability Analysis Plots



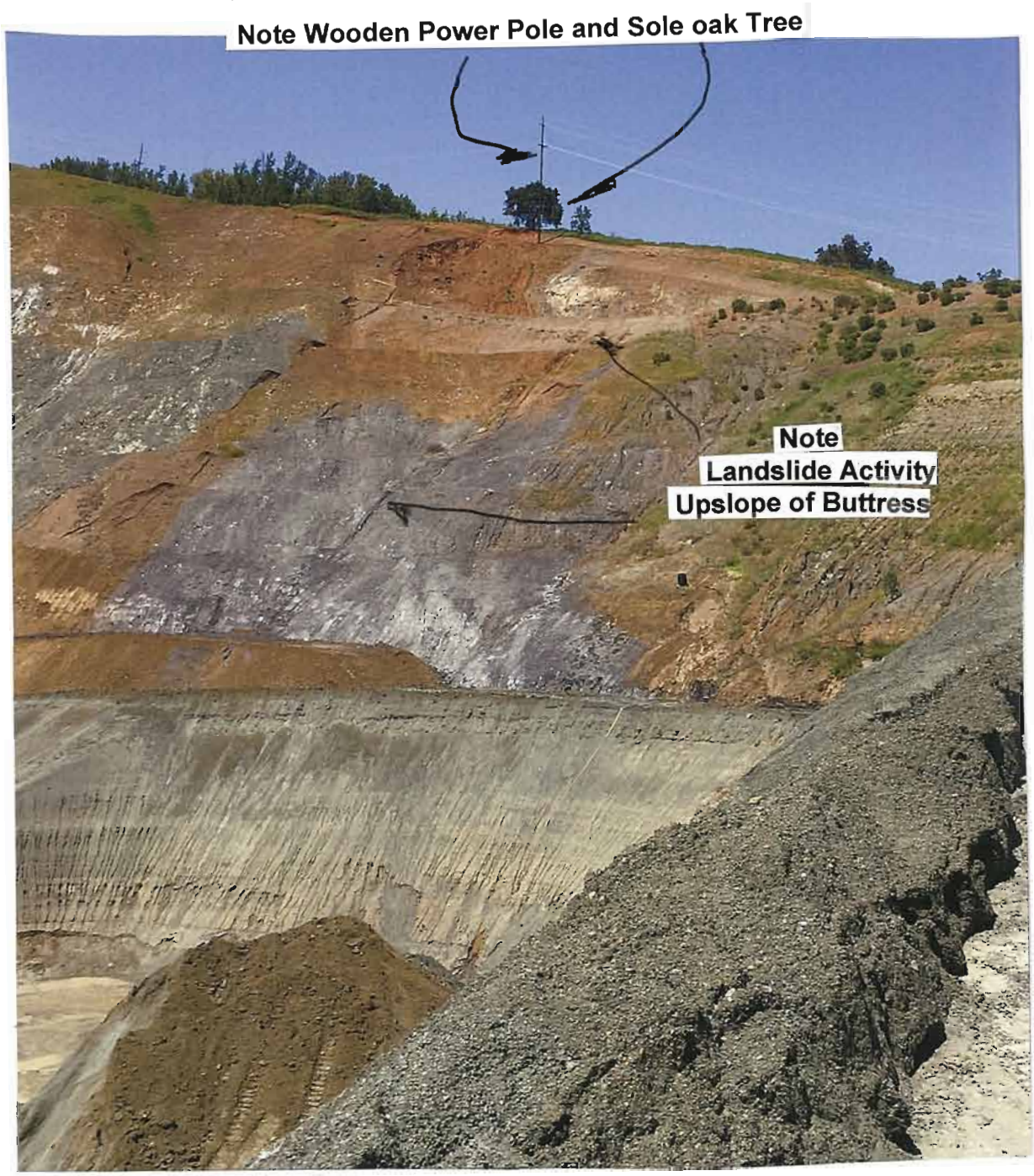
Northern Slope Stevens Creek Quarry Cupertino, California	Site Vicinity Map		
		Jan. 2017	Plate 1

Note

Landslide Activity Upslope of Buttress

Fill Buttress Construction during April 2016

Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs April 2016		
		Jan. 2017	Plate 2

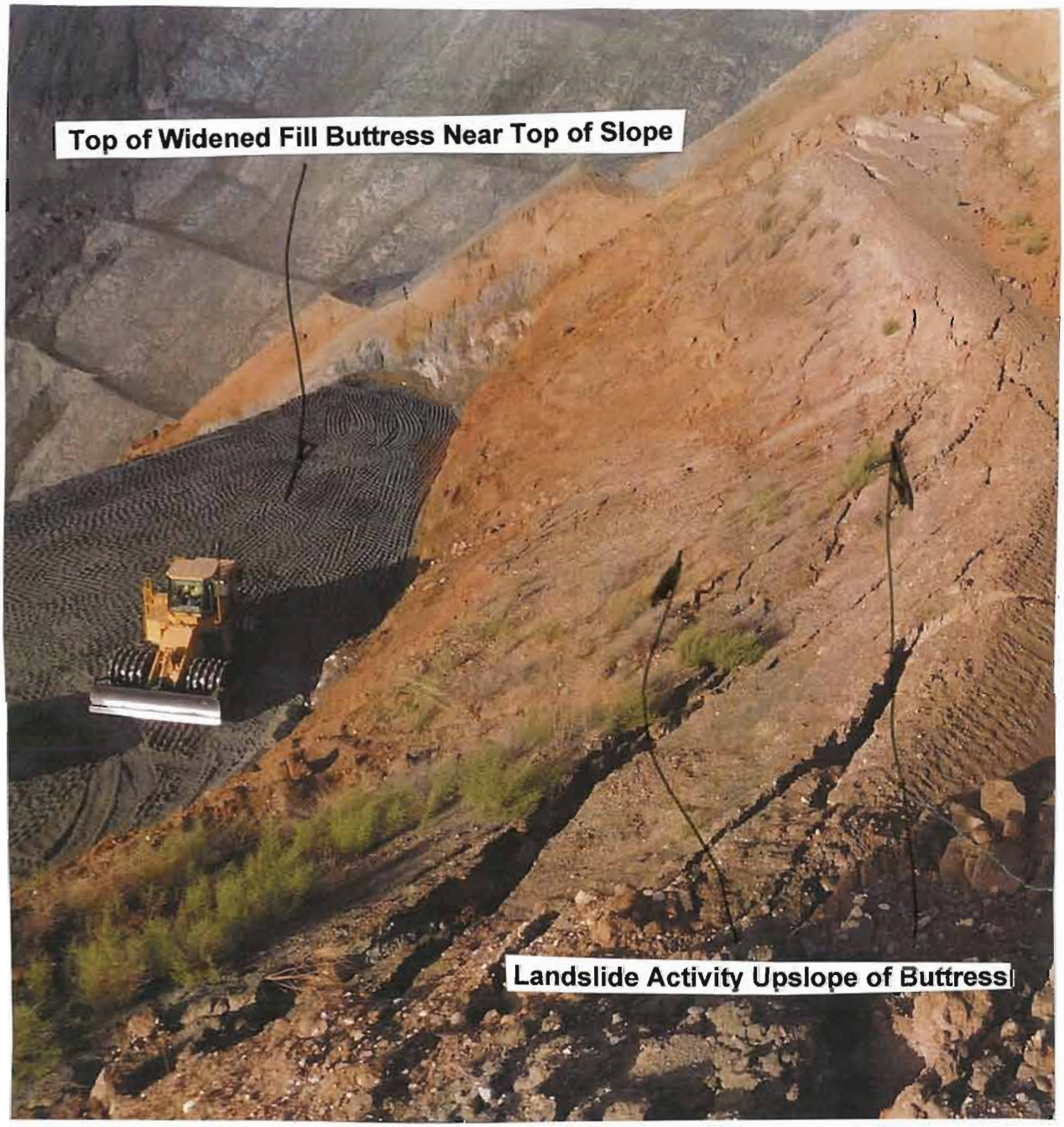


Fill Buttress Construction during April 2016

Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs April 2016		
		Jan. 2017	Plate 3

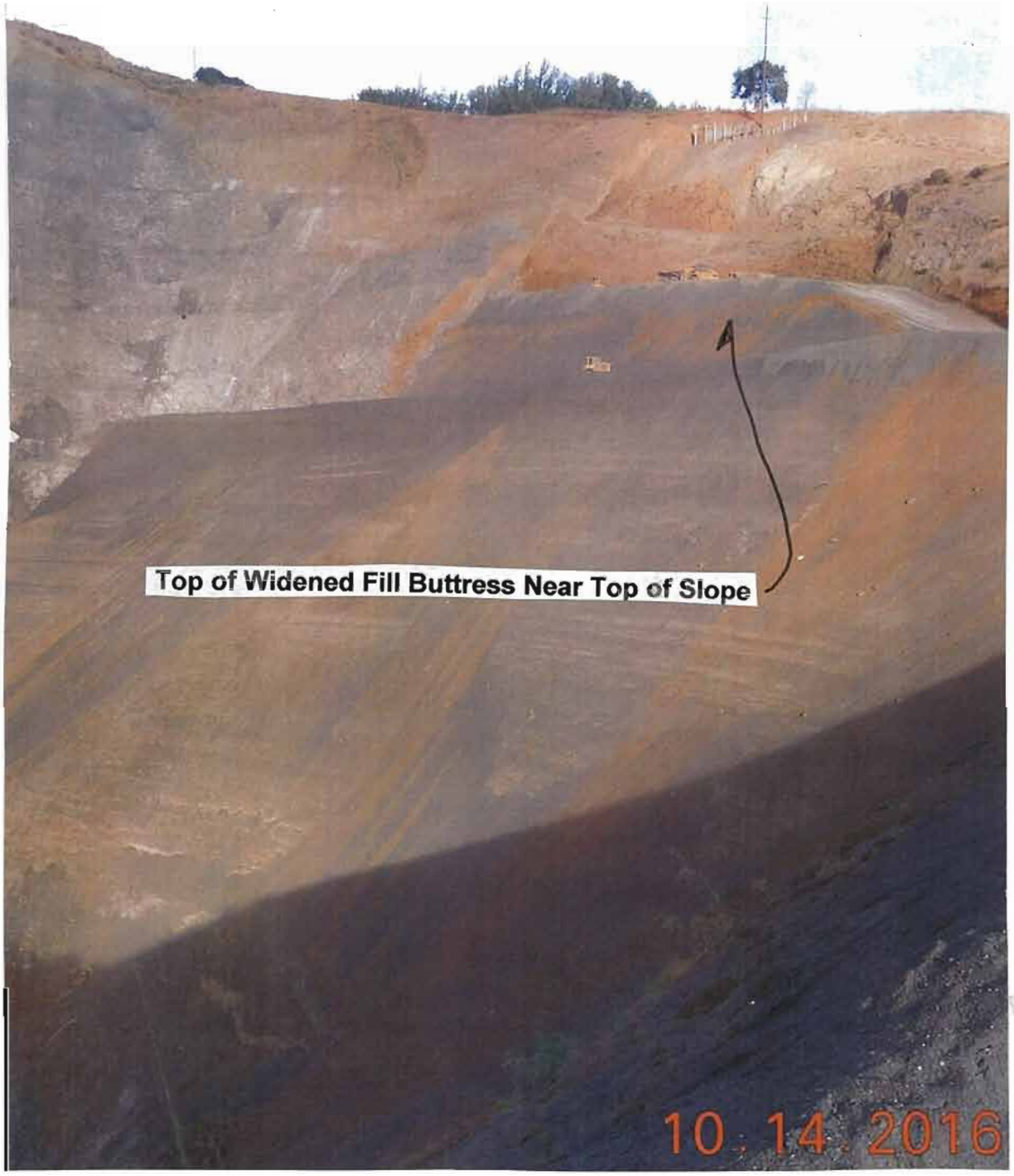
Fill Buttress Construction during April 2016

Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs April 2016		
		Jan. 2017	Plate 4



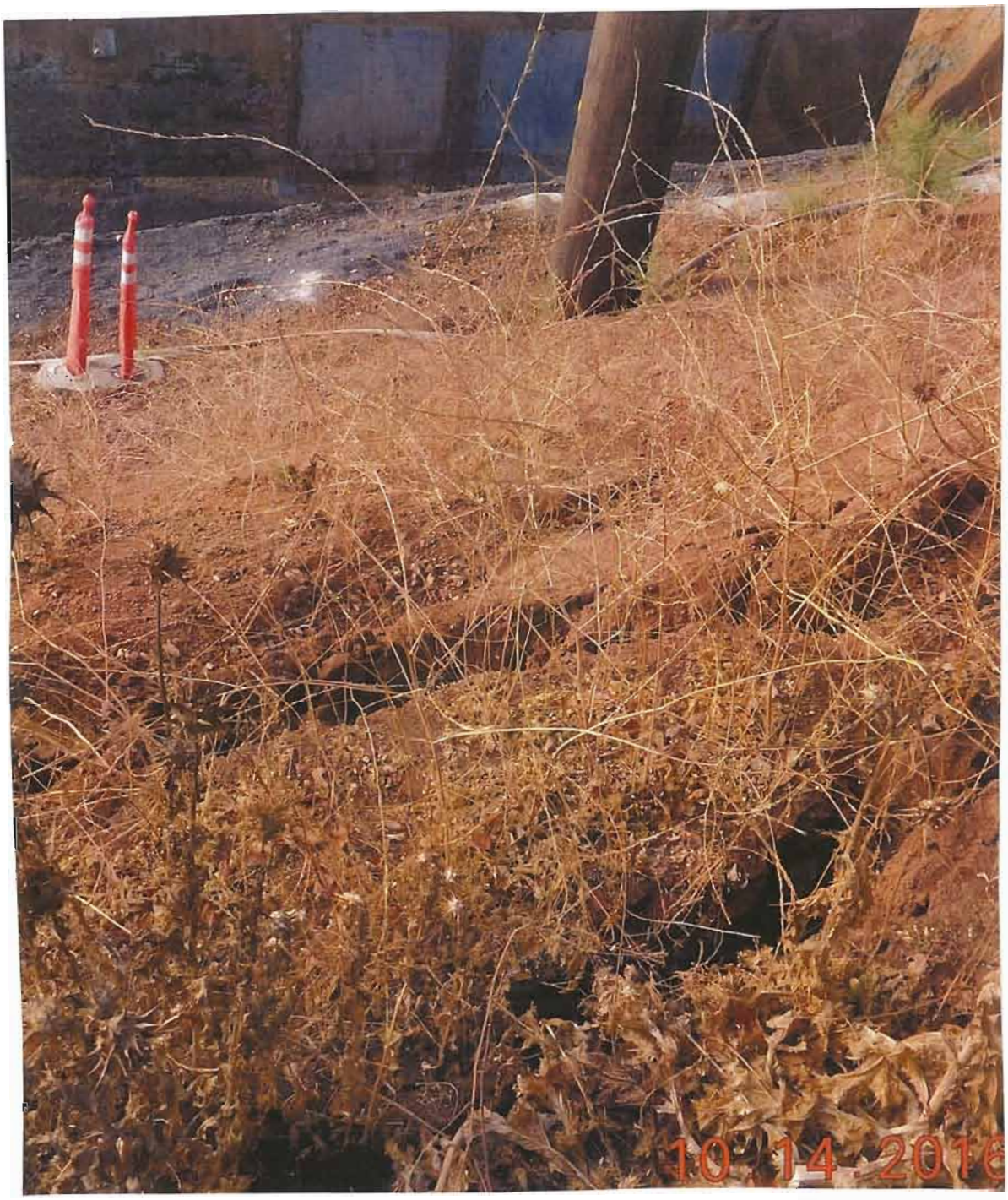
Fill Buttress Construction during October 2016

Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2015		
		Jan. 2017	Plate 5



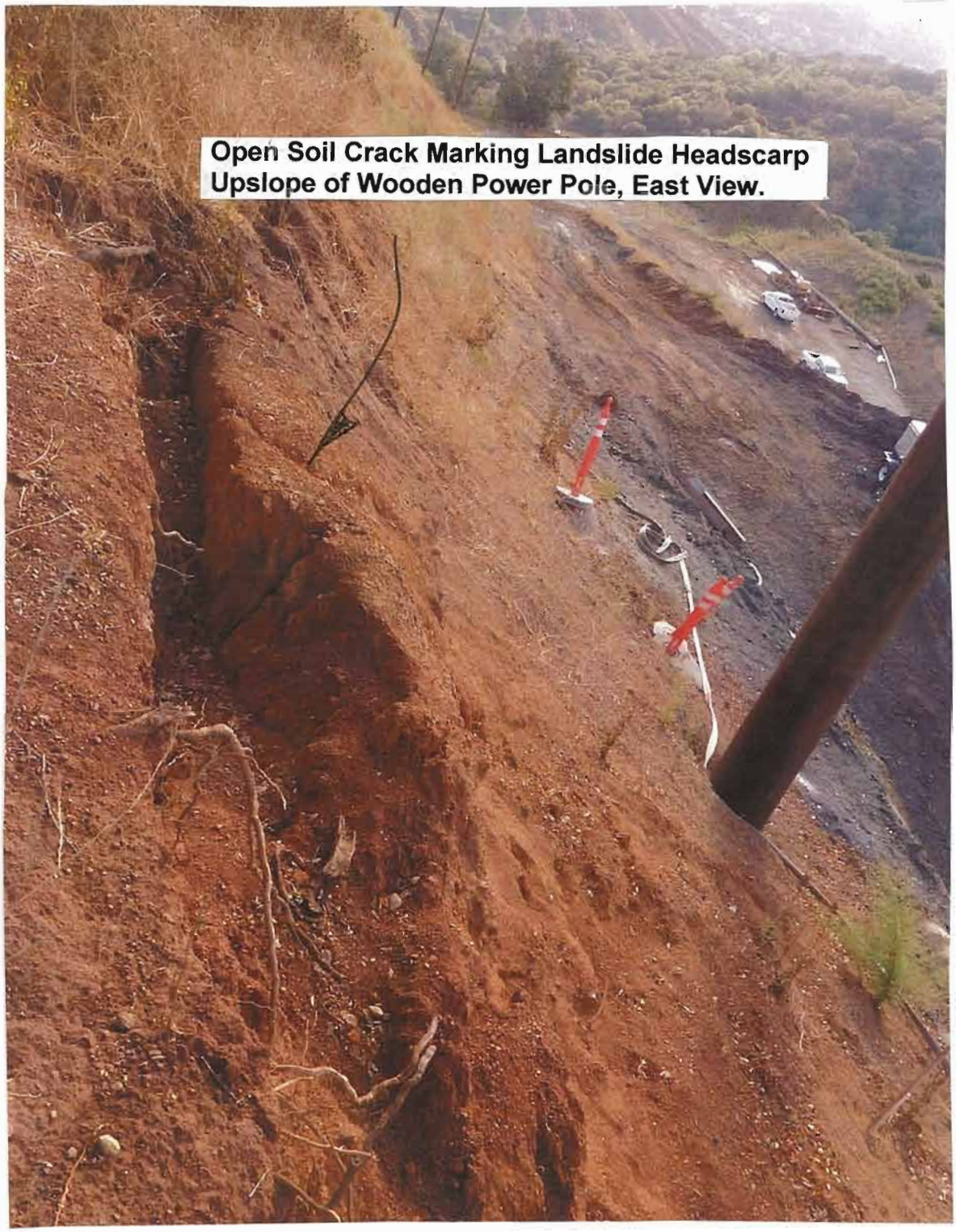
Fill Buttress Construction during October 2016

Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Jan. 2017	Plate 6

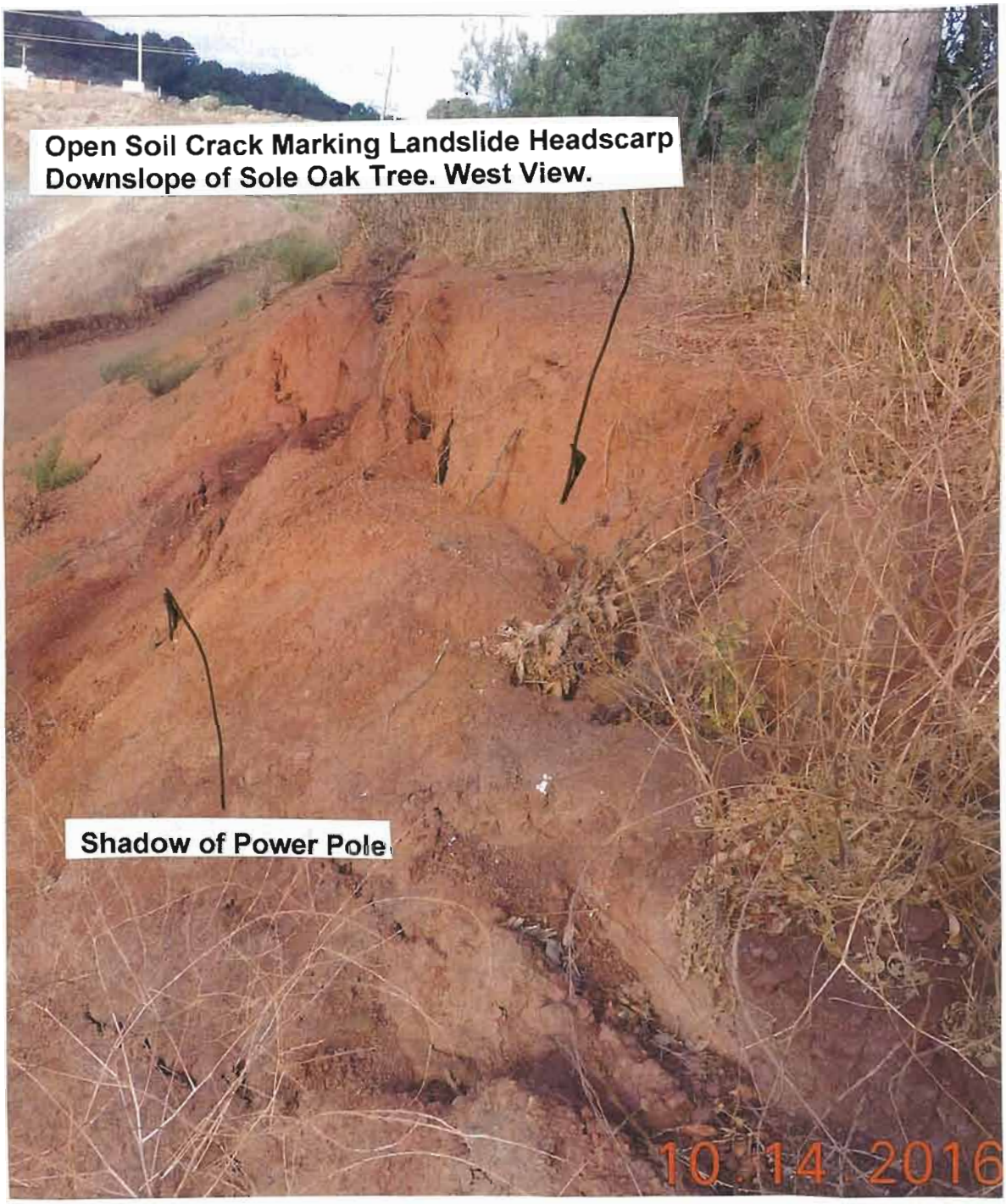


Open Soil Crack Marking Landslide Headscarp

Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Jan. 2017	Plate 7

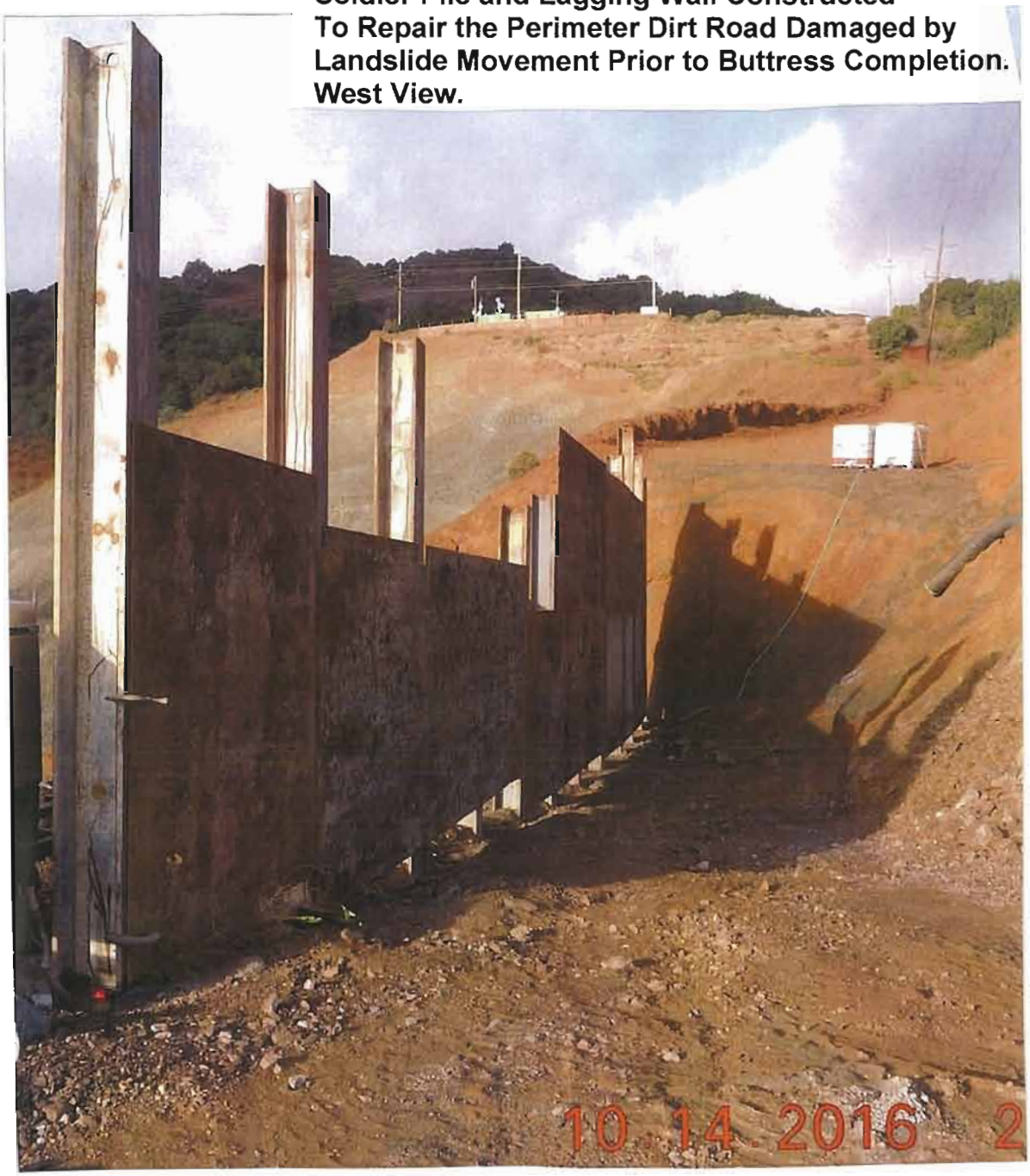


Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Jan. 2017	Plate 8

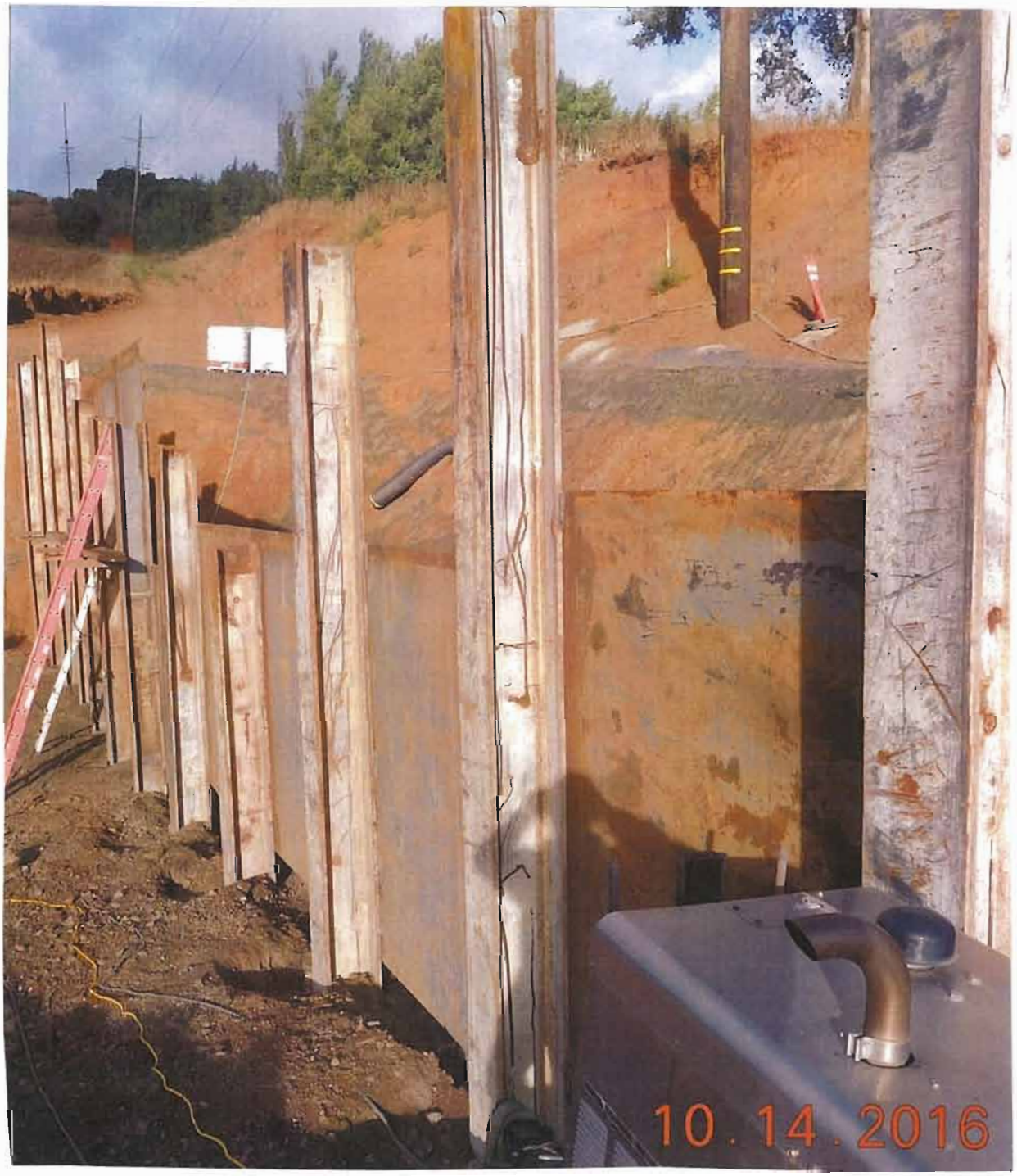


Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Jan. 2017	Plate 9

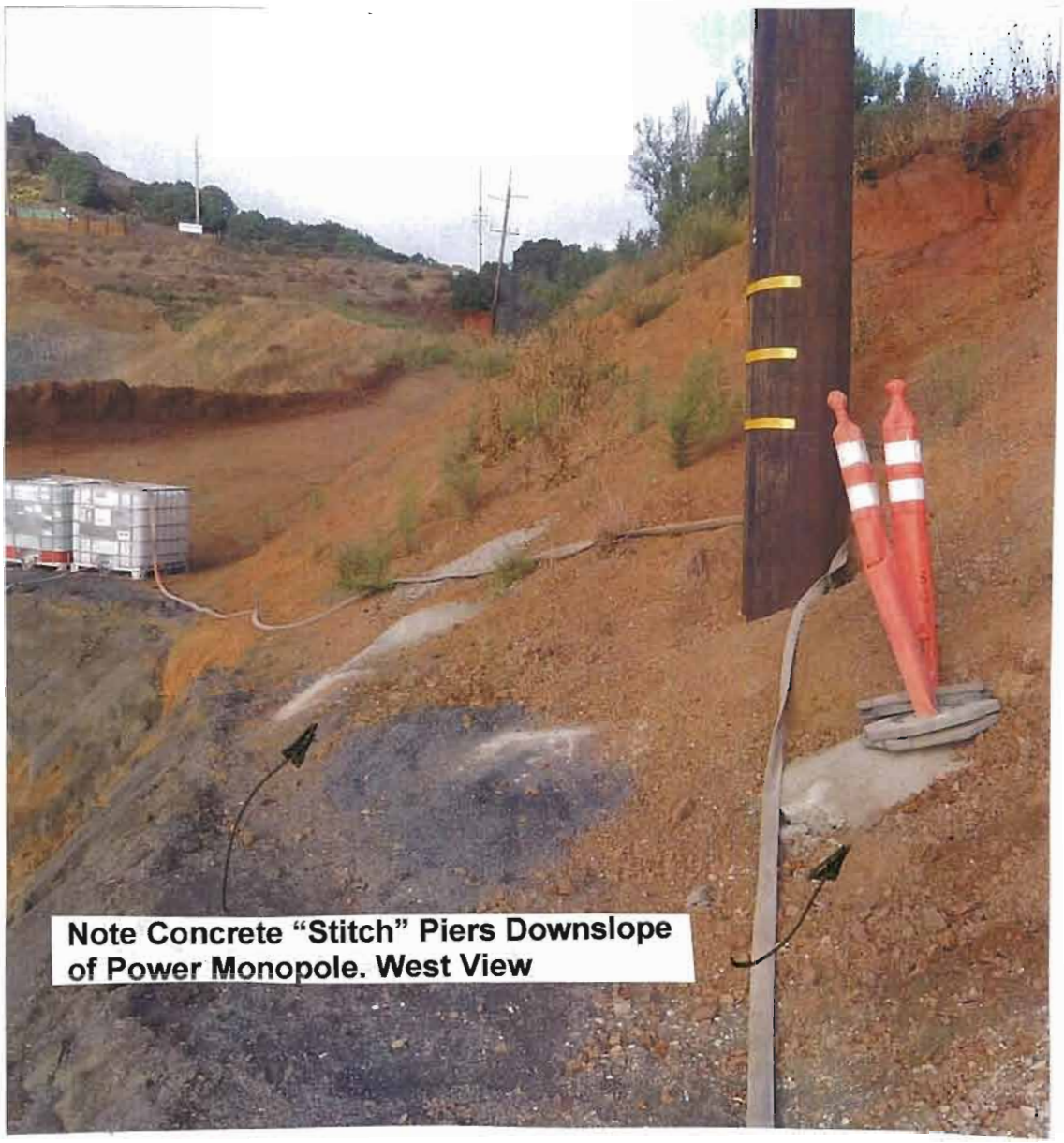
Soldier Pile and Lagging Wall Constructed To Repair the Perimeter Dirt Road Damaged by Landslide Movement Prior to Buttress Completion. West View.



Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Plate 10	Jan. 2017



Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Jan. 2017	Plate 11



Note Concrete "Stitch" Piers Downslope of Power Monopole. West View

Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Jan. 2017	Plate 12

No Annular Void around Power Pole
And No significant Tilt

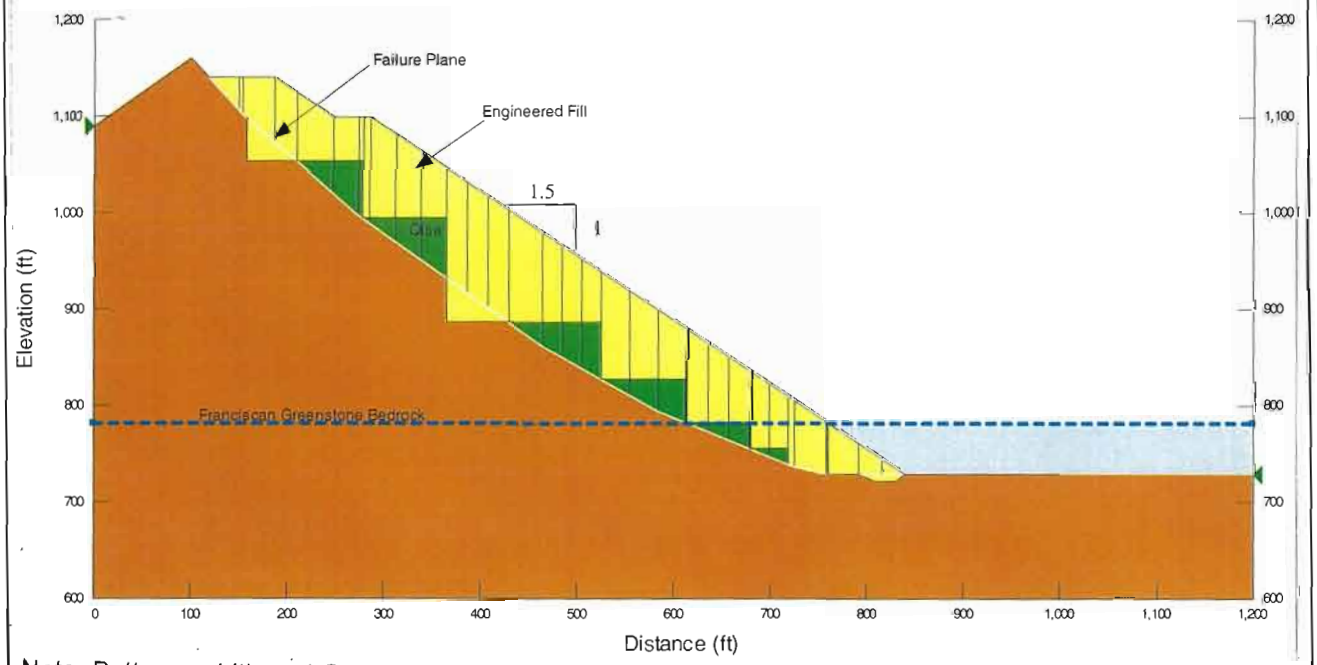
Northern Slope Stevens Creek Quarry Cupertino, California	Site Photographs October 2016		
		Jan. 2017	Plate 13

Name: Failure Plane Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 0 psf Phi': 14 °
Name: Franciscan Greenstone Bedrock Model: Mohr-Coulomb Unit Weight: 140 pcf Cohesion': 680 psf Phi': 28 °
Name: Engineered Fill Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 500 psf Phi': 35 °
Name: Qlsa Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 200 psf Phi': 28 °

Comments: SCQ

Date: 12/7/2016
Last Edited By: John Liao

0.69



Note: Buttress width and Geometry
Was Not Observed by the CEG

Under Static Conditions

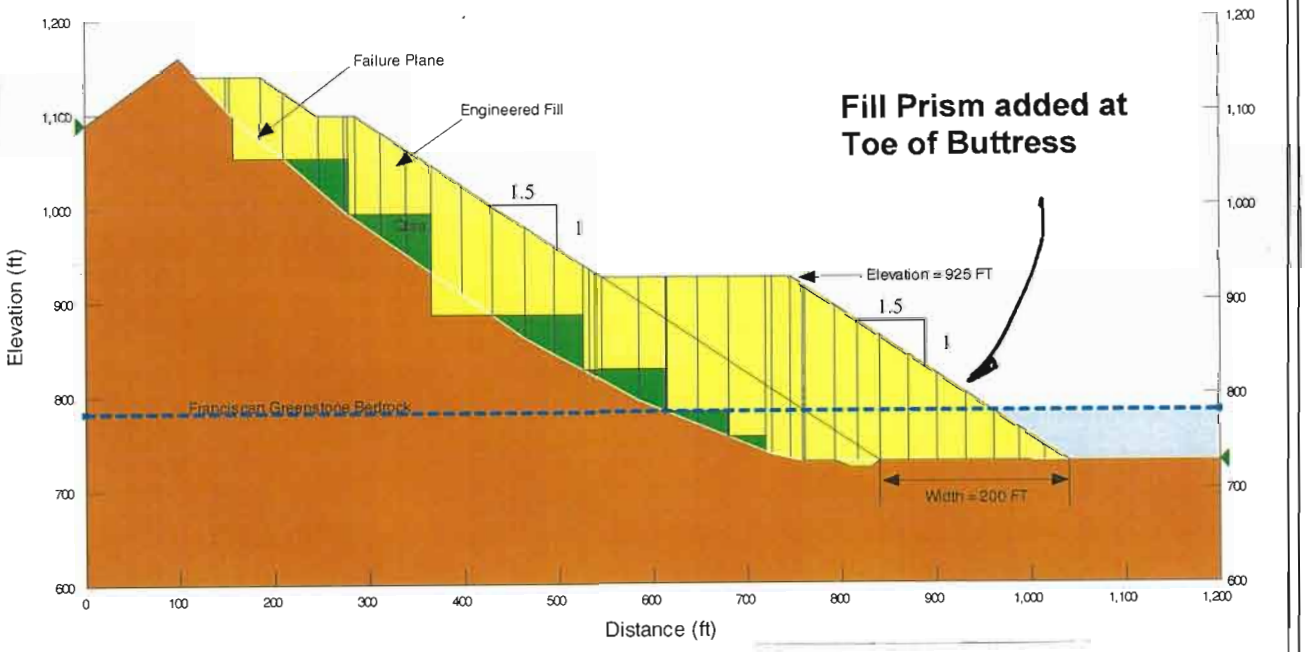
Northern Slope **Stevens Creek Quarry** **Cupertino, California**	**Slope Stability Analysis**		
			Plate 14

Name: Failure Plane Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 0 psf Phi': 14 °
Name: Franciscan Greenstone Bedrock Model: Mohr-Coulomb Unit Weight: 140 pcf Cohesion': 680 psf Phi': 28 °
Name: Engineered Fill Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 500 psf Phi': 35 °
Name: Qls a Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 200 psf Phi': 28 °

Comments: SCQ

Date: 12/7/2016
Last Edited By: John Liao

1.30



Note: Buttress width and Geometry
Was Not Observed by the CEG

Under Static Conditions

Northern Slope Stevens Creek Quarry Cupertino, California	**Slope Stability Analysis**		
		Jan. 2017	**Plate 15**

Project Name: Vista Del Mar
Project Number: 20170131
Comments: SCQ

Date: 12/7/2016
Last Edited By: John Liao

Name: Failure Plane Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 0 psf Phi': 14 °
Name: Franciscan Greenstone Bedrock Model: Mohr-Coulomb Unit Weight: 140 pcf Cohesion': 680 psf Phi': 28 °
Name: Engineered Fill Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 500 psf Phi': 35 °
Name: Qlsa Model: Mohr-Coulomb Unit Weight: 130 pcf Cohesion': 200 psf Phi': 28 °

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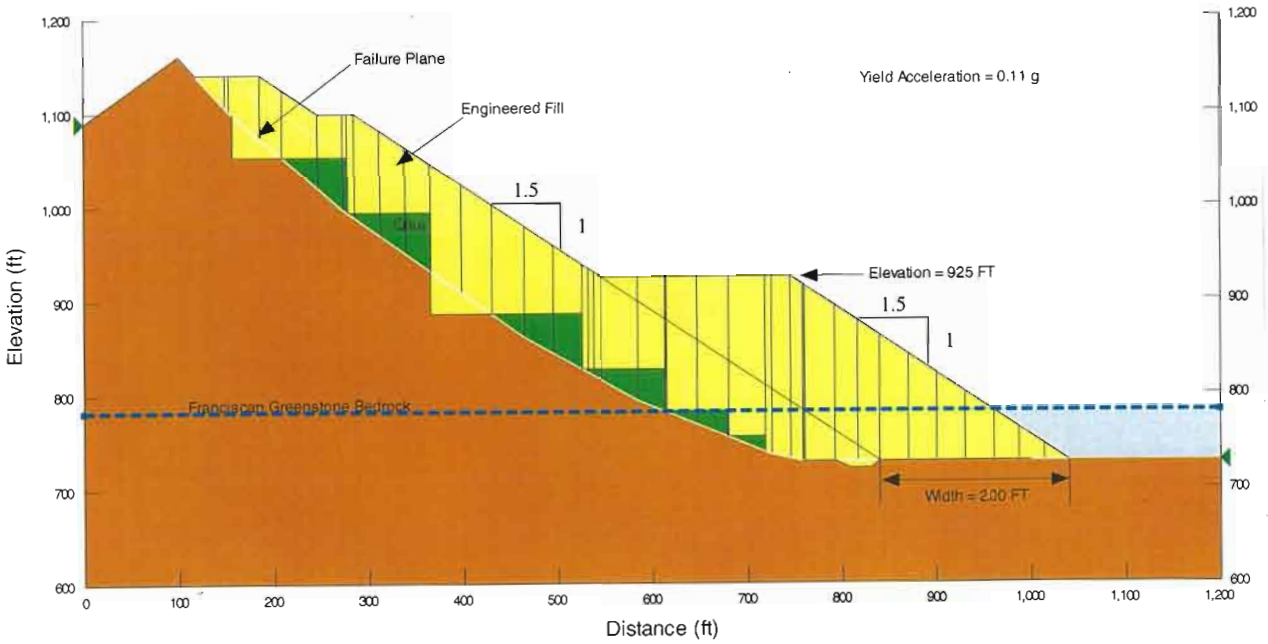

Note: Buttress width and Geometry
Was Not Observed by the CEG

Yield Acceleration

Northern Slope Stevens Creek Quarry Cupertino, California	**Slope Stability Analysis**		
		Jan. 2017	**Plate 16**