



County of Santa Cruz

PLANNING DEPARTMENT

701 OCEAN STREET - 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD (831) 454-2123
TOM BURNS, DIRECTOR

November 29, 2004

AGENDA DATE: DECEMBER 8, 2004

Planning Commission
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

**SUBJECT: CONTINUED PUBLIC HEARING ON GRANITE CONSTRUCTION
COMPANY FELTON QUARRY FIVE-YEAR REVIEW**

Members of the Commission:

On October 13, 2004 your Commission conducted a continued public hearing on the Felton Quarry Five-Year Review. During the hearing, a number of issues were discussed and this matter was continued to this date to allow for follow up on a few remaining issues. You directed staff to conduct an additional neighborhood meeting with Granite Construction Company and to investigate and evaluate: 1) additional dust control best management practices; 2) noise reduction measures; 3) the trucker information program; and 4) a complaint resolution process. The remainder of this staff report contains information on the significant progress made in addressing these issues.

Neighborhood Meetings

On November 3, 2004 a meeting was held at the Planning Department, attended by five neighbors of the quarry, representatives of Granite Construction Company (Granite), the noise consultant for Granite, Monterey Bay Unified Air Pollution Control District (Air District) Staff and County staff. An attendance list for this meeting is included as Attachment 1. The meeting included a discussion of neighborhood issues, including dust, noise, trucker awareness and complaint resolution. At the meeting, Granite agreed to consider additional measures to improve dust control and reduce noise.

On November 15, 2004 a follow-up meeting was held at the quarry, attended by three neighbors, representatives from Granite, County staff, and representatives of two companies (Compass Equipment and Hydro-Turf) that supply equipment and services for the aggregate mining industry. Measures to address dust and noise issues were presented by representatives of Compass and Hydro-Turf. Based on the additional neighborhood meetings Granite has agreed to a number of actions in an effort to work with the neighbors and mitigate dust and noise issues. These actions are included in Attachment 2 and discussed below.

Air Quality

County staff has completed additional research on best-management practices within the aggregate mining industry for dust control. Although a wide range of BMPs are used throughout the industry, the type of mine and its physical setting must be considered to determine appropriate site-specific measures. As a result of investigation and evaluation of typical dust control best management practices in the aggregate mining industry, Staff can confirm that current dust control measures at Felton Quarry incorporate best management practices that meet or exceed all standards required by the Conditions of Approval (see Attachment 3 for a summary of these requirements). In addition, these BMPs include the measures suggested in the letter from the Air District that are appropriate, cost-effective, and reasonable for the site.

One neighbor has expressed a concern regarding odors from the asphalt plant, which has been referred to the Air District. The asphalt batch plant operates under permit from the Air District and, based on annual reporting by the operator to the Air District and on-site inspection by Air District staff, the asphalt batch plant operates in compliance with Air District permits. Odors from an asphalt batch plant are not unexpected or unusual. However, according to the Air District inspector, the odor can become more noticeable under certain atmospheric conditions that trap air beneath an inversion layer and this is probably what this particular neighbor is experiencing. Planning staff will continue to monitor odor complaints and to refer them to Air District for follow up.

As a result of the discussion of dust control at the November 3rd and November 15th neighborhood meetings, Granite agreed to pursue a variety of additional measures to reduce impacts to the neighbors. Staff has distilled these measures into a list, included as Attachment 2, that we are recommending be incorporated into the existing Felton Quarry Conditions of Approval. Granite has agreed to this proposed addition.

In addition, at the November 3rd meeting, Air District staff volunteered to conduct monitoring for PM10 emissions. Planning staff will report back to your Commission on these monitoring efforts with the submittal of the Operator's Annual Report in April 2005. Finally, after exploring a number of different options to reduce dust emanating from the quarry face, it has been determined that feasible, cost-effective dust control measures for this source of emissions do not exist.

Noise

To date, all noise monitoring performed by a qualified professional from the neighboring Simpson and Yates homes has shown that Felton Quarry operates within permitted noise levels. As requested, Granite has investigated measures to further reduce noise levels. These methods were discussed at the neighborhood meeting on November 3rd. As a result of this discussion it was agreed that on November 15th, representatives of Granite would listen to quarry plant noise from inside the Yates home and attempt to identify the source of

noise in an effort to further mitigate those noise sources. Based on this experience Granite has agreed (Attachment 2) to pursue an engineering evaluation of the exhaust fan noise from the asphalt plant bag house dust control system and also to replace the existing metal screens at the primary screen with a rubberized screen to reduce process noise. In addition, Granite has agreed (Attachment 2) to use strobe lights on mobile equipment instead of back up beeper alarms before sunrise and after sunset.

Trucker Information Program

At the public hearing on October 25th a concern was expressed regarding truck traffic, and your Commission expressed a desire for some sort of trucker information program. Such a program has been in place for a number of years, as required by Condition III.G.2. Attachment 4 to this staff report includes The Felton Quarry Trucker Policy, Site Hazards Information and Traffic Flow Map. It should be noted that a number of measures listed in the Site Hazards information also reduce the generation of dust. The quarry manager ensures that all customers of the quarry have this information and that they abide by the rules on-site for safety and to minimize dust, and offsite to minimize truck traffic impacts to the surrounding neighborhood.

Although not required, the Trucker Policy is enforced along San Lorenzo Avenue with monitoring of speed and noise levels periodically by the operator and also in response to any neighbor complaints. This is documented in past Annual Reports submitted to the Planning Department. It should be noted that, for at least the past two years, County staff has not received any complaints from the San Lorenzo Avenue neighborhood. During each night operation, per Condition III.E.5.d Granite documents speed and noise levels along Empire Grade. The documentation is submitted to the Planning Department in the Annual Report. Again, for at least the past two years, County staff has not received any complaints from the nighttime truck route neighborhood.

Complaint Resolution

Prior to the first public hearing for this Five-Year Review process the Planning Department provided public notice in the form of: 1) mailed notices to owners and occupants of all property within 0.5 miles of the boundaries of the site, 2) publication in the local newspaper, and 3) posting of the property. These notices contained the name and phone number of the Planning Department staff person responsible for the Permit Review. Except for discussions regarding noise with one neighbor, no other neighbors contacted the Planning Department prior to the first public hearing. As a result of the first public hearing and subsequent neighborhood meetings a mailing list was developed including nine residents in the Bonnywood neighborhood (north of and above the quarry) and one resident south of the quarry. The Permitting and Compliance Manager for Granite has written to each of these neighbors to request that they contact him directly with any complaints, which he will then address.

Regarding night operations, the existing permit conditions contain a complaint resolution

process. Conditions III.E.5.e through III.E.5.g outline requirements for notifying neighbors of the quarry and residents along the truck haul route of impending night operations. The notification includes the phone number of the Planning Department quarry program Staff. Additionally, according to the Felton Plant Superintendent, neighbors along San Lorenzo Avenue contact him directly if there any problems with truck traffic. He then addresses them through enforcement of the Trucker Policy as described above.

Annual Report

Granite will submit their next Annual Report to the Planning Department on April 1, 2005. It will include updates on the issues discussed above, including installation of an automatic control spray system for the access road, an engineering evaluation of the bag house exhaust fan to determine additional methods to mitigate noise, replacement of the metal screens at the primary screen with a rubberized screen, and the use of strobe lights instead of back-up beeper alarms on mobile equipment before sunrise and after sunset. Upon receipt, the Annual Report will be placed on the next regularly scheduled Planning Commission consent agenda for your review.

CONCLUSION AND RECOMMENDATIONS

Following a review of Quarry operations, Planning Department staff has concluded that Granite Construction's Felton Quarry is in substantial compliance with its approved Mining Permit Conditions, Staff recommends that your Commission take the following actions:

1. Accept and file this Five-Year Review;
2. Adopt the revised set of Quarry Conditions that include a modification to Condition III.K.13 related to the frequency of slope monitoring (Attachment 5, Exhibit F); and
3. Incorporate the additional measures to be taken by Granite Construction Company to reduce dust and noise impacts listed in Attachment 2 into the Felton Quarry Conditions of Approval (Attachment 5, Exhibit F).

Sincerely,



David Carlson
Project Planner
Environmental Planning

Reviewed By: Ken Hart
Principal Planner
Environmental Planning

Attachments:

1. November 3, 2004 Neighbor Meeting Attendance List
2. Additional Conditions of Approval for Permit 74-633-PQ (Amended)
3. Dust Control Best Management Practices at the Felton Plant
4. Trucker Policy, and Site Hazards and Traffic Flow Map
5. October 13, 2004 Staff Report to the Planning Commission

Attachment 1

November 3, 2004 Neighbor Meeting Attendance List

1. Ross Kashiwagi, Plants Manager, Granite Construction Co.
2. Steve Grace, **Permits/Compliance** Manager, Granite Construction Co.
3. Eric Gaboury, Felton Quarry Plant Superintendent, Granite Construction Co.
4. Jeff Pack, Pack Associates
5. Ed Kendig, Compliance Division Manager, Monterey Bay Unified Air Pollution Control District
6. David Frisbey, Air Quality Compliance Inspector, Monterey Bay Unified Air Pollution Control District
7. David Carlson, Santa Cruz County, Resource Planner
8. Kevin Crawford, Santa Cruz County, Sr. Civil Engineer
9. Ken Hart, Santa Cruz County, Principal Planner
10. Harold Simpson, 260 Bonnywood Way
11. Kathryn and Gerald Yates, 250 Bonnywood Way
12. Shannon Conley, 380 McAmant Dr.
13. Linda Palmer, 5650 Empire Grade

Attachment 2
Additional Conditions of Approval for Permit 74-633-PQ (Amended)

1. The following will be added as Condition III.B.3: The operator shall work with Hydro-Turf to develop an automatic control spray system for the access road by April 1, 2005.
2. The following will be added as Condition III.A.4: The operator shall pursue an engineering *or* other qualified evaluation of the baghouse exhaust fan *to* determine ways to mitigate noise from this portion of the plant. The operator along with the Bonnywood residents, or appointed representative, shall review the recommendations. The operator shall determine economic and mechanical feasibility without jeopardizing the existing air permit and plant production rates. The operator shall implement all recommendations to the extent feasible and reasonable in cost relative to the size and conditions of the Quarry operations by April 1, 2005.
3. The following will be added as Condition III.A.5: The operator shall replace the existing metal screens on the top deck of the primary screen with a rubberized screen to reduce process noise by April 1, 2005.
4. The following will be added as Condition III.A.6: By April 1, 2005, the operator shall use strobe lights on mobile equipment in lieu of back-up alarms, after sunset and before sunrise.
5. The following will be added as Condition II.H.13: The operator shall include update discussion of the activities listed in Condition III.B.3 and III.A.4 through III.A.6 in the April 1, 2005 Annual Report required under the current Conditions of Approval. Granite shall make a diligent effort *to* include the Bonnywood residents or other residents of concern as these improvements are made to the facility.

Attachment 3

Dust Control Best Management Practices at Felton Quarry

1. Disturbed area: The surface area of the quarry, which is disturbed, is minimized to the greatest extent compatible with mining and marketing requirements.
2. Disturbed, non-mined areas: Disturbed areas not involved in active mining are seeded to provide temporary vegetative cover.
3. Road surfaces: The main road route through the mine and stockpile area is paved
4. Road watering: The paved roads within the mine are watered with an irrigation system. Unpaved roads are watered with a truck as needed to control dust. Watering (as opposed to the use of chemical dust suppressants) of unpaved roads is appropriate in this setting because of the limited extent of unpaved roads and spillage on these roads, which renders chemical suppressants ineffective.
5. Spillage: Qualified loader operators minimize spillage onto roads
6. Speed limit: Speed limit for mobile equipment within the mine is 15 miles per hour, which significantly reduces the generation of dust
7. Stockpiles: Materials stockpiles are shielded from the wind within the mining pit and by surrounding topography, and are watered as needed with the water truck.
8. Operations: Crushers are operated at design capacity to the greatest extent and interruptions of process flow are minimized. Plant start up, shut down and excessive air, instead of rock, in crusher can create dust.
9. Moisture conditioning: Material is moisture conditioned prior to loading in the primary feed hopper.
10. Wind screening: Primary feed hopper is fitted with a windscreen on three sides.
11. Wet suppression system: Conveyor load points, transfer points, screens and the stacking conveyor are fitted with a water spray system to maintain adequate moisture content and minimize dust emissions.
12. Mine layout: The primary feed is located at the base of the mine face, which eliminates haul road and haul road traffic.
13. Signage: A signage program informing all customers of designated routes through the mine minimizes traffic on roads.
14. Asphalt Plant: The asphalt plant incorporates a bag house dust collector system
15. Air District: Mining operations and reclamation activities, including operation of the aggregate processing plant and the asphalt plant are in conformance with the regulations of the Monterey Bay Air Pollution Control District.

Attachment 4

Trucker Policy, and Site Hazards and Traffic Flow Map

FELTON QUARRY TRUCKER POLICY

Granite Construction Company is determined to minimize truck traffic impacts from the Felton Quarry to continue our good neighbor relationship and to ensure the quarry's continued existence. Granite enforces this policy on all contractors and haulers. Granite reserves the right to restrict and or suspend any trucker, trucking company, or contractor who violates the rules as set forth in this policy. The quarry uses a traffic monitor, radar, and a decibel meter to enforce these rules on San Lorenzo Ave, Empire Grade, and surrounding roads.

The following rules are enforced to reduce noise, dust and safety impacts on the surrounding area. These rules apply to all truckers.

No trucks allowed on San Lorenzo Ave before 5 45 a m

Obey all posted speed limits. (15 mph on all quarry access roads)

Be quiet: No trucks may exceed quarry noise limit levels.

No jake brakes (Including within Santa Cruz City limits)

No loud exhaust (Including no straight pipe exhausts)

No squealing brakes

No horns

All trucks must be maintained to vehicle code standards.

All loads (except asphalt) must be watered or tarped to prevent dust

Stay on designated truck routes. No trucks on HWY 9, South of San Lorenzo Ave. No trucks on Graham Hill Rd.

Any trucker violating any of the above rules within one calendar year will be subject to the following actions:

1st Violation: Warning and letter to truck owner

2nd Violation: 30 day suspension from quarry

Each additional: 30 day suspension from quarry

In addition, any trucking company that has had three violations or three of its trucks or its sub-haulers suspended from the quarry will be completely restricted from the quarry. There are no excuses accepted!

Site Hazards Felton Quarry

Loading of Vehicle

- Granite Construction Company accepts no responsibility for any damage that may occur during loading.
- It is your responsibility for knowing the gross weight of your vehicle (under 80,000 lb)

Mobile Equipment and quarry employees

- Make eye contact with operators before you approach.
- Stay in your vehicle while in stockpile area.
- Drive slow (less than 15 mph)
- Watch out for ground workers.
- Use CB radio to communicate with operators (channel 18)

Stationary Equipment

- Stay away from all stationary plant equipment.
- Obey plant signs for restricted areas.

Stockpile Roads and Travel Ways

- Drive Slow (less than 15 mph).
- Follow directional signs (also see attached map).
- Bobtails and pickups please back up to stockpile.
- Tarp or water aggregate loads.
- Follow trucker policy for all access roads leading to quarry.
- Stay away from ponds.

Visitors and Venders

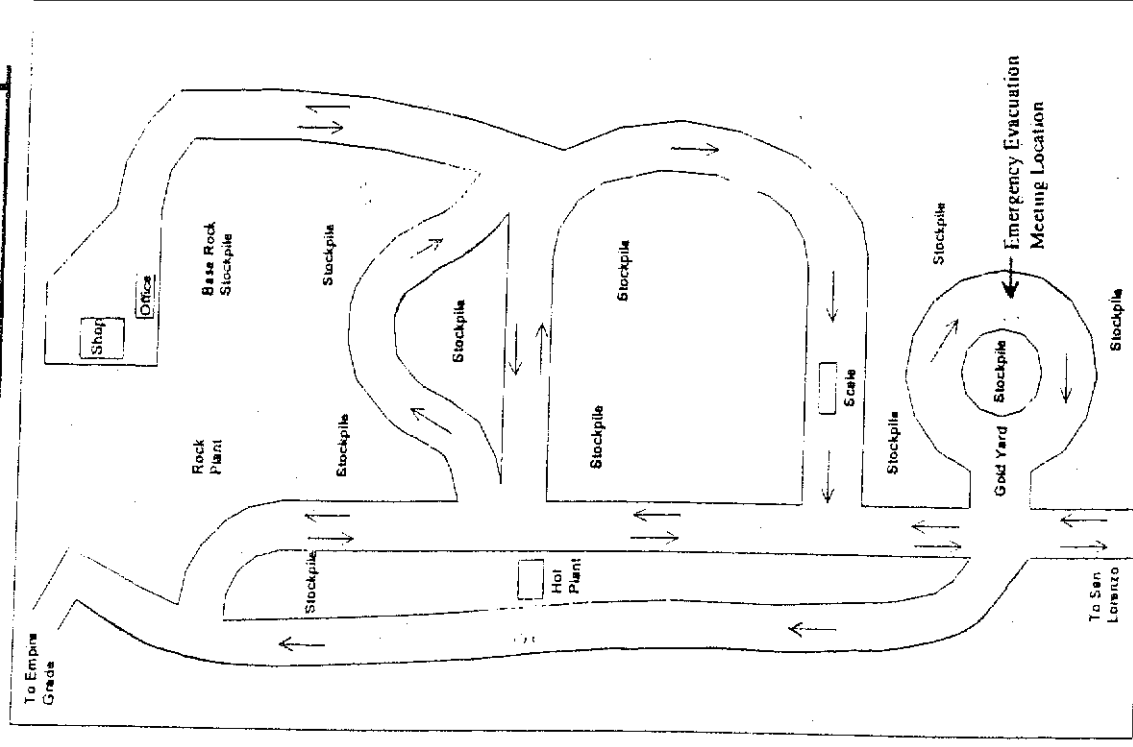
- Check in at scale house before proceeding.
- Proceed only to designated area.
- Must wear hard hat on site.
- Do not unload without supervision from quarry personnel.

Other Onsite Hazards

- Detectable amounts of chemicals known to the State of California to cause cancer, birth defects or other reproductive harm may be found in this facility or product.
California Health and Safety Code Section 25249.6

* SEE MAP FOR EMERGENCY EVACUATION MEETING LOCATION

Traffic Pattern Flow Map



Attachment 5

October 13, 2004 Staff Report to the Planning Commission



County of Santa Cruz

PLANNING DEPARTMENT

701 OCEAN STREET - 4TH FLOOR, SANTA CRUZ, CA 95060
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123

TOM BURNS, DIRECTOR

September 27, 2004

AGENDA DATE: OCTOBER 13, 2004

Planning Commission
County of Santa Cruz
701 Ocean Street
Santa Cruz, CA 95060

SUBJECT: CONTINUED PUBLIC HEARING ON GRANITE CONSTRUCTION COMPANY FELTON QUARRY FIVE-YEAR REVIEW

Members of the Commission:

On August 25, 2004 your Commission conducted a public hearing on the Felton Quarry Five-Year Review and continued the matter to October 13, 2004. During the hearing, dust and noise were the subject of testimony from a neighbor and discussion by your Commission. The intent of the motion to continue this item was to allow time for a neighborhood meeting with Granite Construction Company to discuss issues related to noise and dust.

Neighborhood Meetings

On September 8, 2004 a meeting was held at the quarry office, attended by neighbors of the quarry, representatives from Granite Construction Company (GCC) and County staff. An attendance list is included as Attachment 1. The meeting included a discussion of neighborhood issues, including noise, dust, hours of operation and hydrology. At the meeting, GCC agreed to consider measures to further control dust beyond current dust control measures. In addition, GCC agreed to conduct another noise test and, during the test, take neighbors on a tour of the plant while in operation. Copies of letters submitted to staff at the neighborhood meeting are included in Attachment 2.

A noise test and tour took place on September 16, 2004 attended by approximately six neighbors, representatives of GCC and County staff. During the tour the quarry was in full operation, except the asphalt plant because of a lack of orders for that day. A follow-up neighborhood meeting is scheduled for October 6, 2004 to have the noise consultant discuss the test results with the neighbors. Because the test results were not available prior to preparation of this report, we will include information on this topic during our presentation at the October 13, 2004 meeting.

Air Quality

During the tour on September 16th, the group observed operational dust control measures, including moisture conditioning of raw material, sprayers at the primary hopper/crusher and at other critical points along the conveyor and processing plant, and application of water on roads. In an effort to address neighborhood issues raised at both the public hearing and the neighborhood meetings, and further minimize dust, GCC has installed an irrigation system along the edge of the primary truck road through the plant and at the Empire Grade entrance road that automatically applies water to the road to supplement the water truck. A similar automatic road watering system has been in place for a number of years on the Davenport Cement Plant roads.

In addition, on Monday, September 13th staff from the Monterey Bay Unified Air Pollution Control District (MBUAPCD) completed an inspection, which included visits to the quarry, as well as to surrounding residences. In a phone conversation the following day, the inspector confirmed to County staff that the mining operation is conducted in Compliance with the requirements of the MBUAPCD.

Conditions of Approval for this mining operation and standards from the County Mining Regulations related to air quality are excerpted in Attachment 3. In the staff report for the Five-Year Review staff concluded that the mining operation is conducted in compliance with these conditions and standards. In summary, both County staff and MBUAPCD staff conclude that existing and new dust control measures described above and observed on site minimize off-site dust impacts.

Noise

At the August 25th public hearing and the September 8th neighbor meeting, a concern was raised regarding the validity of past noise tests. In response, GCC arranged for another noise test on September 16th to coincide with the neighbor's tour of the plant. Although the written report is not available prior to preparation of this staff report, staff is informed by GCC that, consistent with past noise measurements, noise levels are in compliance with conditions of approval and standards of County Mining Regulations. As noted above, information from the latest noise test will be provided to your Commission during our staff presentation.

Hours of Operation

During the September 8th neighbor meeting, a concern was expressed that aspects of the quarry operations are not in compliance with the conditions of approval regarding hours of operation, which are 6:00 A.M. to 8:00 P.M Monday through Saturday for mining and processing, and 6:00 A.M. to 8:00 P.M Monday through Friday for shipping. Maintenance operations may be conducted at any time. The morning following the meeting a neighbor complained of back up alarms and engine noise at 5:40 A.M. A GCC truck driver starting early caused the noise. GCC reports that all employees are

now aware of and observe the operating hours. No additional complaints have been received.

Hydrology

During the September 8th neighbor meeting, a concern was expressed regarding quarry water use and impact on neighborhood wells. This issue has been studied extensively in the past resulting in specific and detailed conditions of approval regarding groundwater hydrology. Since 1992, GCC has implemented a Hydrologic Monitoring Program, which includes semi-annual groundwater sampling and annual reporting to the County. The 2003 monitoring report concludes that groundwater levels over the past 13 years have remained stable and quarry activities are not degrading water quality.

CONCLUSION AND RECOMMENDATION

Following a review of quarry operations, Planning Department staff has concluded that Granite Construction's Felton Quarry is in substantial compliance with its approved Mining Permit Conditions. Staff recommends that your Commission take the following actions:

1. Accept and file this Five-Year Review; and
2. Adopt the revised set of Quarry Conditions that include a modification to Condition III.K.13 related to the frequency of slope monitoring (Attachment 4, Exhibit F)

Sincerely,



David Carlson
Project Planner
Environmental Planning

Reviewed By: Ken Hart
Principal Planner
Environmental Planning

Attachments:

1. September 8, 2004 Neighbor Meeting Attendance List
2. Letters from Neighbors
3. 74-633-PQ (Amended) Conditions of Approval and County Mining Regulations Section 16.54.050.c.2.
4. August 25, 2004 Staff Report to the Planning Commission

September 8, 2004 Neighbor Meeting Attendance List

1. Geoff Boraston, Environmental Manager, Granite Construction Inc.
2. Steve Grace, Environmental Manager, Granite Construction Co.-Monterey Bay Branch
3. Eric Gaboury, Felton Quarry Plant Superintendent, Granite Construction Co.
4. Kurt Kniffin, Granite Construction Company-Monterey Bay Branch Manager
5. Mike Sinnott, Felton Quarry Property Owner, 952 Eaton Dr. Felton, CA 95018
6. David Carlson, Santa Cruz County, Resource Planner
7. Bill Whiting, 200 McAmant Dr.
8. Harold Simpson, 260 Bonnywood Way
9. Melissa Thompson, 4035 Sylvester Dr.
10. Kathryn and Gerald Yates, 250 Bonnywood Way
11. Rich and Linda Nesladek, 180 Bonnywood Way
12. Rich and Elaine Conley, 363 McAmant Dr.

Additional neighbors not in attendance, wanting to be kept informed:


1. John and Jennifer Kressman, 360 McAmant Dr.
2. Howard and Linda Palmer, 5650 Empire Grade
3. Margie and Lee Marshall, 250 Tassett Ct.
4. Tom and Nancy Blease, 310 McAmant Dr.

Letters From Neighbors



Gerald Yates

303 Potrero Street #29-301 Santa Cruz, California 95060 phone 831.457.9185 fax 831.457.9186

Architect 

Memorandum

To: **County of Santa Cruz**
Planning Department
701 Ocean Street
Santa Cruz, California 95060

Attention: **David Carlson**

From: **Jerry Yates**

Date: **September 9, 2004**

Regarding: **Granite Construction Felton Quarry Five-Year Review 74-633-PQ (amended)**

Subject: **Neighborhood Meeting & Off Hour Noise**

Thank you for attending the neighborhood meeting last night at the quarry. Your presence **was** appreciated. I felt that it was a positive beginning and hopefully will result in a direction that benefits the community and finally satisfactorily mitigates the historical nuisances of quarry dust and noise.

Unfortunately, I also have to report that after listening to Granite Construction staff adamantly state that no operations or vehicular traffic (other than a fuel truck which they promised to curtail in the future) ever commence prior to 6:00 A.M., I was awoken this morning at about 5:40 A.M. by the sound of multiple back up alarms and attendant vehicle and or machinery engine noise. I find it very disheartening that this would happen less than twelve hours after the discussion in which Granite Construction effectively stated that what we hear prior to 6:00 am can't possibly be originating in the quarry - with the exception of the afore mentioned fuel truck or possibly water trucks.

I drove down to the **quarry** after being awoken and could not get in as the Empire Grade gate was locked. I went home and left a telephone message for **Eric** (the manager) at about 6:15 A.M. registering my disappointment.

This occurrence reinforces the comments made last evening at *our* meeting by Harold Simpson, Rich Conley and Melissa Thompson to the effect that their complaints over the last ten years or more have been listened to but largely ignored. It also reinforces the comments made regarding the frustration of the neighbors on the issue of enforcement of the relevant county ordinances and conditions of approval.

If in fact the noise is from water trucks, this is an aspect of **quarry** operations and should not occur before 6:00 *AM* and the quarry is in violation of its use permit in terms of hours of operations. This fact needs to be included in the current five year review.

9/5/02

subject

Item #63 Minor Mining Amendment for Feltor Quar
Application # 91-0364 Granite Construction's
request to Double the rights of operation from 20-1

To Whom it May concern,

We live directly above the Quarry and
request that you do not approve the additional
hours of operation at the Feltor Quarry.
The noise is so bad that we try to keep
windows closed but in the summer it makes
that hard to do, which then makes it hard to
sleep. There is also a funny smell that is emitted
and the dust is so bad that there is a constant
brown layer of dust on everything which
in the 2 years we've lived here, has
given us upper respiratory problems so
of course we are concerned for our
health.

Thank you for your consideration
to this matter.

Sincerely,

Gerald + Kathryn Yates

home 4579187 or 4579188

September 6, 2004

To: Granite Construction Company

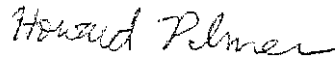
From: Howard & Linda Palmer
5650 Empire Grade

Subject: Felton Quarry meeting Sep. 8, 2004

We regret that we are unable to attend your meeting with our neighbors on September 8. However, we share their concerns and are hoping to view your presentation via video tape. In particular, we are concerned about the dust, which is a well-known health hazard. We suspect it as a causal factor in the chronic respiratory problems from which we have both suffered since moving here. We are also concerned about the quarry's potential impact on our water supply, in terms of both quantity and quality. Finally, we are bothered by noise from the quarry, particularly when it is operating outside of normal business hours.

We have doubts that the quarry is always operating within local and state environmental regulations. We believe that ongoing independent monitoring is necessary to ensure compliance.

Sincerely,



Howard & Linda Palmer

8/25/04

County ~~of~~ Santa Cruz
Planning Commission
701 Ocean Street
Santa Cruz, CA 95067

FAX: 831/454-2131

Subject: Granite Construction Felton quarry

Dear Commissioners:

I am unable to make the five year review meeting regarding the Felton Quarry. I wanted, however, to provide input regarding the effects the quarry has on our neighborhood.


The quarry produces a great deal of noise and dust. I notice a significant increase in my allergy symptoms due to the dust coming from the quarry.

Another area of concern is the number of trucks on Empire Grade. The trucks contribute to deterioration of the roads and significantly affect traffic on the road.

As a long-term resident of Bonny Doon, I would like to request a reduction in the quarry dust, noise, and traffic.

Thank you for your consideration.

Sincerely,


Kate Smith/Bill Whiting
200 McAmant Drive
Santa Cruz, CA 95060

Concerned neighbor vs. Granite Quarry

While I readily accept that the quarry is by its very nature a mining/extraction process, with the attendant dust and noise problems normally associated with operations of this sort, **the** possible falsification of test reports, or arbitrary throwing out of tests that the county doesn't like seems to be working in the pocket of the quarry.

The county is not **an** uninterested impartial party to the Quarry's operation. In reality, the county should recuse themselves from any decision process of this sort. In much the same way as the Supreme Court should not have decided the Florida election results because the choice **of** Justice nominees **is** by the person that they chose, the awarding of contracts in this county smacks too much **of** the "good old boy" syndrome.

Adequate, impartial testing by **an** outside source should be carried out to satisfy everyone. The county should be "as pure as Caesars wife", not regarded as a rubber stamp for the big money interests.

247
A

September 3, 2004

We would greatly appreciate any efforts that could be made by the Felton Quarry Management to look into ways to reduce the noise and dust from the Quarry's operation

Tom and Nancy Blease
310McAmant Drive
423-6915

Handwritten signatures of Tom and Nancy Blease. The signature for Tom is written above the signature for Nancy. Both are in cursive script.

8/25/04

County of Santa Cruz
Planning Commission
701 Ocean Street
Santa Cruz, CA 95067

FAX: 831/454-2131

Subject Granite Construction Felton quarry

Dear Commissioners:

I am unable to make the five year review meeting regarding the Felton Quarry. I wanted, however, to provide **input** regarding **the** effects the quarry has on our neighborhood.


The quarry produces a **great** deal of noise and dust. I notice a significant increase in my allergy symptoms due to the dust coming from the **quarry**.

Another area of **concern** is the number of **trucks** on Empire **Grade**. The **trucks** contribute to deterioration of the roads and significantly **affect** traffic on the road.

As a long-term resident of Bonny Doon, I would like to request a reduction **in** the quarry dust noise, and traffic.

Thank you for your consideration.

Sincerely,


Kate Smith/Bill Whiting
200 McAmant Drive
Santa Cruz, CA 95060

Conditions and Standards Related to Air Quality

74-633-PQ (Amended) Conditions of Approval

Condition III.B.1: Stripping and mining activities shall be conducted in a manner to minimize the generation of dust.

Condition III.B.2: All roads on the property shall be either surfaced, treated, or sprinkled with water frequently enough to insure that windblown materials do not present a problem to adjacent properties or public roads.

County Mining Regulations Section 16.54.050(c)(2)

(i) Each mining operation and reclamation activity shall be conducted in compliance with the requirements of the Monterey Bay Unified Air Pollution Control District.

(ii) Removal of vegetation shall only be permitted in accordance with the approved phasing plan.

(iii) Each mining operation shall be conducted so as to minimize dust, particulate matter (PM₁₀), crystalline silica, and any other potentially significant effect of wind erosion.

(iv) Each interior road within the mining site shall be surfaced, treated or watered frequently enough to preclude wind and traffic generated dust from creating a nuisance affecting any nearby property or public road.

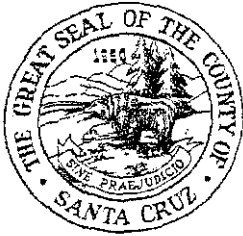
(v) Each exterior entrance road shall be maintained reasonably free of dust and debris resulting from any mining operation. Each truck departing the mining site shall be loaded, wetted down or tarped in such a manner so as to comply with all state or federal laws and minimize spillage on any haul route.

(vi) In a dry weather period during high wind conditions, each mining operation on an exposed slope shall be curtailed. Stockpiled sand products shall be watered or treated in a manner approved by the Planning Director during periods of high wind conditions so as to minimize off-site dust nuisance to nearby property.

(vii) Each area vegetated with native species or communities, in either existing or reclaimed portions of any mining site shall be protected from dust nuisance by a method approved by the Planning Director.

(viii) Each unvegetated disturbed area not actively involved in a mining operation, including any interim slope which does not meet final contours, shall be hydromulched, hydroseeded or otherwise treated by the start of the rainy season each year by a method and in a manner approved by the Planning Director so as to minimize off-site^A dust nuisance.

August 25, 2004 Staff Report to the Planning Commission



County of Santa Cruz

PLANNING DEPARTMENT

701 OCEAN STREET, 4TH FLOOR, SANTA CRUZ, CA 95060-4000
(831) 454-2580 FAX: (831) 454-2131 TOD: (831) 454-2123
TOM BURNS, DIRECTOR

July 20, 2004

Hearing Date: August 25, 2004

COUNTY OF SANTA CRUZ
PLANNING COMMISSION
701 OCEAN STREET
SANTA CRUZ, CA 95076

SUBJECT: GRANITE CONSTRUCTION FELTON QUARRY FIVE-YEAR REVIEW;
74-633-PQ (Amended)

Dear Commissioners:

This Five-Year Review of Granite Construction's Felton Quarry ("Quarry") Permit and Certificate of Compliance (COC) is a required condition of Use Permit 74-633-PQ (Amended), as well as the County Mining Ordinance. Section 16.54.074 of the County Mining Ordinance states that a Quarry's permit shall be reviewed by the Planning Commission at a minimum of every five years. The last Review was conducted on September 8, 1999 and was accepted by your commission on September 27, 2000. While this item is a public hearing to investigate permit compliance, the County's Mining Regulations (County Code Section 16.54.074) states:

"New conditions shall not be imposed as part of a review process unless:

- a) there is a threat to public health and safety;
- b) there is a significant injurious threat to the environment;
- c) there is a nuisance;
- d) there is a violation of approval conditions;
- e) there is a change in the scope of operations; or,
- f) the ordinance in effect at the time of the Mining Approval, Certificate of Compliance or Reclamation Plan Approval being reviewed was originally approved, or the Approval itself, authorized imposition of new conditions by the County."

The following analysis and discussion will address the compliance review, including a brief history of the Quarry, site description and location, mining operations and compliance issues,

LOCATION AND DESCRIPTION OF OPERATIONS

The Felton Quarry is located on a granite deposit approximately two miles southwest of the town of Felton in the Santa Cruz Mountains between State Highway 9 and Empire Grade Road (Exhibit A).

The Felton Quarry Operator mines and processes construction aggregate and asphalt concrete (AC) products for construction and maintenance projects throughout Santa Cruz County. The quarry also provides decorative aggregate materials (California Gold path fines, washed aggregates and accent boulders) that are used throughout northern California.

Quarry operations include the excavation, washing, screening, stockpiling and shipping of aggregate resources. Mining operations begin with the stripping of vegetation and removal of topsoil, which is then stockpiled for use in future reclamation activities. The next process is removing raw materials from the deposit by the benching method. The first step in this process is the ripping of the material by a large ripper-equipped bulldozer. This method is occasionally augmented by blasting when necessary. The harvested raw material is loaded onto the primary feeder and a conveyor system transfers the material to the crushing and screening plant for processing.

The process of washing and screening the aggregates to produce the desired products requires the use of large quantities of water. Initially water is stored in a reservoir and is then used for scrubbing and rinsing of the aggregates. The process water is then directed to a clarifier that mechanically separates large amounts of fine sand, silt and clay from the process water. From the clarifier, the process water is directed back to the plant for washing aggregate. The remaining mud-slurry is then sent through a belt press system that squeezes out additional water and leaves stackable mud. This material is then sold/donated as a product or used in onsite reclamation. This wash water system was improved in 1995 to recycle 100% of the water directly from the clarifier/ belt press system and to eliminate flow to the pond system.

The Felton Quarry operations are currently in their 25th year of mining under the current mining approval. Since this mining approval has an estimated 50-year operating life, the remaining lifespan of the Quarry, under the current permit, is estimated to be 25 years,

BACKGROUND AND HISTORY

A major Mining Amendment to the Felton Quarry Permit was approved by your Commission on October 27, 1993. The amendment included: (1) amending the Mining Plan; (2) expanding the present mining area to include areas of previous overburden placement and additional overburden storage areas; (3) increasing the depth of mining; (4) allowing periodic nighttime operations for asphalt hot plant operations without pre-approval of the Planning Department; and (5) amending the Reclamation/Re-vegetation Plan.

In 1999, the Planning Department brought the last review to the Planning Commission for consideration. This three-year review included requests by the operator for minor mining amendments to allow for the reduction or increase of the frequency of groundwater sampling if deemed necessary by the County Hydrologist; and to allow additional nighttime or off-hour operations at the discretion of the Planning Director. On September 12, 2000, your commission approved the condition to allow for the reduction or increase of the frequency of groundwater sampling if deemed necessary by the County Hydrologist; and approved ten additional off-hour operations for Monday through Friday and ten additional Saturday off-hour operations.

MINING APPROVAL AND COMPLIANCE WITH CONDITIONS OF APPROVAL

The complete permit conditions for COC 74-633 PQ (Amended) are attached hereto as Exhibit B. Staff's comments are provided after each condition listed in Exhibit B to indicate the status of the quarry operator's compliance. Additionally, major items of interest are summarized below.

Off-Hours Ooerations

One of the most significant issues raised during the last three-year review was the request by Granite Construction for additional off-hours operations.

Per Permit Condition III.E.4, Granite Construction is allowed twenty (20) exceptions for off-hours operations without prior approval from the Planning Director. They are also allowed ten (10) additional exceptions (Monday through Friday) and ten (10) additional exceptions (Saturday daytime) with approval at the discretion of the Planning Director. The following is a summary of the number of off-hour operations that have occurred over the past five years and documents that Granite Construction has complied with all off-hours operation requirements:

1999: three (3) off-hours operations
2000: seventeen (17) off-hours operations
2001: ten (10) off-hours operations
2002: four (4) off-hours operations
2003: zero (0) off-hours operations.

Slope Stability

Cotton Shires & Associates, the Quarry Operator's consulting geologist, have continued to monitor the quarry slopes on a monthly basis. The primary reason that the County imposed the monitoring conditions was to guide the mining so that it increased stability and reduced the future potential for siope movements. The monitoring effort has resulted in the conclusion that there is no evidence of significant movement or headward enlargement of the 1992 rock wedge failure over the past 11 years. Additionally, they report that the operator's rock slope grading has likely increased the stabiity of the rock slope.

Since no significant movement has been detected over the past 11 years, mining now appears to have increased the site's stability to a point where less frequent monitoring would be appropriate. After discussing this matter with County staff, the operator has requested that the frequency of monitoring be decreased from once per month to once every three months. The consulting geologist, in a letter attached as Exhibit D, concurs with the modification of the monitoring frequency. Planning staff has reviewed the past and current stability reports and supports the proposed reduction in the frequency of slope monitoring. Staff recommends that your Commission adopt the changes to Condition III. K. 13, included as Exhibit E to this report. The modified condition allows County staff to request more frequent monitoring should renewed slope movement occur.

Mining Operations

In 2002, mining operations continued within the Phase 2 Mining Area. There are five phases in the mining plan. The mining is progressing in general compliance with the approved mining plan, and re-vegetation of mined areas is occurring as mining proceeds.

Due to the circumstances related to the 1992 rock wedge failure, Granite Construction will need to apply in the near future for a minor amendment to their mining plan to revise final contours. County staff has reviewed a preliminary plan and believe that the revised contours will likely result in less aggregate being removed from the quarry and will result in portions of the final slopes that are less steep than indicated on the current mining plan.

The drainage and settling pond facilities have been installed in accordance with the Mining Approval. Numerous inspections by County Staff over the past year have indicated that these facilities are adequate and functioning properly.

Reclamation

Reclamation at the quarry is in compliance with the approved Reclamation Plan. An increasing expansion of vegetative cover exists on previously disturbed areas. There has also been continuing efforts to remove invasive species such as French Broom and Pampas Grass.

The Quarry Operator has submitted the required Re-vegetation Report by Greening Associates with each Annual Report.

RECOMMENDATIONS

Following a review of quarry operations, Planning Department staff has concluded that Granite Construction's Felton Quarry is in substantial compliance with its approved Mining Permit Conditions. Staff recommends that your Commission take the following actions:

1. Accept and file this Five-Year Review; and
2. Adopt the revised set of Quarry Conditions that include a modification to Condition III.K.13 related to the frequency of slope monitoring (Exhibit F)

EXHIBITS

- A. Location Map
- B. COC 74-633 PQ (Amended) Conditions of Approval with staff comments
- C. Mining / Reclamation Plan and Sections
- D. Cotton, Shires & Associates Report on Slope Stability
- E. Proposed revisions to Condition III.K.13
- F. Revised COC 74-633 PQ (Amended) Conditions of Approval

Sincerely,

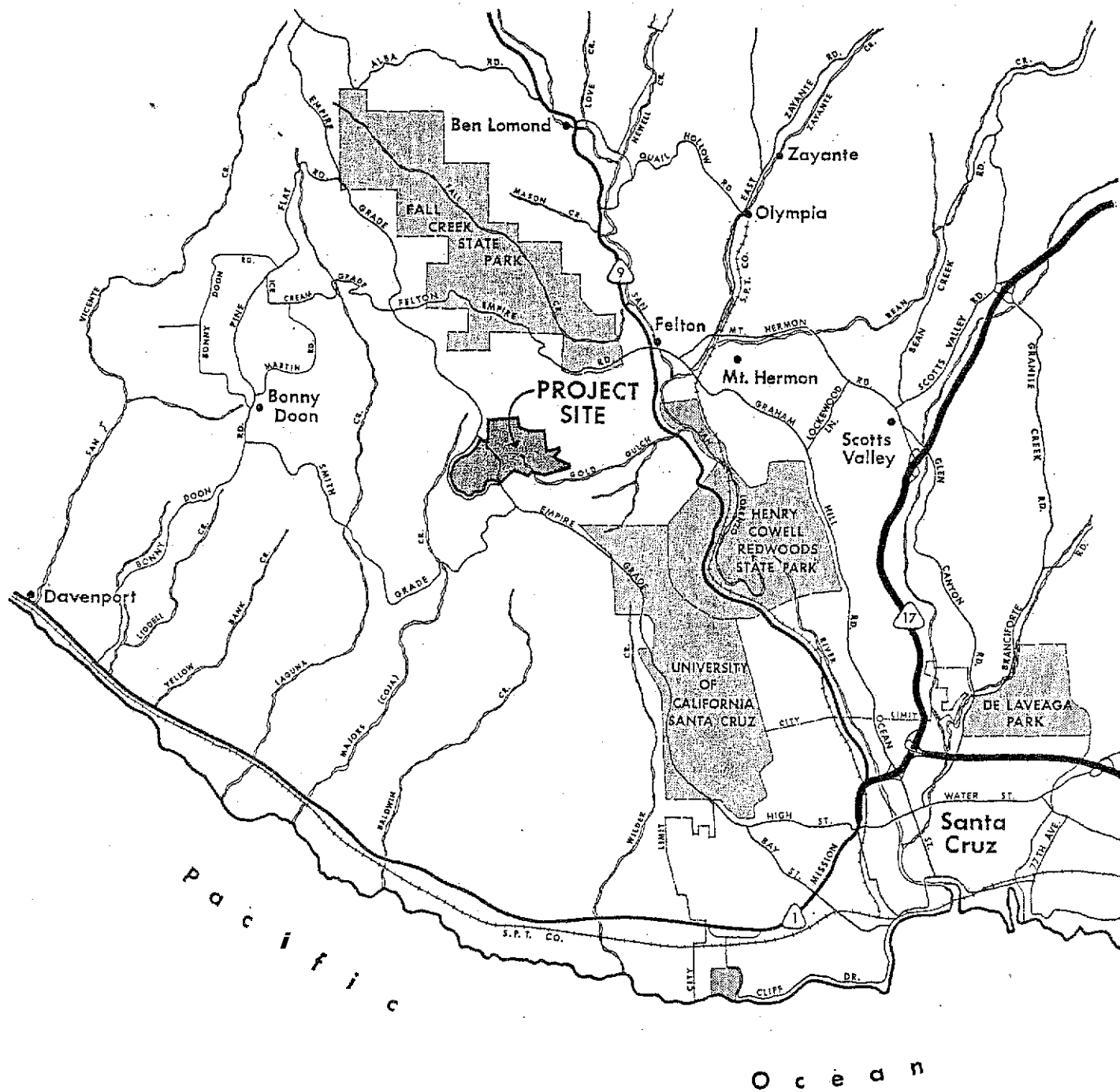
A handwritten signature in black ink, appearing to read "Kent Ealer". The signature is fluid and cursive, with the first name "Kent" and last name "Ealer" clearly distinguishable.

Kent Ealer
Associate Civil Engineer

STAFF REPORT TO THE PLANNING COMMISSION

PERMIT NO. 74-633-PQ (AMENDED)
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

EXHIBIT A



NORTH

0 1 2 MILES

LOCATION MAP

STAFF REPORT TO THE PLANNING COMMISSION

PERMIT NO. 74-633-PQ (AMENDED)
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

EXHIBIT B

FELTON QUARRY
COC 74-633 PQ (Amended)
CONDITIONS OF APPROVAL
(Revised 9/27/00 per Planning Commission Hearing for Three-Year Review)

1) EXHIBITS

Quarry operations shall be described in the following exhibits except where modified by the conditions below. All exhibits are on file with the Planning Department.

- A. Felton Quarry, Quarry Regulations; Felton Quarry; 1974.
- B. Asphalt Plant Operation, Planned Quarry Permit Application; Granite Construction Company; 1975
- C. Surveyor Map of the Land of Felton Quarry; Robert Baldwin; May 1574.
- D. Topographic Map of Felton Quarry (existing contours); Maurice-Helmkamp-Musser; May 10, 1974
- E. Draft Environmental Impact Report, Felton Quarry. Environs; August 1978
- F. Final Environmental Impact Report, Felton Quarry; Environs; November 1978.
- G. Addendum to the EIR for Proposed Operations, Felton Quarry, Environs; July 1979.
- H. Response to comments on the Hydrologic Elements of the Addendum to the EIR for the Proposed Felton Quarry expansion; Environs; October 1979
- I. "Review of Mining Progression Plans, Phases 1 through 5, Felton Quarry Pit Slope, Santa Cruz County, California" Rogers/Pacific Professional Engineering Consultants, May 17, 1993. Plate 1 through Plate 4: Felton Quarry Mining Progression Plan.
- J. "Phase 1 Engineered Drainage Plan", Rogers/Pacific Professional Engineering Consultants, April 29, 1993
- K. "Felton Quarry Area Hydrogeologic Evaluation Report, R.L. Stollar and Associates (now Watkins-Johnson Environmental, Inc.), June 12, 1992, Hydrologic Monitoring Program, Section 8.0, Pages 8-1 through 8-14
- L. "Storm Drainage and Siltation Pond Study for Granite Construction Company, Felton Quarry," Iflan Engineers, Inc., December, 1991.
- M. "Felton Quarry Amended Revegetation Plan, Habitat Restoration Group, April 12, 1991, 27 pages with Appendices, Sheets 1 through 3.
- N. "Riparian Revegetation Plan and Revegetation Monitoring Plan, Addendum to amended Revegetation Plan of April 12, 1991, "Greening Associates, December, 1992. 10 pages.
- O. "A Wildlife Habitat Monitoring Plan for Felton Quarry," Greening Associates, 7 pages with Appendix.
- P. Application No. 94-0144, Request for minor variation to Mining Approval 74-633 (Amended) to include the use of a polymer water clarifier to the product washing system, as conditioned. Approval: April 11, 1994
- Q. Environmental Determination/Mitigated Negative Declaration dated July, 1995

COPIES OF THE ABOVE DOCUMENTS ARE AVAILABLE AT THE COUNTY OF SANTA CRUZ PLANNING DEPARTMENT.

11. GENERAL PROVISIONS

- A. This Planned Quarry Permit shall supersede all provisions of Use Permit 1574-U, and 74-633-PQ.

No Comment (N/C)

- B. This permit is for the extraction; processing, storage, and shipping of the sand and aggregate resource obtained from the property, including the hot plant facilities for production of asphalt conducted in accordance with the descriptions in the exhibit documents and as modified by the conditions of this permit for a 50 year excavation project.

N/C

- C. Minor variations to this Approval meeting the standards of County Code Section 18.10.134 and requested by the mining operator or staff which do not change the general concept of use and operation, and which do not adversely affect the environment, may be approved in writing by the Planning Director following review and recommendation by the County's Environmental Coordinator.

N/C

- D. If at any time the Planning Director determines that there is a substantial noncompliance with any of the conditions, and/or Exhibits, the Planning Director shall forward a recommendation to the Planning Commission to set a hearing to consider revocation of this Approval in accordance with the provisions of County Code Section 18.10.136.

N/C

- E. Within 45-days from the date of issuance of this Mining Amendment Approval, the property owner and applicant shall sign, date and return two copies of the Approval to indicate acceptance and agreement with the conditions thereof. By signing this Approval, property owners agree to file a Declaration with the County's Recorder Office within 45 days from the date of acceptance, binding themselves and any future owners or lessees to the revegetation and reclamation requirements of this Approval. The Declaration shall be supplied by the Planning Director. Failure to sign the approval or record the declaration as described above shall render this Mining Approval null and void and all mining operations shall cease at the Quarry site except reclamation and revegetation work in accordance with the above listed exhibits.

N/C

- F. All mining and reclamation activities shall conform with the Conditions of Approval and with the regulations of the following agencies as they apply to the mining operations. The mining operator shall provide the County with copies of any permits issued by these agencies and any permit amendments, within 30 days of receipt.

1. Central Coast Regional Water Quality Control Board
2. Monterey Bay Unified Air Pollution Control District

3. California Department of Fish and Game
4. State Coastal Commission

In Compliance.

- G This Approval shall be reviewed by the Planning Commission ~~within~~ three years from the date of issuance. In connection with such review, the Planning Commission shall take public testimony and shall otherwise investigate the permittee's compliance with the conditions of this Mining Approval Amendment, and shall be empowered to amend the conditions of the Approval if necessary to eliminate nuisance conditions or to mitigate problems resulting from a change of circumstances.

~~This~~ item before your Commission is the required Five-year Review as required by the County mining ordinance.

- H In conjunction with the annual report to the State Geologist required by SMARA, ~~an~~ annual report to the Planning Director shall be prepared by a professional determined by the Planning Director as qualified to prepare such report. The report shall be submitted by the mining operator to the Planning Director by April 1 of each year. If the Planning Director determines the need for an independent consultant with specialized expertise, the mining operator shall obtain such consultant. All costs of such report and its review shall be paid by the mining operator. The report shall include the following unless waived or modified in writing by the Planning Director (Mit. #1, 2, 3, 4, 5, and 6):

1. A report on compliance with all Conditions of Approval including the required monitoring programs.
2. An analysis of any significant changes in environmental conditions or in the mining operation which have not been anticipated in this Approval.
3. A current aerial photograph of the entire site (1"=200' scale) showing property lines, facilities, stripped areas, and revegetated and reclaimed area, together with a report on the extent of excavation and reclamation completed in the previous year and projected for the coming year.
4. Every fifth year, a current aerial photogrametric topographical map prepared from current aerial photographs map (1"=200' scale with a 10 foot contour interval) showing all the requirements of II.H.3. above.
5. A revegetation report prepared by a botanist, horticulturist or plant ecologist retained by the mining operator and approved by the Planning Director. The revegetation report shall describe the degree of success in achieving the objectives of the revegetation plan, and shall identify any changes or additional measures which may facilitate achievement of the desired results.
6. Written verification of the renewal and/or validity of the financial assurance
7. A report to be held as proprietary information in accordance with the County's Mining Regulations, stating the annual amounts of production and shipping of mining products, and the estimated time to complete mining in the permitted area.
8. Monitoring logs for all wells, piezometers and springs (if any) for the entire year, and analysis thereof,

as described in Conditions III.D. 11

9. A noise report prepared by a qualified noise/acoustical consultant retained by the mining operator and approved by the Planning Director. Each noise report shall determine whether or not the mining operator is in compliance with noise standards contained in the County Mining Regulations, and shall investigate and make recommendations regarding (relative to noise mitigations): (i) Any Mining equipment used at the mining site; (ii) Proposed and existing noise protection; (iii) Any other significant impact resulting from mining operations. The mining operator shall implement all recommendations of the noise consultant determined to be necessary by the Planning Director for compliance with the conditions of the Mining Approval.
10. All reports submitted to the Monterey Bay Unified Air Pollution Control District
11. A log of nighttime operations as required by Condition III.E.4.(c).
12. A copy of this required annual report with all proprietary information removed shall also be submitted for staff inclusion on the next regularly scheduled Planning Commission consent agenda for Planning Commission review.

Due to changes in staffing, Planning Department quarry staff have recently become aware of this requirement. While all of the subject annual reports were reviewed and accepted by the Planning Department, they were not placed on the Planning Commission's consent agenda. Should Commissioners wish to review any or all of these reports, they are on file with the Planning Department.

- I. All costs for the County's inspections and review of Annual Reports and other reports submitted by the Quarry shall be paid by the Quarry, within 30 days after billing.

In Compliance. Granite Construction has paid all costs invoiced for County inspections and reviews.

- J. All mining operations shall be in compliance with the State's Surface Mining and Reclamation Act (SMARA).

In Compliance. During the annual quarry inspection required by SMARA, County staff found the quarry to be in compliance with SMARA.

- K. In the event that future County inspections of the subject property disclose non-compliance with any conditions of this Approval or any violation of the County Code, the operator shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including Approval revocation.

N/C

III. OPERATING REQUIREMENTS

The establishment, operation, and maintenance of the quarry facility shall be in compliance with the requirements of Sections 14.06.060 and 14.06.070 of the Santa Cruz County Code except where modified below.

A. Noise and Vibration

1. Maximum operating noise at the site boundaries (not including haul trucks or construction activities) shall not exceed the limits of Section 13.04.236.25 (C) of the County Zoning Ordinance. Average noise levels at the site boundaries shall conform to an LDN (day/night weighted average) of 60 DBA.

In compliance. Although Section 13.04 of the County Code was repealed in 1992, County Code Section 13.10.345.5 requires noise to meet the County's General Plan Land Use Compatibility Chart for Exterior Community Noise (General Plan Figure 6-1). This chart identifies a "normally acceptable" exterior noise exposure compatibility level of 60 dB Ldn, which is consistent with the previous Code Section 13.04.236.25 (C).

In 2002, the quarry performed noise monitoring of quarry activities during a 24-hour period when Granite Construction was performing nighttime operations. The monitoring devices were set up on the deck of the most impacted residence (5662 Empire Grade). The results of the noise study revealed that the noise exposure to the residence was 54 dB Ldn.

In 2003, Granite Construction did not have nighttime operations, so they performed noise monitoring during a 24-hour period without nighttime operations. The monitoring devices were set up at 5662 Empire Grade as well as at a newly constructed residence located at 240 Bonnywood Way (Yates residence), which is located closer to the quarry than the residence at 5662 Empire Grade. The results of the noise study revealed that the noise exposure to the residence at 5662 Empire Grade was 48 dB and was 52 dB at the Yates Residence.

2. Off-site vibrations shall be subject to the provisions of Section 13.04.236.25 (F) of the County Code.

Section 13.04.236.25 (F) of the County Code was deleted in 1982, when the Zoning Ordinance was updated. Currently, blasting is the only vibration detectable by human senses beyond the boundaries of the quarry. Vibrations attributable to blasting are regulated by MSHA (the Mine Safety and Health Administration). Blasting occurs at the quarry generally a few times a year.

3. Blasting procedures shall utilize time-delayed multiple charges to minimize noise and shock wave disturbances.

In Compliance. The quarry utilizes non-electric time-delayed caps used in multiple drilled hole patterns for all blasts.

B. Air Quality

1. Stripping and mining activities shall be conducted in a manner to minimize the generation of dust.

In Compliance. The quarry is following their approved phased mining plan and is also following the reclamation procedures outlined in the phased mining plan. One of the purposes of the phased mining plan and reclamation is to limit the exposed area that could generate dust.

Additionally, the moisture content of the material entering the plant is monitored and recorded for the Monterey Bay Unified Air Pollution Control District. The area around the primary feeder in the pit, the primary jaw crusher, and transfer point on the conveyor system are kept wet to minimize dust.

2. All roads on the property shall be either surfaced, treated, or sprinkled with water frequently enough to

insure that windblown materials do not present a problem to adjacent properties or public roads.

In Compliance. Paved quarry roads are watered when necessary to prevent dust. The unpaved roads are treated with lingen sulfate and watered.

C. Surface Hydrology

1. Process water shall be isolated in a separate, closed, recycling system of ponds and conveyances.

In Compliance. The aggregate process system utilized by the quarry recycles 100% of the water from their clarifier/ belt press system. This eliminates process water from flowing to the ponds. The quarry only pulls water from the ponds to make up for evaporation or product retention.

2. Site drainage from all disturbed areas; including all mining, processing, or stockpile areas, shall be directed to detention and settling basins prior to release from the property. Detention facilities shall be designed to handle a 2 hour, 100 year storm event and limit storm water flows from the property to those which would occur under natural conditions. The ponds shall also be designed to provide a median detention time of at least 20 to 40 minutes for design storms up to a 2 hour, 100 year event.

In Compliance. All storm water runoff is detained in settling basins. The ponds are laid out and built in accordance with the approved Storm Drainage and Siltation Pond Study by Island Engineers for a 2-hour, 100-year storm event.

3. The outflow from the detention ponds shall be conveyed across the access road by closed culvert and shall be released in such a manner as to minimize erosion hazards.

In Compliance.

4. Pond facilities shall not be relocated on the property without first submitting a revised drainage plan, calculations, and structural certification prepared by a registered civil engineer.

In Compliance.

5. Prior to construction of any new detention ponds which will maintain a residual impoundment greater than 15 feet in depth, a reconnaissance study prepared by a qualified professional limnologist shall be submitted which addresses potential water quality impacts, notably the potential for adverse water quality impacts of manganese concentrations. The recommendations of the study shall be incorporated in the construction and maintenance of such ponds.

In Compliance.

6. All catchment basins, drainageways, culverts, pumps, pipelines, etc. shall be maintained on a regular basis to ensure proper functioning free of breakage, siltation deposits, or malfunction.

In Compliance.

7. The applicant shall maintain and dispose of any petroleum products on the property in such a manner that no contamination of ground or surface waters will occur.

In Compliance.

8. Drainage improvements shall be in accordance with the approved engineered drainage plans by Ifland Engineers dated December 1991 and the above referenced Rogers/Pacific "Review of Phase 1 Drainage." Amendments to the Ifland Engineers, Inc. plan shall be submitted to County Planning for review and approval prior to implementation (Mit. #2).

In Compliance. The ponds are laid out and built in accordance with the approved Storm Drainage and Siltation Pond Study by Ifland Engineers for a 2-hour, 100-year storm event. The quarry is currently transitioning from Phase 2 to Phase 3, so the Phase 1 drainage plan is no longer applicable.

9. Operation of the detention pond evacuation plan prepared by Ifland Engineers shall continue. The plan shall utilize an electric powered pump, with a diesel powered back-up system in case of loss of electric power. Back up system shall be in place at all times during October 15 to April 15. Results of all ware: sampling shall be included in the quarry's annual report (Mit. #2).

In Compliance. The quarry keeps an electric pump and diesel pump onsite. Copies of discharge results submitted by the quarry to the CRWQCB have been submitted with the quarry's annual report.

10. Sediment basins shall be cleaned out annually prior to October 15th. A siltation marking device shall be installed which notes remaining pond capacity of major settling basins. Annual reporting of basin capacity by Hydrological consultant in-lieu of marker system is acceptable (Mit. #2).

In Compliance.

11. Spoil material from annual dredging of settling basins shall not be allowed to enter streams or setting basins. Spoils shall be deposited in such a way that is safe and requires no maintenance. Seeding and mulching prior to October 15th shall be required if spoil placement requires (Mit. #2).

In Compliance.

D. Groundwater Hydrology

1. FELTON QUARRY (QUARRY) will establish, and submit evidence of same to FORESTLAKES MUTUAL WATER COMPANY (FLMWC) within two (2) years from the date of issuance of the 1979 Use Permit, a source of groundwater producing at least nine (9) acre feet per year of groundwater starting as of the beginning of the third year from the date of issuance of the Use Permit, and shall provide at least a total of eighteen (18) acre feet per year of ground water by the beginning of the ninth year from the date of issuance of the Use Permit.

QUARRY shall have the right to inspect, at reasonable times and upon reasonable notice, the meters and other records pertaining to the corporation yard wells.

In Compliance. The well system required to supply 18 acre-feet of water to FLMWC was completed in 1991. FLMWC pulled 17.75 acre-feet in 2002 and 19.08 acre-feet in 2003.

2. The water to be provided to FLMWC by QUARRY shall be ground water which shall be comparable

in quality to the ground water presently drawn from FLMWC'S corporation yard wells, within reasonable tolerances. "Presently drawn" shall mean the quality of this ground water based upon data collected from the corporation yard wells by FLMWC for a six (6) month period following issuance of the Use Permit. Duplicate samples of water taken shall be given to the QUARRY for testing, should it so desire.

In Compliance. Water pumped from the well is processed through a water treatment plant to reduce iron and manganese levels.

3. The water sources developed by QUARRY to supply FLMWC as provided above shall not interfere with the FLMWC corporation yard wells. Further, the quarry operation shall not interfere with the water quality of the corporation yard wells.

In Compliance. Water quality and quantity reports are submitted to the Planning Department semi-annually. The reports indicate that there is no change in water quality or quantity of FLMWC wells attributable to the quarry.

4. QUARRY shall deliver, through water pipelines, the required water to FLMWC'S corporation yard for connection into the FLMWC water system. A meter shall be installed at the delivery point by QUARRY, with the meter accessible to FLMWC and to be maintained and replaced, if necessary, by QUARRY,

In Compliance.

5. FLMWC shall have the right to specify the rate of delivery of the water from QUARRY, staying within nine (9) or eighteen (18) acre feet per year, as the case may be, with a maximum monthly delivery of one-sixth (1/6) of the annual total, or one-seventh (1/7) of the same if QUARRY provides adequate storage capacity to meet this latter requirement.

In Compliance.

6. The QUARRY well, or wells, as well as the transmission lines, shall be constructed, installed and maintained according to standards of the State of California, applicable to FLMWC; and the overall system shall be comparable in quality to FLMWC'S present system in the corporation yard.

In Compliance.

7. If FLMWC establishes that the loss of water at the corporation yard well field is more than nine (9) acre feet per year at any time during the third through the eighth year, or more than eighteen (18) acre feet per year thereafter, and said loss is attributable to the quarry operations, the QUARRY must supply FLMWC sufficient additional water to replace such loss.

In Compliance. No water loss attributable to the quarry has been established.

- e. At the end of the fifty (50) year use Permit, and if QUARRY does not seek an extension of the Use Permit, or subsequent to the end of the thirty-ninth year of the Use Permit, should QUARRY abandon the quarry operation, QUARRY shall transfer to FLMWC the well or wells supplying the water to FLMWC, all equipment and transmission lines pertaining to same, easements for access, maintenance and replacement of equipment and transmission lines, and the right to draw water from the well or

wells. However, should QUARRY abandon the quarry operation prior to the end of the thirty-ninth year of the Use Permit, the above transfer shall take place only if FLMWC establishes that its corporation yard well field has been damaged by the quarry operation.

Should such transfer occur, QUARRY agrees that the system being transferred shall be in good working condition at the time of transfer.

N/C

9. The QUARRY shall, within one (1) year from the issuance of the 1979 Use Permit, provide eighteen (18) acre feet of detention ponds, and a total of twenty-four (24) acre feet of same within the first ten (10) years from the issuance of the Use Permit. Thereafter, the QUARRY shall provide one-half (1/2) acre of additional detention storage for every new acre of net disturbed area. Net disturbed area shall mean the area where the overburden is removed less the area which has been revegetated by the QUARRY.

In Compliance. Approximately 30 acre-feet of detention capacity is maintained by the quarry.

10. To the extent allowed by law, and in view of the fact that Conditions III.C.1 through III.C.19, and Conditions III.G.1 through III.G.5 as amended herein are for the benefit and protection of the shareholders of the FLMWC and other residents within the area served by FLMWC, QUARRY agrees that FLMWC may seek directly through Court action to compel QUARRY to perform these Conditions, or obtain damages or injunctive relief for the failure of QUARRY to perform same, without the necessity of first requesting enforcement by the County of Santa Cruz. The prevailing party in such litigation shall be entitled to reasonable attorney's fees and actual costs incurred. In addition, FLMWC shall have the right, upon reasonable notice and at reasonable times, to inspect those operations of QUARRY which involve performing the conditions set forth in this paragraph. Reasonable notice shall include such time as is necessary to comply with all requirements of the State of California pertaining to a person or persons entering the QUARRY property.

N/C

11. The Hydrologic Monitoring Program prepared for this project by Watkins-Johnson Environmental, Inc., dated June 12, 1992, shall be implemented. The frequency of water quality sampling and groundwater level measuring shall occur two times per year during August and April unless the County Hydrologist determines that an increase or decrease in the frequency of sampling is appropriate based on water quality trends reported in the annual hydrologic monitoring report. At a minimum, water quality monitoring shall occur in August of each year and groundwater level measurements shall occur two times per year during August and April. This monitoring shall include measurements of groundwater elevations and water sampling collected for general chemical analysis. Analysis shall be conducted by a certified water quality testing laboratory. The results of all monitoring and chemical analysis shall be submitted to County Planning as part of the quarry's annual report and shall include biannual comparisons in the findings of monitoring results. Any water quality changes of 15% or more shall be discussed in the report including methods to track (sic) water quality trends, and to remediate any negative impacts if trends of deteriorating water quality continues (Mit. #3).

In Compliance. The quarry has submitted copies of their hydrologic consultant's annual report to the Planning Department on an annual basis.

12. The following measures shall be implemented in addition to the Monitoring Program prepared by Watkins-Johnson (Mit. #3):
 - a. A "Class A Evaporation Pan" shall be installed near the quarry office rain gauge to measure the rate of evaporation and to provide a more accurate measurement of amount of infiltration occurring from the detention ponds. Results of monitoring shall be included in the annual hydrological report.
 - b. Two additional monitoring wells shall be installed, one located near the existing detention ponds and the other located proximate and northeast of the future relocated detention ponds for Phase 3. The same monitoring as specified in the Watkins-Johnson Monitoring Report for the existing wells shall be conducted (depth of wells shall be sufficient to reach year-around groundwater levels with 300 feet being the maximum necessary depth);
 - c. Water quality sampling at the headwaters of the tributary to Gold Gulch (located directly south of Limestone Brook) shall be conducted in the same fashion as other surface water quality monitoring on the site;
 - d. The quarry's hydrologic consultant shall include in the twice/year reports, hydrographs of groundwater level measurements that compare current groundwater levels with the levels shown in the previous report.

In Compliance.

13. Groundwater level and water quality monitoring, analyses and reporting shall be increased to a quarterly frequency (August, November, February, May) if documented trends of deterioration of surface water or groundwater are *not* successfully remediated by the quarry over a two-year period. This more frequent monitoring shall determine if a public health concern may be created through continued quarrying activities. In this case, all quarrying activities may be required to cease by the County until it can be demonstrated that the threat to public health no longer exists (Mit. #3).

No negative trend has been determined through 2003.

E. Days and Hours of Operation

1. All mining and processing activities at the site shall be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Saturday. Maintenance operations may be conducted at any time.

In Compliance. The normal start up time at the quarry is 7 am. On heavy paving days, the asphalt plant starts at 6 am. The latest quitting time is 6 pm.

2. All shipping activities shall normally be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Friday.

In Compliance. Normal shipping hours at the quarry are from 7 am to 3:30 pm.

3. Blasting activity shall be confined to between the hours of 7:30 A.M. and 6:00 P.M.

In Compliance.

4. Twenty (20) exceptions to III.E.2 for the off hour operations of the asphalt plant are allowed without prior approval of the Planning Director. An additional 10 exceptions to Condition III.E.2 per year may be granted at the discretion of the Planning Director for off-hour operations Monday thru Friday, and 10 additional exceptions for Saturday (daytime) operations for a maximum of 40 exceptions per year. These off hour operations are authorized for the quarry providing that (Mit. #5 and Mit. #A.1):

In Compliance. Granite Construction had three (3) off-hours operations in 1999; seventeen (17) in 2000; ten (10) in 2001; four (4) in 2002 and none (0) in 2003.

- a. Off hours shall be defined as those hours that are not included in the normal hours of operation and shipping authorized by this permit. One off hour operation shall be defined as one night or one weekend day.

N/C

- b. In order to obtain approval for 20 additional off hours operations at the discretion of the Planning Director (for a maximum total of 40 exceptions per year), the quarry operator shall submit a letter to the Planning Director demonstrating the need for the additional off hours work and the quarry operator's ability to adequately address any noise, odor, or other related complaints by local residents.

In Compliance.

- c. The Quarry shall keep a list of local residents who request notification of off-hours operations. These neighbors shall be notified prior to the operation as soon as practical.

In Compliance.

- d. A log of off-hour operations shall be kept and included in the annual report including days and hours of operation and the size, number and destination of haul trucks required.

In Compliance. Logs are on file in the Planning Department

- e. Off hour Asphalt operation shall be limited to public agency projects only

In Compliance.

- f. This amendment of off-hour operations shall be reviewed by the Planning Commission during the three-year review of the mining operation, and within one year of this Mining Approval Amendment. The Planning Department staff shall report back to the Planning Commission regarding the success of mitigations for truck noise and asphalt odor associated with off-hour operations.

This Five-year Review includes an analysis of off-hour operations.

5. To reduce noise levels of the asphalt plant and truck traffic for off-hour operations, the Quarry shall construct and/or implement the following improvements (Mit. #5 and Mit. #A.1 and Mit. #B.):

- a. Construction and permanent maintenance of noise baffling or some other type of noise reduction barriers on the dust collector exhaust system.

In Compliance.

- b. Installation and permanent maintenance of a muffler device on the pneumatic system that operates the hopper flaps.

In Compliance. Mufflers were installed in 1993.

- c. Install all other recommendations of acoustical engineer noise reports to reduce decibel level for surrounding neighborhood.

In Compliance.

- d. The quarry operator shall monitor and keep records of speed and noise levels of trucks from the quarry entrance at Empire Grade to the intersection of Bay Avenue and Highway 1 (Mission Street) during off-hour operations. This shall be accomplished using a vehicle equipped with a radar detector and a decibel meter. The vehicle shall set up at random locations along the entire route to ensure compliance. The records shall be made available to the County at the close of each paving project, and shall be submitted to the Planning Department as part of the quarry's annual report.

In Compliance.

- e. The quarry shall post notices in the community of each upcoming off hour operation. Notices shall inform readers of the range of dates within which the operation may begin, the possible hours of operation; the expected duration of the operation and shall display the appropriate telephone number at the Planning Department to which to report complaints of excessive noise. The notices shall be posted on Bay Street at each of four intersections: Nobel/Iowa, Escalona, King, and Mission, 48 hours in advance of the projected start of the operation.

In Compliance.

- f. Notices of off-hour operations shall be mailed to the City of Santa Cruz Public Works and Planning Departments, and the County of Santa Cruz Planning Department, 48 hours in advance of the projected start date.

In Compliance.

- g. If widespread complaints are received from residents within the Bay Street area (with consideration of acoustical and vehicle speed data provided by the quarry operator) further approvals by the Planning Director for off-hour operations will not be granted. The Community Response to Noise chart (ISO R1996) will be used as guidance to determine the number and nature of complaints that represent a significant impact.

In Compliance.

- 6. To reduce objectionable odors during off hour operations the applicant shall use:

- a. A silo load-out and weigh system to load trucks, which includes a fugitive fumes recovery system which shall be interlocked so as to only allow the loading of trucks while the recovery system is operating. The fugitive fumes recovery system shall be maintained in good working order (Mit. #C).

In Compliance.

- b. Cover trucks loaded with asphalt

In Compliance.

F. Insurance.

1. Verification of insurance coverage in compliance with the requirements of the County Quarry regulations shall be provided within three (3) months of the issuance of this permit and with each annual report

In Compliance.

G. Roads and Transportation

1. The applicant shall maintain the entrance roads reasonably free of dust and debris resulting from the site operations and shall load trucks in such a manner as to minimize spillage on haul routes.

In Compliance.

2. The applicant shall maintain an affirmative action program to inform all truck drivers of their obligation to comply with State and Federal vehicle noise regulations and State and local traffic regulations, and to encourage programs of vehicle safety and driving courtesy.

In Compliance.

3. Within one (1) year of the abandonment of Quarry Bend Road, the ends of the road shall be closed off with solid wood gates, fencing, earthen berms, and landscaping as required to discourage public access while providing adequate fire protection access in accordance with a plan to be approved by staff or approved plans on file.

In Compliance.

4. Within one (1) year of the issuance of this permit, internal haul routes for stripping and mining materials shall be developed so that public roads shall not be required to move materials from one part of the site to another.

In Compliance.

5. The private access roads leading to San Lorenzo Avenue and Empire Grade shall be maintained at a minimum paved width of 16 feet.

In Compliance.

6. Gates approved by the State Division of Forestry and the Felton Fire Protection District shall be maintained at the property entrances from Empire Grade and San Lorenzo Avenue to prevent unauthorized public access through the site during non-working hours.

In Compliance.

7. Off-road vehicles shall be prohibited on the property except those operated by company employees

In Compliance. Fencing is maintained at access points to keep off road vehicles out.

8. Nighttime and off-hour operations shall use the Empire Grade entrance to the Quarry only. No use of San Lorenzo Avenue will be allowed except during the daytime hours listed in Condition III.E.2 (amended) above.

- a. Truck shipment from the Quarry shall be limited to the existing routes along Empire Grade and San Lorenzo Avenue. Use of Highway 9, south to Santa Cruz, and Graham Hill Road for destination in Santa Cruz and beyond is not permitted.

In Compliance.

H. Revegetation. Screening; Erosion Control

1. All unvegetated disturbed areas not actively involved in the excavation or processing activities shall be seeded with grass at the start of the rainy season each year to establish a ground cover to reduce visibility and erosion potential.

In Compliance.

2. Within one (1) year of the issuance of this permit the banks of Limestone Brook, including the side slopes extending up to the entrance road and the hot-batch plant, shall be planted in native brush and tree species to maximize the shading of the canyon and waterways and to minimize the erosion potential.

In Compliance. Completed in 1974.

3. The entrance from Empire Grade and the ends of Quarry Bend Road shall be provided with screen plantings to minimize visibility into the property and the view of any excavation areas.

In Compliance. Planting of redwoods occurred in 1992 and supplemental seeding of other native species occurred in 1993, 1994 and 1995.

4. The benches on final slopes shall be provided with a planting medium composed of topsoil and compost removed from excavation areas mixed into a minimum 1 foot thick layer of porous grave material, and a similar planting medium shall be drifted down the face of the cut slopes. The final slopes shall be seeded with native plant species and planted with tree seedlings. Adequate fertilization and irrigation shall be provided for a minimum of 2 years to ensure proper establishment and growth of plants.

In Compliance. The majority of the quarry has not been mined to the final slopes. The final slopes that have been achieved are experiencing successful re-vegetation.

5. The operator shall institute a yearly control program of non-native plant species, including Acacia Scotch Broom, Pampas Grass, and Periwinkle.

In Compliance. The quarry's re-vegetation specialist, Greening Associates, removes non-native plant species on a yearly basis. A report of their control program is included in the quarry's annual report. Inspections by planning staff have verified the success of the removal of the non-native plant species.

6. All revegetation/reclamation shall be implemented in accordance with the requirements of Exhibits M, N, and O of this Amended Mining Approval.

In Compliance. A 2003 revegetation report by Greening Associates indicates that there is an increasing trend in vegetative cover, particularly at the North Work Face. Greening's 2003 report indicates that at the North Work Face, approximately 62% of the area has achieved the 20-year success criteria, compared to approximately only 28% in 1998.

I. Signing

1. Within three (3) months of the issuance of this permit, the signing requirements of the Quarry Regulations Ordinance shall be completed. The property shall also be posted to prohibit the use of off road vehicles and firearms.

In Compliance. Signs are posted at the gates leading to the site as well as the gates along Empire Grade Road,

J. Bonding

1. The quarry shall maintain an adequate financial assurance to ensure reclamation in accordance with the approved Reclamation Plan and compliance with the County's Mining Regulations and SMARA.

In Compliance. A bond from Granite Construction for \$955,157 is currently bound to the County of Santa Cruz and the Department of Conservation, Office of Mine Reclamation.

K. Excavation and Grading

1. Final side-slopes shall be stepped or scarified to provide soil and vegetation retention, and the thickest feasible blanket of overburden strippings shall be replaced on the benches and drifted down the side-slopes to provide for groundwater retention and establishment of vegetation.

In Compliance. Most of the Felton Quarry's slopes have not yet been excavated to final grade, but the final slopes that have been excavated have been stepped and have soil on the benches for revegetation.

2. Excavations shall maintain a setback of 50 feet from the property line measured in a horizontal plane from the property boundary (excavations may thereby extend closer to the property line where the site

rises up from the property boundary), except as amended herein.

In Compliance.

- 3 Prior to any relocation of the entrance road descending from Empire Grade, the applicant shall submit detailed engineering design plans for the new road placement prepared by a registered civil engineer and obtain amendment of this permit by the Planning Commission. Excavations where physically possible shall take place behind a barrier formed by the entrance road to protect the adjacent Forest Lakes development from the noise and visibility of operations. Excavations adjacent to the access road shall not be below the level of the road for the first 50 feet and then shall follow the configuration for final slopes as specified above.

N/A

- 4 Prior to any excavations west of Limestone Brook below an elevation of 900 feet, the operator shall submit revised drainage plans to be approved by County staff. Excavations on site shall not be below the 700 foot elevation.

N/A.

- 5 Prior to excavating or undermining the present utility easement on Quarry Bend Road, the operator shall relocate the easement and telephone lines to the satisfaction of the Pacific Telephone Company and Pacific Gas and Electric Company.

In Compliance. This was completed in 1988.

6. Topsoil and vegetation removed during the quarrying process shall be stockpiled in a level area and to minimize sight from adjacent public roads, The stockpiles shall not exceed 60 feet in a horizontal dimension or 15 feet in height and adequate drainage protection shall be provided.

In Compliance.

7. The existing fill operation at the head of Limestone Brook shall be conducted in accordance with the provisions of the permit from the California Department of Fish and Game.

In Compliance. Completed in 1974.

8. All final excavations shall provide for positive surface drainage to prevent the ponding or accumulation of storm waters or natural seepage except in the planned drainage pond facilities.

In Compliance.

9. In the event that significant paleontological or archaeological finds are made on the quarrying site, all operations shall be halted within 200 feet of the find and the Planning Department Director shall be immediately notified. Operations may be resumed in three working days following notification of the Planning Department unless specific request is made to allow additional time for proper excavation of fossils or artifacts in accordance with the provisions of the County's Native American Cultural Site Ordinance.

None Found.

10. The operator shall endeavor to minimize the surface area of the quarry which is disturbed at any given time to the greatest extent compatible with mining and marketing requirements.

In Compliance.

11. No excavation or disturbance of Assessor's Parcel Number 62-181-08 shall be allowed during the time the Open Space Easement Contract (OS-6-72) with the County is in force.

In Compliance.

12. All mining of the Active Mining Area of the south pit workface shall be limited to a maximum interim gradient of 3/4:1 (horizontal:vertical). In some cases, slopes of 1/2:1 will be acceptable if first approved by both the quarry's geologic consultant and County Planning Staff (Mit. #1).

In Compliance.

13. Inclinometers with surface reading capability shall be installed behind the cut for Phase 1 mining (approximately 200 feet northwest of the slide area) to detect any slope movement. Monitoring and recording of inclinometer readings shall be done once/month by the quarry's geologic consultant until quarry operators have been trained by the consultant to perform these readings. Thereafter, monthly readings may be performed by the quarry personnel who shall submit the results of each reading to the consulting geologist and County Planning Staff on a monthly basis. The frequency of these readings shall be increased if deemed warranted by evolving site conditions as determined by the County Planning Geologist (Mit. #1).

In Compliance. Cotton Shires and Associates is monitoring the inclinometers on a monthly basis. Monthly reports are being sent to the Planning Department. No significant movement of the slope face has been detected over the past 11 years.

Since no significant movement has been detected over the past 11 years, the Operator is requesting a reduction in the frequency of monitoring from once/month to once/quarter.

14. The quarry's consulting geologist shall observe the quarry operation on a minimum basis of once/quarter (every three months) and report on the quarry program on an annual basis. The report shall be submitted to County Planning within 20 days of the quarry's annual report and shall (Mit. #1):
 - a. Document the geologic structure exposed by the quarry as shown on the geologic map of the March 17, 1993, Rogers/Pacific report;
 - b. Discuss the success of the quarry's activities regarding stability and make recommendations about continuing operations;
 - c. Discuss the results of the inclinometer readings conducted over the year, including the consultant's supervision of quarry personnel's monitoring of the inclinometers. The quarry shall immediately notify the County Planning Department if and (sic) adverse geologic conditions become exposed during the monitoring or inspections of quarry activities and coordinate with County Planning on the remedial action to be taken.

In Compliance. All reports by the quarry's Geologic Consultant, Cotton Shires and Associates, have been received and adequately address the quarry's operations. Copies of the reports are on file in the Planning Department.

15. All mining excavations shall be conducted in accordance with the recommendations of the "Review of Mining Progression Plans, Phases 1 through 5" by Rogers/Pacific, dated April 29, 1993 (Mit. #1).

In Compliance.

16. Prior to commencing a new mining phase, the quarry's geologic consultant shall conduct a "Phase Closure Inspection" and submit in report form the results of the inspection to County Planning. The report shall discuss the same issues as required by the annual report for geologic issues (Mit. #1).

In Compliance.

L. Mitigation Monitoring Plan

The mitigation measures listed under this heading have been incorporated into the Conditions of Approval for this project in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public Resource Code, a monitoring and reporting program for the above mitigations is hereby adopted as a condition of approval for this project. This monitoring program is specifically described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the Conditions of Approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to Section 18.10.462 of the Santa Cruz County Code. All mitigation monitoring shall be documented in the required Annual Report. If the next quarterly inspection following the submittal of the Annual Report shows non-compliance with any provision of this Mining Approval Amendment, enforcement actions in accordance with the County Code and SMARA will be implemented to achieve compliance.

1. Mitigation Measure: Condition II.H. 10 (Air Quality)

Monitoring Program: Planning Staff review of communication submitted to the Monterey Bay Unified Air Pollution Control District contained in the annual reports as required by Condition II.H. 10 and staff quarterly inspections will document compliance with this mitigation. Non-compliance with the air quality conditions required by the Air Pollution Control District will be documented in the annual reports. Remedial measures are the responsibility of the Air Pollution Control District.

2. Mitigation Measure: Condition III.C.8 through 11 (Surface Hydrology)

Monitoring Program: Planning staff review of the hydrology section of the required annual report (Condition II.H.8) prepared by the consulting hydrologist will document sampling of water discharge. Planning staff quarterly inspections will verify pump back up system, sediment pond cleaning and spoil placement and treatment condition requirements prior to commencement of each rainy season.

In Compliance.

3. Mitigation Measure: Condition III.D.11 through 13 (Groundwater Protection)

STAFF REPORT TO THE PLANNING COMMISSION

PERMIT NO. 74-633-PQ (AMENDED)
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

EXHIBIT C

Monitoring Program: Planning staff review of hydrology section of the required annual reports (Condition II.H.) prepared by the consulting hydrologist and staff quarterly inspections will verify compliance with this mitigation. Compliance with this mitigation will be documented by the consulting hydrologist's report and included in the annual report with recommendations for remedial measures, if required.

In Compliance.

4. Mitigation Measure: condition II.H and Exhibit "O" of the Amended Mining Approval (Revegetation/Reclamation Plan)

Monitoring Program: Planning Staff review of the revegetation report section of annual reports as required by Condition II.H and quarterly inspection will document compliance with Exhibits "M", "N", and "O" of the Amended Mining Approval. A "Wildlife Monitoring Plan" by Greening Associates, September 1993 has been reviewed and approved by Planning staff and included in the Amended Mining Approval as Exhibit "O". The success criteria defined in the Wildlife and Revegetation Monitoring plans will be documented in each annual report by the consulting biologist with remedial measures if non-compliance is noted.

In Compliance.

5. Mitigation Measure: III.E. 1 through 4(d) (Noise Monitoring)

Monitoring Program: Planning staff review of the noise monitoring reports in the required annual reports (Condition II.H.) and staff quarterly inspections will document compliance with this mitigation.

In Compliance.

6. Mitigation Measure: Condition III.K. 12 through 15 (Slope Stability)

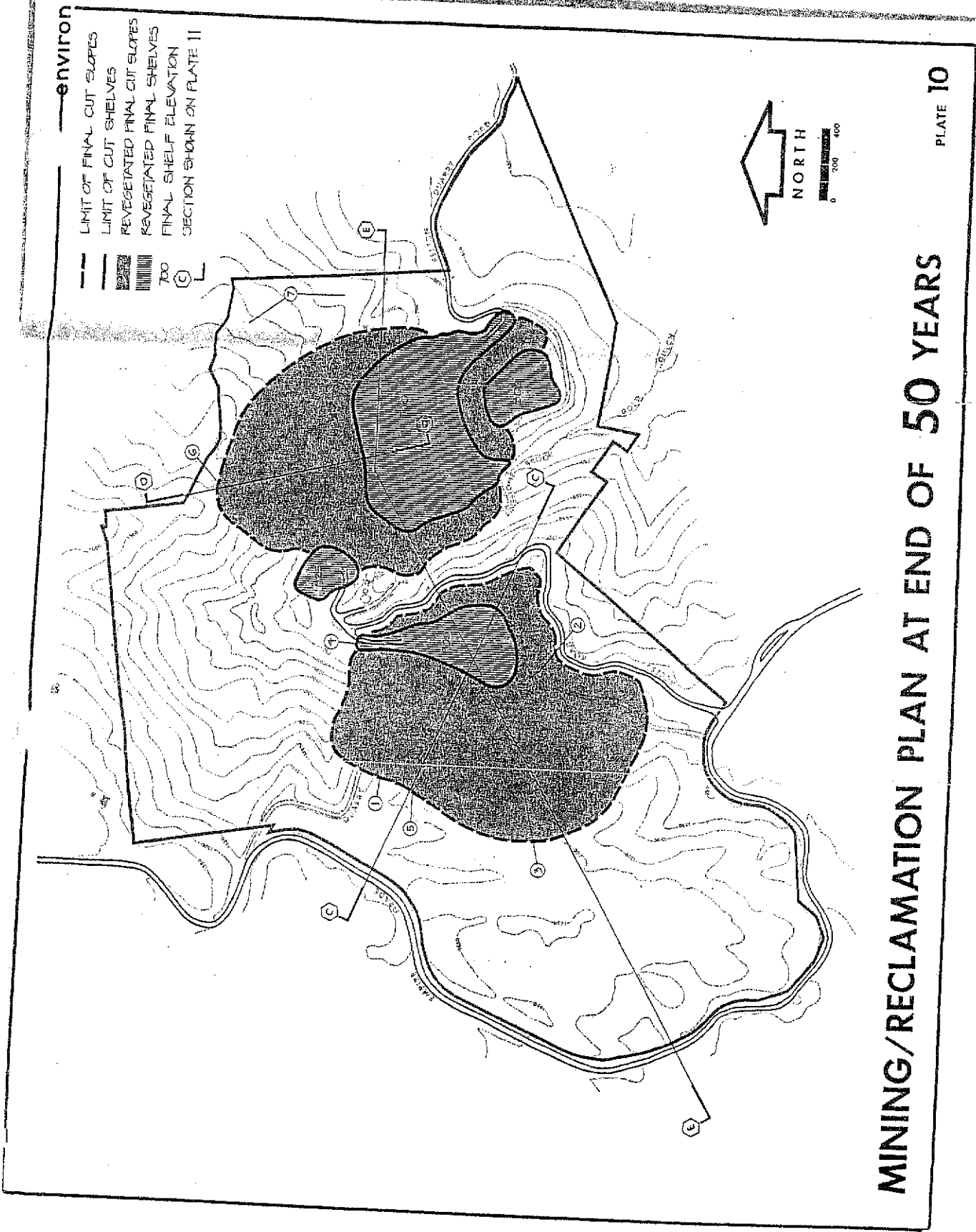
Monitoring Program: Planning Staff review of the geology section of the required annual reports (Condition II.H.), prepared by the consulting geologist as conditioned and staff quarterly inspections will document compliance with this mitigation. Compliance with this mitigation will be documented by the consulting geologist's report and included in the annual report with recommendations for remedial action, if required.

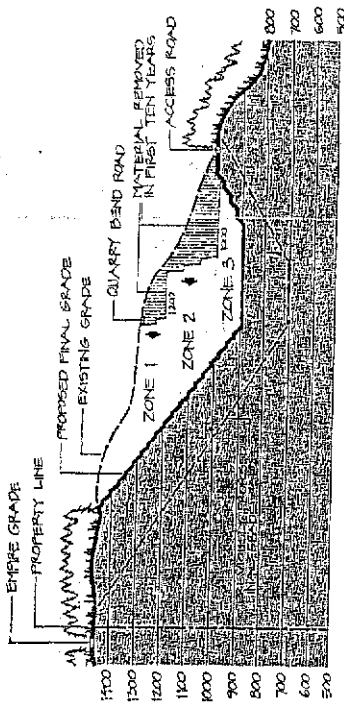
In Compliance.

- 13 Mitigation Measure: Condition III.E.5 (Off hour operations)

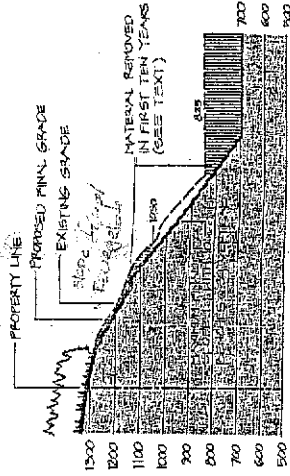
Monitoring Program: Planning Staff review of the noise and speed records included in the annual reports and ongoing review of complaint records will document compliance with this mitigation.

In Compliance.

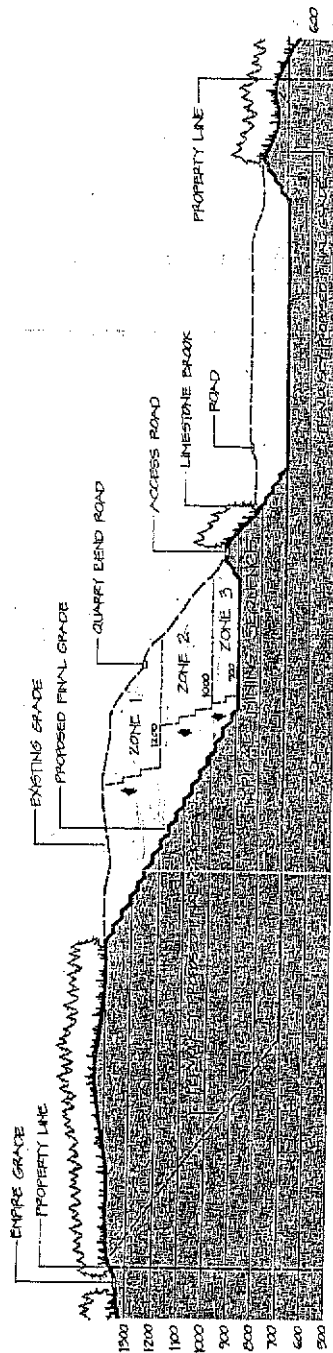




SECTION C-C
CUT ELEVATIONS ARE DIAGNOSTIC



SECTION D-D
CUT ELEVATIONS ARE DIAGNOSTIC



SECTION E-E
CUT ELEVATIONS ARE DIAGNOSTIC

LOCATION OF SECTIONS SHOWN ON PLATE 10

MINING/RECLAMATION SECTIONS AT END OF 50 YEARS

STAFF REPORT *TO* THE PLANNING COMMISSION

PERMIT NO. 74-633-PQ (AMENDED)
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

EXHIBIT D



COTTON, SHIRES & ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

January 8, 2004
G0123A

Mr. Ross Kashiwagi
Plant Manager
GRANITE CONSTRUCTION COMPANY
P.O. Box 720
Watsonville, CA 95077

SUBJECT: Inclinometer Reading Schedule
RE: **West Pit Slope Area - Felton Quarry**
Granite Construction Company
Felton, California



Dear Mr. Kashiwagi:

As you are aware, localized block toppling and rock wedge failures occurred in the West Pit Slope Area of the Felton Quarry in 1993. Following these instabilities, an inclinometer was installed in 1993 for monitoring purposes, and three additional inclinometers were installed in 2000. Geolith Consultants monitored the instruments up to May of 2001, and no slope displacement was noted. Since May of 2001, we have been reading these four inclinometers on a monthly basis. During our monthly monitoring visits, we also carefully observe the areas around the inclinometers and the quarry slopes for any signs of new ground cracks that might indicate reactivation of the 1993 slope instability. Since we began monitoring in 2001, we have not seen any significant signs of movement from either the inclinometers or from our monthly observations. Consequently, unless the quarrying activity in the West Pit Slope Area is significantly accelerated (or the topography or groundwater conditions are significantly changed), in our opinion, the monitoring schedule can be reduced to a quarterly basis.

LIMITATIONS

Cotton, Shires and Associates, Inc. has employed engineering geologic procedures that are within the standard of practice for our industry, and any opinions and conclusions are made in accordance with generally accepted principles and practices of the profession. This warranty is in lieu of all other warranties, either expressed or implied.

Please call if you have any questions

Sincerely,
COTTON, SHIRES AND ASSOCIATES, INC.

Dale R. Marcum
Senior Geologic Engineer
PE 05837

William R. Cotton
Principal Engineering Geologist
CEG 882

WRC:DRM:st

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STAFF REPORT TO THE PLANNING COMMISSION

PERMIT NO. 74-633-PQ (AMENDED)
APN(S): 062-181-12; 064-201-13, -79, -80, -81; 064-211-67, & -68

EXHIBIT E

FELTON QUARRY
COC 74-633 PQ (Amended)
PROPOSED REVISIONS TO CONDITION III.K.13
(new wording in bold font)

Inclinometers with surface reading capability shall be installed behind the cut for Phase 1 mining (approximately 200 feet northwest of the slide area) to detect any slope movement. Monitoring and recording of inclinometer readings shall be done once ~~month~~ each quarter (every three months) by the quarry's geologic consultant. ~~until quarry operators have been trained by the consultant to perform these readings. Thereafter, monthly readings may be performed by the quarry personnel who~~ **The quarry's geologic consultant** shall submit the results of each reading to ~~the consulting geologist and~~ County Planning Staff on an ~~monthly~~ annual basis with the Quarry's annual report unless a significant movement occurs. The frequency of these readings shall be increased if deemed warranted by evolving site conditions as determined by the County Geologist (Mit. #1). Should a significant slope movement occur, or should the monitoring indicate a significant change in the inclinometer readings, the geologic consultant **must** contact the County both verbally and in **writing** of the **change(s) within 48** hours and **shall** make recommendations to address the observed changes.

Staff Report to the Planning Commission

Permit No. 74-633-PQ (Amended)
APN(S): 062-181-12; 064-201-13, 79, 80, 81; 064-211-67 & 68

EXHIBIT F

FELTON QUARRY
COC 74-633 PQ (Amended)
CONDITIONS OF APPROVAL

(Revised per December 8, 2004 Planning Commission Hearing Five-Year Review)

I. EXHIBITS

Quarry operations shall be described in the following exhibits except where modified by the conditions below. All exhibits are on file with the Planning Department.

- A. Felton Quarry, Quarry Regulations; Felton Quarry; 1974
- B. Asphalt Plant Operation, Planned Quarry Permit Application; Granite Construction Company; 1975.
- C. Surveyor Map of the Land of Felton Quarry; Robert Baldwin; May 1974.
- D. Topographic Map of Felton Quarry (existing contours); Maurice-Helmkamp-Musser; May 10, 1974,
- E. Draft Environmental Impact Report, Felton Quarry; Environs; August 1978.
- F. Final Environmental Impact Report, Felton Quarry; Environs; November 1978.
- G. Addendum to the EIR for Proposed Operations, Felton Quarry, Environs; July 1979
- H. Response to comments on the Hydrologic Elements of the Addendum to the EIR for the Proposed Felton Quarry expansion; Environs; October 1979.
- I. "Review of Mining Progression Plans, Phases 1 through 5, Felton Quarry Pit Slope, Santa Cruz County, California" Rogers/Pacific Professional Engineering Consultants, May 17, 1993. Plate 1 through Plate 5, Felton Quarry Mining Progression Plan.
- J. "Phase 1 Engineered Drainage Plan", Rogers/Pacific Professional Engineering Consultants, April 29, 1993.
- K. "Felton Quarry Area Hydrogeologic Evaluation Report, R.L. Stollar and Associates (now Watkins-Johnson Environmental, Inc.), June 12, 1992, Hydrologic Monitoring Program, Section 8.0, Pages 8-1 through 8-14.
- L. "Storm Drainage and Siltation Pond Study for Granite Construction Company, Felton Quarry," Ifland Engineers, Inc., December, 1991.
- M. "Felton Quarry Amended Revegetation Plan," Habitat Restoration Group, April 12, 1991, 27 pages with Appendices, Sheets 1 through 3.
- N. "Riparian Revegetation Plan and Revegetation Monitoring Plan, Addendum to amended Revegetation Plan of April 12, 1991, "Greening Associates, December, 1992. 10 pages.
- O. "A Wildlife Habitat Monitoring Plan for Felton Quarry," Greening Associates, 7 pages with Appendix.
- P. Application No. 94-0144, Request for minor variation to Mining Approval 74-633 (Amended) to include the use of a polymer water clarifier to the product washing system, as conditioned. Approval: April 11, 1994.

- Q. Environmental ~~Determination~~/Mitigated Negative Declaration dated July, 1999.

COPIES OF THE ABOVE DOCUMENTS ARE AVAILABLE AT THE COUNTY OF SANTA CRUZ PLANNING DEPARTMENT.

II. GENERAL PROVISIONS

- A. This Planned Quarry Permit shall supersede all provisions of Use Permit 1574-U, and 74-633-PQ
- B. This permit is for the extraction, processing, storage, and shipping of the sand and aggregate resources obtained from the property, including the hot plant facilities for production of asphalt conducted in accordance with the descriptions in the exhibit documents and as modified by the conditions of this permit for a 50 year excavation project.
- C. Minor variations to this Approval meeting the standards of County Code Section 18.10.134 and requested by the mining operator or staff which do not change the general concept of use and operation, and which do not adversely affect the environment, may be approved in writing by the Planning Director following review and recommendation by the County's Environmental Coordinator.
- D. If at any time the Planning Director determines that there is a substantial noncompliance with any of these conditions, and/or Exhibits, the Planning Director shall forward a recommendation to the Planning Commission to set a hearing to consider revocation of this Approval in accordance with the provisions of County Code Section 18.10.136.
- E. Within 45-days from the date of issuance of this Mining Amendment Approval, the property owner and applicant shall sign, date and return two copies of the Approval to indicate acceptance and agreement with the conditions thereof. By signing this Approval, property owners agree to file a Declaration with the County's Recorder Office within 45 days from the date of acceptance, binding themselves and any future owners or lessees to the revegetation and reclamation requirements of this Approval. The Declaration shall be supplied by the Planning Director. Failure to sign the approval or record the declaration as described above shall render this Mining Approval null and void and all mining operations shall cease at the Quarry site except reclamation and revegetation work in accordance with the above listed exhibits,
- F. All mining and reclamation activities shall conform with the Conditions of Approval and with the regulations of the following agencies as they apply to the mining operations. The mining operator shall provide the County with copies of any permits issued by these agencies and any permit amendments, within 30 days of receipt.
 - 1. Central Coast Regional Water Quality Control Board
 - 2. Monterey Bay Unified Air Pollution Control District
 - 3. California Department of Fish and Game
 - 4. State Coastal Commission
- G. This Approval shall be reviewed by the Planning Commission within three years from the date of

issuance. In connection with such review, the Planning Commission shall take public testimony and shall otherwise investigate the permittee's compliance with the conditions of this Mining Approval Amendment, and shall be empowered to amend the conditions of the Approval if necessary to eliminate nuisance conditions or to mitigate problems resulting from a change of circumstances.

- H. In conjunction with the annual report to the State Geologist required by SMARA, an annual report to the Planning Director shall be prepared by a professional determined by the Planning Director as qualified to prepare such report. The report shall be submitted by the mining operator to the Planning Director by April 1 of each year. If the Planning Director determines the need for an independent consultant with specialized expertise, the mining operator shall obtain such consultant. All costs of such report and its review shall be paid by the mining operator. The report shall include the following unless waived or modified in writing by the Planning Director (Mit. #1, 2, 3, 4, 5, and 6):
1. A report on compliance with all Conditions of Approval including the required monitoring programs.
 2. An analysis of any significant changes in environmental conditions or in the mining operation which have not been anticipated in this Approval.
 3. A current aerial photograph of the entire site (1"=200' scale) showing property lines, facilities, stripped areas, and revegetated and reclaimed areas; together with a report on the extent of excavation and reclamation completed in the previous year and projected for the coming year
 4. Every fifth year, a current aerial photogrammetric topographical map prepared from current aerial photographs map (1"=200' scale with a 10 foot contour interval) showing all the requirements of II.H.3. above.
 5. A revegetation report prepared by a botanist, horticulturist or plant ecologist retained by the mining operator and approved by the Planning Director. The revegetation report shall describe the degree of success in achieving the objectives of the revegetation plan, and shall identify any changes or additional measures which may facilitate achievement of the desired results.
 6. Written verification of the renewal and/or validity of the financial assurance.
 7. A report to be held as proprietary information in accordance with the County's Mining Regulations, stating the annual amounts of production and shipping of mining products, and the estimated time to complete mining in the permitted area.
 8. Monitoring logs for all wells, piezometers and springs (if any) for the entire year, and analysis thereof, as described in Conditions III.D.11.
 9. A noise report prepared by a qualified noise/acoustical consultant retained by the mining operator and approved by the Planning Director. Each noise report shall determine whether or not the mining operator is in compliance with noise standards contained in the County Mining Regulations, and shall investigate and make recommendations regarding (relative to noise mitigations): (i) Any Mining equipment used at the mining site; (ii) Proposed and existing noise protection; (iii) Any other significant impact resulting from mining operations. The mining operator shall implement all recommendations of the noise consultant determined to be necessary by the Planning Director for compliance with the conditions of the Mining Approval.

10. All reports submitted to the Monterey Bay Unified Air Pollution Control District.
 11. A log of nighttime operations as required by Condition III.E.4.(c).
 12. A copy of this required annual report with all proprietary information removed shall also be submitted for staff inclusion on the next regularly scheduled Planning Commission consent agenda for Planning Commission review.
 13. The operator shall include update discussion of the activities listed in Condition III.B.3 and III.A.4 through III.A.6 in the April 1, 2005 Annual Report required under the current Conditions of Approval. Granite shall make a diligent effort to include the Bonnywood residents or other residents of concern as improvements are made to the facility.
- I. All costs for the County's inspections and review of *Annual* Reports and other reports submitted by the *Quarry* shall be paid by the *Quarry*, within 30 days after billing.
 - J. All mining operations shall be in compliance with the State's Surface Mining and Reclamation Act (SMARA).
 - K. In the event that future County inspections of the subject property disclose non-compliance with any conditions of this Approval or any violation of the County Code, the operator shall pay to the County the full cost of such County inspections, including any follow-up inspections and/or necessary enforcement actions, up to and including Approval revocation.

III. OPERATING REQUIREMENTS

The establishment, operation, and maintenance of the quarry facility shall be in compliance with the requirements of Sections 14.06.060 and 14.06.070 of the Santa Cruz County Code except where modified below.

A. Noise and Vibration

1. Maximum operating noise at the site boundaries (not including haul trucks or construction activities) shall not exceed the limits of Section 13.04.236.25 (C) of the County Zoning Ordinance. Average noise levels at the site boundaries shall conform to an LDN (day/night weighted average) of 60 DBA.
2. Off-site vibrations shall be subject to the provisions of Section 13.04.236.25 (F) of the County Code.
3. Blasting procedures shall utilize time-delayed multiple charges to minimize noise and shock wave disturbances.
4. The operator shall pursue an engineering evaluation of the baghouse exhaust fan to determine ways to mitigate noise from this portion of the plan. The operator along with the Bonnywood residents, or appointed representative, shall review the engineer recommendations. The operator shall determine economic and mechanical feasibility without jeopardizing the existing air permit and plant production rates. The operator shall implement all recommendations to the extent feasible

and reasonable in cost relative to the size and conditions of the Quany operations by April 1, 2005.

5. The operator shall replace the existing metal screens at the primary screen with a rubberized screen to reduce process noise by April 1, 2005.
6. By April 1, 2005, the operator shall use strobes on mobile equipment that utilize back-up alarms, after sunset and before sunrise.

B. Air Quality

1. Stripping and mining activities shall be conducted in a manner to minimize the generation of dust.
2. All roads on the property shall be either surfaced, treated, or sprinkled with water frequently enough to insure that windblown materials do not present a problem to adjacent properties or public roads.
3. The operator shall work with Hydro-Turf to develop an automatic control spray system for the access road by April 1, 2005.

C. Surface Hydrology

1. Process water shall be isolated in a separate, closed, recycling system of ponds and conveyances
2. Site drainage from all disturbed areas, including all mining, processing, or stockpile areas, shall be directed to detention and settling basins prior to release from the property. Detention facilities shall be designed to handle a 2 hour, 100 year storm event and limit storm water flows from the property to those which would occur under natural conditions. The ponds shall also be designed to provide a median detention time of at least 20 to 40 minutes for design storms up to a 2 hour, 100 year event.
3. The outflow from the detention ponds shall be conveyed across the access road by closed culvert and shall be released in such a manner as to minimize erosion hazards.
4. Pond facilities shall not be relocated on the property without first submitting a revised drainage plan, calculations, and structural certification prepared by a registered civil engineer.
5. Prior to construction of any new detention ponds which will maintain a residual impoundment greater than 15 feet in depth, a reconnaissance study prepared by a qualified professional limnologist shall be submitted which addresses potential water quality impacts, notably the potential for adverse water quality impacts of manganese concentrations. The recommendations of the study shall be incorporated in the construction and maintenance of such ponds.
6. All catchment basins, drainageways, culverts, pumps, pipelines, etc. shall be maintained on a regular basis to ensure proper functioning free of breakage, siltation deposits, or malfunction.
7. The applicant shall maintain and dispose of any petroleum products on the property in such a manner that no contamination of ground or surface waters will occur.
8. Drainage improvements shall be in accordance with the approved engineered drainage plans by

Ifland Engineers dated December 1991 and the above referenced Rogers/Pacific "Review of Phase 1 Drainage." Amendments to the Ifland Engineers, Inc. plan shall be submitted to County Planning for review and approval prior to implementation (Mit. #2).

9. Operation of the detention pond evacuation plan prepared by Ifland Engineers shall continue. The plan shall utilize an electric powered pump, with a diesel powered back-up system in case of loss of electric power. Back up system shall be in place at all times during October 15 to April 15. Results of all water sampling shall be included in the quarry's annual report (Mit. #2).
10. Sediment basins shall be cleaned out annually prior to October 15th. A siltation marking device shall be installed which notes remaining pond capacity of major settling basins. Annual reporting of basin capacity by Hydrological consultant in-lieu of marker system is acceptable (Mit. #2).
11. Spoil material from annual dredging of settling basins shall not be allowed to enter streams or settling basins. Spoils shall be deposited in such a way that is safe and requires no maintenance. Seeding and mulching prior to October 15" shall be required if spoil placement requires (Mit. #2).

D. Groundwater Hydrology

1. FELTON QUARRY (QUARRY) will establish, and submit evidence of same to FOREST LAKES MUTUAL WATER COMPANY (FLMWC) within two (2) years from the date of issuance of the 1979 Use Permit, a source of groundwater producing at least nine (9) acre feet per year of groundwater starting as of the beginning of the third year from the date of issuance of the Use Permit, and shall provide at least a total of eighteen (18) acre feet per year of ground water by the beginning of the ninth year from the date of issuance of the Use Permit.

QUARRY shall have the right to inspect, at reasonable times and upon reasonable notice, the meters and other records pertaining to the corporation yard wells.

2. The water to be provided to FLMWC by QUARRY shall be ground water which shall be comparable in quality to the ground water presently drawn from FLMWC'S corporation yard wells, within reasonable tolerances. "Presently drawn" shall mean the quality of this ground water based upon data collected from the corporation yard wells by FLMWC for a six (6) month period following issuance of the Use Permit. Duplicate samples of water taken shall be given to the QUARRY for testing, should it so desire.
3. The water sources developed by QUARRY to supply FLMWC as provided above shall not interfere with the FLMWC corporation yard wells. Further, the quarry operation shall not interfere with the water quality of the corporation yard wells.
4. QUARRY shall deliver, through water pipelines, the required water to FLMWC'S corporation yard for connection into the FLMWC water system. A meter shall be installed at the delivery point by QUARRY, with the meter accessible to FLMWC and to be maintained and replaced, if necessary, by QUARRY.
5. FLMWC shall have the right to specify the rate of delivery of the water from QUARRY, staying within nine (9) or eighteen (18) acre feet per year, as the case may be, with a maximum monthly delivery of one-sixth (1/6) of the annual total, or one-seventh (1/7) of the same if QUARRY provides adequate storage capacity to meet this latter requirement.

6. The QUARRY well, or wells, as well as the transmission lines, shall be constructed, installed and maintained according to standards of the State of California, applicable to FLMWC; and the overall system shall be comparable in quality to FLMWC'S present system in the corporation yard.
7. If FLMWC establishes that the loss of water at the corporation yard well field is more than nine (9) acre feet per year at any time during the third through the eighth year, or more than eighteen (18) acre feet per year thereafter, and said loss is attributable to the quarry operations, the QUARRY must supply FLMWC sufficient additional water to replace such loss.
8. At the end of the fifty (50) year use Permit, and if QUARRY does not seek an extension of the Use Permit, or subsequent to the end of the thirty-ninth year of the Use Permit, should QUARRY abandon the quarry operation, QUARRY shall transfer to FLMWC the well or wells supplying the water to FLMWC, all equipment and transmission lines pertaining to same, easements for access, maintenance and replacement of equipment and transmission lines, and the right to draw water from the well or wells. However, should QUARRY abandon the quarry operation prior to the end of the thirty-ninth year of the Use Permit, the above transfer shall take place only if FLMWC establishes that its corporation yard well field has been damaged by the quarry operation.

Should such transfer occur, QUARRY agrees that the system being transferred shall be in good working condition at the time of transfer.

9. The QUARRY shall, within one (1) year from the issuance of the 1979 Use Permit, provide eighteen (18) acre feet of detention ponds, and a total of twenty-four (24) acre feet of same within the first ten (10) years from the issuance of the Use Permit. Thereafter, the QUARRY shall provide one-half (1/2) acre of additional detention storage for every new acre of net disturbed area. Net disturbed area shall mean the area where the overburden is removed less the area which has been revegetated by the QUARRY.
10. To the extent allowed by law, and in view of the fact that Conditions III.C.1 through IU.C.19, and Conditions III.G.1 through III.G.5 as amended herein are for the benefit and protection of the shareholders of the FLMWC and other residents within the area served by FLMWC, QUARRY agrees that FLMWC may ~~seek~~ directly through Court action to compel QUARRY to perform these Conditions, or obtain damages or injunctive relief for the failure of QUARRY to perform same, without the necessity of first requesting enforcement by the County of Santa Cruz. The prevailing party in such litigation shall be entitled to reasonable attorney's fees and actual costs incurred. In addition, FLMWC shall have the right, upon reasonable notice and at reasonable times, to inspect those operations of QUARRY which involve performing the conditions set forth in this paragraph. Reasonable notice shall include such time as is necessary to comply with all requirements of the State of California pertaining to a person or persons entering the QUARRY property.
11. The Hydrologic Monitoring Program prepared for this project by Watkins-Johnson Environmental, Inc., dated June 12, 1992, shall be implemented. The frequency of water quality sampling and groundwater level measuring shall occur two times per year during August and April unless the County Hydrologist determines that an increase or decrease in the frequency of sampling is appropriate based on water quality trends reported in the annual hydrologic monitoring report. At a minimum, water quality monitoring shall occur in August of each year and groundwater level measurements shall occur two times per year during August and April. This monitoring shall include measurements of groundwater elevations and water sampling collected for general chemical

analysis. Analysis shall be conducted by a certified water quality testing laboratory. The results of all monitoring and chemical analysis shall be submitted to County Planning as part of the quarry's annual report and shall include biannual comparisons in the findings of monitoring results. Any water quality changes of 15% or more shall be discussed in the report including methods to tract (sic) water quality trends, and to remediate any negative impacts if trends of deteriorating water quality continues (Mit. #3).

12. The following measures shall be implemented in addition to the Monitoring Program prepared by Watkins-Johnson (Mit. #3):
 - a. A "Class A Evaporation Pan" shall be installed near the quarry office rain gauge to measure the rate of evaporation and to provide a more accurate measurement of amount of infiltration occurring from the detention ponds. Results of monitoring shall be included in the annual hydrological report.
 - b. Two additional monitoring wells shall be installed, one located near the existing detention ponds and the other located proximate and northeast of the future relocated detention ponds for Phase 3. The same monitoring as specified in the Watkins-Johnson Monitoring Report for the existing wells shall be conducted (depth of wells shall be sufficient to reach year-around groundwater levels with 300 feet being the maximum necessary depth);
 - c. Water quality sampling at the headwaters of the tributary to Gold Gulch (located directly south of Limestone Brook) shall be conducted in the same fashion as other surface water quality monitoring on the site;
 - d. The quarry's hydrologic consultant shall include in the twice/year reports, hydrographs of groundwater level measurements that compare current groundwater levels with the levels shown in the previous report.
7. Groundwater level and water quality monitoring, analyses and reporting shall be increased to a quarterly frequency (August, November, February, May) if documented trends of deterioration of surface water or groundwater are not successfully remediated by the quarry over a two year period. This more frequent monitoring shall determine if a public health concern may be created through continued quarrying activities. In this case, all quarrying activities may be required to cease by the County until it can be demonstrated that the threat to public health no longer exists (Mit. #3).

E. Days and Hours of Operation

1. All mining and processing activities at the site shall be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Saturday. Maintenance operations may be conducted at any time.
2. All shipping activities shall normally be confined to between the hours of 6:00 A.M. and 8:00 P.M., Monday through Friday.
3. Blasting activity shall be confined to between the hours of 7:30 A.M. and 6:00 P.M.
4. Twenty (20) exceptions to III.E.2 for the off hour operations of the asphalt plant are allowed without prior approval of the Planning Director. An additional 10 exceptions to Condition III.E.2 per year may be granted at the discretion of the Planning Director for off-hour operations Monday

thru Friday, and 10 additional exceptions for Saturday (daytime) operations for a maximum of 40 exceptions ~~per year~~. These off hour operations are authorized for the quarry providing that (Mit. #5 and Mit. #A.1):

- a. Off hours shall be defined as those hours that are not included in the normal hours of operation and shipping authorized by this permit. One off hour operation shall be defined as one night or one weekend day.
 - b. In order to obtain approval for 20 additional off hours operations at the discretion of the Planning Director (for a maximum total of 40 exceptions per year), the quarry operator shall submit a letter to the Planning Director demonstrating the need for the additional off hours work and the quarry operator's ability to adequately address any noise, odor, or other related complaints by local residents.
 - c. The Quarry shall **keep** a list of local residents who request notification of off-hours operations. These neighbors shall be notified prior to the operation as soon as practical
 - d. A log of off-hour operations shall be kept and included in the annual report including days and hours of operation and the size, number and destination of haul trucks required.
 - e. Off hour Asphalt operation shall be limited to public agency projects only.
 - f. This amendment of off-hour operations shall be reviewed by the Planning Commission during the three-year review of the mining operation, and within one year of this Mining Approval Amendment. The Planning Department staff shall report back to the Planning Commission regarding the success of mitigations for truck noise and asphalt odor associated **with** off-hour operations.
5. To reduce noise levels of the asphalt plant and truck traffic for off-hour operations, the Quarry shall construct and/or implement the following improvements (Mit. #5 and Mit. #A.1 and Mit. #B.):
- a. Construction and permanent maintenance of noise baffling or some other type of noise reduction barriers on the dust collector exhaust system.
 - b. Installation and permanent maintenance of a muffler device on the pneumatic system that operates the hopper flaps.
 - c. Install all other recommendations of acoustical engineer noise reports to reduce decibel level for surrounding neighborhood.
 - d. The quarry operator shall monitor and keep records of speed and noise levels of trucks from the quarry entrance at Empire Grade to the intersection of Bay Avenue and Highway 1 (Mission Street) during off-hour operations. This shall be accomplished using a vehicle equipped with a radar detector and a decibel meter. The vehicle shall set up at random locations along the entire route to ensure compliance. The records shall be made available to the County at the close of each paving project, and shall be submitted to the Planning Department as part of the quarry's annual report.
 - e. The quarry shall post notices in the community of each upcoming off hour operation.

Notices shall inform readers of the range of dates within which the operation may begin, the possible hours of operation, the expected duration of the operation and shall display the appropriate telephone number at the Planning Department to which to report complaints of excessive noise. The notices shall be posted on Bay Street at each of four intersections: Nobel/Iowa, Escalona, King, and Mission, 48 hours in advance of the projected start of the operation.

- f. Notices of off-hour operations shall be mailed to the City of ~~Santa~~ Cruz Public Works and Planning Departments, and the County of Santa ~~Cruz~~ Planning Department, 48 hours in advance of the projected start date.
 - g. If widespread complaints are received from residents within the Bay Street area (with consideration of acoustical and vehicle speed data provided by the quarry operator) further approvals by the Planning Director for off-hour operations will not be granted. The Community Response to Noise chart (ISO R1996) will be used as guidance to determine the number and nature of complaints that represent a significant impact.
6. To reduce objectionable odors during off hour operations the applicant shall use:
- a. A silo load-out and weigh system to load trucks, which includes a fugitive fumes recovery system which shall be interlocked so as to only allow the loading of trucks while the recovery system is operating. The fugitive fumes recovery system shall be maintained in good working order (Mit. #C).
 - b. Cover trucks loaded with asphalt

F. Insurance.

- 1. Verification of insurance coverage in compliance with the requirements of the County Quarry regulations shall be provided within three (3) months of the issuance of this permit and with each annual report.

G. Roads and Transportation

- 1. The applicant shall maintain the entrance roads reasonably free of dust and debris resulting from the site operations and shall load trucks in such a manner as to minimize spillage on haul routes.
- 2. The applicant shall maintain an affirmative action program to inform all truck drivers of their obligation to comply with State and Federal vehicle noise regulations and State and local traffic regulations, and to encourage programs of vehicle safety and driving courtesy.
- 3. Within one (1) year of the abandonment of Quarry Bend Road, the ends of the road shall be closed off with solid wood gates, fencing, earthen berms, and landscaping as required to discourage public access while providing adequate fire protection access in accordance with a plan to be approved by staff or approved plans on file.
- 4. Within one (1) year of the issuance of this permit, internal haul routes for stripping and mining materials shall be developed so that public roads shall not be required to move materials from one part of the site to another.

5. The private access roads leading to San Lorenzo Avenue and Empire Grade shall be maintained at a minimum paved width of 16 feet.
6. Gates approved by the State Division of Forestry and the Felton Fire Protection District shall be maintained at the property entrances from Empire Grade and San Lorenzo Avenue to prevent unauthorized public access through the site during non-working hours.
7. Off-road vehicles shall be prohibited on the property except those operated by company employees.
8. Nighttime and off-hour operations shall use the Empire Grade entrance to the Quarry only. No use of San Lorenzo Avenue will be allowed except during the daytime hours listed in Condition III.E.2. (amended) above.
 - a. Truck shipment from the Quarry shall be limited to the existing routes along Empire Grade and San Lorenzo Avenue. Use of Highway 9, south to Santa Cruz, and Graham Hill Road for destination in Santa Cruz and beyond is not permitted.

H. Revegetation, Screening, Erosion Control

1. All unvegetated disturbed areas not actively involved in the excavation or processing activities shall be seeded with grass at the start of the rainy season each year to establish a ground cover to reduce visibility and erosion potential.
2. Within one (1) year of the issuance of this permit the banks of Limestone Brook, including the side slopes extending up to the entrance road and the hot-batch plant, shall be planted in native brush and tree species to maximize the shading of the canyon and waterways and to minimize the erosion potential.
3. The entrance from Empire Grade and the ends of Quarry Bend Road shall be provided with screen plantings to minimize visibility into the property and the view of any excavation areas.
4. The benches on final slopes shall be provided with a planting medium composed of topsoil and compost removed from excavation areas mixed into a minimum 1 foot thick layer of porous gravel material, and a similar planting medium shall be drifted down the face of the cut slopes. The final slopes shall be seeded with native plant species and planted with tree seedlings. Adequate fertilization and irrigation shall be provided for a minimum of 2 years to ensure proper establishment and growth of plants.
5. The operator shall institute a yearly control program of non-native plant species, including Acacia, Scotch Broom, Pampas Grass, and Periwinkle.
6. **All** revegetation/reclamation shall be implemented in accordance with the requirements of Exhibits M, N, and O of this Amended Mining Approval.

I. Signing

1. Within three (3) months of the issuance of this permit, the signing requirements of the Quarry Regulations Ordinance shall be completed. The property shall also be posted to prohibit the use of

off-road vehicles and firearms.

J. Bonding

1. The quarry shall maintain an adequate financial assurance to ensure reclamation in accordance with the approved Reclamation Plan and compliance with the County's Mining Regulations and SMARA.

K. Excavation and Grading

1. Final side-slopes shall be stepped or scarified to provide soil and vegetation retention, and the thickest feasible blanket of overburden strippings shall be replaced on the benches and drifted down the side-slopes to provide for groundwater retention and establishment of vegetation.
2. Excavations shall maintain a setback of 50 feet from the property line measured in a horizontal plane from the property boundary (excavations may thereby extend closer to the property line where the site rises up from the property boundary), except as amended herein.
3. Prior to any relocation of the entrance road descending from Empire Grade, the applicant shall submit detailed engineering design plans for the new road placement prepared by a registered civil engineer and obtain amendment of this permit by the Planning Commission. Excavations where physically possible shall take place behind a barrier formed by the entrance road to protect the adjacent Forest Lakes development from the noise and visibility of operations. Excavations adjacent to the access road shall not be below the level of the road for the first 50 feet and then shall follow the configuration for final slopes as specified above.
4. Prior to any excavations west of Limestone Brook below an elevation of 900 feet, the operator shall submit revised drainage plans to be approved by County staff. Excavations on site shall not be below the 700 foot elevation.
5. Prior to excavating or undermining the present utility easement on Quarry Bend Road, the operator shall relocate the easement and telephone lines to the satisfaction of the Pacific Telephone Company and Pacific Gas and Electric Company.
6. Topsoil and vegetation removed during the quarrying process shall be stockpiled in a level area and to minimize sight from adjacent public roads. The stockpiles shall not exceed 60 feet in a horizontal dimension or 15 feet in height and adequate drainage protection shall be provided.
7. The existing fill operation at the head of Limestone Brook shall be conducted in accordance with the provisions of the permit from the California Department of Fish and Game.
8. All final excavations shall provide for positive surface drainage to prevent the ponding or accumulation of storm waters or natural seepage except in the planned drainage pond facilities.
9. In the event that significant paleontological or archaeological finds are made on the quarrying site, all operations shall be halted within 200 feet of the find and the Planning Department Director shall be immediately notified. Operations may be resumed in three working days following notification of the Planning Department unless specific request is made to allow additional time for proper excavation of fossils or artifacts in accordance with the provisions of the County's Native American

Cultural Sites Ordinance.

10. The operator shall endeavor to minimize the surface area of the quarry which is disturbed at any given time to the greatest extent compatible with mining and marketing requirements.
11. No excavation or disturbance of Assessor's Parcel Number 62-181-08 shall be allowed during the time the Open Space Easement Contract (OS-6-72) with the County is in force.
12. All mining of the Active Mining Area of the south pit workface shall be limited to a maximum interim gradient of 3/4:1 (horizontal:vertical). In some cases, slopes of 1/2:1 will be acceptable if first approved by both the quarry's geologic consultant and County Planning Staff (Mit. #1).
13. Inclinometers with surface reading capability shall be installed behind the cut for Phase 1 mining (approximately 200 feet northwest of the slide area) to detect any slope movement. Monitoring and recording of inclinometer readings shall be done once each quarter (every three months) by the quarry's geologic consultant. The quarry's geologic consultant shall submit the results of each reading to County Planning Staff on an annual basis with the Quarry's annual report unless a significant movement occurs. The frequency of these readings shall be increased if deemed warranted by evolving site conditions as determined by the County Planning Geologist (Mit. #1). Should a significant slope movement occur, or should the monitoring indicate a significant change in the inclinometer readings, the geologic consultant must contact the County both verbally and in writing of the change(s) within 48 hours and shall make recommendations to address the observed changes.
14. The quarry's consulting geologist shall observe the quarry operation on a minimum basis of once/quarter (every three months) and report on the quarry program on an annual basis. The report shall be submitted to County Planning within 20 days of the quarry's annual report and shall (Mit. til):
 - a. Document the geologic structure exposed by the quarry as shown on the geologic map of the March 17, 1993, Rogers/Pacific report;
 - b. Discuss the success of the quarry's activities regarding stability and make recommendations about continuing operations;
 - c. Discuss the results of the inclinometer readings conducted over the year, including the consultant's supervision of quarry personnel's monitoring of the inclinometers. The quarry shall immediately notify the County Planning Department if and (sic) adverse geologic conditions become exposed during the monitoring or inspections of quarry activities and coordinate with County Planning on the remedial action to be taken.
15. All mining excavations shall be conducted in accordance with the recommendations of the "Review of Mining Progression Plans, Phases 1 through 5" by Rogers/Pacific, dated April 29, 1993 (Mit. #1).
16. Prior to commencing a new mining phase, the quarry's geologic consultant shall conduct a "Phase Closure Inspection" and submit in report form the results of the inspection to County Planning. The report shall discuss the same issues as required by the annual report for geologic issues (Mit. #1).

L. Mitigation Monitoring Plan

The mitigation measures listed under this heading have been incorporated into the Conditions of Approval for this project in order to mitigate or avoid significant effects on the environment. As required by Section 21081.6 of the California Public resource code, a monitoring and reporting program for the above mitigations is hereby adopted as a condition of approval for this project. This monitoring program is specifically described following each mitigation measure listed below. The purpose of this monitoring is to ensure compliance with the environmental mitigations during project implementation and operation. Failure to comply with the Conditions of Approval, including the terms of the adopted monitoring program, may result in permit revocation pursuant to Section 18.10.462 of the Santa Cruz County Code. All mitigation monitoring shall be documented in the required Annual Report. If the next quarterly inspection following the submittal of the Annual Report shows non-compliance with any provision of this Mining Approval Amendment, enforcement actions in accordance with the County Code and SMARA will be implemented to achieve compliance.

1. Mitigation Measure: Condition II.H.10 (Air Quality)

Monitoring Program: Planning Staff review of communication submitted to the Monterey Bay. Unified Air Pollution Control District contained in the annual reports as required by Condition II.H.10 and staff quarterly inspections will document compliance with this mitigation. Non-compliance with the air quality conditions required by the Air Pollution Control District will be documented in the annual reports. Remedial measures are the responsibility of the Air Pollution Control District.

2. Mitigation Measure: Condition III.C.8 through 11 (Surface Hydrology)

Monitoring Program: Planning staff review of the hydrology section of the required annual report (Condition II.H.8) prepared by the consulting hydrologist will document sampling of water discharge. Planning staff quarterly inspections will verify pump back up system, sediment pond cleaning and spoil placement and treatment condition requirements prior to commencement of each rainy season.

Mitigation Measure: Condition III.D.11 through 13 (Groundwater Protection)

Monitoring Program: Planning staff review of hydrology section of the required annual reports (Condition II.H.) prepared by the consulting hydrologist and staff quarterly inspections will verify compliance with this mitigation. Compliance with this mitigation will be documented by the consulting hydrologist's report and included in the annual report with recommendations for remedial measures, if required.

Mitigation Measure: Condition II.H and Exhibit "O" of the Amended Mining Approval (Revegetation/Reclamation Plan)

Monitoring Program: Planning Staff review of the revegetation report section of annual reports as required by Condition II.H and quarterly inspection will document compliance with Exhibits "M", "N", and "O" of the Amended Mining Approval. A "Wildlife Monitoring Plan" by Greening Associates, September 1993 has been reviewed and approved by Planning staff and included in the Amended Mining Approval as Exhibit "O". The success criteria defined in the Wildlife and Revegetation Monitoring plans will be documented in each annual report by the consulting

biologist with remedial measures if non-compliance is noted

5. Mitigation Measure: III.E.1 through 4(d) (Noise Monitoring)

Monitoring Program: Planning staff review of the noise monitoring reports in the required annual reports (Condition II.H.) and staff quarterly inspections will document compliance with this mitigation.

6. Mitigation Measure: Condition III.K.12 through 15 (Slope Stability)

Monitoring Program: Planning Staff review of the geology section of the required annual reports (Condition II.H.), prepared by the consulting geologist as conditioned and staff quarterly inspections will document compliance with this mitigation. Compliance with this mitigation will be documented by the consulting geologist's report and included in the annual report with recommendations for remedial action, if required.

7. Mitigation Measure: Condition III.E.5 (Off hour operations)

Monitoring Program: Planning Staff review of the noise and speed records included in the annual reports and ongoing review of complaint records will document compliance with this mitigation.

**ADDITIONS TO STAFF REPORT FOR
PERMIT NO. 74-633-PQ**



MONTEREY BAY

Unified Air Pollution Control District
serving Monterey, San Benito, and Santa Cruz counties

AIR POLLUTION CONTROL OFFICER
Douglas Quetin

24580 Silver Cloud Court • Monterey, California 93940 • 831/647-9411 • FAX 831/647-8501

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Coutista

John Myers
King City

Ellen Pine
Santa Cruz
County

October 1, 2004

County of Santa Cruz, Planning Dept
701 Ocean St., 4th Floor
Santa Cruz, CA 95060

Attention: David Carlson

Subject: Fugitive Dust Emissions from the Granite Construction Inc. (GCI) Felton Quarry

Dear Mr. Carlson:

I am writing to you to summarize my investigation into fugitive dust emission issues at the Felton Quarry. On Sept. 13 I met with several residents who live along Bonnywood Dr. which is located on the hill overlooking the secondary crushing & screening plant at the facility. The residents showed me some of the dust impacts around their homes. There was a light layer of dust on various surfaces including patio furniture, windows, tables and garaged vehicles. The dust is definitely present, but doesn't seem substantially more than one would expect from homes located in rural settings, plus we have no actual evidence of the origin(s) of that dust. Still, it's probable and to be expected that the quarry is contributing its share, although we are unaware of evidence suggesting that it is the sole source.

Following my meeting with the residents I met with Dave Locatelli at the quarry. He showed me many of the modifications at the facility which were intended to limit fugitive dust emissions including:

- Adding water sprays to the fines conveyor, primary screen and cone crusher
- Using scrapers to limit carryback of material on the conveyors
- Enclosing a portion of the pep screen
- Installing a pipe along the access road which sprays water across the road at varying intervals

Some of their procedural changes include:

- Watering roads ½ hr before equipment starts up
- Spraying the wall of the quarry with the water truck
- Washing down the secondary crushing and screening plant weekly
- Pushing rock off the top of the quarry earlier in the year during the rainy season so that the rock can be pushed from a lower bench during drier seasons.
- Mixing the rock with wetter material from natural springs on the quarry face before pushing it off the bench

Future modifications include:

- Improving the scraper on the conveyor coming from the pep screen
- Adding a water mister or water sprayer on the conveyor below the cone crusher
- extending the water line to the access road around the pond and up to the primary crusher.

Ideas for further fugitive dust reductions:

- Apply lignin sulfonate on roads that are not frequently used
- Apply hydroseed to exposed surfaces that are not frequently disturbed
- Add water sprayers on the hopper at the primary crusher
- Address the release of fugitive dust from the primary and pep screens on windy days
- Add another water sprayer at primary screen conveyor
- Mix a surfactant with the water sprayed onto the conveyors
- Address the release of fugitive dust when disturbing the stock piles on windy days - especially the fine material piles.

During this investigation I did not observe any violations of the Air District's permit conditions or rules; that includes the Air District's public nuisance rule, #402. If the dust impacts had been significant enough to be considered a public nuisance violation, the result would be that GCI would be expected to take steps to mitigate the dust issue right away, and failing that, the Air District would initiate enforcement action to abate the nuisance. It appears that GCI is taking the dust issue seriously and has already enacted a number of remedies beyond what is required by their Air District permits, thereby mitigating potential public nuisance due to dust. These permits require that dust releases be within certain limits, but they do not require that zero dust is released by the quarry.

It is important that the fugitive dust issue remain high in the consciousness of GCI staff even after the permit review process is over. It may help to have these dust control measures incorporated into the County's enforceable conditions in the quarry's permit for future use by GCI or any other future operators of the quarry.

If I can be of further assistance to you including coordinating inspections at the quarry, please contact me at 760-2178.

Sincerely:



David Frisbey
Air Quality Compliance Inspector II



EDWARD L. PACK ASSOCIATES, INC.

2177 NORTHAMPTON DR.
SAN JOSE, CA 95124

Acoustical Consultants

TEL: 408-723-8900
FAX: 408-723-8095

September 23, 2004
Project No. 36-013-2

Mr. Steve Grace
Granite Construction Company
P.O. Box 720
Watsonville, CA 95077

Subject: Noise Monitoring of Quarry Operations, Granite Construction Company
Felton Quarry, San Lorenzo Avenue, Santa Cruz County

Ref. (a): Santa Cruz County Zoning Ordinance, Article 13, Chapter 13.10, Section
13.10.345.5, "Noise", 1994

Rei. (b) (former) Santa Cruz County Code, Industrial Performance Standard, Section
13.10.445, as Applied to Mining Operations

Dear Mr. Grace:

This report presents the results of noise monitoring of quarry operations at the Felton Quarry located at the end of San Lorenzo Avenue in Santa Cruz County. The purpose of the monitoring was to determine the noise exposures at the Yates residence at 240 Bonnywood Way generated by quarry operations. This home is situated on the hillside above the quarry. Also included in this study are noise measurement data at two other locations in the quarry vicinity. The noise levels and noise exposures were evaluated against the noise standards of the Santa Cruz County Zoning Ordinance, Re: (a), and the Industrial Performance Standards of the former: Santa Cruz County Code that is imposed on the quarry through the Use Permit. The analysis of the noise level measurements indicates that the noise levels and noise exposures generated by the quarry operations are within the limits of the standards. Mitigation measures will not be required.

Sections I and II of this report contain a summary of our findings, and site and operation descriptions, respectively. Section III contains a description of the analytical methodologies and evaluations. Attached hereto are Appendices A and B, which include the descriptions of the applicable standards, definitions of the terminology, descriptions of the acoustical instrumentation used for the field survey, and the on-site noise measurement data and calculation tables.

I. Summary of Findings

A. Noise Standards

The noise assessment results presented in the findings were evaluated against the standards of the Santa Cruz ~~County~~ Zoning Ordinance which references the Land Use Compatibility Chart of ~~the~~ County of Santa Cruz General Plan (Noise Element). The noise standards utilize the Day-Night Level (DNL) 24-hour noise descriptor to define community noise impacts, and specifies that exterior noise exposures at residential land uses are limited to 60 decibels (dB) DNL. The DNL is a time-weighted average noise exposure descriptor that penalizes noise created at night by 10 dB and is the most common method used to describe community noise impacts and environments worldwide. The DNL divides the 24-hour day into the daytime (7:00 a.m. - 10:00 p.m.) period and the nighttime (10:00 p.m. - 7:00 a.m.) period.

The DNL is calculated using hourly average (L_{eq}) noise levels that are measured throughout the course of the 24-hour day. The 10 dB penalty is added to the nighttime noise levels before the daytime and nighttime noise levels are averaged. The DNL is used to determine the long-term noise exposure and the related health effects from noise exposure. It is widely demonstrated that short-term, intermittent or spurious noise sources do not have significant negative effects on people.

If a noise source is constant *over* the 24-hour period, the DNL will be 6 dB higher than the instantaneous (measured dBA) sound level. For example, if a motor runs for 24-hours and is measured to emit 60 dBA of noise, the DNL will be 66 dB. However, if the motor runs for only the daytime hours, the DNL will be 58 dB. If the motor runs for only the nighttime hours, the DNL will be 66 dB.

The combining of noise levels is not simple arithmetic. Decibels we added (or subtracted) using the following methodology:

$$\text{Sum} = 10 \log_{10} (10^{SL1/10} + 10^{SL2/10} \dots)$$

Thus: two sources of the same level generate a sound level 3 dB higher than o x of the sources. For instance, 60 dB + 60 dB = 63 dB. When two sources are 10 dB apart, the lower source does not add to the higher source. 60 dB + 50 dB = 60 dB.

A 3 dB change in the noise environment is "just perceptible", while a 5 dB change is "noticeable". A 10 dB change is considered twice or half as loud. Doubling the number of noise sources increases the sound level by 3 dB, while it takes a 10-fold increase in the number of sources to increase the sound levels by 10 dB.

The Use Permit of the Felton Quarry also restricts noise emission levels by applying the limits of the former Santa Cruz County Code (Industrial Performance Standard, Section 13.10.445), which was applicable at the time of the permit process. The permit limits quarry-generated noise to 60 dBA for no more than 15 minutes during any hour of operation at the property boundary. Statistically, a limit of 15 minutes out of an hour is defined as the L_{25} value, that is, the noise level exceeded 25% of the time (15/60). L_{25} values are measured directly by the sound measuring instruments.

The hourly L_{25} is typically about 1 decibel higher than the hourly L_{eq} at the Yates' residence, but is approximately 11 dB lower along Empire Grade. This indicates that the noise sources measured at the Yates' residence are fairly constant within the hourly periods, whereas, the noise levels along Empire Grade vary considerably, as evidenced by the intermittent passbys of vehicles.

Table I on page 4 is a decibel scale relating A-weighted sound levels to common noise sources. Note that the decibel levels in the table ~~we~~ instantaneous values and *are* not Day-Night Levels

- A -

TABLE I

The A-Weighted Decibel Scale. Human Response,
and Typical Noise Sources

<u>Noise Level. dBA</u>	<u>Human Response</u>	<u>Noise Source</u>	
120-150+	Painfully Loud	Scenic Boom	(140 dBA)
103-120	Physical Discomfort	<i>Discotheque</i>	(115 dBA)
		Motorcycle @ 20 A.	(110 dBA)
		Power Mower	(100 dBA)
70-100	Annoying	Train Horn at 50 ft.	(96 dBA)
		Food Blender	(90 dBA)
		Jet Plane at 1000 ft.	(85 dBA)
		Freeway @ 100 ft.	(80 dBA)
50-70	Intrusive	Average Traffic at 100 ft.	(70 dBA)
		Vacuum Cleaner	(70 dBA)
		Loud Speech	(65 dBA)
		Car Idle at 15 ft.	(60 dBA)
0-50	Quiet	Normal Conversation	(50 dBA)
		Refrigerator	(45 dBA)
		Whispering	(35 dBA)
		Leaves Rustling	(10 dBA)
		Threshold of Hearing	(0 dBA)

The noise levels and noise exposures shown below represent the noise environments during "typical day" quarry operations.

A. Exterior Noise Exposures

Yates Residence

The noise exposure at the Yates residence north of the quarry is 57 dB DNL. Thus, the noise exposure is within the 60 dB DNL limit of the Santa Cruz County Zoning Ordinance standards.

The typical operating instantaneous noise levels from the quarry are in the 47 to 53 dBA range. The highest levels are up to approximately 56 dBA.

Fir Tree Point

A second measurement location was analyzed to compare the noise levels at other areas near the quarry. The second location, designated herein as "Fir Tree Point" is at a slightly lower elevation than the Yates residence, and is approximately 1,000 ft. to the southwest. This location has a direct line-of-sight to most of the quarry operations and is at the quarry property line. The noise exposure at Fir Tree Point is 47 d 3 DNL. Thus, the noise exposure is within the 60 dB DNL limit of the Santa Cruz County Zoning Ordinance standards.

The typical operating instantaneous noise levels from the quarry are in the 41 to 50 dBA range. The highest levels are up to approximately 54 dBA.

Empire Grade

- To compare typical traffic noise levels to the quarry noise levels, noise measurement were also made at 30 ft. from the centerline of Empire Grade at Bonnywood Way. The noise exposure generated by Empire Grade traffic is 62 dB DNL at 30 ft.

The following graph depicts the hourly average noise levels measured at the three monitoring locations and the resulting DNL noise exposure. The measurement period was from 8:00 a.m. on September 16th to 8:00 a.m. on September 17th. The first and last 7:00 a.m. data points are the same hours. The data indicate that the Empire Grade traffic noise levels and hourly noise distribution are typical of the area with the highest noise levels occurring during the commute periods and the lowest noise levels occurring during the late night/early morning hours. The noise levels at the Yates' home and at Fir Tree Point were fairly consistent with the Yates' property noise levels approximately 5 dB higher. An exception to this is from 3:00 p.m. to 7:00 p.m. when the sound levels were nearly identical.

On the days of the sound measurements, the quarry operated until 3:00 p.m. The quarry log indicates that the first customer truck entered at 7:07 a.m. and the last truck entered at 3:07 p.m. Subsequent to the last truck leaving, the facility was vacant, with the exception of a fuel truck that stayed until 4:00 p.m. and the asphalt burner maintenance staff working until approximately 5:00 p.m. The plant was shut down until 6:00 a.m. the following morning, where it is evident by the data that the noise environment increased not only from traffic but from the quarry also.

The disparity between the noise levels at the Yates' house and at Fir Tree Point during the 6:00 a.m. to 3:00 p.m. operational hours of the quarry are best explained by a greater exposure to a section of the quarry that is not exposed at Fir Tree Point. In addition, there appears to be some minor influence to the Yates' noise levels from other sources, such as activity at the Yates' home (noise from the kitchen is slightly audible at the rear deck monitoring location), and background traffic noise from Empire Grade. There was also a chain saw operating on a nearby property the morning of the 16th that was noticeable and the noise levels are included in the data.

The noise level difference between the Yates' home and Fir Tree Point from 7:00 p.m. to 4:00 a.m. was likely due to background traffic sources on Empire Grade and wildlife (crickets, *frogs*, etc.) sounds. It is interesting to note that there is a fairly consistent 5 dB difference between the noise levels at the Yates' home and at Fir Tree Point whether *or* not the quarry is in operation. This indicates that background noise (noise un-related to the quarry) has a greater influence at the Yates' home than at Fir Tree Point.

Granite Construction Felton Quarry Noise Levels

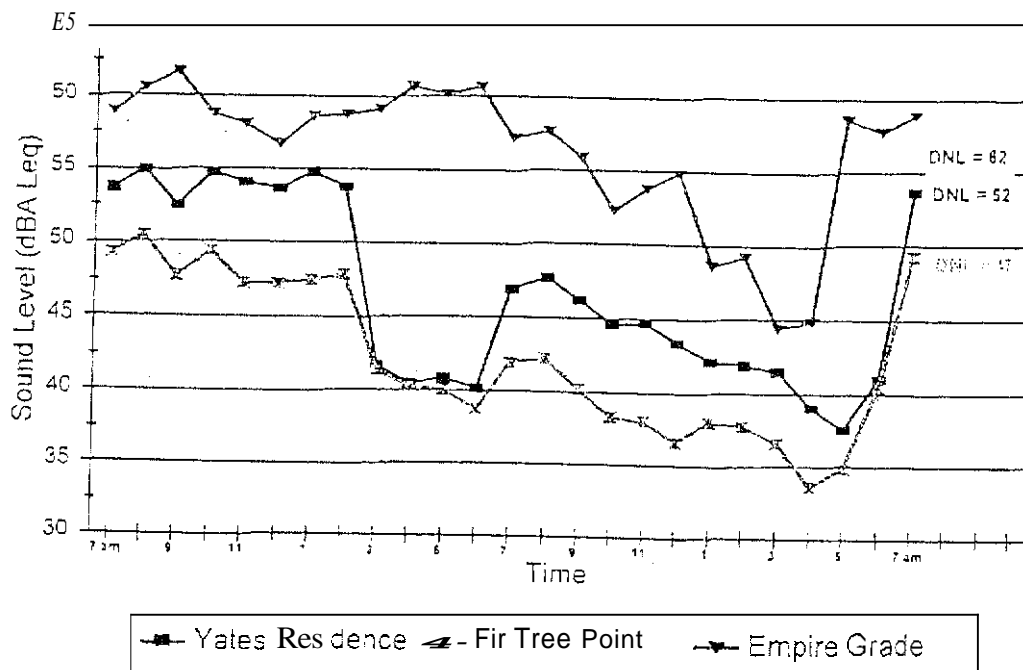


Table II, on the following page, provides the hourly L_{25} values measured at the Yates' residence over the 24-hour day. The noise level limit contained in the quarry's Use Permit is 60 dBA L_{25} . There were no exceedances of the Use Permit requirements.

TABLE II
Felton Quarry "L25" Exceedance Values

<u>Time Period</u>	
7:00 a.m. - 8:00 a.m.	55.2
8:00 a.m. - 9:00 a.m.	55.2
9:00 a.m. - 10:00 a.m.	53.4
10:00 a.m. - 11:00 a.m.	55.8
11:00 a.m. - 12:00 p.m.	55.0
12:00 p.m. - 1:00 p.m.	55.1
1:00 p.m. - 2:00 p.m.	55.7
2:00 p.m. - 3:00 p.m.	55.1
3:00 p.m. - 4:00 p.m.	42.0
4:00 p.m. - 5:00 p.m.	40.5
5:00 p.m. - 6:00 p.m.	40.2
6:00 p.m. - 7:00 p.m.	40.5
7:00 p.m. - 8:00 p.m.	49.1
8:00 p.m. - 9:00 p.m.	48.4
9:00 p.m. - 10:00 p.m.	46.6
10:00 p.m. - 11:00 p.m.	45.1
11:00 p.m. - 12:00 a.m.	45.4
12:00 a.m. - 1:00 a.m.	43.8
1:00 a.m. - 2:00 a.m.	42.7
2:00 a.m. - 3:00 a.m.	42.5
3:00 a.m. - 4:00 a.m.	42.2
4:00 a.m. - 5:00 a.m.	39.9
5:00 a.m. - 6:00 a.m.	38.0
6:00 a.m. - 7:00 a.m.	41.0

As shown above, none of the L_{25} values exceeded 63 dBA. Thus, the noise levels are in compliance with the noise standards contained in *the* Use Permit, as imposed from the former Industrial Performance Standards, Section 13.10.445 of the Santa Cruz County Code.

II. Site and Operation Descriptions

The Granite Construction Company Felton Quarry is located at the end of San Lorenzo Avenue in Santa Cruz County. The general area is primarily wooded, steeply sloping hillside. The site is hilly and the main area of the facility is approximately 300 ft. below the elevation of the Yates residence.

The Felton Quarry usually operates from 6:00 a.m. to 3:00 p.m. weekdays with the exception of the asphalt plant that can operate 24 hours per day, depending upon the demand for materials, as identified in earlier monitoring reports. Raw materials are quarried from a hillside above the crushing and batching area. Quarried rock is stored in piles in the southeastern portion of the site. Front end loaders distribute the raw material onto a conveyor system that takes the material off of the hillside and distributes the rock into the crusher and rock screens.

Material is separated through the screens, mixed and dumped into piles of sand, various sized rock and the asphalt drier. The asphalt material is then mixed with oil and sent by conveyor to the silos. Exhaust gases are sent to the bag house for filtering. Trucks enter the site from San Lorenzo Avenue, check in and load under the silos. The trucks then exit via the driveway back to San Lorenzo Avenue.

- 10 -

III. Analytical Methodologies

To determine the noise environment in the vicinity of the quarry, continuous recordings of the sound levels were made at three locations. Location 1 was on the rear deck of the Yates' home which overlooks the quarry facility. Location 2 as on a high point that also overlooks the quarry but is to the southwest of the Yates' home. The point is identified by a single tall fir tree situated atop the point. Location 3 was 30 ft. from the centerline of Empire Grade directly across Empire Grade from Bonnywood Way. The sound level measurements were made on September 16-17, 2004 for a minimum continuous 24-hour period and were recorded and processed using Larson-Davis LDL 812 Precision Integrating Sound Level Meters. The meter yields, by direct readout, a series of descriptors of the sound levels versus time, as described in Appendix A. The results of the on-site noise measurements are shown in the data tables in Appendix B. The measured descriptors included the L_2 , L_5 , L_{25} , and L_{50} , i.e., those levels exceeded for 2%, 9%, 25%, and 50% of the time. Also measured were the maximum and minimum levels and the continuous equivalent-energy levels (L_{eq}), which are used to calculate the DNL's.

As shown in the data tables and the graph on page 7, the L_{eq} 's at the Yates residence ranged from 40.2 to 55.0 dBA during the daytime and from 37.6 to 44.7 dBA at night. The L_{eq} 's during the quarry operational hours of 6:00 a.m. to 3:00 p.m. ranged from 41.1 to 55.0 dBA.

The L_{eq} 's at Location 2, Fir Tree Point, ranged from 39.8 to 50.5 dBA during the daytime and from 33.6 to 40.5 dBA at night. The L_{eq} 's during the quarry operational hours of 6:00 a.m. to 3:00 p.m. ranged from 40.5 to 50.5 dBA.

The L_{eq} 's at Location 3, 30 ft. from the centerline of Empire Grade, ranged from 55.9 to 61.7 dBA during the daytime and from 44.5 to 58.6 dBA at night.

- 11 -

To evaluate the noise exposures against the Santa Cruz County standards, the DNL's were calculated from the measured noise levels as a decibel average of the L_{eq} values for the daily time periods. The 10 dB nighttime weighting factor was applied to account for the increased human sensitivity to noise during these hours. The mathematical formula used to calculate the DNL is shown in Appendix B.

The results of the calculations reveal that the noise exposure at the rear deck of the Yates residence was 52 dB DNL. Thus, the noise exposure is within the limits of the Santa Cruz County Zoning Ordinance Standards.

The average hourly L_{eq} at the Yates' home from the hours of 7:00 a.m. to 3:00 p.m. (busiest hours of the quarry) was 54.0 dBA. Assuming that all of the noise measured at the Yates' home was due to the quarry and applying the 54.3 dBA L_{eq} value to an entire 24-hour period, in other words, non-stop quarry operations for 24 hours, the DNL would be 60 dB. Therefore, to exceed the 60 dB DNL limit of the Santa Cruz County Zoning Ordinance, the quarry would need to operate at a level beyond its abilities.

The noise exposure at measurement Location 2, Fir Tree Point, was calculated to be 47 dB DNL. Thus, the noise exposure at this area of the quarry property boundary is within the limits of the Santa Cruz County Zoning Ordinance standards.

The noise exposure at measurement Location 3, 30 ft. from the centerline of Empire Grade, was calculated to be 62 dB DNL.

The hourly L_{25} values measured directly by the sound measuring instruments ranged from 41.0 to 56.2 dBA during the 6:00 a.m. to 3:00 p.m. operational hours of the quarry. From 3:00 p.m. to 6:00 a.m., the L_{25} 's ranged from 38.0 to 45.1 dBA. The L_{25} noise levels are within the 63 dBA L_{25} limit imposed by the Industrial Performance Standards contained in the Use Permit.

As noise generated by the quarry operations are within the limits of Santa Cruz County standards under typical and worst-case 24-hour operations, mitigation measures will not be required.

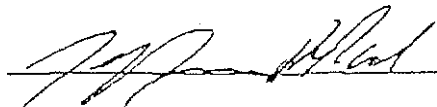
- 12 -

This report presents the results of the noise assessment study of the operations of the Granite Construction Company Felton Quarry at the end of San Lorenzo Avenue in Santa Cruz County. The study findings for present conditions are based on field measurements and other data and are correct to the best of our knowledge. However, changes in activities, operations, equipment, noise regulations, or other future changes beyond our control may produce long-range noise results different than those reported herein.

If you have any questions or would like an elaboration of this report, please call me

Sincerely,

EDWARD L PACK ASSOC INC



Jeffrey K. Pack
President

Attachments: Appendices **A** and **B**

APPENDIX A

Noise Standards, Terminology and Instrumentation,

1. Noise Standards

A. Santa Cruz County Zoning Ordinance

Chapter 13.10 of the Santa Cruz County Zoning Ordinance, Section 13.10.345.5, references the use of the Land Use Compatibility Chart, Figure 6-1 of the County of Santa Cruz General Plan Noise Element.

The Noise Element standards of the County of Santa Cruz General Plan identify a "Normally Acceptable" exterior noise exposure compatibility level of 60 dB Day-Night Level (DNL) for residential, hotel, motel, school, library, museum; hospital, church, office, commercial and professional business land use. Outdoor sports, recreation, parks and playgrounds are limited to 65 dB DNL. Industrial, manufacturing and agriculture land uses are limited to 70 dB DNL.

The noise standards are applicable to the receiving *land* use,

2. Terminology

A. Statistical Noise Levels

Due to the fluctuating character of urban traffic noise, statistical procedures are needed to provide an adequate description of the environment. A series of statistical descriptors have been developed which represent the noise levels exceeded a given percentage of the time. These descriptors are obtained by direct readout of the Community Noise Analyzer. Some of the statistical levels used to describe community noise are defined as follows:

L_1	-	A noise level exceeded for 1% of the time
L_{10}	-	A noise level exceeded for 10% of the time, considered to be an "intrusive" level.
L_{50}	-	The noise level exceeded 50% of the time representing an "average" sound level.
L_{90}	-	The noise level exceeded 90 % of the time, designated as a "background" noise level.
L_{eq}	-	The continuous equivalent-energy level is that level of a steady state noise having the same energy as a given time-varying noise. The L_{eq} represents the decibel level of the time-averaged value of sound energy or sound pressure squared; and is used to calculate the DNL and CNEL.

B. Day-Night Level (DNL)

Noise levels utilized in the standards are described in terms of the Day-Night Level (DNL). The DNL rating is determined by the cumulative noise exposures occurring over a 24-hour day in terms of A-Weighted sound energy. The 24-hour day is divided into two subperiods for the DNL index, i.e., the daytime period from 7:00 a.m. to 10:00 p.m., and the nighttime period from 10:00 p.m. to 7:00 a.m. A 10 dBA weighting factor is applied (added) to the noise levels occurring during the nighttime period to account for the greater sensitivity of people to noise during these hours. The DNL is calculated from the measured L_{eq} in accordance with the following mathematical formula:

$$DNL = [(L_d + 10 \log_{10} 15) + (L_n + 10 + 10 \log_{10} 9)] - 10 \log_{10} 24$$

Where:

- L_d = L_{eq} for the daytime (7:00 a.m. to 10:00 p.m.)
- L_n = L_{eq} for the nighttime (10:00 p.m. to 7:00 a.m.)
- 24 indicates the 24-hour period
- & denotes decibel addition.

C. A-Weighted Sound Level

The decibel measure of the sound level utilizing the "A" weighted network of a sound level meter is referred to as "dBA". The "A" weighting is the accepted standard weighting system used when noise is measured and recorded for the purpose of determining total noise levels and conducting statistical analyses of the environment so that the output correlates well with the response of the human ear.

3. Instrumentation

The on-site field measurement data were acquired by the use of one or more of the sound analyzer listed below. The instrumentation provides a direct readout of the L exceedance statistical levels including the equivalent-energy level (L_{eq}). Input to the meters were provided by microphones extended to a height of 5 ft. above the ground. The "A" weighting network and the "Fast" response setting of the meters were used in conformance with the applicable standards. The Larson-Davis meters were factory modified to conform with the Type 1 performance standards of ANSI S1.4. All instrumentation was acoustically calibrated before and after field tests to assure accuracy.

Bruel & Kjaer 2231 Precision Integrating Sound Level Meter

Larson Davis LDL 812 Precision Integrating Sound Level Meter

Larson Davis 2900 Real Time Analyzer

APPENDIX B

Noise Measurement Data and Calculation Tables

DNL CALCULATIONS									
36-013-2									
FILE:	FELTON QUARRY NOISE MONITORING								
PROJECT:	9/16-17/2004								
DATE:	QUARRY OPERATIONS								
SOURCE:	Yates Residence								
LOCATION 1	LOCATION 2								
d to Source =	d to Source =								
TIME	Leq	10 ¹ eq/10	TIME	Leq	10 ¹ eq/10				
7:00a.m	53.7	234422.9	7:00a.m	49.3	85113.8				
8:00 a.m.	55.0	316227.8	8:00 a.m.	50.5	112201.8				
9:00a.m.	52.5	177827.9	9:00a.m.	47.7	58884.4				
10:00a.m.	54.8	301995.2	10:00a.m.	49.4	87096.4				
11:00 a.m.	54.1	257039.6	11:00 a.m.	47.2	52480.7				
12:00noon	53.7	234422.9	12:00noon	47.2	52480.7				
1:00p.m.	54.8	301995.2	1:00p.m.	47.4	54954.1				
2:00 p.m.	53.8	239883.3	2:00 p.m.	47.8	60256.0				
3:00 p.m.	41.8	15135.6	3:00 p.m.	41.4	13803.8				
4:00 p.m.	40.5	11220.2	4:00 p.m.	40.3	10715.2				
5:00 p.m.	40.9	12302.7	5:00 p.m.	40.1	10232.9				
6:00 p.m.	40.2	10471.3	6:00 p.m.	38.8	7585.8				
7:00 p.m.	46.9	48977.9	7:00 p.m.	42.0	15848.9				
8:00 p.m.	47.7	58884.4	8:00 p.m.	42.3	16982.4				
9:00 p.m.	46.2	41686.9	9:00 p.m.	40.2	10471.3				
10:00 p.m.	44.6	28840.3	10:00 p.m.	38.3	6760.8				
11:00 p.m.	44.7	28840.3	11:00 p.m.	38.0	6760.8				
12:00midnt	43.4	29512.1	12:00midnt	36.6	6309.6				
1:00 a.m.	42.2	21877.6	1:00 a.m.	38.0	4570.9				
2:00 a.m.	42.0	15848.9	2:00 a.m.	37.8	6025.6				
3:00 a.m.	41.6	14454.4	3:00 a.m.	36.7	4677.4				
4:00 a.m.	39.1	8128.3	4:00 a.m.	33.6	2290.9				
5:00 a.m.	37.6	5754.4	5:00 a.m.	34.9	3090.3				
6:00 a.m.	41.1	12882.5	6:00 a.m.	40.5	11220.2				
SUM=		2262493.6	SUM=		649108.3				
Ln=		42.7	Ln=		46.4				
Daytime Level=	63.6		Daytime Level=	58.2					
Nighttime Level=	62.2		Nighttime Level=	57.1					
DNL=	52		DNL=	47					
24-Hour Leq=	50.1		24-Hour Leq=	44.7					

DNL CALCULATIONS				
CLIENT:	GRANITE CONSTRUCTION COMPANY			
FILE:	36-013-2			
PROJECT:	FELTON QUARRY NOISE MONITORING			
DATE:	9/16-17/2004			
SOURCE:	QUARRY OPERATIONS			
LOCATION 3	Empire Grade			
d to Source =	30 ft.			
TIME	Leq	10 ⁴ Leq/10		
7:00a.m.	58.9	776247.1		
8:00 a.m.	60.6	1148153.6		
9:00a.m.	61.7	1479108.4		
10:00a.m.	58.8	758577.6		
11:00 a.m.	58.1	645654.2		
12:00noon	56.7	467735.1		
1:00p.m.	58.6	724436.0		
2:00 p.m.	58.7	741310.2		
3:00 p.m.	59.1	812830.5		
4:00 p.m.	60.7	1174897.6		
5:00 p.m.	60.2	1047128.5		
6:00 p.m.	60.7	1174897.6		
7:00 p.m.	57.2	524307.5		
8:00 p.m.	57.7	588843.7		
9:00 p.m.	56.9	389045.1	SUM=	12453672.7
10:00 p.m.	52.3	169824.4	Ld=	59.2
11:00 p.m.	53.8	169824.4		
12:00mdnt	54.9	239883.3		
1:00 a.m.	48.6	309029.5		
2:00 a.m.	49.2	63176.4		
3:00 a.m.	44.5	28183.8		
4:00 a.m.	44.9	30903.0		
5:00 a.m.	58.6	724436.0		
6:00 a.m.	57.8	602559.6	SUM=	2357820.3
			Ln=	54.2
	Daytime Level=	71.0		
	Nighttime Level=	73.7		
	DNL=	62		
	24-Hour Leq=	57.9		

MEASURED L25 VALUES

LOCATION 1 Yates Residence

Limit = 60 dBA

TIME	L25
7:00a.m.	55.2
8:00 a.m.	56.2
9:00a.m.	53.4
10:00a.m.	55.0
11:00 a.m.	55.0
12:00noon	55.1
1:00p.m.	55.7
2:00p.m.	55.1
3:00p.m.	41.0
4:00p.m.	40.5
5:00p.m.	40.2
6:00 p.m.	40.5
7:00 p.m.	49.1
8:00 p.m.	48.4
9:03 p.m.	48.6
10:00 p.m.	45.1
11:00 p.m.	45.4
12:00midnight	43.8
1:00 a.m.	42.7
2:00 a.m.	42.5
3:00 a.m.	42.2
4:00 a.m.	39.9
5:00 a.m.	38.0
6:00 a.m.	41.0

October 12, 2004

David Carlson
Santa Cruz County Planning Department
701 Ocean St
Santa Cruz, CA 95060

Re: Granite Construction/Felton Quarry/Response to Conley Letter of 9-24-04, Yates Letter of 9-9-04, Palmer Letter of 9-06-04, Kate Smith Bill Whiting Letter of 8-25-04, Blease Letter of 9-3-04.

Dear Mr. Carlson:

We appreciate the concerns of the above referenced neighbors as regards our operation and have taken extreme measures in ensuring that this operation does not exceed or compromise those conditions as set forth by Santa Cruz County for the operation of this facility. On September 8, 2004 we met with these neighbors as well as others to listen to their concerns and discuss possible remedies to mitigate and/or lessen the extent of their issues, particularly as they relate to noise and dust. On September 16, 2004 we again met with approximately ~~six~~ neighbors to give them a tour of the facility while it was operational so that they could see for themselves how the facility operates and what activities are in-place to curb dust and noise. On October 6, 2004 we again met with six neighbors to discuss the results of the noise analysis conducted at their request.

In reviewing the above referenced letters, Granite Construction Company (Granite) would like to take this opportunity to respond to those issues raised:

It is indeed true that the operation has moved, in accordance with the approved plan, in a direction that has presented a more direct line of sight and thus an incremental addition of noise and dust. These issues are discussed below. However, to categorize the operation as "gargantuan" somewhat mischaracterizes and overstates the operation that is approved. In fact the operation that was approved in 1979 was producing approximately 300,000 tons per year. Production at this facility today stays in that general range. To say that Granite admits that the noise and dust are impacting them more than in the past should also be caveated with the fact that Granite is complying with a plan that the County has had approved for the last 11 years, was reviewed under the California Environmental Quality Act (CEQA) guidelines and has been known to property owners that the current progression of the operation would occur per that process and plan.

Monterey Bay Branch
P.O. Box 720
Watsonville, CA 95077
(831) 752-6100
FAX (831) 753-5121

Mr. David Carlson
October 12, 2004
Page Two:

1. Water Protection

In 1979 an Environmental Impact Report (EIR) was prepared which addressed the hydrologic/hydrogeologic concerns being raised per the referenced correspondence. Per that EIR it was determined that there would be no impact to the Bonnywood/McAman Drive homes, per the approved plan.

¹The quarry area and Ben Lomond Mountain are separated by the Shingle Mill Creek Shear Zone, which represents a major hydrogeologic discontinuity between the areas. The shear zone trends from east to west and separates the Bonny Doon weathered granite aquifer from the Quarry Bend Hill weathered granite aquifer and underlying fractured granite water-bearing zone within the quarry. Therefore, groundwater draining from springs in the west slope of the active quarry did not originate from the Bonny Doon weathered granite aquifer, which the private water-supply wells in the Bonny Doon area are completed in.

A hydrologic monitoring program has been conducted at the quarry since 1992 to provide the information necessary to quantitatively assess the potential long-term effects of mining operations at Felton Quarry on the quantity or quality of nearby groundwater and surface water resources. Groundwater level data collected during the past 13 years confirms that the groundwater flow regime has remained relatively stable at the quarry area with only minor fluctuations related to seasonal variations in precipitation and recharge, and the water quality data indicates that ongoing activities at the quarry are not degrading the overall quality of quarry area water resources.

Based on the past 13 years of monitoring data and because there is no active quarrying planned at or near the northern quarry boundary in the vicinity of the Shingle Mill Creek Shear Zone, there is no technical basis for concern that private wells located north of the quarry property in the Bonny Doon area will be impacted by the proposed mining.

The northern slope(s) in particular the reclaimed area as well as the center portion of the quarry, are not intended to be mined or disturbed further.

2. Noise

Quarry noise has been analyzed by a "County qualified" consultant, Jeff Pack-Edward Pack and Associates. Each analysis that has been performed has shown that the operation does not exceed or even comes close to exceeding County noise thresholds. Additionally, the backup alarms on the equipment do not operate continuously and in fact there are many times when this equipment (mobile equipment) is not operating. The 60

¹ Excerpt from Farrallon Consulting Technical memo: October 10, 2004: Attached

Mr. David Carlson
October 12, 2004
Page Three:

db threshold is a residential standard and as such this operation in no way has exceeded that threshold.

Mr. Yates fails to include in his letter that we (Granite) were unaware that in the past, one of our drivers was coming in early (5:30a.m.), watering down the facility and signing his time card at 6:30a.m. Additionally, after the meeting on the 8th, not all of our employees could be notified by 6:00am the next day to not commence (any) start-up of equipment before 6:00a.m. Hence, after Mr. Yates informed us of the 5:45 start-up noise, we directed all of our staff as regards the start-up/commencement of any equipment prior to 6:00a.m. Additionally, we made arrangements that day with our maintenance trucks to schedule maintenance of our equipment (rolling stock) between 4:00pm and 6:00pm. I called Mr. Yates that day to apologize for the incident, to let him know what had occurred, and our actions with our employees. He stated he was satisfied with our response. No further incidents have occurred since that time.

Additionally, we met on October 6, 2004 with **six** neighbors, the Yates' being a part of that group to discuss the noise analysis that was performed on September 16. We made sure that all the residents whose names appeared on the September 8 meeting list received copies of the noise analysis performed on September 16, with an invitation to attend **an** informational meeting with Granite and their consultant on October 6, 2004. We had our consultant available that evening to discuss the analysis and answer any questions. Additionally, our consultant presented the option of having the analysis "peer reviewed" by a consultant of the neighbor's choosing. This offer was declined and Mr. Yates expressed that he was "satisfied" with the analysis.

3. Dust

There is no argument from Granite that this operation contributes incrementally to ambient dust in the area. However, the Monterey Bay Unified Air Pollution Control District (MBUAPCD-District) has been contacted, by some surrounding neighbors, regarding dust issues with nearby residences. The District states² "...dust is definitely present, but doesn't seem substantially more than one would expect from homes located in rural settings...". Granite takes these concerns seriously and we are constantly evaluating our operations to see what can be done to further alleviate this issue. The District also states: "It appears (Granite) is taking the dust issue seriously and has already enacted a number of remedies beyond what is required by their Air District Permits, thereby mitigating potential public nuisance to dust."

Granite will continue its effort to evaluate and refine our operations so as to minimize dust in the surrounding areas. However, other factors over the last ten years need to be

² MBUAPCD Letter to Santa Cruz County Planning: 10-1-04: Attached

Mr. David Carlson
October 12, 2004
Page Four:

considered when evaluating dust in surrounding areas. Traffic has increased to a large extent on Empire Grade Road. Additionally, building within the valley and surrounding areas has also increased thereby contributing to overall ambient dust in the area, as well as living in a rural mountainous area lends itself to experiencing higher than normal dust generation than would be experienced in a non-rural setting. Further, Granite has never received a letter from the Palmers, and until the September 16 quarry tour; the Palmers had never contacted Granite as regards their concerns.

Again, Granite is not trying to alleviate their position that this operation in some incremental fashion contributes to dust in the area, however, this operation is not the sole source and in fact is less of an issue today than it was 20 years ago due to technological advances and attitudes, Granite feels that it is a mischaracterization for residents to state that their chronic and or increased respiratory problems are due to this facility, when no evidence regarding our facility and their health problems has been provided. Granite takes the health of our workers and the public very seriously as regards the operation of our facilities. These accusations are inflammatory and do not tell the truth regarding our commitment to worker safety.

We have been and continue to be reviewed by the MBUAPCD, Federal Mine Safety and Health Administration (MSHA), Federal Occupational Safety and Health Administration (OSHA) and the California Occupational Safety and Health Administration (Cal-OSHA) in regards to worker health and safety, especially in the arena of air quality and respiratory health. We have had no incidents regarding respiratory issues as relates to our employees due to our facility operations at Felton since we began operating in 1981.

4. Reforestation

Broom and pampas grass are endemic problems throughout Santa Cruz County. Granite is complying with the revegetation plan that was approved for this site. The reclamation area is not complete and is a constant and evolving project. Pampas and broom eradication are done on a regular basis with evaluations and spraying conducted as part of that eradication.

5. Setback from Empire Grade

The only reference to setbacks within any of the permits states: "Excavations shall maintain a setback of 50 feet from the property line measured in a horizontal plane from the property boundary (excavations may thereby extend closer to the property line where the site rises up from the property boundary), except as amended herein." The mine plan approved for this site shows a quarry limit from Empire Grade Road. That limit from the

³ Mining Approval: 74-633-PQ (II Operating Requirements K2) 2000, 1993.(K3) 1979.

Mr. David Carlson
October 12, 2004
Page Five:

closest point to Empire Grade is approximately 450 feet. It is not our intent to compromise any limits as set forth in our approved plan.

6. Future Use of Quarry

This operation will continue for 25 years per the approved entitlement, with open space being the approved reclamation plan and end-use for the site. Granite is always willing to discuss beneficial uses of the properties they utilize. However, Granite is a lessee of this property and as such the property owner and the County entitlement process has the final say as to what use is acceptable for this property, and as such would need to investigate the environmental impacts of any new use proposed.

In closing, it should be stated again that this facility has been in operation since the 1930s. The plan that was approved in 1979 not only decreased the operation from 420 years to 50, but as stated previously was reviewed per CEQA and included numerous conditions not ever before required. The Bonnywood/McAmant Dr. homes started to develop in 1975⁴ with full knowledge that this facility was in operation. In fact in 1975 this facility had an entitlement to mine for 420 years. These homes were built with the knowledge of the potential issues associated with being built next to this type of facility. In addition, this operation was reviewed by the California Coastal Commission in 1980 and in fact the Coastal Commission concurred with the County's decision to amend the land use designation for this site from Mountain-Residential to Mineral Resource adding in their staff report; "There does not appear to be any alternative use of the land that would have a higher priority in terms of the Coastal Act".

The entitlement process for this facility has been a long and expensive process. This facility provides not only commercial product for contractors, but affordable and local building materials for public works agencies in the County as well as the State of California, not just for "new" roads and development, but for the continuing maintenance of the existing infrastructure in Santa Cruz County, in good times and in times of emergencies. We have shown through numerous professional analyses that we are in compliance with our conditions. If these analyses are to be disregarded, then we would appreciate reviewing any professional data others may have to the contrary.

Granite diligently strives to make our plant facilities cleaner and quieter, and will continually look to our neighbors for their suggestions and assessment of our operations. We will continue to be a community participant to the greatest extent possible, and appreciate the willingness of these neighbors to work with us. We wish nothing more

⁴ Addendum to the Environmental Impact Report: Environ July 1979, Appendix Hydrogeologic Report, H. Esmali & Associates: June 1979

⁵ California Coastal Commission-Central Coast Regional Commission: Permit No. P-80-6: March 11, 1980.

Mr. David Carlson

October 12, 2004

Page Six:

than to have a productive and meaningful relationship with our neighbors. However, we also request that the public deal with us in an honest and fair fashion with respect to our responsiveness, our entitlements, our longevity in this area, and our ability to operate our business.

If you have any questions, please call me at 831-768-4099

Sincerely

GRANITE CONSTRUCTION INCORPORATED



R. Stephen Grace

Permits and Compliance Manager

GCC-Monterey Bay Branch

SG/sg

C:\MBB\FELTON/OCTOBER 12 2004 LTRDOC

CC: Renee Shepard
 Kurt Kniffin
 Ross Kashiwagi
 Eric Gaboury
 File

FARALLON CONSULTING, L.L.C.

320 3rd Avenue Northeast
Issaquah, Washington 98027

Phone
(425) 427-0061

Fax
(425) 427-0067

T E C H N I C A L M E M O R A N D U M

TO: Steve Grace – Granite Construction Company

FROM: J. Riley Conkin, Principal Geologist / Clifford T. Schmitt, Principal Hydrogeologist

DATE: October 10, 2004

RE: **RESPONSE TO COMMENTS – SEPTEMBER 24, 2004 LETTER TO COUNTY OF SANTA CRUZ PLANNING COMMISSION FELTON QUARRY PERMIT #74-633-PQ REVIEW FELTON, CALIFORNIA FARALLON PN: 604-002**

Farallon Consulting, L.L.C. (Farallon) has prepared this Technical Memorandum to address comments received regarding potential impacts to private wells located to the north of Felton Quarry in the Bonny Doon area in a letter dated September 24, 2004 Re: Felton Quarry Permit # 74-633-PQ Review prepared by Richard and Elaine Conley, Jennifer and John Kressman, and Sean and Shannon Conky, submitted to the County of Santa Cruz Planning Commission. It is our understanding that several owners of private property located north of the quarry area are concerned that future quarry activities may impact the local aquifer supplying their private water-supply wells. This Technical Memorandum specifically addresses Item 1. Water Protection as described in the September 24, 2004 letter.

The Felton Quarry Area Hydrogeologic Evaluation Report prepared by Watkins-Johnson Environmental, Inc. (WJE) in June 1992, provided a comprehensive review and interpretation of the quarry area hydrogeologic system, which included an evaluation of the mining impact on groundwater supplying the nearby Bonny Doon wells. According to WJE, the Bonny Doon wells located immediately north of the quarry, at the top of Ben Lomond Mountain, are withdrawing groundwater from a perched aquifer in weathered granite material. This aquifer is not hydraulically connected to the existing quarry area or future planned quarry area to the south and west of Ben Lomond Mountain.

The quarry area and Ben Lomond Mountain are separated by the Shingle Mill Creek Shear Zone, which represents a major hydrogeologic discontinuity between the areas. The shear zone trends from east to west and separates the Bonny Doon weathered granite aquifer from the Quarry Bend Hill weathered granite aquifer and underlying fractured granite water-bearing zone within the quarry. Therefore, groundwater draining from springs in the west slope of the active quarry did not originate from the Bonny Doon weathered granite aquifer, which the private water-supply wells in the Bonny Doon area are completed in.

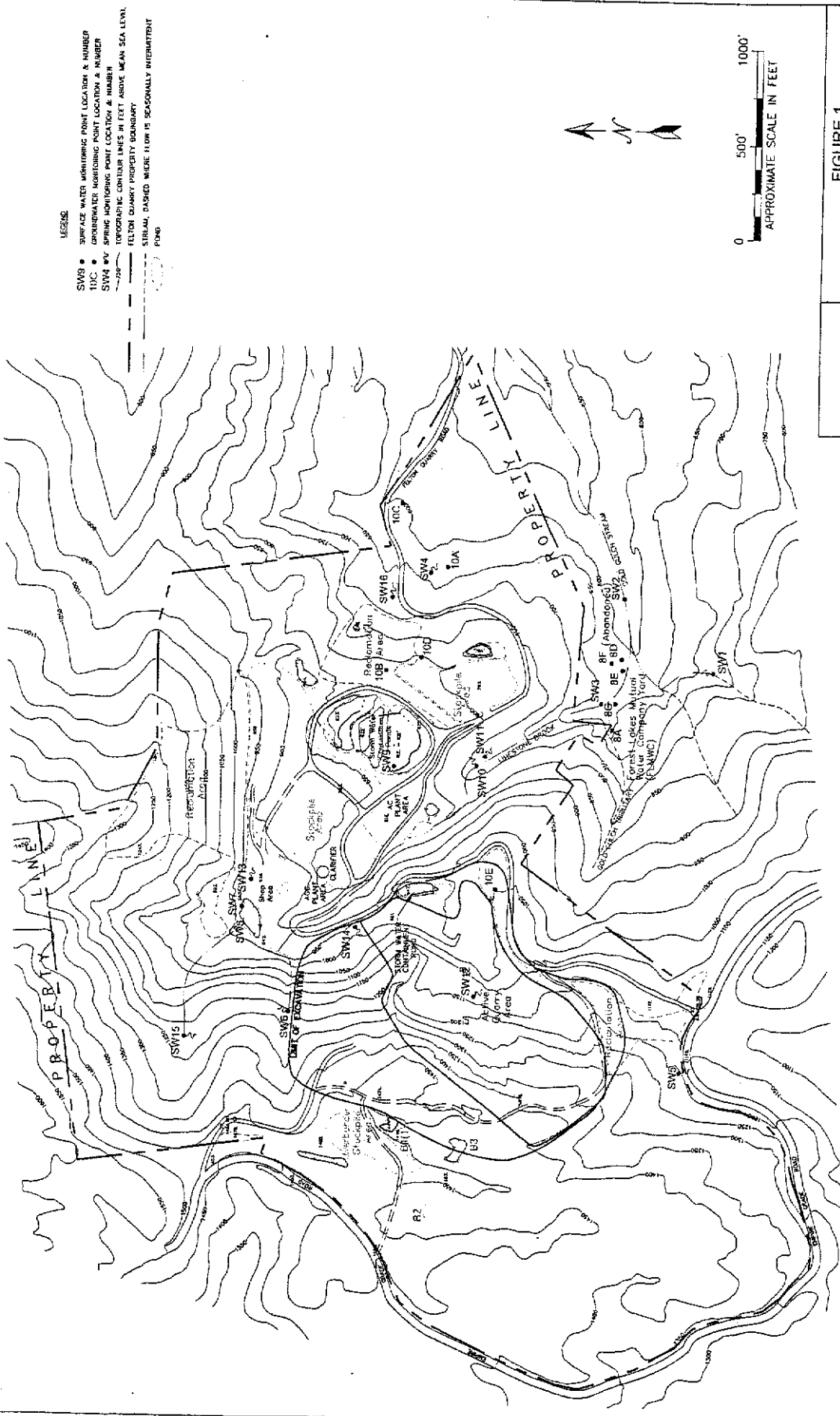
Monitoring data collected from surface water monitoring points SW6, SW15, and SW-8, which are located in the northwestern portion of the quarry area adjacent to the Bonny Doon area, indicate no change in the quality or quantity of groundwater in this area over the past 13 years. These monitoring points are considered representative of background conditions for groundwater discharging from the area up-gradient of the active quarry. Further, there are no visible springs discharging from the north slope of the reclaimed quarry area, demonstrating that there is little or no groundwater draining from the weathered granite aquifer in the northern quarry area adjacent to the Bonny Doon area.

A hydrologic monitoring program has been conducted at the quarry since 1992 to provide the information necessary to quantitatively assess the potential long-term effects of mining operations at Felton Quarry on the quantity or quality of nearby groundwater and surface water resources. Groundwater level data collected during the past 13 years confirms that the groundwater flow regime has remained relatively stable at the quarry area with only minor fluctuations related to seasonal variations in precipitation and recharge, and the water quality data indicates that ongoing activities at the quarry are not degrading the overall quality of quarry area water resources.

Based on the past 13 years of monitoring data and because there is no active quarrying planned at or near the northern quarry boundary in the vicinity of the Shingle Mill Creek Shear Zone, there is no technical basis for concern that private wells located north of the quarry property in the Bonny Doon area will be impacted by the proposed mining.

Attachments: Figure 1, Surface Water & Groundwater Monitoring Locations, Felton Quarry Area

JRC/CTS:FCL



LEGEND
 SW8 • SURFACE WATER MONITORING POINT LOCATION & NUMBER
 10C • GROUNDWATER MONITORING POINT LOCATION & NUMBER
 SW4 • SPRING MONITORING POINT LOCATION & NUMBER
 TOPOGRAPHIC CONTOUR LINES IN FEET ABOVE MEAN SEA LEVEL
 FELTON QUARRY PROPERTY BOUNDARY
 STREAM, DASHED LINE, FLOW IS SEASONALLY INTERMITTENT
 POND

FIGURE 1

SURFACE WATER & GROUNDWATER
 MONITORING LOCATIONS
 FELTON QUARRY AREA
 GRANITE CONSTRUCTION COMPANY
 FELTON, CALIFORNIA



FARALLON CONSULTING
 200 3rd Avenue NE
 Issaquah, WA 98027

Drawn By: GDD Checked By: RJ Date: 1/29/01 Disk Reference: 604001B
 FARALLON PN: 604-001

October 1, 2004

County of Santa Cruz, Planning Dept.
701 Ocean St., 4th Floor
Santa Cruz, CA 95060

Attention: David Carlson

Subject: Fugitive Dust Emissions from the Granite Construction Inc. (GCI) Felton Quarry

Dear Mr. Carlson:

I am writing to you to summarize my investigation into fugitive dust emission issues at the Felton Quarry. On Sept. 13 I met with several residents who live along Bonnywood Dr. which is located on the hill overlooking the secondary crushing & screening plant at the facility. The residents showed me some of the dust impacts around their homes. There was a light layer of dust on various surfaces including patio furniture, windows, tables and garaged vehicles. The dust is definitely present, but doesn't seem substantially more than one would expect from homes located in rural settings, plus we have no actual evidence of the origin(s) of that dust. Still, it's probable and to be expected that the quarry is contributing its share, although we are unaware of evidence suggesting that it is the sole source.

Following my meeting with the residents I met with Dave Locatelli at the quarry. He showed me many of the modifications at the facility which were intended to limit fugitive dust emissions including:

- \$ Adding water sprays to the fines conveyor, primary screen and cone crusher
- \$ Using scrapers to limit carry back of material on the conveyors
- \$ Enclosing a portion of the pep screen
- \$ Installing a pipe along the access road which sprays water across the road at varying intervals

Some of their procedural changes include:

- \$ Watering roads ½ hr before equipment starts up
- \$ Spraying the wall of the quarry with the water truck
- \$ Washing down the secondary crushing and screening plant weekly
- \$ Pushing rock off the top of the quarry earlier in the year during the rainy season so that the rock can be pushed from a lower bench during drier seasons.
- \$ Mixing the rock with wetter material from natural springs on the quarry face before pushing it off the bench

Future modifications include:

- \$ Improving the scraper on the conveyor coming from the pep screen
- \$ Adding a water mister or water sprayer on the conveyor below the cone crusher
- \$ extending the water line to the access road around the pond and up to the primary crusher.

Ideas for further fugitive dust reductions:

- \$ Apply lignin sulfonate on roads that are not frequently used
- \$ Apply hydroseed to exposed surfaces that are not frequently disturbed
- \$ Add water sprayers on the hopper at the primary crusher
- \$ Address the release of fugitive dust from the primary and pep screens on windy days
- \$ Add another water sprayer at primary screen conveyor
- \$ Mix a surfactant with the water sprayed onto the conveyors
- \$ Address the release of fugitive dust when disturbing the stock piles on windy days - especially the fine material piles.

During this investigation I did not observe any violations of the Air District's permit conditions or rules; that includes the Air District's public nuisance rule, #402. If the dust impacts had been significant enough to be considered a public nuisance violation, the result would be that GCI would be expected to take steps to mitigate the dust issue right away, and failing that, the Air District would initiate enforcement action to abate the nuisance. It appears that GCI is taking the dust issue seriously and has already enacted a number of remedies beyond what is required by their Air District permits, thereby mitigating potential public nuisance due to dust. These permits require that dust releases be within certain limits, but they do not require that zero dust is released by the **quarry**.

It is important that the fugitive dust issue remain high in the consciousness of GCI staff even after the permit review process is over. It may help to have these dust control measures incorporated into the County's enforceable conditions in the quarry's permit for *future* use by GCI or any other future operators of the quarry.

If I can be of further assistance to you including coordinating inspections at the quarry, please contact me at 760-2178.

Sincerely:

David Frisbey
Air Quality Compliance Inspector II



Gerald Yates

303 Potrero Street #29-301 Santa Cruz, California 95060 phone 831.457.9185 fax 831.457.9186

Architect



Memorandum

To: County of Santa Cruz
Planning Department
701 Ocean Street
Santa Cruz, California 95060

Attention: David Carlson

From: Jeny Yates

Date: September 9, 2004

Regarding: Granite Construction Felton Quarry Five-Year Review 74633-PQ(amended)

Subject: Neighborhood **Meeting** & Off Hour Noise

Thank you for attending the neighborhood meeting last night at the quarry. ~~Your~~ presence was appreciated I felt that it was a positive beginning and hopefully will result in a direction that benefits the community and finally satisfactorily mitigates the historical nuisances of quarry dust and noise.

Unfortunately, I also have to report that after listening to Granite Construction staff adamantly state that no operations or vehicular traffic (other than a fuel truck which ~~they~~ promised to curtail in the future) ever commence prior to 6:00 A.M., I was awoken this morning at about 5:40 A.M. ~~by~~ the sound of multiple backup alarms and attendant vehicle and or machinery engine noise. I find it very disheartening that this would happen less ~~than~~ twelve hours after the discussion in which Granite Construction effectively stated ~~that~~ what we hear prior to 6:00 am can't possibly be originating in the **quany** with the exception of the afore mentioned fuel truck or possibly wafer trucks.

I drove down to the quarry after being awoken and could not get in ~~as~~ the Empire Grade gate was locked. I went home and left a telephone message for Eric (the manager) at about 6:15 A.M. registering *my* disappointment

This occurrence reinforces the comments made last evening at our meeting by Harold Simpson, Rich Conley and Melissa Thompson to the effect that their complaints over the last ten years or more have been listened to but largely ignored. It also reinforces the comments ~~made~~ regarding the frustration of the neighbors on the issue of enforcement of the relevant county ordinances and conditions of approval.

If in fact the noise is from water trucks, this is an aspect of quarry operations and should not occur before 6:00 AM and the *quarry* is in violation of its use permit in terms of hours of operations. This fact needs to be included in the current five year review.

To Whom it May Concern,

We live directly above the Quarry and request that you don't approve the additional hours of operation at the Felter Quarry.

The noise is so bad that we try to keep windows closed but in the summer it makes that hard to do, which then makes it hard to sleep. There is also a funny smell that is on the air and the dust is so bad that there is a constant brown haze of dust in everything which in the 2 years we've lived here, has given us upper respiratory problems so of course, we are concerned for our health.

Thank you for your consideration to this matter.

Sincerely,

Gerald + Kathryn Yates

Phone 4579187/Fax 4574181

⑦

240 DONALDSON ROAD, C.A. 90112

September 6, 2004

To: Granite Construction Company

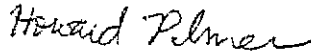
From: Howard & Linda Paimer
5650 Empire Grade

Subject: Felton Quarry meeting Sep. 8, 2004

We regret that we are unable to attend your meeting with our neighbors on September 8. However, we share their concerns and are hoping to view your presentation via video tape. In particular, we are concerned about the dust, which is a well-known health hazard. We suspect it as a causal factor in the chronic respiratory problems from which we have both suffered since moving here. We are also concerned about the quarry's potential impact on our water supply, in terms of both quantity and quality. Finally, we are bothered by noise from the quarry, particularly when it is operating outside of normal business hours.

We have doubts that the quarry is always operating within local and state environmental regulations. We believe that ongoing independent monitoring is necessary to ensure compliance.

Sincerely,



Howard & Linda Palmer

8/25/04

County of Santa Cruz
Planning Commission
701 Ocean Street
Santa Cruz, CA 95067

FAX: 8311454-2131

Subject: Granite Construction Felton quarry

Dear Commissioners:

I ~~am~~ unable to make the five year review meeting regarding the Felton *Quarry*. I wanted, however, to provide input regarding the effects the **quarry** has on our neighborhood.


The **quarry** produces a great deal of noise and dust. I notice a significant increase in my allergy symptom due to the dust coming ~~from~~ the **quarry**.

Another area of concern is the number of trucks on Empire Grade. The trucks contribute *to* deterioration of the roads and significantly affect traffic on the road.

As a long-term resident of **Bonny Doon**, I would like *to* request a reduction in the **quarry** dust, noise, and traffic.

Thank you for your consideration.

Sincerely,


Kate ~~Smith~~/Bill Whiting
200 McAmant Drive
Santa Cruz, CA 95060

Concerned neighbor vs. Granite Quarry

While I readily accept that the quarry is by its very nature a mining/extraction process, with the attendant dust and noise problems normally associated with operations of this sort, the possible falsification of test reports, or arbitrary throwing out of tests that the county doesn't like seems to be working in the pocket of the quarry.

The county is not an uninterested impartial party to the Quarry's operation. In reality, the county should recuse themselves from any decision process of this sort. In much the same way as the Supreme Court should not have decided the Florida election results because the choice of Justice nominees is by the person that they chose, the awarding of contracts in this county smacks too much of the "good old boy" syndrome.

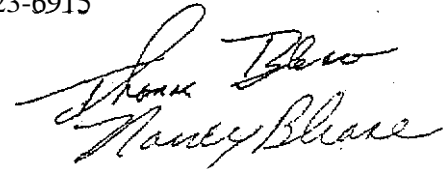
Adequate, impartial testing by an outside source should be carried out to satisfy everyone. The county should be "as pure as Caesars wife", not regarded as a rubber stamp for the big money interests.

24
A

September 3, 2004

We would greatly appreciate any efforts that could be made by the Felton Quarry
Management to look into ways to reduce the noise and dust from the Quarry's operation

Tom and Nancy Blease
310 McAmant Drive
423-6915

Handwritten signatures of Tom and Nancy Blease. The signature for Tom is written above the signature for Nancy. Both are in cursive script.

8/25/04

county of santa Cruz
Planning Commission
701 Ocean Street
Santa Cruz, CA 95067

FAX: 831/454-2131

Subject Granite Construction Felton quarry

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As a long-term resident of Bonny Doon, I would like to request a reduction in the quarry dust, noise, and traffic.

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Sincerely,


Kate Smith/Bill Whiting
200 McAmant Drive
Santa Cruz, CA 95060

September 24, 2004
county of santa Cruz
Planning Commission
701 Ocean Street, Room 400
Santa Cruz, CA 95060

RECEIVED
OCT 04 2004
MONTEREY BAY BRANCH
GRANITE CONSTRUCTION COMPANY

Re: Felton Quarry Permit #74-633-PQ Review

Dear Planning Commission Members,

This letter is to express our continuing concerns regarding the quarrying activity by Granite Construction and its adverse impact on numerous environmental factors in our neighborhood. These issues have been raised by us on every permit application considered by the Planning Commission, including the first "non-conforming use" permit granted in 1962, permit 1574u.

Since we predate the quarry (the property has been in the family since 1891), we have significant history regarding the concerns over noise, dust, water, setbacks, traffic, and expansion. Our letters and testimony are part of public record at the County in the many hearings since the 1970's when the General Planning process started.

Our letter of October 23, 1990 (attached) to the Planning Commission documents our involvement, and of the validity of our concerns. The quarry now operates many more hours, including night time. The operation is gargantuan in comparison to the family operation in the 1970's. The expansion has introduced large truck traffic to Empire Grade, and produces dust and noise at even more obnoxious levels than ever before. Even the quarry operators admit that the noise and dust must be impacting our area above the quarry more than years past because they have moved up the side of the ridge toward Empire Grade. Even more expansion in this area is planned.

We therefore reiterate our request that the following items be considered by the commission:

WATER Protection

1. Continue to protect the Northern slope of the quarry, with assurance that it will not be considered for excavation, in this permit or any other future permit. The protection of this slope is essential for preservation of our aquifer. The decomposed granite on this ridge is a known sponge for water retention, and has been documented by a licensed hydrologist who did an assessment at our expense in the early 1980's. This input to the County was part of the reason this area was excluded from any excavation. Proof of the validity of this concern is now evident on the Western slope of the quarry expansion: there are numerous springs exposed on the face, with water flowing out of the aquifer, essentially draining the aquifer above. The attached photographs show the Western slope (toward Empire Grade), and demonstrate the drainage of water. This is occurring in exactly the manner we predicted, at approximately 40-50 feet below the surface, where the decomposed

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granite layer meets hard granite. These photos were taken with permission of the quarry.

2. NOISE

The concern over noise has been a continuing one, by our family and neighbors for many years. If the County checks its records from past citizen input, people have often noted that noise detectors have been installed and operated at optimum times. Granite is doing a new noise survey; while it will probably show compliance, the fact is the back up devices (required by OSHA) are much louder, due in part to the operation moving up the face of the mountain and the increased *size* of the basin. The quarry basin, which continues to grow in between approvals for further excavation, acts like an amphitheater, magnifying the sound of equipment such as the crusher, trucks and bulldozers. The County should investigate with the quarry noise mitigation plans.

3. DUST

The *size* of the **quarry**, and the westerly winds that come in off the coast in the summer, now blow across the expanded face of the **quarry**. The exposure of this face, viewable from Empire Grade above Smith Grade, was not there during the 1990 review. Now that face is a large expanse of dirt; to say there is more dust due to development in other areas of Santa Cruz is just not a realistic appraisal of what has happened since the last permit. This area will be expanded under the new permit. The quarry has a responsibility to mitigate this problem for our health and living conditions. We argued these points when our children were young, with their future and ours in mind. Now our children live here, and 5 grandchildren. This is a generational problem!

4. REFORESTATION

In our letter of 1990, we noted that the County needed to ensure native species planting was done on sections of the **quarry** that will no longer be active. Since trucks started coming up onto Empire Grade, the infestation of French Broom and pampas grass has become endemic. The quarry provided a bridge from the valley quarries and introduced the broom problem to our area. It was not here 20 years ago. The attached photo shows a reforested area. It is hardly heartwarming to see that this is what the County and Granite view as bringing the natural look back to **quarried** areas! Please, review your guidelines and get a plan for planting redwoods. They are the best growing trees in our area, not pine! Second, have the quarry eradicate the pampas grass and broom on their property near Empire Grade, so we have some assurance that we are stopping a significant source.


SETBACK from EMPIRE GRADE

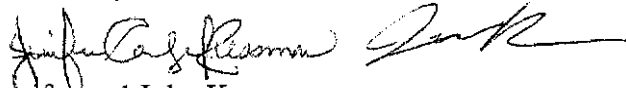
The County, in part due to our input and other citizens of Empire Grade, conditioned the original permit with a setback of 500 feet from Empire Grade. These discussions involved the abandonment of the old Quarry Bend roadway and was a key part of the quarry expansion plan. We understand this setback is now 300 feet, and has been so since the last permit. We want to ensure that the County understands that this setback is very important to all of us who travel on Empire Grade. We request the County ensure the original 500 foot setback from Empire

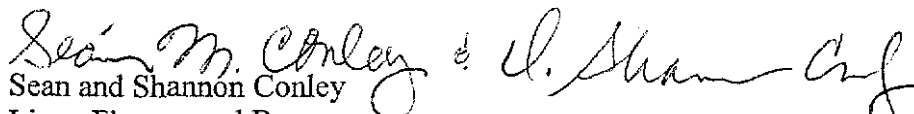
Grade. The residents expect the County to enforce the guidelines and restrictions of the permit, and to use *the* 10 year review cycle as an evaluation point for what has changed since last review.

It has been about 40 years that we have been providing input to the County on this quarry. **At** some point, there will be nothing more to remove. Since our concerns in the past have proven merit, and we now have children and grandchildren living here (representing the 7th generation of family who have treasured this area), it is time to bring up future use and plans for the property. We would like the County to assess with the **quarry** the expected year of discontinuing operations, and begin a dialog for low impact utilization. The current projection is for another 20 to 25 years, but we all know that timeframe could be shorter due to extraction at a faster rate ~~than~~ anticipated. The County, and its citizens have opted to use this section of Santa Cruz as a source of rock, aggregate, and paving material. Because we have had to live with the downside of that experience, we think the neighbors of the **quarry** from Felton Acres to Empire Grande should have strongest say in its future.

Thank you for your consideration,


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363 McAmant Drive and Parcel 063-113-16lands of Donovan
Santa Cruz, CA 95060


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Ana and McClain
360 McAmant Drive
Santa Cruz, CA 95060


Sean and Shannon Conley
Liam, Fionna, and Ronan
380 McAmant Drive
Santa Cruz, CA 95060

cc. Granite Construction

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Planning Commission
County of Santa Cruz
701 Ocean St. Room 525
Santa Cruz, Cal. 95060

10/23/90

Re: Planning Agenda: 10/24/90; Application:#90-1065;
Applicant: Granite Construction Company

to: Planning Commission

This is to formally register our continued concerns over the removal of a major portion of the mountain range east of Empire Grade. As family **property** owners since 1892, we have significant roots in this area and have predated this operation for many years.

We have been concerned about the ever-expanding operation of the Empire Grade/ Felton Quarry, including **when it** was originally granted a "non-conforming use" permit in 1962, Permit 1574u. Then, as now, the quarry has taken the stance of asking for ~~access~~ to a little more rock; the county granting expansion, with stipulations that it doesn't enforce; and we local property owners having our concerns validated.

We trusted that the county would monitor and assure compliance to the concerns and requirements which we expressed in 1978/1979, four years later than the quarry was supposed to have its permit reviewed. The delay was to accommodate the Environmental Impact Report, which in its original version completely by-passed our community that is adjacent to the northern quarry property line. Only after our protest, and hiring a hydrologist as an expert witness in our behalf, were our concerns acknowledged. The Bonny Doon General Plan, states that it "allows for the orderly economic extraction of minerals, with a minimal adverse impact on aquifers, streams, scenic values, and surrounding urban uses".

It appears to us that the only "orderly extraction" taking place is of our property values.

Due to the significant violations by the Quarry, and the rapid expansion of its mining operation taking the excavated area decades beyond its planned operation, it validates our concerns have been well founded. Further, the many assumptions and assertions made in the 1979 EIR need reassessment, especially in regard to the hydrologic/geologic/visual/noise impacts.

The assurances by the county, in its role as a "watchdog agency", seem to be more bark than bite, and its performance borders on negligence.

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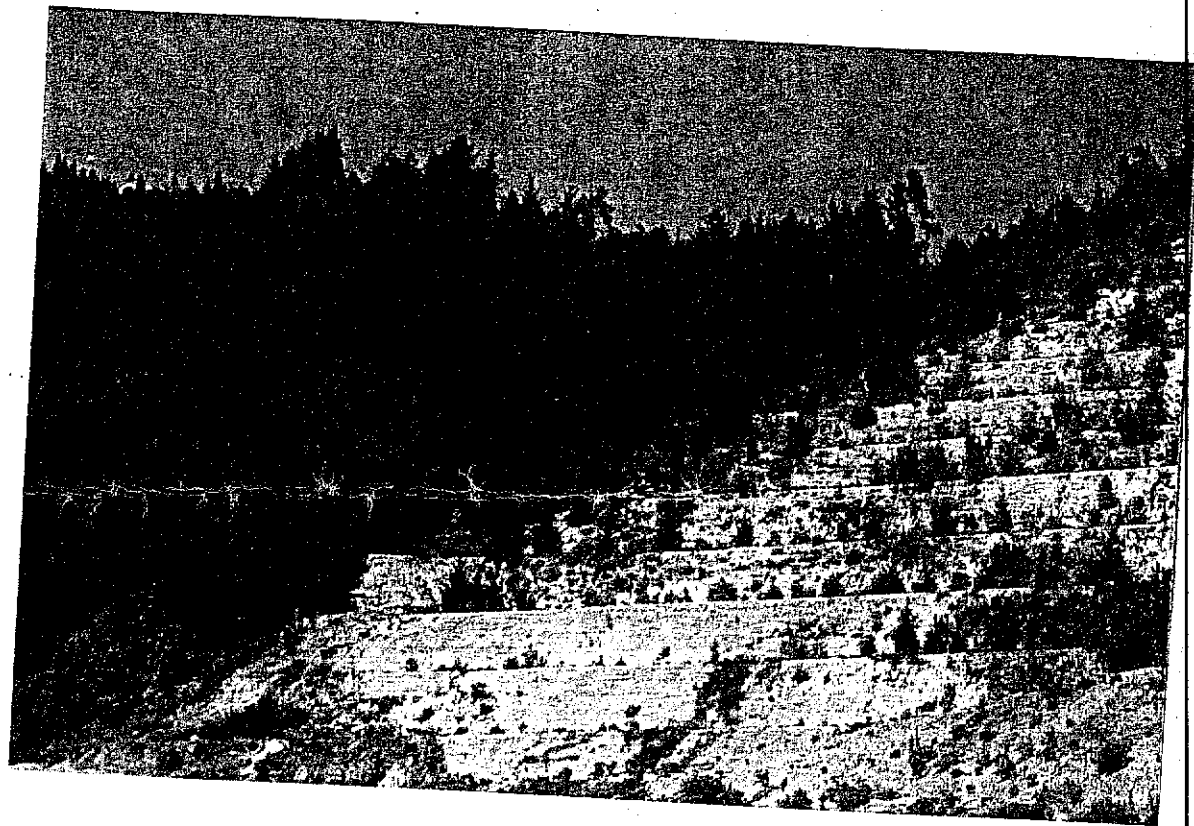
- 1) Protection of the Northern slope of the quarry, with assurance that it not be excavated.
- 2) That reforestation be conducted with indigenous plant/trees, and not the current program of planting non-native plant species. Our area is being invaded by scotch broom, pampas grass.
- 3) Hours of operation.
- 4) Noise pollution. (Test to be conducted during peak production hours. Neighbors witnessed noise tests being done under optimum conditions to benefit the Quarry. This was brought to the attention of the quarry by the neighbors.)
- 5) Protection of "scenic values" of Empire Grade.

Sincerely,

Elaine and Richard Conley
363 McAmant Dr.
Santa Cruz, California 95060
427-0456

Dorothy and William Donovan
109 Bonnywood Way
Santa Cruz, California 95060
423-1444





September 24, 2004
County of Santa Cruz
Planning Commission
701 Ocean Street, Room 400
Santa Cruz, CA 95060

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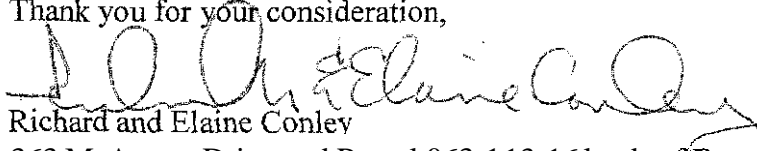
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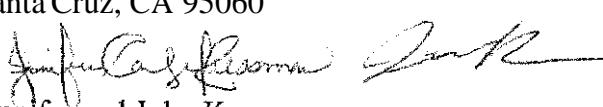
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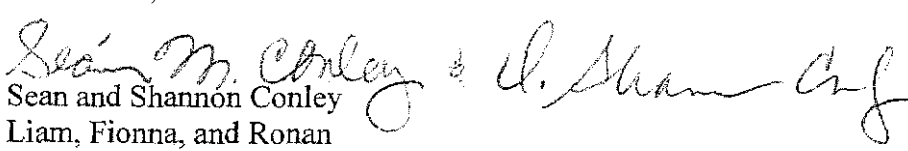
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