Syar Napa Quarry Surface Mining Permit #P08-00337

Napa County Department of Planning, Building & Environmental Services

Appendix B to Final EIR: Master Responses to Comments Received after Publication of November 2014 Final EIR and Proposed Project Modifications

State Clearinghouse #2009062054

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SYAR NAPA QUARRY

SURFACE MINING PERMIT #P08-00337

APPENDIX B TO FINAL EIR MASTER RESPONSES TO COMMENTS RECEIVED AFTER PUBLICATION OF NOVEMBER 2014 FINAL EIR AND PROPOSED PROJECT MODIFICATIONS

State Clearinghouse #2009062054

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1. Introduction

This document provides master responses to both written and oral comments on the Syar Napa Quarry Surface Mining Permit #P08-00337 Environmental Impact Report (EIR) received after the Final EIR was completed. These master responses have been prepared to address comments received at the January 7, 2015 Planning Commission hearing, from both the public and the Planning Commission as well as comments on the EIR received from January 5 through May 31, 2015. The responses herein address comments received on the four following environmental issues: Aesthetics, Noise and Vibration, Air Quality and Dust, and Groundwater Hydrology. The master responses are organized by these four resource categories. At the beginning of each resource category response there is a summary of the oral and written comments made on that particular resource. Attachment C includes the list of those who provided oral comments during the Planning Commission Meeting, as well as the written comments received after the publication of the Final EIR.

In addition, Syar has proposed modifications to the project to alleviate concerns raised at the January 7, 2015, Planning Commission Hearing. The proposed modifications are described in more detail in Section 2 (also see Attachment B). Attachment D are the revised and clarified Mitigation Measures associated with the proposed project taking into consideration the modified project.

2. Proposed Modifications to the Project

In response to concerns raised at the January 7, 2015 Planning Commission Hearing on the Syar Napa Quarry project, on March 17, 2015 Syar formally proposed the following modifications to the proposed project (see Attachment B) that is described in the Syar Napa Quarry Draft EIR:

1. A reduction of the proposed annual production level down to 1.3 million tons per year consistent with the Reduced Production Alternative as identified in the DEIR.
2. A reduction in the size of the expansion areas as shown on Exhibits 1 and 2 (of Attachment 2). In the Pasini Parcel, this includes doubling the size of the setback from the property line from 50 feet to 100 feet (Exhibit 1, Attachment 2). In the northeast area adjacent to the State Blue Pit, this consists of removing the northern-most 10 acres of the expansion area (Exhibit 2, Attachment 2). These reductions in the expansion areas would further reduce potential noise, vibration, and visual impacts of the project to the north and east. It would also reduce impacts to oak woodlands, particularly in the northeast area. This reduction would also preserve the encroaching SWP trails and includes the provision to develop a License Agreement with the County to allow all the existing established trails currently a located on Syar holdings to remain in place and to allow continued public access.
3. Syar proposes the following clarification to Mitigation Measure 4.11-1 to indicate: 1) the mitigation would be applied in both expansion areas, and (2) clearing of topsoil and overburden are limited to the hours of operation stated in Section 3.5.7. As additional mitigation in the expansion areas, Syar would also: (1) limit blasting to the hours of 10:00 am to 4:00 pm weekdays, with no blasting on Saturdays, Sundays, or holidays, and (2) within 400 feet of the property line, and where such activities are visible from the trails in Skyline Park, limit topsoil and overburden removal activities to the hours of 7:00 am to noon on weekdays, with no such activities on Saturdays, Sundays, or holidays.

4. To provide additional screening, Syar would plant oak trees in the setback of the Pasini expansion area in the general location shown on Exhibit 1 (Attachment 2), within the first two years of the permit term.
5. Syar would provide 48 hours' notice of blasting via a website and provide 48 hours email notice to anyone who requests to receive notice via email.
6. Syar would agree to not blast when sustained wind speeds at the quarry exceed 20 miles per hour.

3. Master Response – Aesthetics

Comments received at the January 7, 2015 Planning Commission Hearing and in comment letters identified herein on aesthetics and visual resources associated with the proposed project are summarized as follows:

- The Draft EIR did not address foreground visual impacts, only mid-ground and background visual impacts.
- The document doesn't provide any views from Imola Avenue, near the preschool, and ignores this foreground view.
- Figures aren't usable in the document as there are no topographic overlays on the aesthetics figures.
- Views from Skyline Wilderness Park, particularly through the Pasini property, are important and critical to the users of the park. Concerns over views and aesthetics were not limited to the Pasini Parcel; however that area was of greatest concern.
- Any visual intrusion of industrial activity into Skyline Wilderness Park would adversely affect park user experiences and should be identified as significant.

3.1 Introduction

Visual impacts are generally assessed by estimating the amount of visual change introduced by project components, the degree to which any changes may be visible to surrounding viewer groups, and the general sensitivity of viewer groups to landscape alterations. Visual changes are usually measured by three factors:

- the amount of visual contrast that project components create (changes to form, line, color, texture, and scale in the landscape)
- the amount of view obstruction that occurs (loss of view), and
- degradation of specific scenic resources (e.g., removal of scenic trees and/or hillsides).

Visual contrast would be considered significant if the visual contrast is strong as a result of re-graded landforms, alteration or elimination of ridgelines, or changes introduced by the project that result in landscape colors, textures, and scale of visual components that are inconsistent with the natural surroundings. View obstruction would be considered significant if the project would obstruct foreground or mid-ground views of the viewed area seen from sensitive viewing areas. Degraded visual quality would be considered significant if the project severely altered or displaced specific scenic resources composed of striking landform features, aesthetic water bodies, mature stands of native/cultural trees (e.g., historic hedgerows), or highly visible historic structures.

The following master response first summarizes the study area and methodology for determining aesthetic impacts that was presented in the Syar Napa Quarry Draft EIR, and then provides a detailed response, in Section 3.7, to the comments related to aesthetics. The exception to this is the issue of topographic overlays, which is addressed below. A summary of the responses is as follows:

Foreground visual impacts: four of the 12 visual simulations presented and analyzed in the Draft EIR were of foreground views. Foreground views also are discussed in Section 3.7, below.

Views from Imola Avenue: New simulations have been prepared and analysis provided, the details of which are discussed below in Section 3.7. The simulations include the project as originally proposed and as modified by Syar on March 17, 2015.

Figures should have topographic overlays: Several figures in the aesthetics section use two dimensional views of the project study area, thus providing a sense of the topography. In addition, the topography of each visual simulation vantage point is indicated in the profile line-of-sight figures as described in Section 3.5 below. It was not necessary for the analysis to also have topographic overlays on the aesthetic figures because they are provided in other figures in the Draft EIR and the Aesthetics Section figures could be too cluttered and unreadable. However, there are other figures in the Draft EIR that provide topographic lines that the reader could view. This includes Figure 3-5 and Figure 4.8-10 of the Draft EIR (and included here in Attachment A).

Views through Pasini property are important: Views of the proposed project at its southern extent in relation to SWP and as seen from SWP were considered. Two visual simulations where prepared from this side of the project site and analyzed in the Draft EIR. This analysis is further discussed in Section 3.7.

Visual intrusion of industrial activity into Skyline Wilderness Park should be considered significant: Existing views from Skyline Wilderness Park include quarry activities, however it has been concluded this would not be significant with implementation of the project as further explained below. In addition, as part of the project, trees would be planted for additional screening. Screening would be planted as part of reclamation as well as part of the Project (as modified on March 17, 2105). Screening trees planted as part of recent project modification would be planted prior to the initiation of vegetation or overburden removal, or quarrying activities occurring in previously undisturbed areas. This analysis is further discussed in Section 3.7.

3.2 Visual Study Area

The “visual study area” was defined as a 5.5-mile radius around the outer edge of the project site and was divided into a series of “distance zones,” which consist of roughly concentric circles radiating outward from the outer edge of the project site (see Figure 4.1-1 of the Draft EIR [Also see Attachment A of this document]) for a depiction of the distance zones; see Chapter 3, Project Description, for a detailed description of the project site). Distance zones are as follows:

1. Foreground Zone (less than 1 mile from edge of quarry expansion area)
2. Mid-ground Zone (1 mile to 3 miles from edge of quarry expansion area)
3. Background Zone (3 miles to 5 miles from edge of quarry expansion area)
4. Distant Background Zone (>5 miles from edge of quarry expansion area)

Within the Foreground Zone, features are easily distinguishable and details can be readily seen. Large features such as buildings or hillsides can completely dominate the visual field. Within the Mid-ground Zone, features begin to blend together and individual details are much more difficult to distinguish. Large features such as buildings or hillsides become secondary elements in the visual field. Trees are seen as stands of trees, buildings are seen as building clusters, and topography is seen as landforms. The existing

quarry, as well as the extent of the project site, is a recognizable feature of the visual field in the Mid-ground Zone, but do not dominate the view. The Background Zone is dominated by the horizon. Within the Background Zone, features are generally blended components of the broader landscape. Large features may be indistinguishable from their surroundings, and therefore colors of individual elements become difficult to differentiate. Site observations demonstrate that the color, texture, and other visual characteristics of the existing quarry, as well as the extents of the project site, become nearly imperceptible at a distance of three to five miles. At this distance, the quarry and project site consume a very small portion of an observer's field of view and begin to blend in with the background. Beyond five miles is the Distant Background Zone, which can extend indefinitely to the furthest distance from which a feature is visible. Beyond five miles, the existing quarry and project site are difficult to distinguish from its surroundings and appear to be a part of the broader landscape.

3.3 Views of the Project Site

East of the project site, Skyline Wilderness Park (SWP) has direct foreground views of east-facing previously mined areas, as shown in Image 4 in the Draft EIR (see Attachment 1). Views from the east are limited to a very narrow band of visibility because the terrain east of the project site is steep and heavily vegetated. From the south, views are relatively restricted due to a large high-elevation hillside that blocks views of the project site. Most of the Foreground and Mid-ground Zone areas west and northwest of the quarry have limited views due to intervening buildings and urban trees. Views from the west are generally only available from locations with open, unobstructed views of the hillsides to the east, which is relatively rare in the urbanized areas of the City of Napa. Similarly, views from the north are very limited due to intervening topography just north of the quarry, as well as intervening buildings and vegetation. Views from Imola Avenue looking south are further discussed below in Section 3.6 Photographic Simulations of the project (Images 1 through 4).

3.4 Methodology[1]

The methodology developed specifically for the aesthetics analysis was based on methodologies and recommendations developed by the U.S. Bureau of Land Management (BLM), Federal Highway Administration (FHWA), U.S. Forest Service (USFS), and the U.S. Army Corps of Engineers (USACE), as well as methodologies developed for visual impact assessments analyzing similarly-sized surface mining and quarrying projects e.g., Lake Herman Quarry in Solano County and Harris Quarry in Mendocino County).

The following is a summary of the methodology used to prepare the Aesthetics Special Study (Appendix F of the Draft EIR) and the Aesthetics section of the Draft EIR.

1. Identify study parameters:
   a. Review regulatory guidance (including local jurisdictions) to determine significance criteria.
   b. Review comment letters on Notice of Preparation specifically addressing aesthetic concerns.
   c. Define project and establish areas of grading and other project activities that may be visible from outside the project area.
   d. Determine locations from which the project site is currently visible.
   e. Evaluate visual contrast and quality of existing conditions at project site to establish "visual baseline."
   f. Identify and classify categories of potential sensitive receptors in the visual study area.
2. Define the Visual Study Area.

[1] Reference Appendix F (Napa Quarry Proposed Expansion Aesthetics Study) of the Draft EIR for further information.

a. Establish Distance Zones.

b. Establish Landscape Similarity Zones.

c. Determine existing visual character in Visual Study Area.

3. Model visibility of project:
   a. Identify all visual components of project.
   b. Create 3D GIS-based digital elevation model and digital terrain model of project.
   c. Calculate viewshed of project in 3D model.
   d. Map sensitive receptor locations.
   e. Determine "modeled" visibility of project from sensitive receptor locations.
4. Conduct field assessments:
   a. Drive to a sample of sensitive receptor locations.
   b. Determine accuracy of model's predictions.
   c. Photograph project site from each sensitive receptor location visited (2009 and 2010).
5. Simulate and model project impacts:
   a. Calibrate viewshed model based on results of first field visit (if necessary).
   b. Calculate viewshed and line-of-sight visibility at selected sensitive receptor locations.
   c. Use photographs taken during field visits and 3D model to simulate appearance of proposed project.
6. Analyze the degree of impacts.
7. Determine significance of project impacts.

3.5 Viewshed Model and Potential Sensitive Receptors

A viewshed model was created (in 3D) to depict existing and proposed project conditions. The first step in creating the viewshed model was to create a digital terrain model of the project site as it currently exists. The ground surface in this model was then modified to "excavate" the existing ground surface at the project site in order to three-dimensionally represent the proposed project. The modelling was based on spatial and vertical parameters of the project portrayed in Figures 3.5 and 3.6 of the Draft EIR (see Attachment A). Once the modified digital terrain model was ready with the proposed project contours, the next step was to create a "viewshed" of the project. The term "viewshed" refers to the areas in the landscape that can be seen from a given location (i.e. not blocked by topography, vegetation, or the built environment).

A composite viewshed of the proposed project was developed using the following method. Four-hundred points were randomly assigned within the limits of excavation, which included points around the project's highest elevations, along the project's "vertical" walls, and along the "floor" of the quarry. A model was initiated that calculated the viewshed of each point, effectively generating 400 unique viewsheds from these 400 points within the project. The model then combined these viewsheds into a single composite viewshed. The model was then set to display the relative percent of these points that could be seen throughout the study area. Figure 4.1-3 (Composite Viewshed of Project) in the Draft EIR displays the results of this process (see Attachment 1).

The next step in producing the viewshed model was to identify potential sensitive receptors (PSRs) in the visual study area using the criteria established in section 4.1.1-1 Sensitive Receptor Categories (Appendix F of the Draft EIR). These are the potential sites from which visual impact from the project could occur. Using the criteria referenced above, two-hundred and thirty-one (231) PSRs were identified within the visual study area, which includes all the parks, open space areas, trails, schools, golf courses, cemeteries,

and Registered Historic Places in the visual study area. This number does not include private residences or privately owned lands, though neighbourhoods such as Terrace/Shurtleff and River East were considered.

The identification of the 231 sites was done primarily by overlaying various types of existing Geographic Information System (GIS) data over the study area. GIS data was provided by the County of Napa, the US Geological Survey, the Department of the Interior, the Bay Area Protected Areas Database (BPAD), and Environmental Systems Research Institute (ESRI) Tele Atlas. Each of the 231 PSRs identified was assigned a unique site number and a precise "point" location in the GIS.

Once the PSRs were mapped, it was then possible to conduct an analysis of the potential visibility (or "viewshed") of the project from each of the PSRs. By overlaying the PSRs over the viewshed model of the project, it is possible to determine the PSRs that do not have views of the project due to intervening topography and the PSRs whose views of the project are not blocked by topography. Based on these modeled findings, the next step in this visual analysis was to identify sites whose views were blocked by buildings and/or vegetation.

Four site reconnaissance field visits were conducted for this analysis in March and April of 2009 and March and June of 2010. During the site visits, project staff visited 89 of the PSR sites with two primary objectives: (1) field-check the accuracy of the viewshed model described above and (2) take photographs of the project site from key PSRs.

Twenty-three of the sites visited in the field were labelled as "no view" by the software model. The model's predictions were found to be 100% accurate at all of these "no view" sites visited.

The remaining 66 PSRs visited in the field were modeled as having at least some view of the project. However, as described above, the model only takes topography into consideration and does not consider the screening effects of buildings, vegetation, and other large non-topographical features. Therefore, field visits to 51 PSRs indicated that the model provided some "false positives" in which the model accurately predicted that topography was not blocking the view, but failed to determine that some other feature (such as a building) was blocking the view. As such, several sites that had modeled views of the project actually did not have unobstructed views of the project due to buildings and trees blocking the line-of-site.

3.6 Photographic Simulations of the Project

In the Draft EIR, photo simulations of the project site were developed at 12 viewpoints to illustrate anticipated changes to the visual character of the landscape as seen from characteristic viewpoints within the visual study area. While the sites selected for the simulations are not the only sites in the study area with views of the project, the intent of the selected sites was to serve as representative views of the project site as seen from other similar sites: in other words the simulations in the Draft EIR were intended to provide representative views of the project site as seen from various locations within the larger community. The viewpoints were selected in consultation with Napa County. They were selected with the intent of ensuring that simulations were conducted within each of the distance zones, within each of the Landscape Similarity Zones, and from various orientations. These 12 locations provide an overall view of the project from various vantage points, view orientations, and angles throughout the visual study area.

Each simulation consists of two or three images. The first image shows the project area as of the year 2009 or 2010 (the visual baseline). The second image shows a simulation of the project area as of the year 2048, or 35 years after the project has been fully implemented. The reader is reminded that the simulations are based on the maximum excavation of the project (i.e. the fullest extent of the project), or the project's "worst case scenario". For a few of the views a post reclamation simulation was also conducted (i.e. Site N17, Image 31) depicting conditions post reclamation.

As shown in Figure 4.1-4 of the Draft EIR (and included here in Attachment 1), four viewpoints were taken within the foreground, six viewpoints were taken in the mid-ground, and two were taken in the background. In this document, a thirteenth simulation is provided in response to images shown at the January 7, 2015 Planning Commissions Meeting.

In a presentation by Ms. Susanne VonRosenberg (2168 Penny Lane, Napa) given at the January 7th hearing, a good portion of the northern hillside separating the quarry from uses to the north was shown as being removed as part of the proposed project. While this image provided a representative view of the project site form this location, it did not accurately depict Syar's property. Approximately half of the area shown to be removed in this view was of Skyline Wilderness Park, with the remainder being Syar property. In response to Ms. VonRosenberg's presentation, three additional photo simulations have been prepared from the same general location to accurately depict what the quarrying operations would look like under three different scenarios. The photo simulations included in this document are from the very northwest corner of Skyline Wilderness Park just south of Imola Avenue and just east of the driveway entrance to the Napa County Office of Education (2121 Imola Avenue): also included is an existing conditions image from Imola Avenue looking south from this location (see Images 1 through 4 of this document).

The photo in Image 1 is an existing conditions view from Imola Avenue looking south similar to the image in the Powerpoint presentation prepared by Ms. VonRosenberg. Image 2 shows the proposed project's worse-case 35-year view scenario without reclamation, from the same location as Image 1. As noted, the proposed project would include interim and final reclamation. Image 3 shows the new reduced mining area boundary (reduction of approximately 10.7 acres in the northern-most portion of the propose expansion area, as described in Section 2.0 above) proposed by Syar (see Exhibit 2 in Attachment B). This is also a worse-case view scenario as it does not include any interim reclamation. Image 4 shows the new reduced mining area boundary proposed by Syar but includes vegetation included in final reclamation. These views from Imola Avenue looking south are fairly limited because of the saddle (or notch) in the hills above the barn shown in the photo simulations: traveling farther east or west along Imola Avenue, views of project activities become further reduced because of topographic and vegetative screening. See Images 15, 21, 23, and 26 (included here in Attachment 1 and also in Section 4.1 – Aesthetics, in the Draft EIR) for examples of post-reclamation views which would also be representative of views anticipated for the area shown in Image 1, below.

3.7 Project Significance

Mining would be gradual because it is dependent on the demand for aggregate materials (such as basalt rock) in the region. Basically, Syar would start stepping back from the current Snake Pit area, north into the Pasini Parcel. Each step back into the Pasini area would be about 200 feet at a time. Once Syar removes vegetation and overburden, Syar would start benching down a maximum of 50 feet and 25 feet out as shown on the current mining plan (Image 3-1 in Attachment 1). From the current floor of Snake Pit to the top of the area to be mined first on the Pasini parcel is about a 350 foot drop, so, Syar could potentially get seven benches. More benches would be constructed as the elevation rises. The rate at which this would occur is dependent on the need for aggregate materials in the region. Syar does not anticipate getting near the Pasini knoll for many years; therefore, the greatest visual changes are anticipated to occur towards the end of the 35-year project timeframe when the Project could be expect to reach its fullest extent. Subsequent to quarrying activities reclamation would occur, which would include re-vegetation of quarried slopes. This process would be similar for areas in the northeast expansion area located east of the State Blue Pit.

The reduction in the size of the expansion area boundary proposed by Syar on March 17th (removal of approximately 10.7 acres of expansion area located in the very northeast portion of the project area)

would further reduce views of quarry activities from Imola Avenue and other areas to the north (see Images 3 and 4 and Exhibit 2 in Attachment 2).

The existing quarry is currently visible from multiple geographic orientations throughout the vicinity including from portions of Skyline Tail located immediately east of the State Blue Pit, as noted in the Draft EIR and discussed above. The quarry is less visible than it otherwise might be because Syar currently employs several strategies to minimize visual impacts. The following minimization strategies are already in practice at the quarry and would continue to be used for the proposed project:

1. Retention of existing topographic screens that block views of the quarry. The primary existing visual topographic screen is along the northwest edge of the project site, as shown in Image 3 of the Draft EIR (and included in Attachment 1 herein). This screen is west of State Grey Pit. Whereas the quarry is clearly visible in the centre of Image 3 (Attachment 1), views of the quarry are blocked along the left side of the image due to the topographic screen. This vegetated ridge is approximately 175 to 375 feet in elevation and serves as an effective visual screen for most current quarry activities occurring in the northeast portion of the project site, especially for low-elevation views from the west and southwest. This topographic screen would be maintained throughout the life of the project and would continue to minimize/mitigate visual impacts.
2. Vegetative screening of exposed quarry walls. The quarry walls generally consist of nearly vertical planes interrupted by nearly horizontal benches, resulting in a stair-step effect, with 50-foot vertical faces and 25-foot horizontal benches. As each horizontal bench is completed, the bench can be loaded with soil and vegetated. An example of such vegetative screening is highlighted with the white arrow in Image 9 (Attachment 1). The white arrow is pointing to two rows of trees planted along existing benches, which effectively hide the quarry face behind them. Re-vegetation to establish and screen excavated areas would take between five and 10 years depending on the individual and species of trees planted.
3. Directional quarrying. Directional quarrying is another strategy that currently minimizes potential visual impacts. This technique is highlighted with the black arrow in Image 9 (Attachment 1). In this process, excavation begins along upper slopes and then proceeds inward and downward. While the elevation of the ridgeline is progressively lowered, the ridgeline is maintained to block views into the active quarry. The effect generated by this approach is known as the “vanishing horizon effect.” The highest elevation rims of quarry pits are removed from inside the quarry pit, with each subsequent stage of material removal also occurring inside the quarry rim. As a result, quarrying activities generally cannot be seen from outside the pit. The area behind the black arrow is a large quarry pit, but it cannot be seen from this particular viewpoint because it is being mined from the “inside outward.”

As noted previously, Skyline Wilderness Park has direct foreground views of east-facing previously mined areas, as shown in Image 4 in the Draft EIR and in Attachment 1. As originally proposed the Project included the Relocation of sections of the Skyline Trail located in the northeast portion of the site, as detailed in Section 4.14 (Recreation), from the quarry property back onto Skyline Wilderness Park property. While this would have ultimately put the trail even farther east from the property line than its current location and would therefore be less visible of quarry operations for trail users due to a greater distance from the mine and visual shielding by existing trees and shrubs at Skyline Wilderness Park. As described in Section 2 Syar has modified the project to exclude a 10.7-acrea area in the northeast corner of the property that contains these encroaching trails; therefore, eliminating the need to relocate these trails. This project modification also includes the provision to develop a License Agreement with the County to allow all the existing established trails currently located on Syar holdings to remain in place and to allow continued public access.

In the Pasini Parcel, Syar has proposed to increase the setback from 50 feet to 100 feet from the Pasini Parcel property line adjacent to Skyline Wilderness Park (see Exhibit 1). To provide additional visual screening, Syar would plant oak trees in the setback of the Pasini expansion area, in the general location as shown in Exhibit 1 (Attachment 2) within the first two years of the permit term. The location of these tree planting are intended to provide visual screening of proposed quarrying activities occurring within the Pasini Parcel from park users that would be looking southward, primarily from Skyline Trail where it turns eastward at the Pasini Parcel and at convergence of Skyline and Buckeye trails where the Skyline Trial turns back southward. This boundary modification wouldn't drastically change views from Sites C10 and C11 (Figure 4.1-4 in Attachment 1); however it would provide more screening between Skyline Wilderness Park and the project along the Pasini Parcel property boundary. The proposed screening trees would not block significant off-site views from SWP to the south as those views are currently of side and uphill slopes that don't look over any scenic vistas.

As detailed in Section 4.1.3.3 of the Draft EIR, at some of the off-site locations (such as those in Skyline Wilderness Park and from some areas along Imola Avenue), the project would increase the level of visual contrast, would create large areas of color contrast inconsistent with the adjacent landscape character, would change existing landscape textures by removing existing vegetation and exposing native soil/rock, and the size of the project would potentially exceed the scope of the nearby natural land forms. However, it is important to note that the current excavation areas are visible under existing conditions and the visual character of the project site and its surroundings would not be substantially changed by implementation of the proposed project and that the viewshed would slowly change incrementally over 35 years. There are very few locations in which the project would create new unobstructed views of quarry activities that do not already have at least some degree of views of existing quarry activities. The amount of visual contrast from project activities would not substantially change from existing conditions. For example, Image 41 in the Draft EIR (and included here in Attachment 1) shows three existing natural rock outcroppings appearing throughout the visual study area as compared to a photograph of an existing quarry face within the project site. As shown in the image, the exposed faces of the existing quarry are similar in visual character to the natural rock faces. Views of natural rock faces can be valued as visual resources, as shown in Image 42 in the Draft EIR (and Attachment 1) of a bench with views of a natural rock outcropping east of Skyline Wilderness Park. Expanded quarry faces created by the project are likely to appear natural to some viewers as well. In other cases, individuals would recognize the project as an active quarry. In either case, although the expanded quarry faces created by implementation of the proposed project would modify views of the project site from existing conditions, even the proposed project's worst-case scenario would not substantially degrade the existing visual character or quality of the site and its surroundings, nor would it obstruct key views or vistas in the vicinity.

Furthermore, the modified project would further reduce the amount of visual change as seen from mid-ground and foreground vantage points to the north and west (as shown in Images 3 and 4), and of views from within SWP, in particular views from SWP trails located on Syar lands within the northeast corner of the holding (i.e. form the trails that were previously proposed to be relocated). The existing visual character associated with these trails, as well as their functioning, would be maintained and not materially change as a result of the modified project because they would not need to be relocated.

While this project modification would retain existing trials, some portions of the encroaching Skyline Trail would be in close proximity to proposed mining boundaries, in particular where the trail comes in close proximity to the existing rock wall that runs along this proposed mining boundary. Due to the limited occurrences that the trial comes in close proximity to the wall (approximately 3 based on trial alignment and site inspection conducted by county staff on April 6, 2015) and the existing mining occurring in the area (i.e. State Blue Pit) the overall effect on the visual character of this particular area is considered to be less than significant.

Image 1: From Imola Avenue looking south toward Skyline Wilderness Park and the proposed project.

Image 2: Photosimulation looking south from Imola Avenue: 35-year worse-case scenario view with no interim or final reclamation.

Image 3: Photosimulation looking south from Imola Avenue: 35-year proposed reduced expansion area with no reclamation.

Image 4: Photosimulation looking south from Imola Avenue: 35-year proposed reduced expansion area with final reclamation.

Foreground and mid-ground views within the viewshed would not be substantially obstructed, altered, or degraded from sensitive viewing areas because of existing topographic screening and existing and proposed vegetative screening, and the existing visual character of the area. Degradation of scenic resources would not be significant because the proposed project would not severely alter or displace any striking landform features, aesthetic water bodies, historic hedgerows, or historic structures. For the reasons stated above and within the Draft and Final EIRs, and with the inclusion of existing minimization strategies already in practice at the quarry, the impact would be less than significant

4. Master Response – Noise and Vibration

Public comments received after the circulation of the proposed Final EIR, including those presented at the Napa County Planning Commission hearing on January 7, 2015, generally were in regard to the consistency of the project with applicable General Plan noise standards, Napa County Code Chapter 8.16 (Noise Control Regulations), and the feasibility or effectiveness of proposed mitigation measures in reducing operational noise levels to less-than-significant levels. Comments also questioned the validity of the noise and vibration studies as they related to sensitive residential and educational uses to the north and recreation uses to the north and east, including the characterization of ambient and project conditions. In addition, comments received recommended that adequate notification of blast events be provided to the surround public and sensitive land uses prior to blasting events.

The following response first summarizes the Noise and Vibration chapter of the Draft EIR, and includes a discussion of the existing noise environment in the project vicinity, a brief summary of the applicable regulatory criteria, a brief description of the assessment's methodology, and a summary of project impacts and mitigation measures necessary for compliance with the established significance thresholds. Additionally a quantitative comparison of predicted noise and vibration levels that would be expected from the proposed changes to project operations as described in Section 2 above (reduced expansion areas and further limit blasting and overburden removal activities).

4.1 Noise and Vibration Chapter Setting Section

The setting section of the Noise and Vibration chapter provides background information of the fundamentals of acoustics, ground borne vibration, and blasting, so that the reader can understand the technical terms and concepts used in acoustical analyses. Sensitive receptors in the project vicinity are then identified, and the existing noise conditions in the project vicinity are also described to establish the baseline noise environment used for comparative purposes in the impact assessment.

A comprehensive noise monitoring survey was made at representative receptor locations surrounding the quarry by Illingworth & Rodkin, Inc. (I&R) in October 2009. The noise monitoring survey included long-term (LT) noise measurements at five locations and short-term (ST) noise measurements at two locations. Several additional noise measurements were made within the quarry itself to document noise levels close to operating quarry equipment. Draft EIR Figure 4.11-1 (Appendix A) shows the approximate locations of long-term and short-term noise measurements. Draft EIR Table 4.11-4 summarizes the long-term noise data. The noise data collected at each of the noise measurement sites included noise from activities at Syar Napa Quarry as well as all other ambient noise sources in the project vicinity (e.g., vehicular traffic, aircraft, etc.). The data collected in 2009 continue to represent existing noise conditions at receptors in the project vicinity as major operation at the Syar Napa Quarry or other ambient noise sources in the project vicinity have not changed substantially since 2009.

With respect to the LT noise measurements that were taken from Tuesday October 6th through Monday October 12, 2009, the following characterizes mining activities and operations occurring within the Quarry on that specific day (J. Gomez, April 30, 2015): October 6 - The asphalt plant (A/C plant) the blue rock plant (main crusher on lower floor) and sand plant were in operation, one loader was sorting rip rap in State Grey Pit, and operations/processing in the blue rock plant extended through a swing shift (a swing shift is typically form 3:30 pm to 11:30 pm or 1:30 am); October 7 - The AC plant the blue rock plant and the aggregate base plant (AB plant - recycle area upper floor) were in operation, aggregate materials were loaded and hauled rock out of State Blue, drilling occurred in the Snake Pit, scalping occurred at the AB plant, and processing in the blue rock plant extended through a swing shift; October 8 – the AC plant and the blue rock plant were in operation, aggregate materials were loaded and hauled from State Grey Pit, and processing in the blue rock plant extended through a swing shift; October 9 – The AC plant blue rock plant and the AB plant were in operation, drilling in Snake Pit occurred, materials were loaded and hauled from Rock Area 1 and from State Grey, and processing in the blue rock plant extended through a swing shift; October 10 - Maintenance took place on the blue rock plant, and processing in the blue rock plant extended through a swing shift; October -11 - No operations occurred (Sunday); and October 12 – The AC plant blue rock plant and the AB plant were in operation, materials were be loaded and hauled from State Blue Pit and Rock Area 1, and processing in the blue rock plant extended through a swing shift. Syar has indicated that they do not conduct operations during a graveyard shift (i.e. from 11:30 pm through 7:30 am).

A review of the ambient noise data summary shows that existing noise levels at representative receptor locations are compatible with the existing land uses when assessed against the County's noise and land use compatibly guidelines below (General Plan Community Character Policy CC-39). The data also show that noise levels at receptor locations did not vary substantially during quarry operational hours on weekdays versus the same hours on weekend days. The results of this comparison show that noise levels resulting from existing operations are not substantial contributors to the ambient noise environment at receptor locations surrounding the quarry. Also, the review of the ambient noise data did not reveal any exceedances of the noise thresholds established in the Napa County General Plan or Noise Ordinance as described in this section.

Noise Compatibility Guidelines
Community Character Policy CC-39
(Expressed as a 24-hour day-night average or Ldn)

Land Use	***Completely Compatible***	***Tentatively Compatible***	***Normally Incompatible***	***Completely Incompatible***
Residential	*Less than 55 dBA*	*55-60 dBA*	*60-75 dBA*	*Greater than 75 dBA*
Commercial	*Less than 65 dBA*	*65-75 dBA*	*75-80 dBA*	*Greater than 80 dBA*
Industrial	*Less than 70 dBA*	*70-80 dBA*	*80-85 dBA*	*Greater than 85 dBA*

Furthermore, as detailed in Section 3.7.7 of the Draft EIR, it is anticipated that the quarry would typically operate approximately 250 days per year accounting for weekends, holidays, and other breaks in the production schedule. Therefore, there could be up to approximately 100 days per year that noise associated quarry operations would not occur.

Draft EIR TABLE 4.11-4: Summary Of Long-Term Data Collected During The Noise Monitoring Survey

Site	Description	Average Noise Levels (Leq[1]) during Quarry Operational Hours		L_{dn}[2]
		Weekday	Weekend	
LT-1	Southeast property line of the quarry, ~5,000 feet from the AB/Recycling Plant.	40-50	39-46	48-49
LT-2	Northeast property line of the quarry near the Skyline Trail.	38-52	39-46	46-49
LT-3	Northwest property line of the quarry along the Bay Area Ridge Trail (River to Ridge Trail) located west of and leading towards Skyline Wilderness Park.	43-50	42-54	47-51
LT-4	Skyline Wilderness Park near the Horse Arena.	41-52	40-52	46-52
LT-5	100 feet west of the centerline of SR 221.	72-74	--	74-75

Source: Illingworth & Rodkin, Inc., July 2012.

[1] Equivalent Noise Level, Leq - The average A-weighted noise level during the measurement period. See DEIR Page 4.11-2 for definitions of acoustical terminology.

[2] Day-Night Level, Ldn - Ldn is the equivalent noise level for a continuous 24-hour period with a 10-decibel penalty imposed during nighttime and morning hours (10:00 PM to 7:00 AM).

As noted in DEIR Section 4.11.1.6 (Blasting Survey Locations and Results), I&R also monitored ground vibration and air-blast overpressures during two types of blasting events typical of those that regularly occur at the Syar Napa Quarry as part of the existing baseline conditions. The first blasting event monitored during the vibration survey was a pit blast (also known as a sink shot) that occurred in the State Blue Pit at 1:08 PM on January 7, 2010. The second blasting event monitored by I&R staff was a wall blast that occurred in the State Blue Pit at 9:41 AM on August 6, 2010. The blasts were monitored at three locations representative of sensitive receptors labelled V-1 (located west-northwest of quarry along Bay Area Ridge Trail /River to Ridge Trail, V-2 (located at 2100 Imola Avenue and Patton Avenue), and V-3 (located in the archery range of Skyline Wilderness Park) in Draft EIR Figure 4.11-1. Representatives of Syar also monitored ground vibration and air-blast overpressures at two of these three locations (V-2 and V-3) and at 2143 Penny Lane. Syar also provided vibration data collected from blasts occurring on November 13 and December 22, 2009, from locations V-2, V-3 and 2143 Penny Lane that they collected to supplement and enhance modelling results (see Table 4.11-5).

Vibration data and air-blast overpressures recorded by I&R and Syar during four blasting events that occurred in the State Blue Pit between November 13, 2009 and August 6, 2010 are summarized in Draft EIR Table 4.11-5, below. The data were reviewed by I&R and appear to be a reliable source of baseline data for use in calculating vibration levels at sensitive land uses near proposed mining expansion areas. Vibration levels from blasting ranged from less than 0.01 to 0.06 in/sec PPV at sensitive locations north of the quarry, but were typically 0.01 to 0.04 in/sec PPV. For reference, vibration levels of 0.04 in/sec PPV or less are “barely perceptible,” however, the average person is quite sensitive to ground motion, and vibration levels as low as 0.01 in/sec can be detected by the human body. Although blasting vibration levels are “barely perceptible” the vibration levels may be found to be annoying depending on the level of activity or the sensitivity of the individual to ground vibration. Existing vibration levels measured from blasting events were below the Federal Transit Administration’s and the former U.S. Bureau of Mines’

thresholds to avoid damage to structures. Future vibration levels from blasting events located further from receptors would be expected to be less than those measured during the monitoring survey and below the established thresholds.

Noise from blasting is primarily composed of sound pressures at frequencies below the threshold-of-hearing for humans (16 to 20 Hz). Therefore, the sound of the blast itself is not audible. The only audible sounds related to the blasting events documented to establish baseline conditions for the project occurred prior to and after the blast. Such sources included the warning sirens sounded to ensure safety protocols, the ignition of blasting caps (which qualitatively sound like firecrackers in the distance), and rock fall. These sources of audible sounds were only detectable at monitoring positions V-2 and V-3, and only in the absence of other local noise sources. Audible sounds attributable to blasting events did not exceed existing ambient levels, nor the standards established in the General Plan or Noise Ordinance.

Measured Air-blast overpressures resulting from the blasts themselves ranged from 101 to 116 dB(L). As summarized on DEIR Page 4-11.4, the regulatory limit defined by the former United States Department of the Interior, Bureau of Mines for air-blast overpressure measured with 2-Hz response seismographs is 133 dB(L). Existing air blast overpressures measured from blasting events were below the Federal Transit Administration's and the former U.S. Bureau of Mines limit that have been identified to avoid damage to structures. Future air-blast overpressures from blasting events located further from these receptors would be expected to be less than those measured during the monitoring survey and below the established thresholds.

Draft EIR TABLE 4.11-5 Summary of Data Collected During State Blue Pit Blasting Events

Date	Distance to Blast (ft.)	Charge Weight (lbs./delay)	Peak Particle Velocity			Air-Blast (dB(L))[1]	Collected by – Location
			Long. Vib. (in/sec)	Vert. Vib. (in/sec)	Trans. Vib. (in/sec)		
11/13/09	2,240	261	0.0356	0.0312	0.0587	116.3	Syar - Skyline Wilderness Park
11/13/09	2,560	261	0.0194	0.0137	0.0181	114.8	Syar - 2100 Imola Avenue
11/13/09	3,500	261	0.0425	0.0344	0.0294	110.9	Syar - 2143 Penny Lane
12/22/09	2,560	170	0.0131	0.0162	0.0150	108.8	Syar - 2100 Imola Avenue
12/22/09	3,500	170	0.0331	0.0250	0.0331	104.9	Syar - 2143 Penny Lane
1/7/10	2,630	270	0.0350	0.0275	0.0306	107.0	Syar - Skyline Wilderness Park
1/7/10	3,700	270	< 0.0100	< 0.0100	< 0.0100	N/A	I&R - Napa State Hospital (V-1) below trigger level of instrument
1/7/10	2,900	270	0.0162	0.0219	0.0212	106.0	I&R - 2100 Imola Avenue (V-2)
1/7/10	2,900	270	0.0137	0.0187	0.0219	106.0	Syar - 2100 Imola Avenue (V-2)
1/7/10	3,350	270	0.0362	0.0250	0.0231	105.5	I&R – Archery Range (V-3)
1/7/10	3,350	270	0.0362	0.0237	0.0237	104.2	Syar – Archery Range (V-3)
1/7/10	2,650	270	0.0350	0.0275	0.0306	107.0	Syar – Skyline Wilderness Park
8/6/10	3,830	332	< 0.0100	< 0.0100	< 0.0100	N/A	I&R - Napa State Hospital (V-1) below trigger level of instrument
8/6/10	3,200	332	0.0144	0.0225	0.0219	101.0	I&R - 2100 Imola Avenue (V-2)
8/6/10	3,200	332	0.0150	0.0225	0.0231	101.9	Syar - 2100 Imola Avenue (V-2)
8/6/10	3,650	332	0.0112	0.0162	0.0119	107.5	I&R – Archery Range (V-3)
8/6/10	2,930	332	0.0294	0.0162	0.0331	102.8	Syar – Skyline Wilderness Park
8/6/10	4,315	332	0.0237	0.0069	0.0187	101.9	Syar - 2143 Penny Lane

Source: Illingworth & Rodkin, Inc., July 2012.

Note: Air-blast levels are presented in terms of dB (L) for the assessment of potential damage to structures (dB (L) is a linear, unweighted measurement of noise). Regular acoustical noise measurements typically use weighted scales that discriminate against low frequency noise. Thus for a similar noise source, A-weighted and C-weighted scales will usually record significantly lower levels of noise.

4.2 Noise and Vibration Chapter Regulatory Framework Section

The Community Character Element of the Napa County General Plan (Napa County 2008) sets forth goals and policies to protect people from exposure to excessive noise as follows:

Goal CC-8: Place compatible land uses where high noise levels already exist and minimize noise impacts by placing new noise-generating uses in appropriate areas.

Policy CC-38: The following are the County's standards for maximum exterior noise levels for various types of land uses established in the County's Noise Ordinance (DEIR Table 4.11-6). Additional standards are provided in the Noise Ordinance for construction activities (i.e., intermittent or temporary noise).

a) For the purposes of implementing this policy, standards for residential uses shall be measured at the housing unit in areas subject to noise levels in excess of the desired levels shown above.

b) Industrial noise limits are intended primarily for use at the boundary of industrial zones rather than for noise reduction at the industrial use.

c) Where projected noise levels for a given location are not included in this Element, site-specific noise modelling may need to be conducted in order to apply the County's Noise policies.

d) For further information, see the County Noise Ordinance, Napa County Code 8.16 – Noise control regulations.

Draft EIR TABLE 4.11-6 Exterior Noise Level Standards (Levels not to be exceeded more than 30 minutes in any hour, L50)

Land Use Type	Time Period	Noise Level (dBA) by Noise Zone Classification		
		Rural	Suburban	Urban
Residential: Single-Family and Duplexes	10 PM -- 7 AM	45	45	50
	7 AM -- 10 PM	50	55	60
Residential: Multiple or county	10 PM -- 7 AM	45	50	55
	7 AM -- 10 PM	50	55	60
Commercial	10 PM -- 7 AM	60		
	7 AM -- 10 PM	65		
Industrial including Wineries	Anytime	75		

Sources: Napa County Code Section 8.16.070- Exterior noise limits; and Napa County General Plan 2008 Community Character Policy CC-38.

Policy CC-48: Where proposed commercial or industrial land uses are likely to produce noise levels exceeding the standards contained in this Element at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process.

The Napa County Noise Ordinance Section 8.16.070, Exterior Noise Limits, requires that no person shall operate or cause to be operated any source of sound at any location within the unincorporated area of Napa County, or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes a noise level when measured on any other property, either incorporated or unincorporated, to exceed the following limits for rural residential properties during the hours of 7:00 AM to 10:00 PM:

a. 50 dBA for more than 30 minutes out of an hour (represented by the L_{50} acoustical descriptor);

b. 55 dBA for more than 15 minutes out of an hour (represented by the L_{25} acoustical descriptor);

c. 60 dBA for a period of more than 5 minutes out of the hour (represented by the L_{08} acoustical descriptor);

d. 65 dBA for a period of more than 1 minute out of an hour (represented by the L_{02} acoustical descriptor); or

e. 70 dBA for any period of time (represented by the L_{max} acoustical descriptor).

Nighttime noise level limits are five dBA more restrictive. The ordinance requires that noise levels be measured with a calibrated sound level meter using the A-weighting scale and the slow meter response. Measurements are to be conducted at any point on the complainant's property. Noise standards are higher for suburban or urban residential developments but the rural residential standard would be appropriate for sensitive land uses in the quarry vicinity as it is a more conservative threshold for the analysis. The ordinance requires that adjustments be made to the standard if the Noise Control Officer (i.e. the Director of the Napa County Environmental Health Division or designee) judges the noise to contain a steady audible tone such as a whine, screech or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech.

Because mining equipment typically generates steady noise levels while in operation, the most restrictive noise limit for the purposes of the noise assessment was determined to be the L50 (the noise level exceeded 30 minutes in any hour). As noted above, Napa County Noise Ordinance, Section 8.16.070, also allows higher noise levels for shorter periods of time. For steady noise however, the L50 noise limit is the lowest noise limit and would be exceeded before any of the other noise limits contained in the code (L_{25}, L_{08}, L02, or L_{max} limits as described above).

4.3 Noise and Vibration Chapter Impacts and Mitigation Measures Section

Impact 4.11-1 of the Draft EIR identifies a potentially significant noise impact due to aggregate mining activities and operations on the ridgelines in the expansion areas because worst-case noise levels calculated as part of the noise analysis could exceed the allowable noise levels as established in the Napa County General Plan and Napa County Noise Ordinance at residential and educational land uses along Imola Avenue and Madrone Drive as well as at established activity areas at Skyline Wilderness Park. Typical aggregate mining activities and operations are described in Section 4.1 above.

Worst-case noise levels were calculated based on the assumption that the predominant noise source would be unshielded aggregate mining activities occurring near the quarry boundaries at or near the top of the quarry pit. Aggregate mining activities typically utilize heavy equipment including rock drills, dozers, loaders, excavators, and rock trucks. After vegetation and overburden is removed from the area to be mined, the mining area is drilled for subsequent blasting. Blasting loosens the material to be quarried allowing for a quarry bench to be cut. The bench is then drilled, blasting occurs, and another bench is cut. This aggregate mining process repeats itself until the mining activities reach the quarry floor. Drills are used to penetrate the rock to install blast charges. Dozers are normally used to cut the benches and loaders, excavators, and rock trucks are used to load and transport the aggregate to the processing areas. The source noise level used in the calculations, 80 dBA L_{50} at a distance of 100 feet from the mining activity, assumed that the receptors had direct line-of-sight to the mining equipment. The calculations assumed that noise from existing on-site support facilities, including the aggregate processing equipment, which are located further away and in areas shielded by terrain, would continue to be similar to existing conditions which are generally only audible in the absence of other local noise sources. The on-site support facilities are not proposed to be expanded or modified with the project. Because of the distance separating the on-site support facilities and the nearest receptors (approximately 4,000 to 5,000 feet from Imola Avenue residences, the schools south of Imola Avenue, and the primary use areas at Skyline Wilderness Park), as well as the intervening terrain, the noise level from the on-site support facilities is calculated to be less than 39 dBA L_{50}, over 10 dBA below the noise level resulting from unshielded aggregate mining activities alone. The noise from on-site support facilities (i.e., processing areas) would not measurably contribute to the noise level resulting from unshielded aggregate mining activities alone. The overall worst-case noise levels that have been determined to be significant would result from unshielded aggregate mining activities occurring near the quarry boundaries.

The Syar Napa Quarry would be gradually expanded over time from existing disturbed areas such as the State Blue Pit, Snake Pit, and the gun range, based on the demand for basalt rock. According to Syar Napa Quarry, a typical surface mining "step back" into undisturbed areas would cover a distance of approximately 200 feet with the step back width ranging from 500 feet to 1,000 feet. Once the step back process is complete, benching would begin downward (maximum of 50 feet down and 25 feet out as shown on the current mining plan in Appendix H of the Draft EIR). During the step back, trees and shrubs would first be removed from the area. Depending on the number and density of the trees in the step back area, the process could last between one and two weeks. The overburden would then be removed from the step back area over an approximate period of one week. Finally, the step back area would be drilled for the blasting of the first bench over a period of approximately two days. The overall step back process would last approximately two to three weeks. Once the step back activities are complete, the benching, and removal of material, would continue at a rate dependent upon the demand at the time. It could take one year or many years to mine the "wedge" of material, and before another step back is necessary.

The Quarry anticipates "stepping back" from the current Snake Pit area north into the Pasini Parcel. Similar numbers and types of mining equipment would be expected during the step back process including dozers, loaders, excavators, and rock trucks. As a result, source noise levels during the temporary step back process would be equivalent to the worst-case noise level predictions made for aggregate mining activities (80 dBA L_{50} at a distance of 100 feet). The noise due to the step back process would be short-term occurring over a two to three period at any given time, would move along the quarry perimeter as the quarry pits as they expand, and would be limited to the hours of 7:00 am to noon on weekdays, with no such activities on Saturdays, Sundays, or holidays.

The step back process, including the removal of overburden and aggregate on the uppermost benches would result in the highest noise levels received at off-site receptor locations because of the lack of intervening acoustical shielding between the noise source and the receptor. While this temporary phase of the mining operation would be similar to construction activities, which is not normally regulated by County Noise Ordinance Standards that address long-term operations, noise resulting from long-term operations including temporary phases associated with the step back process is discussed below in Sections 4.4 and 4.5. Under the proposed permit these noise sources are regulated by NCC Section 8.16.070 (Exterior noise limits) and General Plan Policy CC-38 which are described in Section 4.2 above. It should be noted that regulating noise generation and exposure during the temporary phases of mining pursuant to NCC Section 8.16.070 (Exterior noise limits) and General Plan Policy CC-38 is more restrictive than regulating them as construction activities: under construction activities ((NCC 8.16.080(B)(2)) noise generation and exposure would be allowed to reach 75dBA from 7 a.m. to 7 p.m. and 60 dBA from 7p.m. to 7 a.m.

4.4 Mining Noise at Imola Avenue Receptors

Noise levels from overall project operations (i.e. aggregate mining and processing activities) were calculated at the nearest noise-sensitive receptors to the north of the quarry, which do not currently have direct line-of-sight to mining activities due to intervening terrain, but would at times have direct line-of-sight to proposed aggregate mining activities when these expansion activities occur at the top of the eastern limits of the State Blue pit. These receptor positions were considered to be the most affected receptors for the analysis because of their relative proximity to the quarry and because topography would not always provide shielding during worst-case operations.

Calculations assuming unshielded conditions show that noise levels would exceed the daytime (7 AM to 10 PM) Napa County Noise Ordinance limits at the nearest receptors along Imola Avenue. Again, these worst-case noise levels are only anticipated to occur during the step-back period of approximately two to three weeks when mining activities at the perimeter of the quarry are within view of receptors in the project

vicinity. As the mining progresses downward to the quarry floor, the top of the quarry slope would shield these activities from the view of these receptors, which would in turn reduce potential noise due to shielding by intervening topography.

A visual simulation of the expanded quarry, made from a point along Imola Avenue and representative of the future views of nearby receptors, is shown in Image 2 above. Image 2 shows the area in the foreground where unshielded mining activities would occur. Mining activities at the northernmost end of the benches located along the quarry expansion area would at times be visible from nearby receptor positions. Noise reduction measures identified in Mitigation Measure 4.11-1 include the prohibition of nighttime mining activities in unshielded areas, the prohibition of the daytime mining activities in unshielded areas to the north and east of the State Blue Pit or Snake Pit within 2,500 feet of sensitive receptors if noise levels exceed the noise limits (the construction of acoustical shielding would be part of the step back process and is temporary in nature), and noise monitoring to ensure that noise levels at the nearest receptor locations north or east of the quarry are maintained at or below the applicable noise limits. Syar Napa Quarry will maintain acoustical shielding for the longest time possible, use the quietest available equipment when removing topsoil and overburden (e.g., well-maintained, modern equipment having sufficient engine insulation and mufflers such that noise levels are no greater than 85 dBA at 50 feet, electric or hydraulic powered equipment where available, or equipment operation settings at the lowest possible power levels), and monitor and report noise levels to the county to ensure compliance with the daytime noise limit of 50 dBA L_{50}.

The visual simulation (Image 2 in Section 3.7 above) also shows a future quarry face in the distance located beyond the foreground area where the State Blue Pit would be expanded. Although mining on the distant quarry face would be visible above the terrain located in the foreground, the distance between the unshielded mining activities and the nearest receptors along Imola Avenue would be approximately 3,000 to 3,500 feet at the closest points. Predicted worst-case noise levels, assuming direct line-of-sight to mining on the future quarry face would be less than 50 dBA L_{50}, complying with the Napa County General Plan and Napa County Noise Ordinance limits for daytime noise.

4.5 Mining Noise at Trails within Skyline Wilderness Park – Pasini Knoll

Calculations were also made as part of the Draft EIR to predict worst-case mining noise levels at the Syar Napa Quarry boundaries and within Skyline Wilderness Park. Worst-case noise contours resulting from aggregate mining activities at three sample locations along the north, east, and south boundaries of the expanded quarry areas are shown in Draft EIR Figures 4.11-34, 4.11-35, and 4.11-36 and also in Attachment 1 of this document. The noise contours presented in these figures are conservative because the calculations assume a worst-case source noise level of 80 dBA L50 at a distance of 100 feet, no intervening acoustical shielding provided by terrain, or excess attenuation due to ground absorption. The Draft EIR presents a worst-case noise level assuming that receptors within the park could be located within approximately 100 feet from future mining areas. Currently, there are some similar vantage points within Skyline Wilderness Park, or outside of the Park's boundaries on the Syar Napa Quarry property, where hikers or equestrians can go "off-trail" and observe existing aggregate mining operations. The focus of the noise impact analysis for Skyline Wilderness Park, however, was not at particular off-trial vantage points because: 1) trails currently exist within and near the proposed mining expansion areas and trail users are directed by Skyline Wilderness Park to stay on mapped trails, 2) the Quarry has mined areas adjacent to these trails for many years and trail users may be accustomed to the noise, 3) the transitory nature of the use limits the cumulative exposure of the receptor to the noise at any given point, and 4) there are many other established trails or use areas within Skyline Wilderness Park that would be shielded from mining noise and exposed to lower noise levels. Similarly, noise at established trails on Syar Napa Quarry property were not included in the impact analysis because these trails were to be relocated back

onto Skyline Wilderness Park lands either with or without the Project. However, as previously detailed in Section 2 above (Proposed Modifications to the Project), on March 17, 2015, Syar revised the project to exclude mining within approximate 10.7-acre area located east of the State Blue Pit which contains the encroaching trails that were to be relocated as part of the project. As such, all existing trials will remain in place as part of the modified project.

The focus of the Draft EIR noise impact assessment was at receptor positions along established trails where park users could be exposed to continuous mining noise for periods exceeding 30 minutes in any hour consistent with the L50 noise level limits established in the County's Noise Ordinance. The L50 is the noise level exceeded 30 minutes or more during an hour. Draft EIR Figure 3-5 (Limits of Vertical Excavation [Attachment 1]) and Draft EIR Figure 3-6 (Vertical Excavation Cross Sections [Attachment 1]) were reviewed as part of the Draft EIR noise analysis to assess mining noise at established trails within Skyline Wilderness Park adjacent to the Syar Napa Quarry. In the vicinity of the Pasini Knoll, the Skyline Trail is typically located 300 to 500 feet from the Skyline Wilderness Park boundaries that border Syar Napa Quarry. A review of Draft EIR Figure 3-6 Cross Sections A, B, C, E, F, and G show that park users, even at locations near the property line of the Skyline Wilderness Park, would not have direct line-of-sight to long-term mining activities once the step back process is complete. Cross Section D is somewhat different as it shows that the terrain just east of the Syar Napa Quarry boundary trends up in elevation. As a result, there is a potential that receptors could go "off-trail" and position themselves at a vantage point overlooking future mining areas. However, the Skyline Trail (near Lake Marie) is located over 900 feet to the northeast of the position where Cross Section D ends and on the opposite side of an intervening ridge. Noise levels resulting from aggregate mining activities on the easternmost portion of the proposed expansion area are calculated to be 36 dBA L_{50} or less at receptor locations along Skyline Trail near Lake Marie (approximately 1,650 feet from the expansion area). Similarly, noise levels at receptor locations along the portion of Skyline Trail that runs north of the proposed expansion area are calculated to be 46 dBA L_{50} or less at a distance of approximately 500 feet. The distance separating the Skyline Trail from future mining expansion areas, in combination with intervening topographical shielding provided by the ridge within Skyline Wilderness Park, would be sufficient to result in noise levels below the Napa County General Plan and Napa County Noise Ordinance limits at receptor positions along the trail.

As stated previously, Mitigation Measure 4.11-1 will require Syar Napa Quarry to maintain acoustical shielding for the longest time possible (see description of step back process in Section 3.0), use the quietest available equipment when removing vegetation, topsoil and overburden, and monitoring and reporting noise levels to the county to ensure compliance with the applicable noise limits.

4.6 Blasting and Vibration

Per the current blasting protocol implemented by Syar Napa Quarry, blasting only occurs on weekdays between the hours of 9:00 AM and 3:00 PM during favourable weather conditions (e.g., clear skies, vertical temperature lapse, and calm to light-winds). The frequency of blasts is dependent on the demand for products. During the construction season (June to November), blasting can occur at a rate of one to two blasts per week, and during the off-season (December to May), blasting typically occurs at a rate of zero to one blast per month.

As discussed in Section 3.5.8 of the Draft EIR under existing conditions, blasting operations would occur as a required part of mining operations/activities, blasting would not be performed at night or during severe weather. Typically blasting occurs up to twice per week when blasting is necessary between 9:00 a.m. and 2:00 p.m. on weekdays (blasting would not occur on weekends or during holidays). During the construction season blasting would likely occur more often than during the off season, however frequency is dependent on product demand, but in general, blasting could occur once or twice a week during the

construction season and once a month to not at all in some months in the off season. A substantial increase in blasting events beyond that which has occurred during existing conditions is anticipated under the proposed project as modified (i.e. production up to 1.3 million tons per year). Over an approximate six year period (from 2006 to September 2011) approximately 156 blasts have occurred at the quarry ranging from a low of approximately 13 blast events in 2011 to a high of approximately 46 blast events in 2009, resulting in an annual average of approximately 26 blasts per year (personal communication; J. Gomez, Syar Industries Inc., September 23, 2011). Therefore, with incorporation of the Reduced Production Alternative it is anticipated that blasting events could number up to approximately 70 per year at a production level of 1.3 million tons per year. Furthermore, specific to blasting in the State Grey Pit, from 2010 through 2015 there have been a total of 12 blasts: four in 2010, none in 2011, two in 2012, one in 2013, four in 2015, and one so far in 2015 (personal communication; J. Gomez, Syar Industries Inc., March 11, 2015 email).

Draft EIR Impact 4.11-2 evaluates vibration levels due to the blasting proposed as part of the project. Table 4.1 summarizes the results of worst-case calculations assuming blasting at the quarry perimeter. As the quarry expands toward the northernmost project limit to the north and east of the State Blue Pit, blasting could occur within approximately 1,280 feet of residential areas adjacent to Skyline Wilderness Park and existing schools located south of Imola Avenue. Blasting would occur approximately 1,900 feet from the nearest residences along Imola Avenue. Calculations indicated that blasting using a charge weight of 332 lbs/delay (the worst-case charge weight per delay currently used by Syar Napa Quarry) could generate “distinctly perceptible” groundborne vibration levels of 0.33 in/sec. PPV, exceeding the 0.20 in/sec PPV limit and resulting in a potentially significant impact.

Draft EIR Mitigation Measure 4.11-2 identifies blasting vibration reduction measures to be implemented by the Permittee during all blasting events. These measures include monitoring during each blast, blast modification procedures such as reducing the charge weight per delay to ensure compliance with the 0.20 in/sec PPV limit, and notification requirements so that the county, sensitive receptors and surrounding residences (TBD) are provided at least 24-hours advance notice of the blast. Data collected through the vibration monitoring process would allow Syar and the county to track when vibration levels approach the limits and provide an opportunity for Syar to implement blast modification procedures to reduce vibration levels as necessary to avoid any exceedance. Advanced notification of blasting events reduces the potential for community annoyance because the source of the vibration would be known and receptors would anticipate the blast. The implementation of Mitigation Measure 4.11-2 would maintain acceptable levels of blasting vibration such that sensitive structures and sensitive receptors north of the quarry would not experience excessive or damaging vibration and would reduce the impact to a less than significant level.

4.7 Quantitative Comparison of Noise and Vibration Levels between DEIR Project and Proposed Modifications to the Project

With regard to noise, the Draft EIR project is proposed to be modified as follows:

- Reduce the size of the expansion areas including the doubling of the size of the setback from the property line in the Pasini area and removing the northernmost 10 acres of the northeast expansion area adjacent to Skyline Wilderness Park.
- Limit topsoil and overburden removal activities to the hours of 7:00 am to noon on weekdays, with no such activities on Saturdays, Sundays, or holidays.

Attachment 2, Exhibits 1 and 2 show the plan modification proposed by Syar Napa Quarry on February 13, 2015.

Exhibit 1 shows a revised mining boundary within the Pasini Parcel of approximately 47.69 acres as compared to the Draft EIR project mining boundary area totalling 51.97 acres. The proposed plan modification would double of the size of the setback from the property line in the Pasini area thereby reducing worst case noise levels at the Skyline Wilderness Park boundaries by approximately four dBA.

Exhibit 2 shows the removal of the northernmost 10 acres of the northeast expansion area adjacent to Skyline Wilderness Park. The removal of the northernmost 10 acres from the project increases the distance between the worst-case locations of aggregate mining activities and receptors as well as increases the acoustical shielding that would remain between the noise source and receptors.

Table 4-1 summarizes the results of the additional calculations made assuming the revised mining area boundaries. Noise levels at the primary use areas of Skyline Wilderness Park (e.g., picnic/camping areas) assuming worst-case aggregate mining operations are expected to be approximately 48 dBA L50. The plan modification would reduce predicted noise levels by up to nine dBA due to the additional distance of the receptor from the noise source and acoustical shielding provided by intervening terrain. Operational noise levels assuming the worst-case conditions would be less than the county's 50 dBA L50 noise level threshold for sounds exceeded 30 minutes or more per hour and the impact would be less than significant.

Noise levels at the educational land uses located south of Imola Avenue are expected to reach 51 dBA L50 assuming worst-case aggregate mining operations. The plan modification would reduce predicted noise levels by up to six dBA due to the additional distance of the receptor from the noise source. Operational noise levels assuming the worst-case conditions would just exceed the county's 50 dBA L50 noise level threshold for sounds exceeded 30 minutes or more per hour. The implementation of Mitigation Measure 4.11-1 would mitigate this impact to a less than significant level.

Noise levels at the residential land uses north of Imola Avenue are expected to reach 49 dBA L50 assuming worst-case aggregate mining operations. The plan modification would reduce predicted noise levels by up to three dBA due to the additional distance of the receptor from the noise source. Operational noise levels assuming the worst-case conditions would be less than the County's 50 dBA L50 noise level threshold for sounds exceeded 30 minutes or more per hour and therefore the impact would be less than significant.

Table 4.1 Comparison of Worst-Case Noise Levels for Unshielded Mining Activities at Nearest Receptors

Facility or Operation	Receptor	DEIR Project	Proposed Modifications to the Project	County Noise Ord requirements / limitations (L_{50})
		Resultant Noise Level (L_{50})	Resultant Noise Level (L_{50})	
Aggregate Mining near north boundary of State Blue Pit	North (Skyline Wilderness Park) picnic, day use, and camping areas	**57 dBA**	48 dBA	50 dBA
Aggregate Mining near north boundary of State Blue Pit	North (Schools)	**57 dBA**	**51 dBA**	50 dBA
Aggregate Mining near north boundary of State Blue Pit	North (Imola Avenue residences)	**52 dBA**	49 dBA	50 dBA

Facility or Operation	Receptor	DEIR Project	Proposed Modifications to the Project	County Noise Ord requirements / limitations (L_{50})
		Resultant Noise Level (L_{50})	Resultant Noise Level (L_{50})	
Aggregate Mining near north boundary of Snake Pit	North (Skyline Trail, Cross-Section G)	46 dBA	46 dBA	50 dBA
Aggregate Mining near east boundary of Snake Pit	East (Skyline Trail, Cross-Sections C)	36 dBA	36 dBA	50 dBA
Aggregate Mining near north or east boundaries of Snake Pit off-trail park boundary locations, Cross Section D)	North and East (Skyline Wilderness Park)	**80 dBA**	**76 dBA**	N/A

Notes: Bold exceeds the county's threshold: Existing noise levels at representative locations in Ldn are from Table 4.11-4 of the DEIR which is provide above in Section 4.1.
Source: Illingworth & Rodkin, Inc., July 2012.

Further, the plan modification would limit topsoil and overburden removal activities to the hours of 7:00 am to noon on weekdays, with no such activities on Saturdays, Sundays, or holidays, thereby reducing the number of hours per day where receptors could be exposed to the worst-case noise levels.

With regard to vibration, the Draft EIR project would be modified as follows:

- Reduce the size of the expansion areas including the doubling of the size of the setback from the property line in the Pasini area and removing the northernmost 10 acres of the northeast expansion area adjacent to Skyline Wilderness Park.
- Limit blasting to the hours of 10:00 am to 4:00 pm weekdays, with no blasting on Saturdays, Sundays, or holidays and within 400 feet of the property line, where such activities are visible from the trails in Skyline Wilderness Park.
- Provide notice 48 hours in advance of blasting via a website and email notice to sensitive receptors and anyone who requests to receive email notification (See draft condition of approval #2F for additional details).

Under the modified plan, blasting could occur within approximately 1,500 feet from the residential areas adjacent to Skyline Wilderness Park and the existing schools located south of Imola Avenue from the State Grey Pit to and approximately 1,750 feet from the State Blue to the residential areas adjacent to Skyline Wilderness Park and the existing schools located south of Imola Avenue. Blasting would occur approximately 2,300 feet from the nearest residences along Imola Avenue and the State Grey Pit and approximately 2,650 feet from the nearest residences along Imola Avenue to the State Blue Pit. Calculations indicated that blasting using a charge weight of 332 lbs/delay (the worst-case charge weight per delay currently used by Syar Napa Quarry) could generate groundborne vibration levels ranging from 0.11 to 0.20 in/sec. PPV, below the Draft EIR worst-case vibration level of 0.33 in/sec. PPV. Predicted vibration levels due to blasting would not exceed the 0.20 in/sec PPV limit resulting in a less than significant impact at these receptors. In addition, the plan modification would further limit blasting activities and provide advance notification of blasting to anyone requesting notification.

With regard to the retention of Skyline Trail as a result of the modified project, in particular those immediately east of the State Blue Pit, because the lower portions of the trail have historically experienced

mining activities, and a 50 foot buffer would be provided from the rock wall (see Draft Condition #1C) that would retain screening/buffering vegetation, therefore noise impacts are anticipated to be less than significant in these areas.

5. Master Response – Air Quality & Dust

Comments received at the January 7, 2015, Planning Commission Hearing on air quality and dust associated with the proposed project are summarized as follows:

- The project will subject park users to respirable crystalline silica which is a carcinogen.
- Silica dust will be released and become airborne and particles can travel several miles. When inhaled by people and animals, the silica gets embedded in lungs and cannot be expelled causing lung disease.
- How can the Draft EIR suggest that one sampling/monitoring point for air quality is representative sampling and there will be no impact to residents downwind of the quarry operation.
- Arroyo Creek is going to absorb carcinogens and move them down the creek.
- Silicosis in equines can cause bone problems which lead to fractures.

5.1 Health Effects from Fugitive Dust

Fugitive dust is a mixture of chemical compounds each of which has a different concentration and toxicity. Chemical compounds in fugitive dust with relatively high toxicity are identified by the State of California Office of Environmental Health Hazard Assessment (OEHHA) as toxic air contaminants (TACs). In order to understand the potential for health effects from TACs, dispersion modelling and an air quality health risk assessment were performed using methodologies described in the California Air Resources Board's AB 2588 Health Risk Assessment Guidelines (CARB 2003) and Bay Area Air Quality Management District's Health Risk Screening Analysis Guidelines (BAAQMD 2010). Results of the health risk assessment were compared to significance thresholds as discussed below and it was determined that the project impact after mitigation would be less than significant.

CARB maintains and updates estimates of the chemical composition and size fractions of particulate matter (PM) for a variety of emission source categories. CARB PM Profile 470 was used in the Draft EIR and quantifies fractions of constituents in fugitive dust from unpaved roads. PM Profile 470 was selected because unpaved roads have the greatest emissions of any fugitive dust source in the project. None of the PM profiles contain respirable crystalline silica and to the amount of respirable crystalline silica was determined based on the technical paper provided in Draft EIR Appendix I. Similarly, asbestos is omitted from the profiles, and so the amount of naturally occurring asbestos was determined by on-site sampling (Draft EIR Page 4.3-18 and Appendix I). A total of four samples were analyzed for asbestos and the highest concentration found was then used in the health risk assessment. Table 5.1 presents the TACs in fugitive dust that were used in the health risk assessment prepared for the project.

Table 5.1 Fraction of Toxic Air Contaminants in Respirable Dust

Toxic Air Contaminant	Fraction of Respirable Dust	Cancer Potency Factor?
arsenic	0.000015	Yes
cadmium	0.000013	Yes
chromium	0.000017	No

Toxic Air Contaminant	Fraction of Respirable Dust	Cancer Potency Factor?
copper	0.000158	No
chlorine	0.000844	No
lead	0.00013	Yes
manganese	0.000915	No
nickel	0.000037	Yes
mercury	0.000014	No
selenium	0.000003	No
vanadium (fume or dust)	0.000077	No
crystalline silica	**0.04**	**No**
naturally occurring asbestos	0.000031	Yes

Sources: DEIR Table 4.3-6; "PM_4 Crystalline Silica Emissions Factors and Ambient Concentrations at Aggregate Producing Sources in California" (DEIR, Appendix I); "Dust Sampling Analytical Results, Syar-Napa Quarry, Napa, California" (DEIR Appendix I); modelling files on CDROM in DEIR Appendix I; and http://www.arb.ca.gov/toxics/healthval/contable.pdf.

Respirable crystalline silica constitutes a small fraction of the dust that will be emitted by the project (Final EIR Page 4-18). Moreover, as shown in Table 5.1, respirable crystalline silica has not been assigned a cancer potency factor by OEHHA, whereas other TACs in fugitive dust have been assigned cancer potency factors. This means OEHHA has decided that respirable crystalline silica is not a carcinogen for purposes of air quality health risk assessment.

OEHHA acknowledges in the Toxicity Summary for respirable crystalline silica[2] that the International Agency for Research on Cancer (IARC) listed respirable crystalline silica as a carcinogen. The Toxicity Summary states: "In 1997, IARC classified respirable crystalline silica in Class 1, a Known Human Carcinogen, based on occupational epidemiologic studies. However, chronic reference exposure levels (RELs) are not based on cancer endpoints. Further, there is no approved cancer potency factor for silica." Thus, OEHHA believes that respirable crystalline silica is a carcinogen for worker exposures, but based on the epidemiological studies available, concentrations to which the public may be exposed do not give rise to cancer and instead may result in a chronic non-cancer health effect (Final EIR Page 4-18).

For comparison, the California Occupational Safety and Health Administration (CalOSHA) permissible exposure level (PEL) for crystalline silica is 100 µg/m3 and protects workers from the carcinogenic effects of respirable crystalline silica when exposed eight hours per day, five days per week for 40 years. The OEHHA non-cancer reference exposure level (REL) is 3.0 $\mu g/m^3$ and protects the public from non-cancer effects of respirable crystalline silica (i.e., silicosis) when continuously exposed. Thus, the health effects of respirable crystalline silica have been conservatively and properly assessed using approved methods and factors. Results of the health risk assessment are discussed below.

5.2.1 Health Risk Assessment

Risk of health effects from exposure to respirable crystalline silica, other toxic constituents in dust (e.g. earth metals), diesel exhaust, and toxic constituents emitted by the asphalt plants are all included in the health risk assessment which shows that after mitigation risk of a health effect is low and the impact on health risk is less than significant. The significance of health effects is evaluated on individual and cumulative bases according to the thresholds in Table 5.2. Cancer risks from all emitted carcinogens are summed and the total is compared to the threshold. Hazard quotients (i.e., predicted concentration divided

[2] http://oehha.ca.gov/air/chronic_rels/pdf/SILICAcREL_FINAL.pdf

by the reference exposure level) for non-carcinogenic substances are summed by target organ/system (in this case humans) affected to determine the hazard index (HI) which is compared to the significance threshold. Draft EIR Section 4.3.3.1 provides further discussion of the significance thresholds.

Additionally, as discussed in Appendix I of the Draft EIR, rocks and soils located at the project site are not considered to be high in crystalline silica. The minor amount of respirable crystalline silica that may migrate from the site as part of fugitive dust emissions as a result of the project not result in any significant increases in the level of crystalline silica in the air or soils of surrounding residential, recreational or institutional (schools and hospitals) uses and would not present a significant impact to the health of humans.

Table 5.2 Health Risk Thresholds of Significance

Individual Health Risk	Cumulative Health Risk
Cancer risk > 10 in 1 million increase Non-cancer risk > 1.0 hazard index (acute and chronic) Ambient $PM_{2.5}$ increase > 0.3 µg/m^3 annual average	Cancer risk > 100 in 1 million Non-cancer risk > 10 hazard index (chronic) Ambient $PM_{2.5}$ increase > 0.8 µg/m^3 annual average

Source: Draft EIR Page 4.3-21.

Toxic components of respirable dust and the more highly carcinogenic effect of diesel particulate matter would combine to increase the total cancer risk by less than 10 excess cancer cases per one million individuals exposed after mitigation resulting from the project (Table 4.3-13, Draft EIR Page 4.3-41). In addition, the mitigated project would not cause the cumulative cancer risk to exceed 100 excess cancer cases per one million individuals exposed (Table 4.3-13 in Draft EIR). The increase in chronic non-cancer risk due to the project would be approximately 10 times less than both the individual and cumulative significance thresholds (i.e., 1 and 10 Hazard Index, respectively); and includes risk attributable to respirable crystalline silica (Draft EIR Page 4.3-44).

The Health Risk Assessment that was performed for Project and for cumulative activities at the Syar Napa Quarry was prepared in accordance with the BAAQMD Air Toxics NSR Program Health Risk Screening Analysis (HSRA) Guidelines (January 2010); and (Office of Environmental Health Hazard Assessment (OEHHA) documents titled Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (August 2003) and Air Toxics Hot Spots Program Risk Assessment Guidelines: Technical Support Document for Exposure Assessment and Stochastic Analysis (August 2012). Specifically, the OEHHA document formally adopts the age sensitivity factors (ASFs) that are required in the BAAQMD guidance as well as limits the exposure duration to 30 years based upon the 95th percentile of length of residency statistic.

Cancer risk at sensitive receptors was calculated using the Derived (Adjusted) Method option in the Hotspots Analysis Reporting Program (HARP) and the 70 year setting. The output from HARP was then be multiplied by 1.12 in order to adjust for the age sensitivity factors and 30 year exposure recommended by OEHHA (i.e., 10*2.25/70 + 3*14/70 + 1*14/70 = 1.12). However, the diesel particulate matter from offroad equipment which dominates the diesel exhaust emissions inventory is calculated without accounting for fuel correction factors. This was an oversight that turned out to simplify the health risk assessment and ensure that it is conservative. Fuel correction factors for diesel particulate matter are 0.852 or less depending upon the model year of the unit. Taking each of these factors into account shows that the unadjusted 70-year risk results from HARP represent values that are approximately five percent greater than necessary (i.e. 1.12 * 0.852 = 0.95). Therefore, the unadjusted 70-year risk results from HARP are considered to conservatively represent cumulative impacts from the project. Individual Project 70 year cancer risk less than or equal to 8.9 in 1 million corresponds to slightly less than 10 in 1 million (i.e. 8.9 x 1.12 = 9.97 which is less than the significance threshold of 10 in 1 million).

Cancer risk for children at the adjacent Napa Pre-School is less than the nearby residential risk and less than the worker cancer risk because the exposure is limited to the hours spent on-site and the limited years that may be spent in pre-school. Specifically, three years of exposure between two and five years old, eight hours per day, five days per week, 50 weeks per year was assessed. The limited exposure duration and frequency were combined with the ASF (i.e., 3) to determine that Project emissions would result in excess cancer risk for children attending Napa Pre-School of less than 0.3 in 1 million.

Furthermore, implementation of the Reduced Production Alternative and mitigating measures associated with air quality emissions would further reduce potential human health risks associated with the project.

5.2.2 Skyline Regional Park and Arroyo Creek

Exposure of Skyline Regional Park users, including campers, to respirable crystalline silica and other pollutants are acceptable and the risk of health effects to Park users is less than significant (see DEIR Appendix I for detailed analysis). Park users and campers are unlikely to have a chronic exposure because they do not reside in the Park for periods exceeding 30 days. Thus, risk of chronic health effects like those from respirable crystalline silica and diesel particulate matter would not substantially affect this sub-population resulting in a less than significant impact. Nevertheless, to be conservative, the DEIR did assess the risk of chronic health effects on users and campers as if they were residents of the Park with continuous, long term exposures and determined the impact to be less than significant.

Crystalline silica particles that may be deposited into Arroyo Creek do not affect any organ except the lungs through inhalation. Thus, unless the material dries and becomes airborne, its associated health risk is expected to be zero because there is no route of exposure. Moreover, the effect of water movement tends to erode particles in the water so that they have rounded edges. Thus, with enough time in the water, the characteristic which makes crystalline silica toxic (i.e., long, thin fibers) will be eliminated. This physical phenomenon is the reason why the California Air Resources Board's Asbestos Air Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations exempts alluvial materials (i.e., materials that were deposited by moving water). Thus, the minor amount of respirable crystalline silica that may be deposited into the Creek as a result of mining and processing activities is not expected to affect the health of downstream receptors.

5.2.3 Exposed Equines

As in humans, silicosis may develop in the lungs of chronically exposed equines. One Internet resource that was found claims that bone problems from silicate associated osteoporosis may occur when the animal is living on soils that are high in crystalline silica.[3] As discussed in Appendix I of the Draft EIR, rocks and soils located at the project site are not considered to be high in crystalline silica. The minor amount of respirable crystalline silica that may travel as part of fugitive dust from the project would not result in significant increases to the level of crystalline silica in the soil that equines use in the immediate area or where equines are living and would not present a significant impact to the health of these animals.

5.2 Deposition of Fugitive Dust on Vineyards

Comments made at the Planning Commission Hearing and in correspondence submitted after the Final EIR that are addressed in this subsection include:

- Reduce wind speed provision in Mitigation Measure 4.3-2B from 25 miles per hour to 20 miles per hour to reduce amount of dust deposited on vineyard.
- The BAAQMD quote in the Draft EIR (page 4.3-9) is inconsistent with wind data found on the internet.

5.2.4 Dust Deposition on Vineyard

Commenters questioned whether the "instantaneous" wind speed identified in Mitigation Measure 4.3-2B of the Final EIR accurately represented typical high wind conditions for the project area. There was

[3] http://www.steinbeckequine.com/pdf/Silicosis%20MD.pdf

concern that the wind speed does not frequently exceed 25 miles per hour and that this mitigation measure would therefore not provide a significant reduction of fugitive dust.

Mitigation Measure 4.3-2B read as:

"Blasting is prohibited within 1,000 feet of vineyards during high wind conditions. High wind conditions means when instantaneous wind speed exceeds 25 miles per hour as measured using the methods described by South Coast Air Quality Management District Rule 403 and the Rule 403 Handbook." (Final EIR Page 2-1).

Because of these concerns and upon further consideration, the two-minute average was determined to be a more meaningful measurement than instantaneous wind speed which was used in the mitigation measure. This is because it is impossible to know what the instantaneous wind speed will be at the moment the blast occurs. It is more reasonable and more effective to predict wind speed in the next instant when the blast occurs based on a longer sampling of the wind speed leading up to that instant. Thus, the blasting high wind item in Mitigation Measure Number 4.3-2B has been revised to read as follows:

"Blasting is prohibited within 1,000 feet of vineyards during high wind conditions. High wind conditions means when two-minute average wind speed exceeds 20 miles per hour as measured using the methods described by the South Coast Air Quality Management District in Attachment A to the Rule 403 Implementation Handbook."

5.2.5 BAAQMD Wind Data

The following BAAQMD quote that was repeated in the Air Quality and Health Risk Assessment and DEIR was called into question based on wind data found on the internet:

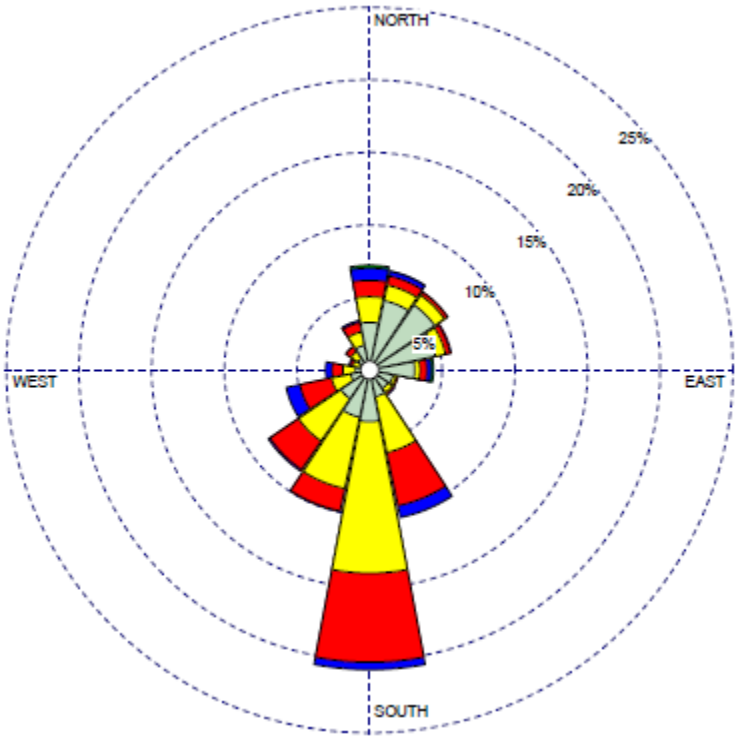
"During the day, the prevailing winds flow up valley from the south about half of the time. A strong up valley wind frequently develops during warm summer afternoons, drawing air in from the San Pablo Bay. Daytime winds sometimes flow down valley from the north. During the evening, especially in the winter, down valley drainage often occurs. Wind speeds are generally low, with almost 50 percent of the winds less than 4 mph. Only 5 percent of the winds are between 16 and 18 mph, representing strong summertime up valley winds and winter storms." (Draft EIR Page 4.3-9).

Wind speed measurements are highly dependent on the averaging period. The quote does not provide sufficient information about averaging period to allow comparison with other available wind data including the data cited by the commenter. Moreover, the direction of wind and wind speed varies from day to day and year to year. Even if it were known that the speeds are hourly averages (which seems reasonable based on the windrose[4] presented in the health risk assessment; Draft EIR Appendix I), it is not known which year or years of data were used by BAAQMD to determine the wind speeds referenced in this passage. Lastly, the wind speeds in the BAAQMD quote were used in a narrative that describes the regional setting and were not used in the technical analysis or modelling. The hourly wind data (i.e., speed and direction) used in the EIR technical analysis and health risk assessment modelling was pre-processed by BAAQMD into a model compatible format and was used in accordance with BAAQMD and CARB procedures.

The direction of wind fluctuates over time but should remain relatively constant in an approximate or general sense from year to year. There are some years when wind is different (e.g., el Nino, la Nina). The 1973 EIR characterized wind direction at the site as being primarily from the southwest. The current EIR

[4] A wind rose is a graphic tool used by meteorologists to give a succinct view of how wind speed and direction are typically distributed at a particular location.

characterized wind as being from the south based on the windrose presented in DEIR Appendix I. The windrose shows a greater number of hours with wind from the southwest quadrant as compared to hours with wind from southeast quadrant. The BAAQMD processed wind data from Napa Airport during 1997 that was used in the modelling and to produce the windrose shows the predominant wind direction to be generally from the south. Other years such as those reviewed for the 1973 EIR may have had slightly different conditions or the evaluation technique used in the 1973 EIR may have been more of an estimate and less quantitative than the method used today.



5.3 Effect of Removing Knoll on Pasini Property

Comments made at the Planning Commission Hearing and in correspondence submitted after the Final EIR that are addressed in this subsection include:

- The EIR does not take into account the effect of the wind velocity, turbulence and wind speedup effect associated with wind hitting the slope and terrain of the hillside.
- Wind tends to deflect around obstructions. Removing the hill that separates the park from the proposed quarry expansion area will expose the park to increased air flow from the quarry.

Higher wind speeds generally result in lower ground level concentrations of pollutants including dust due to increased vertical mixing of pollutants into the upper layers of the atmosphere. Thus, not accounting for the effect of wind velocity, turbulence and wind, speed up the effect associated with wind hitting the slope and terrain of the hillside is conservative when evaluating ground level concentrations and related health risk at nearby receptors.

One exception would be windblown dust which increases briefly during high wind conditions. As discussed in EPA AP-42 Section 13.2.5, the surfaces of stockpiles and unpaved areas “typically are characterized by

nonhomogeneous surfaces impregnated with nonerodible elements (particles larger than approximately 1 centimetre in diameter)…. Field testing … has shown that … particulate emissions rates tend to decay rapidly (half-life of a few minutes) during an erosion event. In other words, these aggregate material surfaces are characterized by finite availability of erodible material (mass/area) referred to as erosion potential…. wind gusts may quickly deplete a substantial portion of the erosion potential. Because erosion potential has been found to increase rapidly with increasing wind speed, estimated emissions should be related to the gusts of highest magnitude. The routinely measured meteorological variable that best reflects the magnitude of wind gusts is the fastest mile…. The duration of the fastest mile, typically about two minutes (for a fastest mile of 30 mph), matches well with the half-life of the erosion process, which ranges between one and four minutes."

In other words, unpaved areas and stockpiles have a limited reservoir of erodible particles on the surface. Once a surface has been eroded, it will not emit further unless the wind speed increases or the surface is disturbed. If the wind speed increases, then the wind will penetrate further into the surface dislodging larger particles resulting in additional smaller particles available for erosion below those larger particles. Disturbance of the surface results in a new surface which could then be eroded again. The size of stockpiles and operational areas would not change much with the project. Thus, the amount of windblown dust is not expected to change. In summary, lower wind speed results in higher pollutant concentrations.

Changing the topography of the Pasini property by removing the knoll does not expose Skyline Wilderness Park visitors to greater air flow and corresponding levels of dust from the Quarry. Images 11 and 12 (in the Draft EIR and in Attachment 1 herein) illustrate the difference between the two landforms. The existing landform is a gently sloping knoll over which streamlines of air near the ground can pass without disruption carrying pollutants generated from ground level sources at the Quarry to ground level receptors at the Park. The project landform has a steeper slope with a sharp edge at the top that would result in greater potential for the air stream near the ground to be separated from the ground at the hilltop and/or increase turbulence. Either of these conditions (i.e., separation of air stream from the land and introduction of turbulence) would promote increased vertical mixing and result in a decrease in ground level pollutant concentrations of dust and other pollutants. Thus, the assumption used in the health risk assessment that the area is flat is conservative and removal of the knoll would not expose Skyline Wilderness Park visitors to greater pollutant concentrations or health risk than the less than significant impact determined in the Draft EIR.

Nevertheless, visitors may experience greater levels of dust because the distance between the dust sources and receptors is reduced slightly. The potential increase in dust within the Park due to change in distance between the sources and receptors was determined to be a less than significant risk of health effects by modelling prepared for the Daft EIR. The model used flat terrain (Final EIR Page 4-81) with the rural dispersion coefficient which represents an area with low surface roughness and few heat sources (e.g., grassland plains). The selected modelling parameters (i.e., flat, rural) are the most conservative parameters that could have been used resulting in greater predicted concentrations than the alternatives (i.e., urban dispersion coefficient, complex terrain). In summary, the most conservative modelling parameters were chosen and the impact on receptors in the Park was determined to be less than significant.

5.4 Adequacy of Dust Mitigation Measures (Mitigation Measure 4.3-2B).

Comments made at the Planning Commission Hearing and in correspondence submitted after the Final EIR that are addressed in this subsection include:

- The EIR fugitive dust control mitigation deserves more than six items noted in the EIR to protect the residents and sensitive receptors downwind from the Quarry. Please take a look at Marin

County's mitigation measures for the San Rafael Quarry; SCAQMD Rule 403 Fugitive Dust Handbook; and Senate Bill 656 List of Air District Measures that Reduce Particulate Matter.

- In the next 35 years, Syar Napa Quarry would release as much or more fugitive, silica dust as it has released in the past 70 years.
- Who will enforce the requirement to cover loads in haul trucks?

Mitigation Measure 4.3-2B, which reduces dust emissions to less than significant levels is sufficient. The BAAQMD Basic Construction Mitigation Measures were not applied because quarrying and construction are different activities than basic construction and the BAAQMD CEQA Guidelines within which the Basic Construction Mitigation Measures are listed was rescinded during preparation of the Draft EIR. Nevertheless, some construction sources are similar to mining sources. Comparison of the project dust control methods to the Basic Construction Mitigation Measures listed in the current BAAQMD CEQA Guidelines is presented in Table 5.3 below which demonstrates that the project methods are consistent with the Basic Construction Mitigation Measures.

Table 5.3 Comparison of BAAQMD Basic Construction Mitigation Measures with EIR

Basic Construction Mitigation Measures	EIR Applicability
1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.	The facility already waters exposed surfaces two times per day and so this measure is part of the existing setting. MM 4.3-2B is more stringent because chemical dust suppressants may be applied to unpaved roads.
2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.	The project does not own on-road haul trucks. California Vehicle Code Section 23114(e)(4) allows six inches of freeboard or covering of the loads.
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.	Syar has internal paved roads of sufficient length to ensure that public paved roads will not accumulate trackout. Internal paved roads are swept daily and MM 4.3-2B may be more stringent if a PM_{10} efficient sweeper is implemented.
4. All vehicle speeds on unpaved roads shall be limited to 15 mph.	On-road vehicle speeds are currently limited to 15 mph as posted on-site, and would continue to be limited with implementation of the project. Off-road vehicles operate at greater speeds and could not feasibly limit speed to 15 mph.
5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.	No additional paving is proposed by the project. Therefore, this does not apply.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.	This is unrelated to dust. Nevertheless, idling times are already minimized by the regulation cited (i.e., 13 CCR 2485) which requires the facility to have a written idling policy. This measure could not be considered a mitigation measure for the project because it is part of the existing setting.

Basic Construction Mitigation Measures	EIR Applicability
7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.	This is unrelated to dust. Nevertheless, equipment is maintained and properly tuned. Opacity readings are unnecessary because distance to receptors is large as compared to some construction projects and equipment will be retrofitted or replaced to reduce diesel particulate matter emissions in the near future as needed to comply with CARB regulations and Mitigation Measure 4.3-3 which requires cleaner engines in order to achieve higher throughput.
8. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.	This measure does not reduce dust emissions.

Source: BAAQMD CEQA Guidelines.

As can be seen in the comparison above, Mitigation Measure 4.3-2B goes beyond the basic construction mitigation measures listed in Table 5.3 in order to further control dust emissions from the facility as needed to reduce emissions to less than significant levels. The project may choose to implement one or more of the control measures listed in Mitigation Measure 4.3-2B and is required to demonstrate to the county that the necessary emissions reductions are occurring. As shown in Draft EIR Table 4.3-12 (and included here in Attachment 1), Mitigation Measure 4.3-2B dust control methods are capable of reducing dust emissions to less than current levels (i.e., if Mitigation Measure 4.3-2B were to be fully implemented, then the project would achieve a beneficial impact on dust emissions by further controlling emissions that currently occur [baseline]). Thus, the project incorporates each basic dust control measure as shown in Table 5.3 and Mitigation Measure 4.3-2B includes additional measures that would be used to reduce the impact to less than significant levels. Mitigation Measure 4.3-2B is not the entirety of the conditions and requirements that limit fugitive dust. The facility already performs dust control activities that are not considered to be mitigation because they are part of the existing setting (i.e., baseline). In total, these dust control activities (i.e., best management practices) when combined with production limits represent dust control requirements for the project that are similar to those required of the San Rafael Quarry by Marin County with the following exceptions:

1. Stack grain loading may not exceed 0.022 gr/dscf for scrubber/baghouses venting crushers and screens operated by the project. This is a standard applied by the AQMD during new source review that has since become more restrictive (i.e., 0.01 gr/dscf for the San Rafael Quarry). The more restrictive value would be applied by BAAQMD if an affected unit is replaced or modified in the future.
2. Trackout of material onto public paved roads from the project is controlled by the length of internal paved road which is greater than 0.25 mile rather than by washing trucks as required of the San Rafael Quarry (i.e., see exemption in South Coast AQMD Rule 1157).
3. Reclamation related excavation and grading is a minor part of earthmoving activities at the project and may occur when instantaneous wind speed exceeds 25 mph. Reclamation related excavation and grading is prohibited at San Rafael Quarry when instantaneous wind speed exceeds 25 mph. Quarrying and materials processing operations are allowed at both quarries when instantaneous wind speed exceeds 25 mph.

4. The project may use a PM_{10} efficient vacuum truck on paved roads. This would exceed the performance of water sweepers that are required at San Rafael Quarry.
5. The project would limit on-road truck speeds on unpaved areas to 15 mph or less regardless of the purpose of travel. The San Rafael Quarry condition that limits speed on unpaved roads to less than 15 mph applies only to travel for reclamation grading activities.
6. The project would apply water to blast sites prior to detonation. San Rafael Quarry is not required to water before blasting.
7. Project Mitigation Measure 4.3-2B shows that mitigation of dust impacts to less than significant levels can be achieved and allows measures in addition to those listed to be implemented. Some measures that are not listed may be more effective in reducing dust than those listed. The San Rafael Quarry mitigation measure does not allow for such flexibility.

It is noteworthy that on-road haul trucks will have lower emissions in most years (see AQHRA Appendix H) and the lower emissions were not considered in preparing the mitigation measure. Furthermore, EMFAC2014 was published last week and contains reduced emissions in most years over EMFAC2011 that was used to estimate emissions.

Unpaved roads can be controlled at the 95% level but the chemical dust suppressant (Item 2) was assigned 84% control based on a generally used reference document. BAAQMD does not have guidance that would yield in 95% control but MDAQMD, which has greater need for dust control due to the dry nature of that region, has emissions inventory guidance that assigns control efficiency up to 95% based on intensity and frequency of suppressant application. US EPA emissions inventory guidance (AP-42 Figure 13.2.2-2) also shows that 95% control efficiency is achieved. Moreover, AP-42 assigns days with greater than 0.01-inches of rain zero emissions which infers that nearly 100% control can be achieved.

In addition, paved roads are assigned 86% control based on daily sweeping. Presumably higher control efficiency could be claimed for sweeping at a more frequent interval. A conveyor could be installed to reduce on-site road dust. Stationary source emissions of particulates could be reduced by adding baghouses to aggregates processing equipment or by installing bags with higher removal efficiencies in the baghouses that already exist on-site (e.g., asphalt plants). Using baghouses to control construction aggregate processing equipment may not be advisable for all equipment and/or processes. Baghouses achieve minor emissions reductions as compared to adequate moisture in dry process materials (i.e., wet process materials are assigned zero emissions). Baghouses consume electricity and filter media and are less cost effective than water for most construction aggregates production processes where sufficient moisture can be added to process material to control emissions.

The facility has recently employed operation of a Buffalo Turbine or similar single stage blower to control dust as needed using wet mist suppression at the A/B Plant. By creating a wall of micron size atomized fluid droplets, fugitive airborne dust particles are intercepted, become heavier (with the water), and drop to the ground.

Furthermore, based on review of the references provided by one of the commenter (Patrick K. Gilleran, January 18, 2015) it is stated that there are 8 pages of mitigation that the San Rafael Quarry is subject too; however only there are only 2 pages of mitigation (the remainder is responses to comments) several of which are consistent with proposed mitigation for this quarry or a stipulation to maintain existing practices. Additionally, SCAQMD Rule 403 that the commenter references exempts dust from blasting (Page 11 – Section g.4.A), and that the Measures listed to reduce particulate matter listed in SB 656 primarily consist of applying water or dust suppressants to construction sites and surfacing public dirt roads.

5.4.1 Percent Increase in Fugitive Dust Emissions

The comment that "in the next 35 years, Syar Napa Quarry will release as much or more fugitive silica dust as it has released in the past 70 years" is incorrect. There is no evidence in the record that after mitigation the project would double any air quality or health risk impact. Baseline emission of respirable particulates (PM_{10}) is 81.4 tons per year (Table 4.3-2, Draft EIR Page 4.3-5). Doubling emissions would correspond to the project emitting an equal amount (81.4 tons per year) so that the total emission is 162.8 tons per year. This would be a 100% increase (unmitigated).

Project dust emissions are reported in Table 4.3-10 of the Draft EIR (included here in Attachment 1) to be 92 tons/yr with an additional four tons/yr of particulates from combustion in diesel engines and the asphalt plant. These emissions were calculated assuming that the existing dust control methods are continued in the future. Thus, without mitigation, the project would more than double the amount of particulate emissions. However, the mitigated project has potential to benefit air quality by reducing respirable dust from baseline levels depending upon the dust control options chosen from the list in Mitigation Measure 4.3-2B. At worst, the project could emit up to 15 tons per year more PM_{10} which is considered a less than significant amount (Draft EIR Page 4.3-36) and only an 18 percent increase over baseline conditions.

Furthermore, with implementation of the Reduced Production Alternative fugitive dust emissions would be less than described above.

5.4.2 Load Covering or Levelling

There is no requirement for a quarry to cover all loads in haul trucks. California Vehicle Code Section 23114(e)(4) allows truck drivers to maintain six inches of freeboard in lieu of covering loads. The project does not own on-road haul trucks or employ drivers of on-road trucks. Mitigation Measure 4.3-2B is modified with the following items in order to ensure compliance with the Vehicle Code:

- A load covering/levelling station shall be maintained near the scalehouse.
- Signs instructing truck drivers to cover or level their load to maintain six inches of freeboard shall be conspicuously posted. The signs shall cite Vehicle Code Section 23114(e)(4).

5.5 Air Monitoring

Comments made at the Planning Commission Hearing and in correspondence submitted after the Final EIR that are addressed in this subsection include:

- Something has to be done to protect sensitive receptors. In Marin County they did sampling to be definitive about whether exposure was acceptable.

The county relied on the air quality and health risk assessment analyses prepared by SESPE (Draft EIR Appendix I) in order to ensure that all receptors would be protected. In doing so, the county determined that mitigation measures would be needed to reduce impacts on receptors to less than significant levels and has imposed those measures on the project. Thus, there is no nexus to require air monitoring under CEQA.

Understanding that there are concerns about the existing levels of dust, the county could require air monitoring as a condition of project approval. However, ensuring that the monitoring generates meaningful results is problematic and costly. If monitoring were to be performed, then the test method would require upwind and downwind measurement; the difference of which would be attributed to the quarry. Monitoring stations would have to be positioned and constructed according to Environmental Protection Agency, CARB and BAAQMD citing criteria which limits the areas available. Upwind and downwind locations would need to be known beforehand. With such a large site, so many other sources of particulate emissions (in

particular public roads and agricultural development and operations), and natural variations in wind direction; multiple monitoring stations would be needed to ensure that the impact from the quarry can be differentiated from impacts attributable to other sources. Such a monitoring program would be quite costly and subject to interpretation. Therefore, the county has chosen not to require monitoring of dust from the quarry. Instead, the County has required that the project submit an emissions inventory any time production of 810,363 tons has been achieved in the previous 12-month period. Through the emissions inventory the Applicant shall demonstrate the controls that will be implemented to achieve emissions reductions which are necessary to ensure emissions from the project (i.e., expansion of the Syar Napa Quarry) are less than 15 tons per year for PM10 and 10 tons per year for PM2.5. If the County finds that operations have not achieved the required reductions, production shall be scaled back as necessary until the reductions are achieved.

6. Master Response - Groundwater Hydrology

Comments received from the January 7, 2015 Planning Commission Hearing on groundwater hydrology associated with the proposed project have been summarized as follows:

Potential groundwater infiltration and corresponding water availability and use is not adequately assessed or mitigated.

The location and timing associated with the installation of monitoring wells should be established and agreed upon, including protocols for monitoring groundwater, defining a trigger point for when groundwater is being affected, and what activities would take place to ensure adequate groundwater quality and quantity.

The Mitigation Monitoring and Reporting Program (MMRP) relies on the Permittee's self-monitoring and self-reporting, which is not effective. Logs are only produced to the county if requested.

6.1 Maintain Structure of Aquifer by Maintaining a 10-foot Buffer

Mitigation Measure 4.8-2 has been revised to provide clarification regarding methods of its implementation. The full text of Mitigation Measures 4.8-2 and 4.8-3 can be found in Attachment D. With implementation of Mitigation Measure 4.8-2 mining would not disturb the structure of the existing saturated aquifer. This mitigation measure is emplaced to ensure that the existing hydrogeologic pathways remain intact and interconnected as they are under existing conditions. This ensures that the groundwater which is moving under the Syar Napa Quarry maintains the existing condition distribution and elevation as it enters and leaves Syar property and ensures that the baseline infiltration would be maintained or increased during the project.

Removal of rock resource is to occur at a minimum of 10 feet above the elevation of the saturated rock (potentiometric surface). This prevents the exposure of saturated aquifer material and eliminates the potential for causing persistent open water bodies which increases evaporation. Mitigation Measure 4.8-2 also prevents exposing saturated aquifer material which could result in persistent springs, seeps or wet areas which could result in groundwater loss through surface leakage or evaporation. Mineable rock resource which is located above the saturated groundwater elevation would at times contain infiltrating rain water located in fractures or porous soil material. A photograph of this situation was provided in Figure A.13 (Hydrologic Study, Appendix J in the Draft EIR and Attachment 1 within this report) where the fracture flow from the Pasini property is shown suspended over dry minable rock resource. This photograph was taken from a lower observation point located near the saturated groundwater elevation (approximately 470 feet above mean sea level [MSL]). The purpose of Mitigation Measure 4.8-2 is to avoid

intersecting the saturated groundwater aquifer while allowing recovery of rock resource located above the saturated aquifer.

Restricting the depth of mining based on the groundwater elevation is not a current requirement of mining at the Syar Napa Quarry. Historically, mining below the groundwater potentiometric elevation has occurred by temporally pumping groundwater to dewater these areas to allow for mining. Once the mining has been completed and the dewatering pumping has stopped the mined area fills with groundwater and a persistent open body of water is created. This is the situation for the State Blue Pit which is a persistent open body of water exposed to evaporation. Under Mitigation Measure 4.8-2 this creation of new (or the enlargement of exiting) persistent open bodies of water would no longer occur. Mitigation Measure 4.8-2 would restrict the depth of mining activities which would result in final grade elevations which are higher than those that are shown in Figure 3-6 in the Draft EIR (and included here in Attachment 1). The new final grade elevations would be 10 feet higher than the groundwater elevations shown in Figure 4.8-6. To facilitate this, Mitigation Measure 4.8-3 requires a groundwater elevation analysis of areas which are to be mined. It is likely that future groundwater evaluations in the eastern portion of the site would confirm the groundwater potentiometric elevation at higher elevations which is consistent with the steepening groundwater contours shown in Figure 4.8-6. This would reduce the total volume of rock from the mine because the excavations would not extend to the depths which are presented in Figure 3-6. For example, the finished grade depth of approximately 350 feet shown on the eastern side of cross section C (Figure 3-6) may need to be raised by 100 to 150 feet to maintain the 10-foot buffer.

Mitigation Measure 4.8-2 is intended to avoid depleting groundwater supplies or interfering with groundwater recharge mechanisms by maintaining a 10-foot vertical separation between final mining grades and regional groundwater potentiometric elevation.

This mitigation measure addresses the impacts due to the potential depletion of groundwater in aquifers associated within the Project and the Arroyo Creek area. Groundwater recharge mechanism include infiltration through perched aquifers and fractures in the upper reaches of the drainage and interactions with Arroyo Creek in the lower reaches (some of these interactions may occur offsite).

For the upper reaches of the site, this mitigation measure is achieved through a combination of best management practices (BMP's) that entail: managing recharge areas [or detention/infiltration ponds] so that pre-project (baseline) groundwater infiltration volumes are maintained, limiting the depths of excavation and or mining to 10 feet above the regional groundwater table and, limiting the depths of excavation and or mining near Arroyo Creek so as to not change the flow path of the creek or surface runoff entering the creek.

For the lower reaches of the site (and any offsite interactions), this mitigation measure is achieved by maintaining pre-project flow conditions in Arroyo Creek. These conditions include the flow rates, timing of peak runoff, and volume of water in the creek. This mitigation measure requires the monitoring of stream flow in the lower reach of Arroyo Creek. Impacts to the amount of water and timing of peak flows entering the creek are managed through the use of surface grading, surface cover, and detention basins.

To ensure that groundwater infiltration volumes are not decreased, pre-project infiltration volumes will be compared with project groundwater infiltration volumes after adjusting for local rainfall variations. If there is a deficit, BMP's will be adjusted or consumptive use of water will be curtailed.

Pre-project infiltration volumes were calculated for the two drainage area where mining may occur: Arroyo Creek drainage, and State Blue Pit drainage. The Arroyo Creek system drains water from the southern portion of the site. The lower reaches of the creek are near the MST aquifer zone and the creek discharges to the Napa River. The groundwater infiltration volumes for both basins were calculated using a water balance approach, as described in detail in Section 3 of Appendix J, Napa Quarry Proposed

Expansion Surface Hydrology and Sub-Surface Hydrogeologic Study, of the Draft EIR. Pre-project infiltration volumes were calculated at 685 acre-feet in the Arroyo Creek drainage and 442 acre-feet in the State Blue drainage, totalling 1,067 acre-feet. The infiltration volumes were calculated using rainfall, evaporation, evapotranspiration, stream flow, and pond storage data. Rainfall, evaporation, and evapotranspiration rates are obtained from publicly available sources.

Maintaining groundwater recharge volume is addressed by routing stormwater runoff to existing ponds or new surface detention/infiltration basins that shall be constructed on recharge areas to ensure that groundwater infiltration volumes are equal or greater than pre-project groundwater infiltration volumes. To ensure that existing volumes of groundwater recharged are maintained the Permittee shall monitor stream flow and pond elevation throughout the year. In addition, at least one new permanent groundwater monitoring well will be installed within the Arroyo Creek drainage for the purpose of monitoring the groundwater elevation in the southern portion of the mine. This information, along with publicly available climatic data, shall be used to calculate the groundwater infiltration volumes quarterly, in a manner consistent with Appendix J (in the Draft EIR). The results of the monitoring and water balance infiltration analysis shall be included in the Annual Groundwater Elevation Monitoring and Use Report. If there is a deficit in groundwater infiltration during one quarterly monitoring period, BMP's will be adjusted or consumptive use of water would be curtailed until groundwater recharge volumes are greater than or equal to pre-project volumes.

To avoid interfering with the groundwater recharge mechanisms, the Permittee shall also ensure that any subsurface flow in fractures or soil that is exposed or intercepted by the excavation shall be reinfiltrated within the same watershed boundaries. Any surface water that is not the direct result of surface water runoff during rain events is infiltrated or directed to groundwater onsite and within the same watershed as depicted in Figure 4.8-10. Surface water which is the direct result of rain events is infiltrated to groundwater or directed to the existing channels. Under Mitigation Measure 4.8-3 spring season monitoring shall be conducted to verify that springs and subsurface flow exposed as a result of mining activities is infiltrated back into the subsurface before reaching the surface flow channels. These observations shall be reported in the Annual Groundwater Elevation Monitoring and Use Report. If persistent springs are formed by mining activities the owner/operator shall hire a qualified professional to assess springs and provide an evaluation to the county to determine if the elevation of these springs are part of the regional groundwater potentiometric surface; if so, mining shall not advance further below this elevation.

The Permittee shall maintain existing volumes of groundwater recharge and shall ensure that a vertical buffer of undisturbed native soil/rock remains in place which maintains the final grade elevation no closer than 10 feet above the spring season regional groundwater potentiometric elevation. The Permittee shall not excavate and/or mine material within 10 feet of the regional groundwater potentiometric surface to prevent the creation of open water bodies subject to evaporation or springs which can drain regional groundwater to surface drainage creeks.

The proposed project does not include direct groundwater extraction from the vicinity of Arroyo Creek. However, excavation deeper than the regional groundwater potentiometric elevation could allow regional groundwater to drain to the ground surface and be discharged from the project area as surface water. In order to avoid depleting groundwater supplies in the vicinity of Arroyo Creek (and all mined areas of the Syar Napa Quarry) the grade of the excavation shall be maintained at a minimum of 10 feet above the elevation of the regional groundwater potentiometric elevation. This mitigation would preclude regional groundwater from discharging as surface water and draining to the Arroyo Creek channel.

The estimated regional groundwater potentiometric elevations presented in Draft EIR Figure 4.8-6 are based on a compilation of existing data which include well data on- and off-the project site and

observations of areas were regional groundwater appears to have been intersected by quarry activities (i.e. State Blue Pit). It is expected that the actual elevation of regional groundwater potentiometric elevation would vary from the estimates provided in Figure 4.8-6. Adherence with this mitigation measure requires accurate and contemporary understanding of the regional groundwater potentiometric elevation under the Syar Napa Quarry. This understanding is necessary in order to avoid excavating into the 10-foot vertical buffer zone. To obtain the data necessary to comply with this mitigation measure, the Permittee shall provide Napa County with an Annual Groundwater Elevation Monitoring and Use Report, prepared under the direction of a qualified Professional Engineer or Professional Geologist, that quantifies the groundwater potentiometric elevations during spring of each year when groundwater elevations are expected to be highest at the Syar Napa Quarry. The Permittee shall install exploratory borings and/or monitoring wells as required by Mitigation Measure 4.8-2 to quantify the regional groundwater potentiometric elevation in areas of mining when the excavation is likely to extend to within 50 feet of the groundwater elevations presented in Figure 4.8-6 or the most recent Annual Groundwater Elevation Monitoring and Use Report which is required by this mitigation measure. All excavation activity at the Syar Napa Quarry shall be conducted to maintain a 10-foot separation of undisturbed native soil/rock between the finished grade and the underlying groundwater potentiometric elevation as determined by the most recent Annual Groundwater Elevation Monitoring and Use Report.

To avoid interfering with the groundwater recharge mechanisms, the Permittee shall also ensure that any subsurface flow in fractures or soil that is exposed or intercepted by the excavation shall be reinfiltrated within the same watershed boundaries. Any surface water that is not the direct result of surface water runoff during rain events is infiltrated or directed to groundwater onsite and within the same watershed and as depicted in Figure 4.8-10. Surface water which is the direct result of rain events is infiltrated to groundwater or directed to the existing channels. Spring season monitoring shall be conducted concurrent with Skyline Wilderness Park monitoring to visually verify that springs and subsurface flow exposed as a result of mining activities is infiltrated back into the subsurface before reaching the surface flow channels. If persistent springs are formed by mining activities the owner/operator shall hire a qualified professional to assess springs and provide an evaluation to the County to determine if the elevation of these springs are part of the regional groundwater potentiometric surface; if so, mining shall not advance further below this elevation.

While no direct groundwater extraction has been proposed in the Arroyo Creek vicinity, the existing Well #4 could be activated for extraction or an additional well could be installed. The extraction of groundwater from Well #4 or from any additional well at the project site, including in the Arroyo Creek vicinity, shall be subject to the groundwater extraction limitations discussed under Impact 4.8-4 which are related to the extraction of groundwater from the Quarry Well.

Mitigation Measure 4.8-3: Avoid reducing the groundwater potentiometric elevation by increasing consumptive use of surface water or surface occurrence of regional groundwater as a result of quarry activities.

This mitigation measure addresses the impacts due to the potential depletion of groundwater in aquifers associated with the State Blue Pit and State Gray Pit. Groundwater recharge mechanisms include infiltration through perched aquifers and fractures that contribute groundwater recharge to the regional (MST) aquifer. There is no surface discharge, via a creek, stream, or pipe within this drainage. All surface runoff in this drainage is captured in existing detention basins or pits.

This mitigation measure is achieved through a combination of BMP's that entail: managing recharge areas [or detention/infiltration ponds] so that pre-project groundwater infiltration volumes are maintained and limiting the depths of excavation and or mining to 10 feet above the regional groundwater table.

To ensure that groundwater infiltration volumes are not decreased, pre-project infiltration volumes shall be compared with project groundwater infiltration volumes after adjusting for local rainfall. If there is a deficit, BMP's shall be adjusted or consumptive use of water would be curtailed.

Pre-project infiltration volumes were calculated for the two drainage areas where mining may occur: Arroyo Creek drainage, and State Blue Pit drainage. The groundwater infiltration volumes for both basins were calculated using a water balance approach, as described in detail in Section 3 of Appendix J (in the Draft EIR), Napa Quarry Proposed Expansion Preliminary Surface Hydrology and Sub-Surface Hydrogeologic Study. Pre-project infiltration volumes were calculated at 685 acre-feet in the Arroyo Creek drainage and 442 acre-feet in the State Blue drainage, totalling 1,067 acre-feet. The infiltration volumes are calculated using rainfall, evaporation, evapotranspiration, stream flow, and pond storage data. Rainfall, evaporation, and evapotranspiration rates are obtained from publicly available sources.

Maintaining groundwater recharge volume is addressed by routing stormwater runoff to existing ponds or new surface detention/infiltration basins that will be constructed on recharge areas to ensure that groundwater infiltration volumes are equal or greater than pre-project groundwater infiltration volumes. To ensure that existing volumes of groundwater recharged are maintained the Permittee shall monitor pond elevation throughout the year. This information, along with publicly available climatic data collected from the closest weather station available at the CIMIS data base, University of California Agriculture & natural Resources Statewide Integrated Pest Management Program (UCIPM) : (http://www.ipm.ucdavis.edu/WEATHER/SITES/napa.html) shall be used to calculate the groundwater infiltration volumes quarterly, in a manner consistent with Appendix J (in the Draft EIR). The results of the monitoring and water balance infiltration analysis shall be included in the Annual Groundwater Elevation Monitoring and Use Report. If there is a deficit in groundwater infiltration during one quarterly monitoring period, BMP's shall be adjusted or consumptive use of water will be curtailed until groundwater recharge volumes are greater than or equal to pre-project volumes.

All water extracted from open bodies of water that are at the regional groundwater potentiometric elevation shall be reinfiltrated in surface detention/infiltration basins within the same watershed from which the extraction occurs. Any water extracted from detention/infiltration basins that is used outside of this basin or is considered a consumptive use of groundwater. This would prevent depletion of the groundwater resource by consumptive use of water derived from open bodies of water such as State Blue Pit. Mitigation Measure 4.8-3 shall not apply to the draining of ponded surface water which is at an elevation higher than the underlying regional groundwater potentiometric elevation. Pumping or transferring this water is not consumptive use if the water is sent to a detention pond where infiltration can occur. Ponded surface water which occurs in temporary low areas in active mining areas may be pumped to detentions ponds within the same watershed.

As part of quarry activities, water is pumped from open water bodies such as State Blue Pit for consumptive quarry activities such as dust control and other uses where the water is not reinfiltrated. The volume of groundwater that is pumped from those water bodies where the water surface elevation is effectively the same as the regional groundwater potentiometric elevation (i.e. State Blue Pit) shall be considered part of the groundwater use allocation for the project. Consumptive use from open water bodies such as State Blue Pit shall be recorded and considered a part of the groundwater allocation in the same manner as the groundwater pumping from the Quarry Well. The volume of water used to wash materials shall not be included in the quantification of groundwater use if it is returned to the aquifer by reinfiltration. The volume of wash water returning to detention ponds for infiltration is not considered in quantifying groundwater use because it is not a consumptive use of groundwater.

6.2 Determination of 10 Foot Buffer

Seeps springs are locations on the ground surface where the saturated groundwater aquifer has intersected the ground surface. This can occur through mining activities which have excavated down or into a hillside or through natural geologic processes such as a river that has eroded into a hillside. These features and groundwater elevation data from on and off-site wells were used in 2012 to develop the groundwater contour map presented in Figure 4.8-6 in the Draft EIR (and included here in Attachment 1). As presented in Figure 4.8-6 the elevation of groundwater starts at approximately 12 feet MSL and increases to approximate 250 feet MSL near the center of the site where surface water bodies were identified. However, the elevation of groundwater further to the east can be estimated by projecting the groundwater gradient in Figure 4.8-6 to the east. Doing this projection, results in an expected groundwater elevation under the Pasini property of approximately 450 to 500 feet MSL. The ground surface at the Pasini property is approximately 800 feet MSL. Therefore it is expected that the upper 300 feet of rock under the Pasini property would be above the groundwater potentiometric elevation.

In the past, mining has occurred down to or even below elevations which encountered the groundwater potentiometric elevation. Under Mitigation Measure 4.8-2 the mine would advance from lower elevations in the west towards the east maintaining a 10-foot buffer above the groundwater potentiometric elevation. As the mine advances, the ground surface elevation is brought closer to the groundwater potentiometric elevation and the installation of wells and temporary borings to confirm projected groundwater elevation would be necessary. It is in the Permittees interest to identify the groundwater potentiometric elevation at the earliest opportunity where it is feasible and economically reasonable to do so. This groundwater elevation information sets the final grade of each mining excavation and the Permittee would factor this into the mining plan for each area and the cost of recovering the material.

Under Mitigation Measure 4.8-2 the spring-time (yearly high) elevation of groundwater under the Syar Napa Quarry is to be estimated by a Registered Engineer or Geologist and reported to the County every year. When mining is to be completed to within 50 feet of the estimated groundwater elevation then borings or wells are required to provide a more precise local measurement of the saturated groundwater elevation. The elevation of groundwater is to be based on a combination of data points including; permanent groundwater monitoring wells located in areas where mining has been completed, temporary wells located in or near active mining areas, and the elevation of springs/open bodies of water in all areas of the mine. In the interest of worker safety where topography is steep it may be necessary to interpolate the groundwater elevation by projection up gradient into areas where wells can't safely be installed.

While the interpretation of the overall potentiometric surface elevation is reasonable and the allowance to mine to within 50 feet of the professionally estimated groundwater elevation is considered to be protective of the groundwater aquifer without the expense and inaccuracies inherent in drilling borings through hundreds of feet of rock, the data is extremely limited and significant interpretation and assumptions are made as part of the determination. As such the County has elected to require the installation of monitoring piezometers or wells prior to any mining excavation occurring within any undisturbed areas (i.e. increases the mining footprint including proposed expansion areas) or that will cause an increase in depth beyond existing conditions and is likely to extend to within 50 feet of the groundwater elevations presented on Figure 4.8-6. This will ensure that the groundwater elevation is more accurately defined and a minimum 10 foot mining buffer to groundwater is maintained as a result of mining.

6.3 Monitoring of the 10 Foot Buffer

Under Mitigation Measure 4.8-2 the final depth of the mine would be based on the elevation of the groundwater potentiometric elevation. Annual groundwater elevation reports are to be prepared by the Permittee when required pursuant to Mitigation Measure 4.8-2 and submitted to the county. The data

available in these would be the elevation of persistent water bodies, springs, seeps, ponds and the water elevation in borings and wells. This information would be used by the Professional Engineer or Geologist to maintain an annual record of groundwater elevation. As these reports are developed each year it is expected that the understanding of the local aquifer material and groundwater elevation would become well understood by Syar and the county. As this process is completed every year it is available to the public through the county records. The mitigation measures allow for no disturbance of the saturated aquifer material and the project progresses slowly over many years. With the required annual monitoring and professional analysis of the groundwater elevations, adjustments can be made to the mining plan in the unlikely event that unanticipated changes in groundwater elevation occur. By implementing Mitigation Measure 4.8-2 which protects the physical integrity of the aquifer structure and Mitigation Measure 4.8-3 which maintains the existing condition infiltration and extraction of groundwater the effect of the mining would be reduced to a less than significant level.

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www.ghd.com

Attachment A

Referenced Figures, Tables and Images

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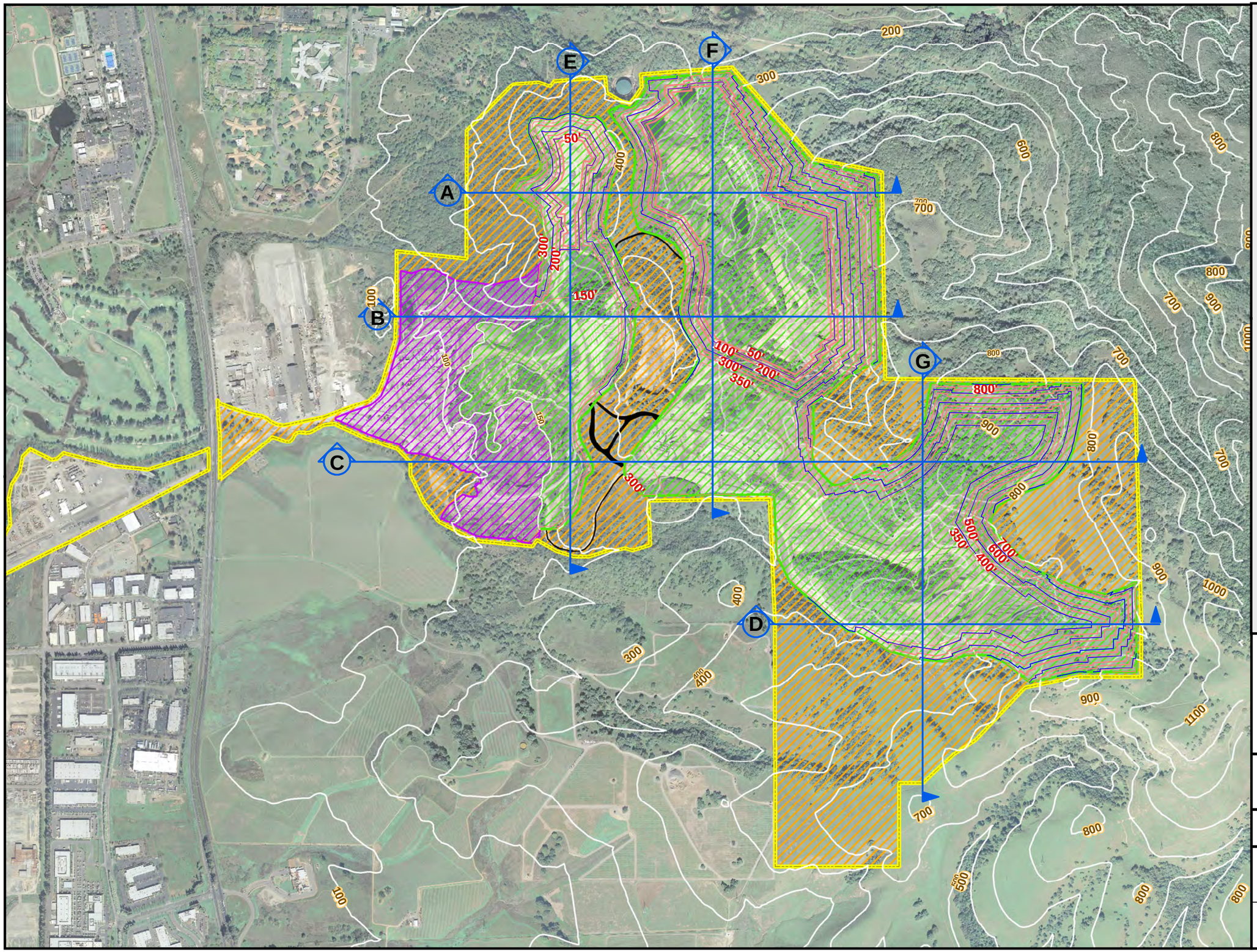

Project Site

Exclusion Area
(See Figure 3-4)

Excavation Limits

Processing Area

Existing Road
(to be maintained)

Proposed Finished
Grade Contours

Existing Surface
Contours

Profile Cut Line
(see Figure 3-6 for Profiles)

0 500 1,000 2,000 ft

1 inch = 1,000 feet printed at 11x17

N

Sources: Napa County GIS: 2007 Napa County Orthophoto 0.5 ft resolution.

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Cartography	Date	Project #
BFV/AF/GLD	7/29/2013	02304-09-001

Figure 3-5
Limits of Vertical Excavation

Draft EIR
Syar Napa Quarry Expansion

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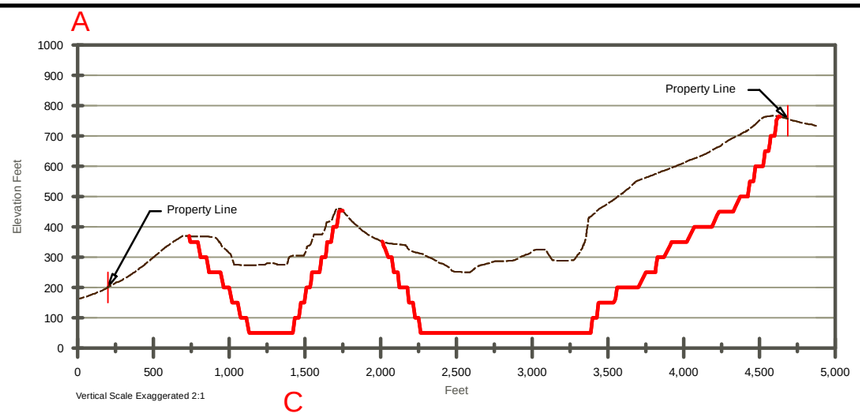

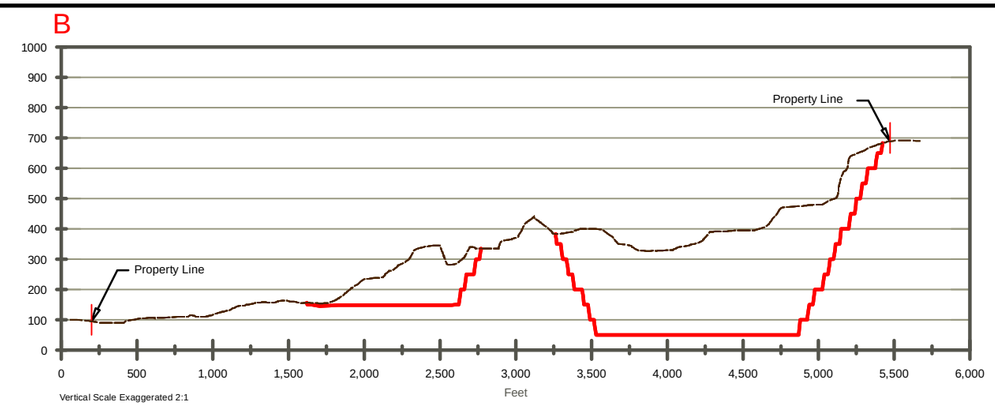

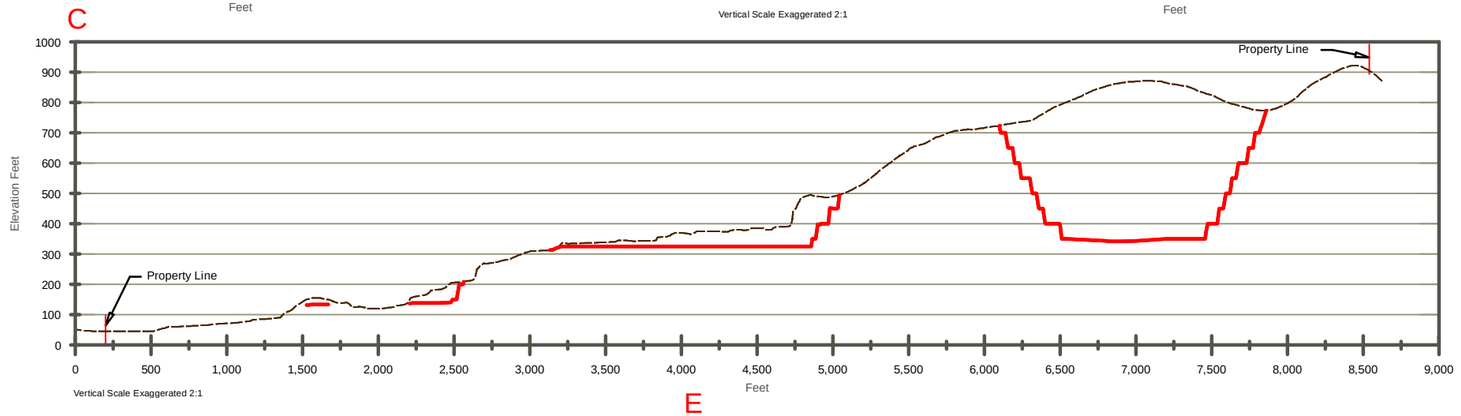

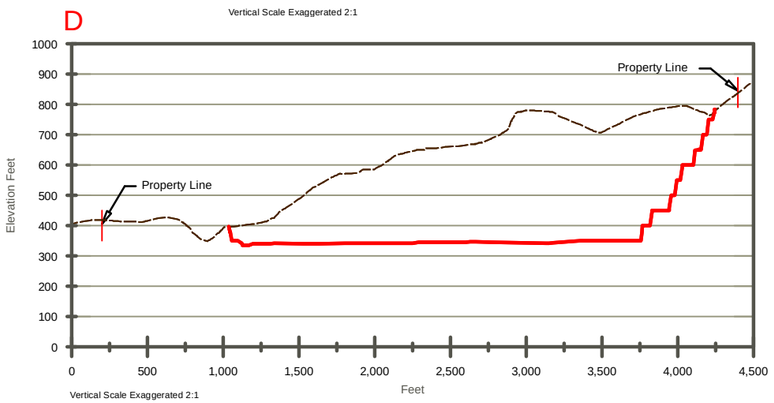

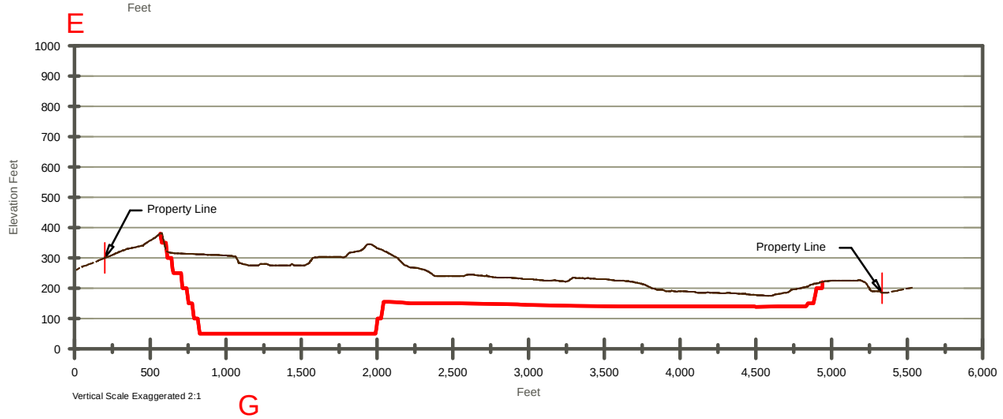

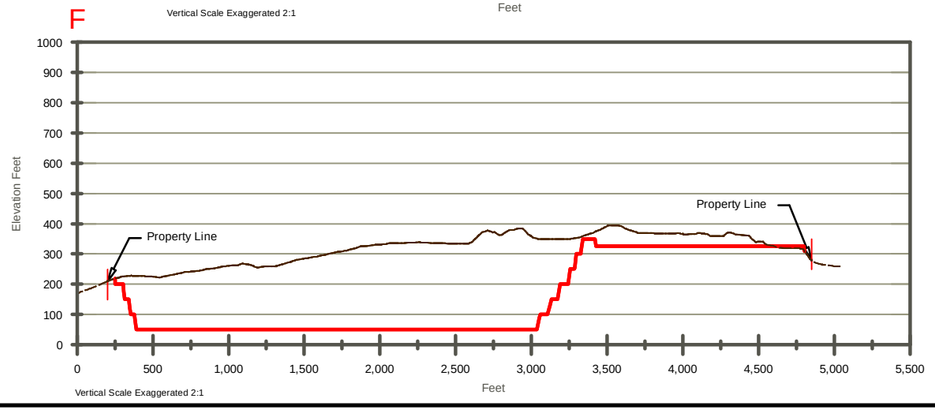

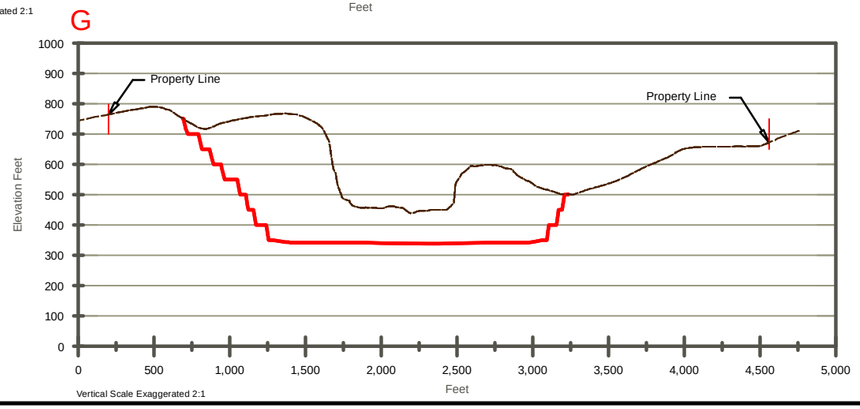

Existing Ground

Proposed Ground

Horizontal Scale

0 500 1,000 2,000 ft

Vertical Scale

0 250 500 1,000 ft

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Cartography	Date	Project #
BFV/AF	7/12/2012	02304-09-001

Figure 3-6
Vertical Excavation Cross Sections
(See Figure 3-5 for Locations)

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Syar Napa Quarry Expansion

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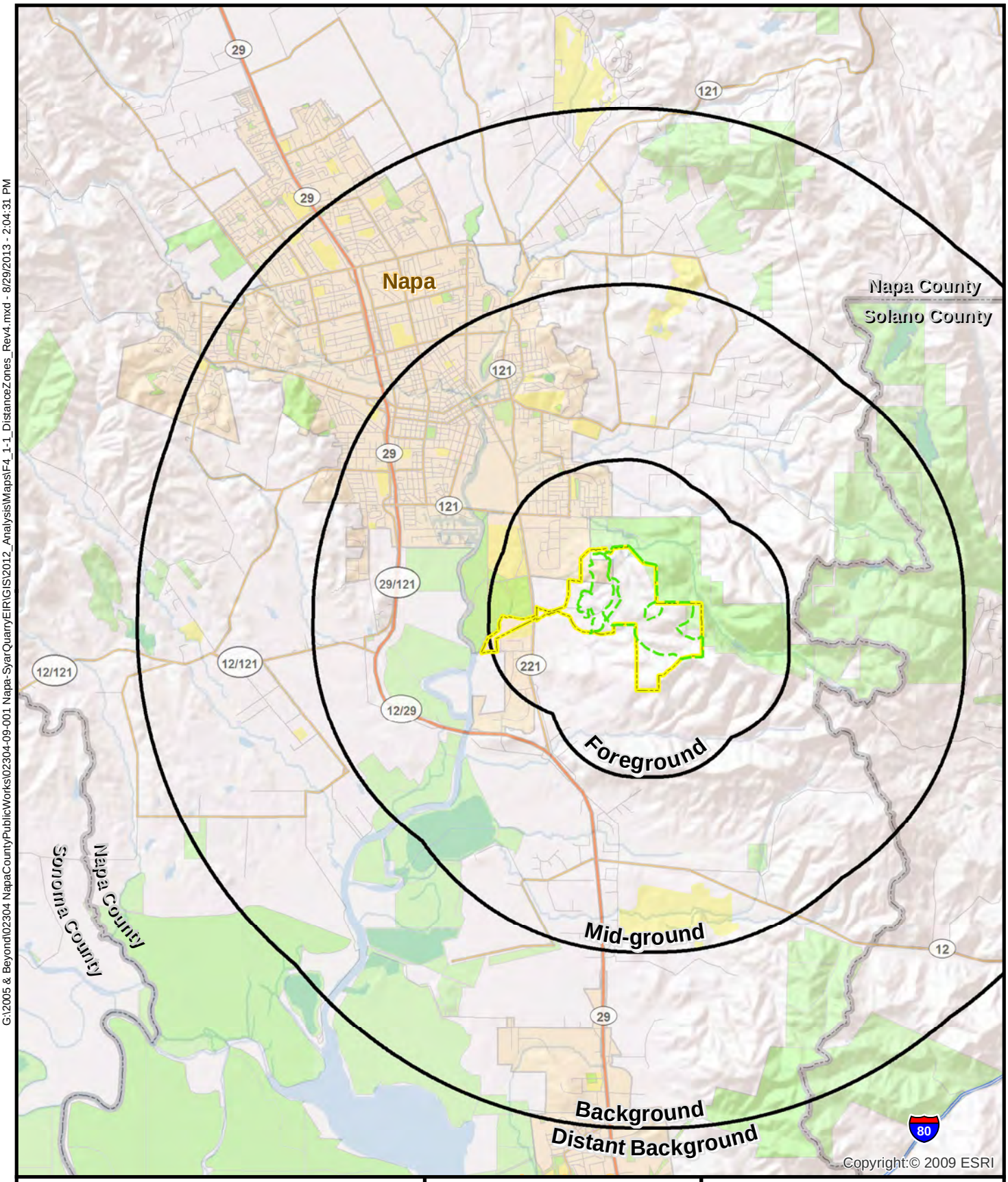

Distance Zones from Quarry Expansion Area

Excavation Limits (Area of Visual Impacts)

Project Site

City Boundaries

County Boundaries

Landmarks, Golf, Schools, Cemeteries

Parks, Open Space, and Protected Lands

N

0 0.75 1.5 Miles

1 inch = 1.5 miles printed at 8.5x11

Sources: 2007 Napa County Orthophoto 1 meter resolution; Napa Co. GIS - Land Use; ESRI - streets

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Figure 4.1-1
Distance Zones and Visual Study Area

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Syar Napa Quarry Expansion

Cartography: GHD Pty Ltd

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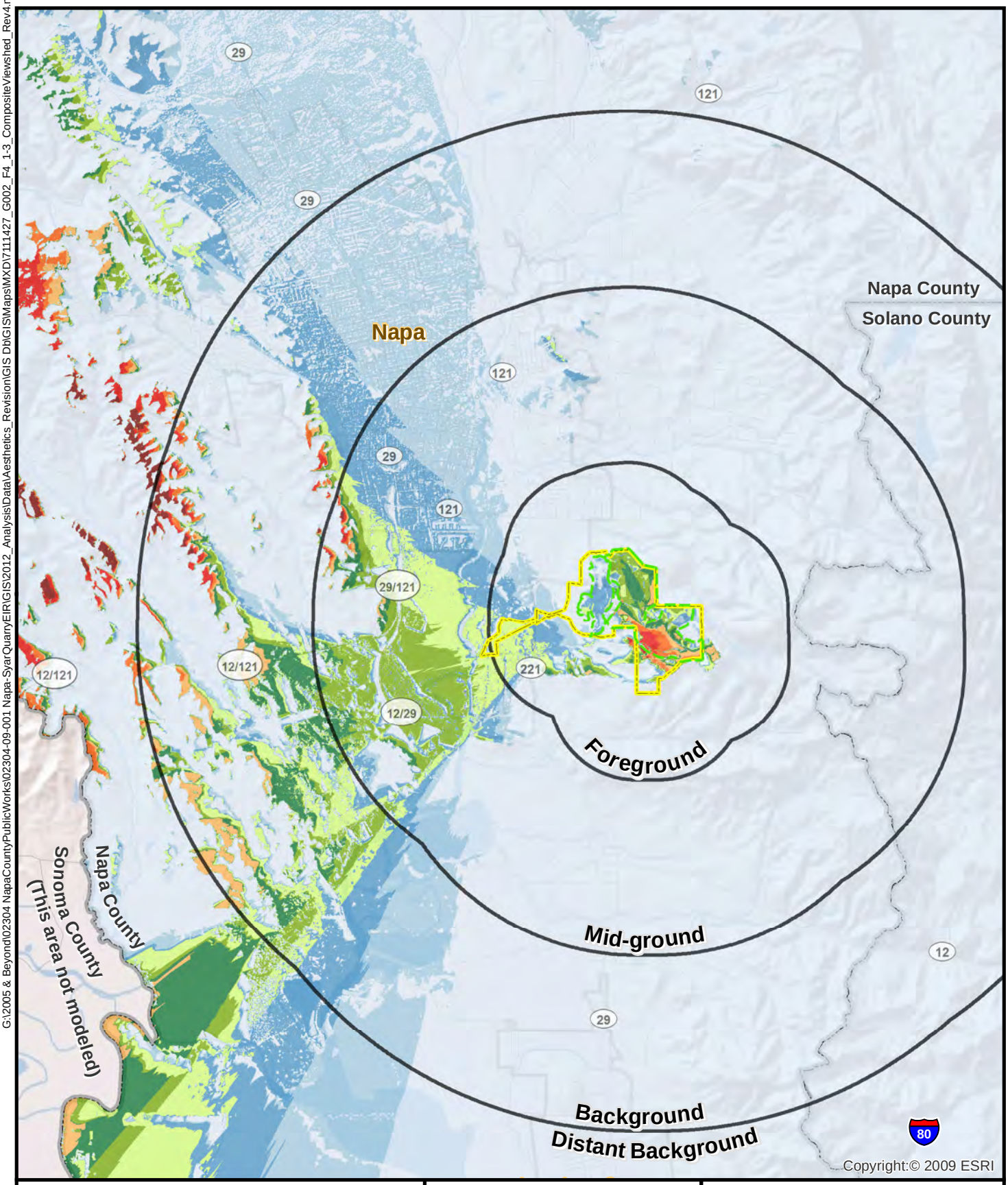

Percent of Project Visible

- 0% - 5%
- 5% - 10%
- 10% - 15%
- 15% - 20%
- 20% - 25%
- 25% - 30%
- 30% - 35%
- 35% - 40%
- 40% - 45%
- 45% - 51%

Distance Zones from Quarry Expansion Area

Excavation Limits *(Area of Visual Impacts)*

Project Site

County Boundaries

N

0 0.75 1.5 Miles

1 inch = 1.5 miles printed at 8.5x11

Sources: 2007 Napa County Orthophoto 1 meter resolution; Napa Co. GIS - Land Use; ESRI - streets

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Figure 4.1-3
Composite Viewshed of Project

Draft EIR
Syar Napa Quarry Expansion

Cartography: GHD Pty Ltd

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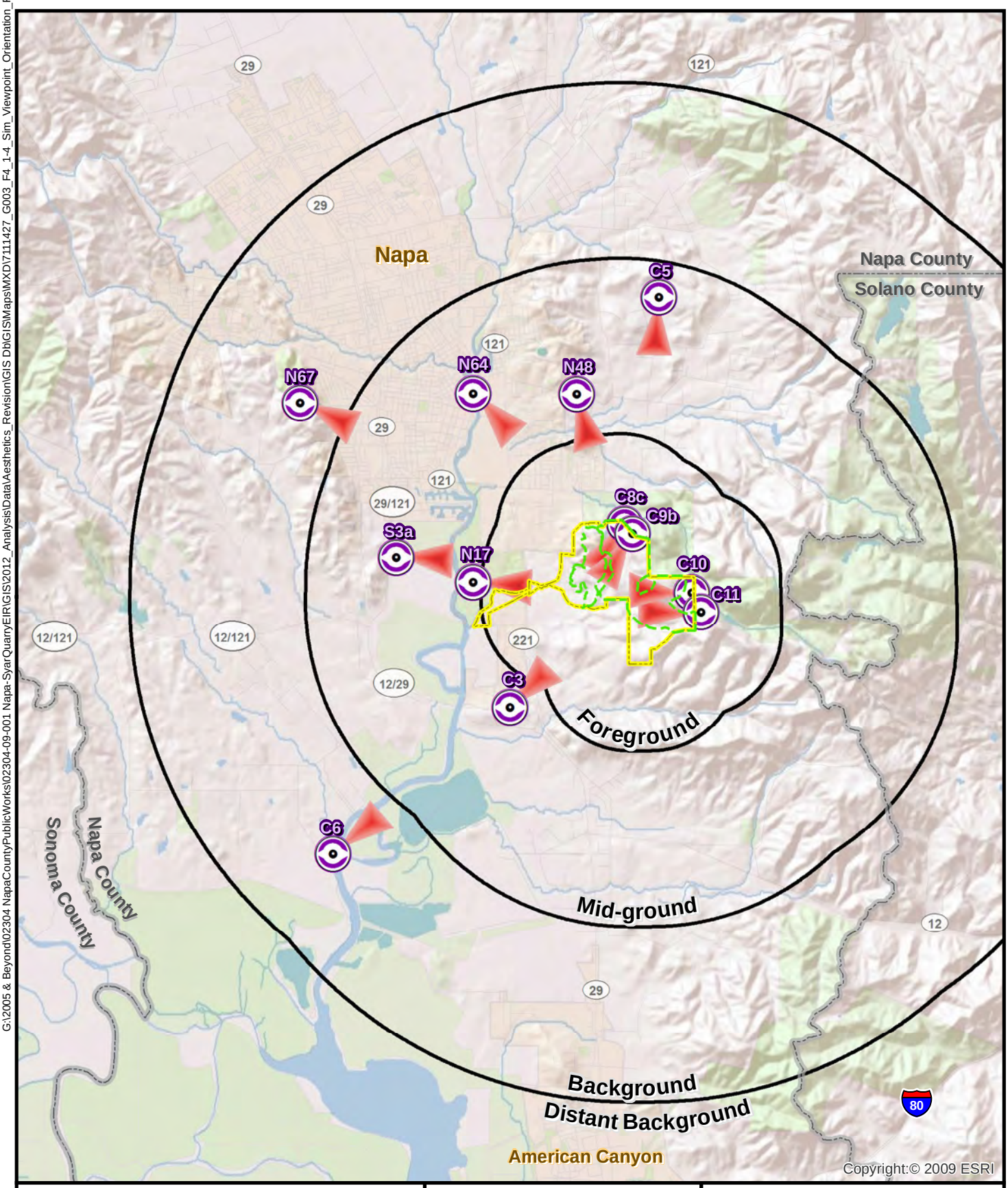

Simulation Viewpoints

Camera Angle Orientation

Distance Zones from Quarry Expansion Area

Excavation Limits *(Area of Visual Impacts)*

Project Site

County Boundaries

N

0 0.75 1.5 Miles

1 inch = 1.5 miles printed at 8.5x11

Sources: 2007 Napa County Orthophoto 1 meter resolution; Napa Co. GIS - Land Use; ESRI - streets

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Figure 4.1-4
Photographic Orientation of Simulation Viewpoints

Draft EIR
Syar Napa Quarry Expansion

Cartography: GHD Pty Ltd

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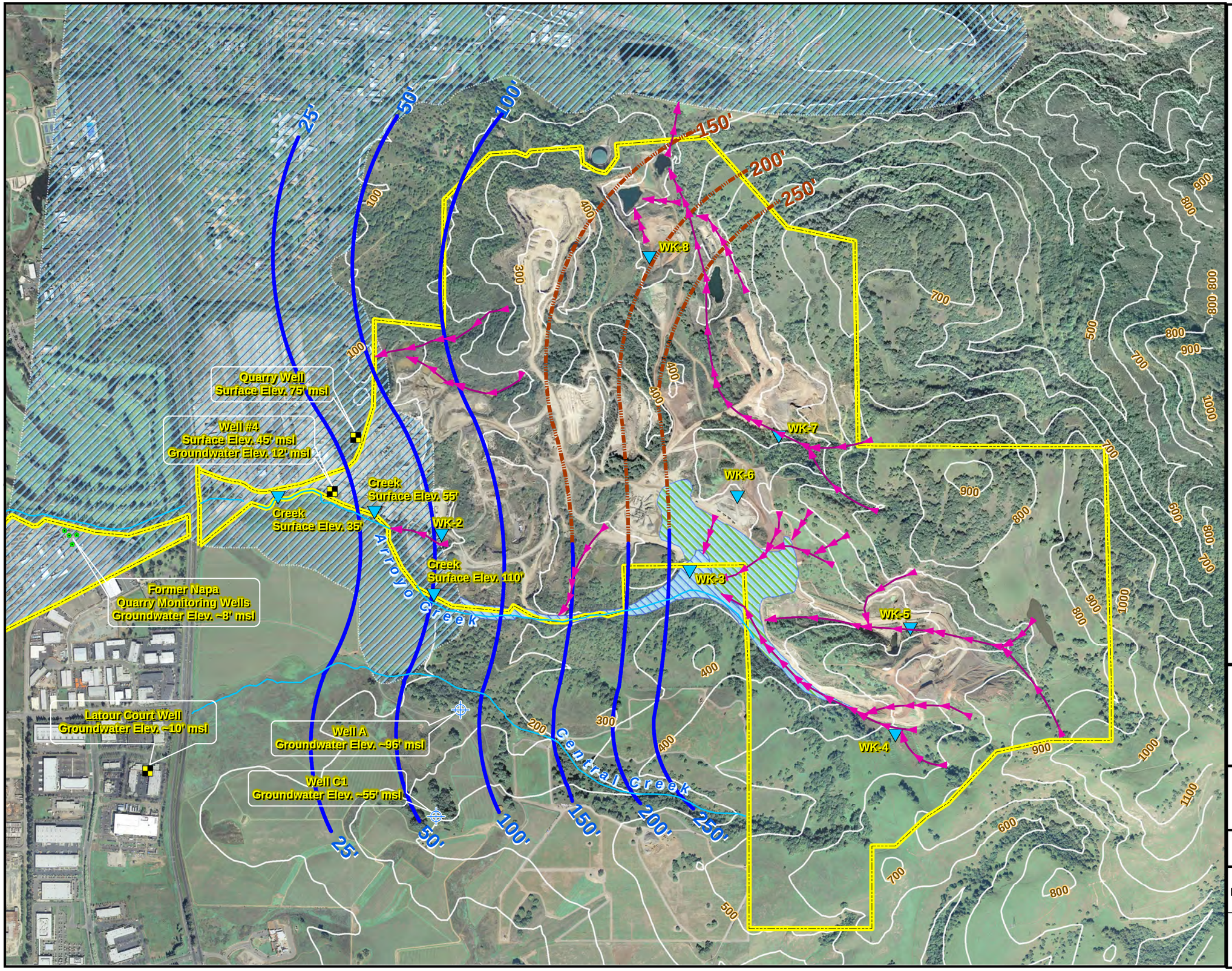

Project Site

Creek/Drainage

Approximate 25 ft Regional Groundwater Spring 2011 Isocontour

Approximate Potentiometric Spring 2011 Isocontour within Fractured Rock of Low Storativity

Approximate Seep Conduit Pathways

Arroyo Creek Aquifer

Artificial Fill

MST*

Former Napa Quarry Monitoring Wells

Winzler & Kelly Site Observations

Springs/Seeps

Napa Quarry Well

Approximate Reference Well Location from Slade (2001)

*Milliken-Sarco-Tulucay (MST) as defined in Farrar, C.D. and L.F. Metzger, 2003. Groundwater resources in the Lower Milliken-Sarco-Tulucay Creeks area, southeastern Napa County, California, 2000-2002. USGS. Water Resources Investigations Report 03-4229.

0 500 1,000 2,000 Ft

1 inch = 1,000 feet printed at 11x17

N

Sources: Napa County GIS: 2007 Napa County Orthophoto 0.5 ft resolution; aquifer.

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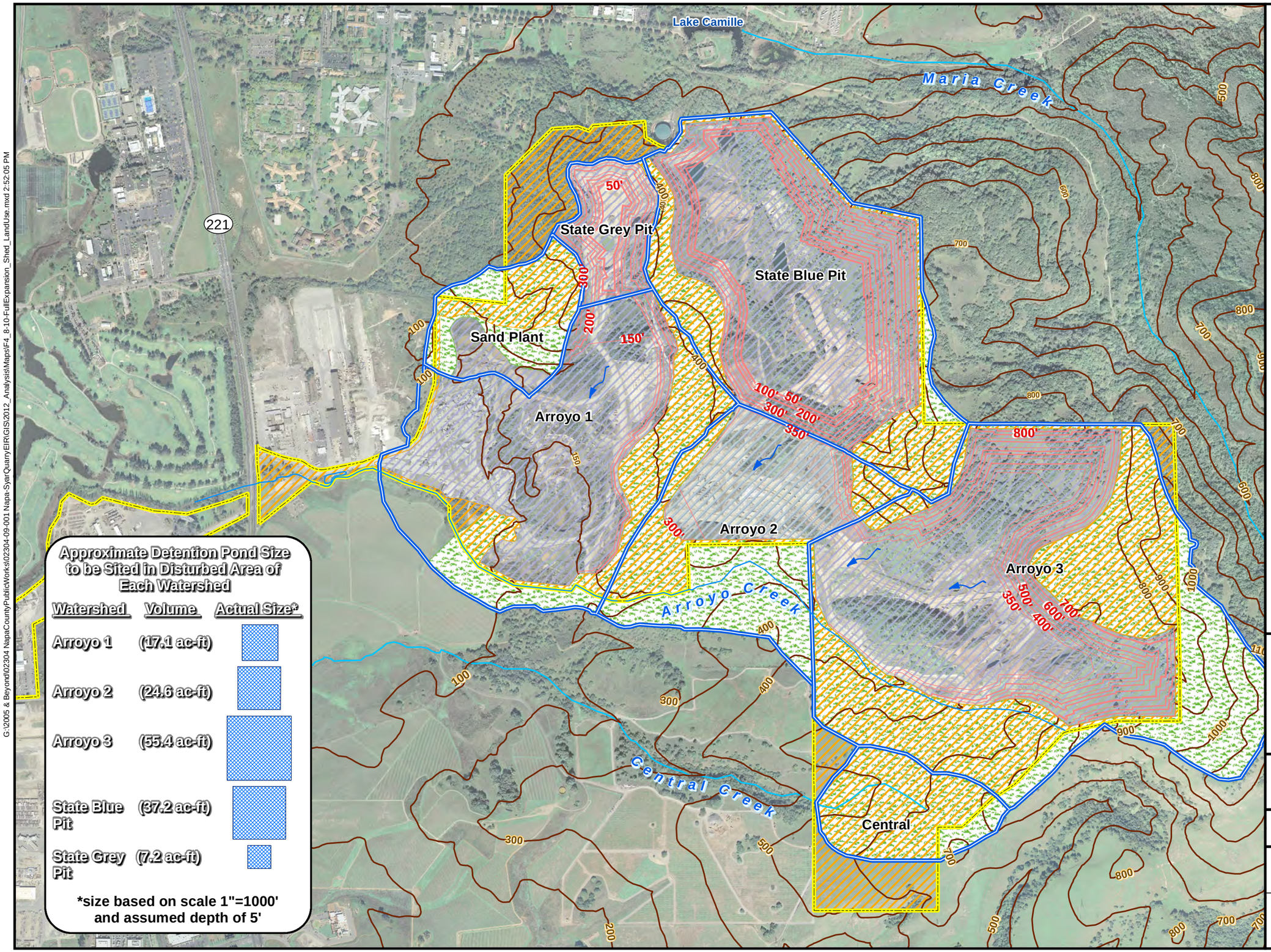
Cartography	Date	Project #
GLD/BFV	8/24/2012	02304-09-001

Figure 4.8-6
Regional Groundwater and Potentiometric Isocontour Map Napa Quarry Area

Draft EIR
Syar Napa Quarry Expansion



Project Site

Buffer/Exclusion Areas

Proposed Finished Grade Contours

Existing Surface Contours

Creeks

Proposed Watershed Basin (Typical)

Full-Expansion Condition

Overland Flow Paths

Watershed Boundaries

Land Use

Disturbed

Undisturbed

0 495 990 1,980 ft

1 inch = 1,000 feet printed at 11x17

N

Sources: Napa County GIS: 2007 Napa County Orthophoto 0.5 ft resolution.; Terrestrial Habitat data from Live Oaks Associates

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Cartography	Date	Project #
GG/BFV	8/7/2013	0230409001

Figure 4.8-10
Full-Expansion
Land Use Conditions

Draft EIR
Syar Napa Quarry Expansion

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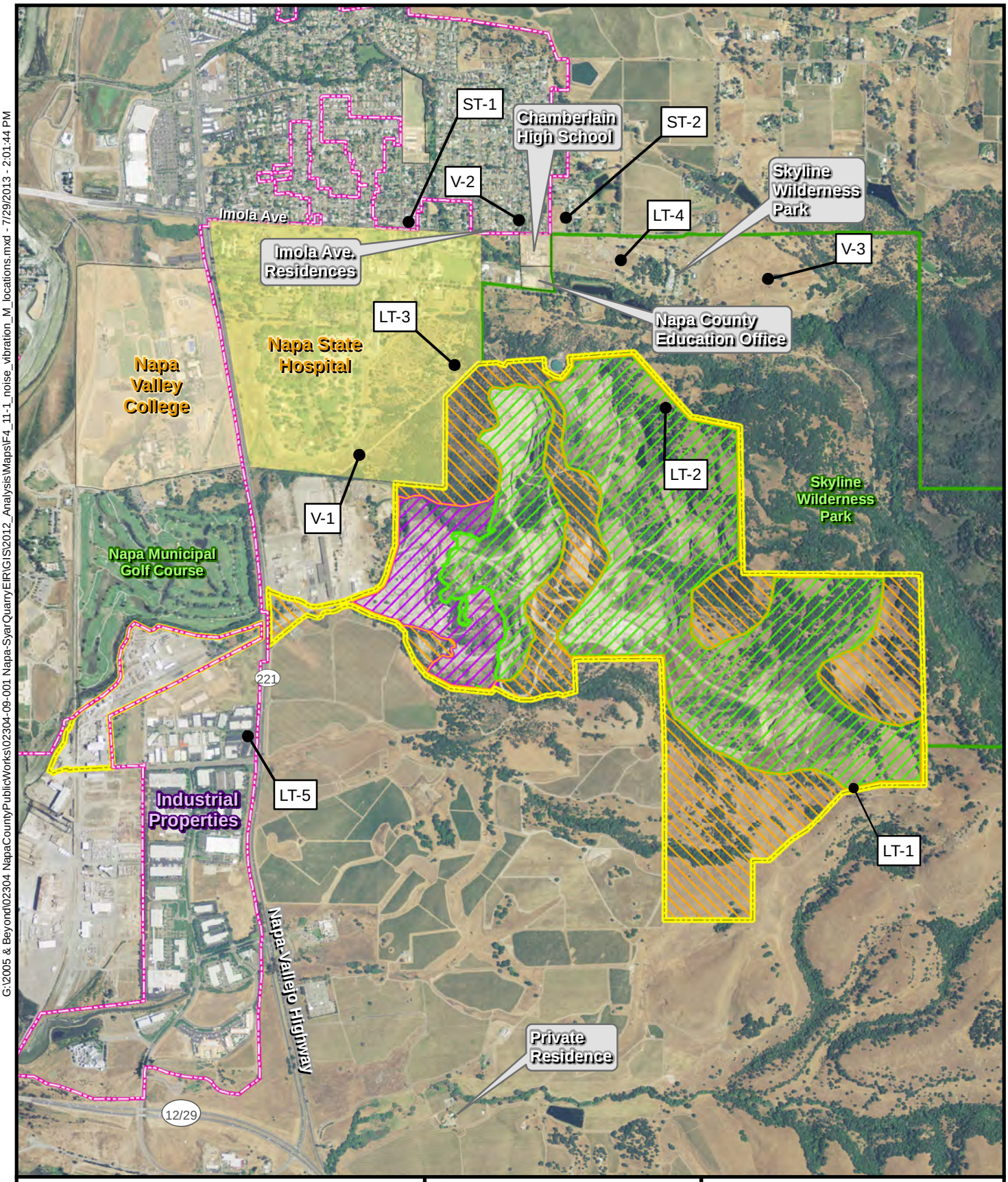

Napa City Limits
Project Site
Exclusion Area
Excavation Limits
Processing Area

LT Long-term Noise Measurement
ST Short-term Noise Measurement
V Vibration Measurement
Hospital
School

N

0 990 1,980 Feet

1 inch = 2,000 feet printed at 8.5x11

Sources: ESRI - tele atlas; Napa County GIS

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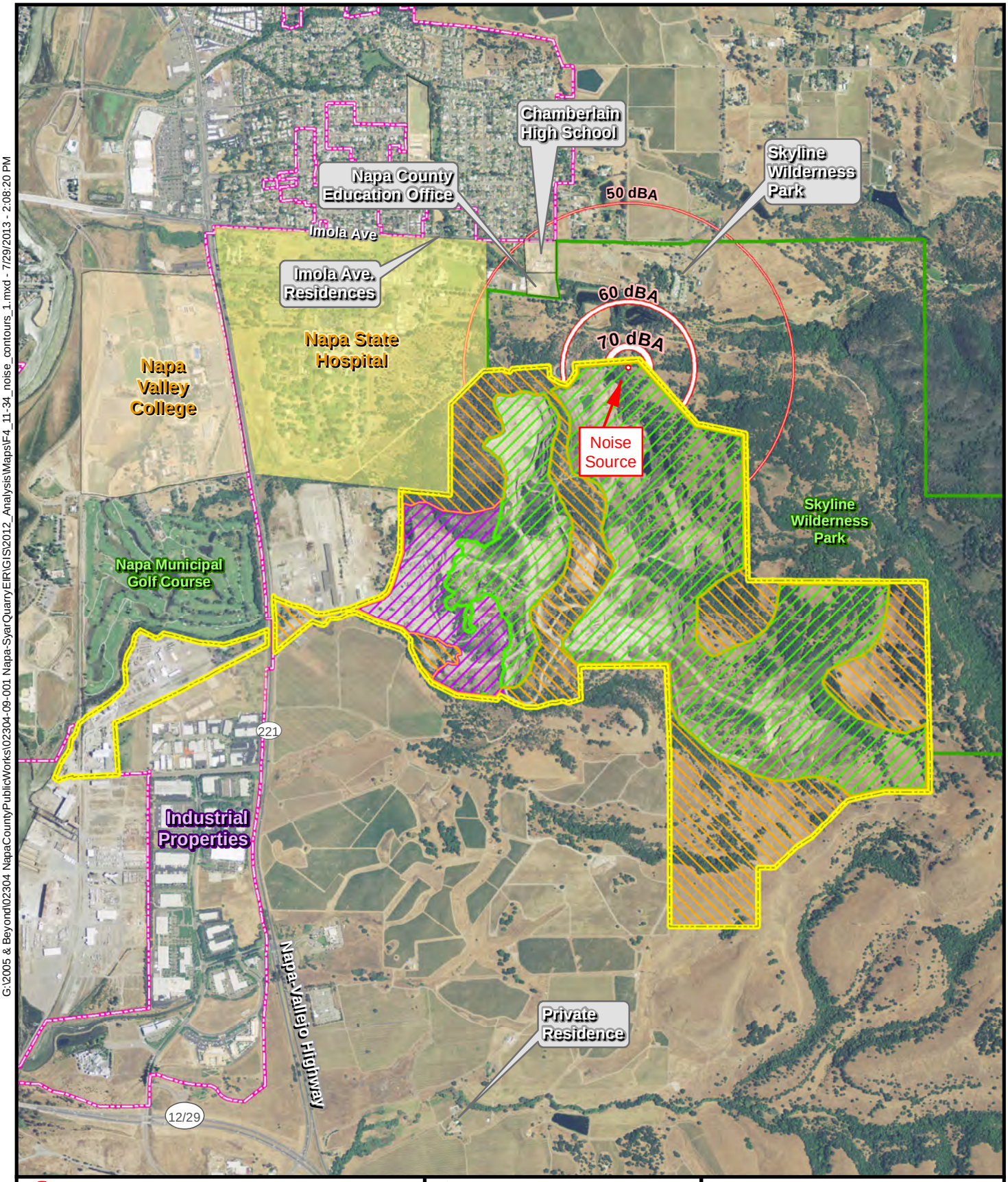
Figure 4.11-1
Noise and Vibration Monitoring Locations

Draft EIR
Syar Napa Quarry Expansion

Cartography: RCH

G:\2005 & Beyond\02304 NapaCountyPublicWorks\02304-09-001 Napa-SyarQuarryEIR\GIS\2012_Analysis\Maps\F4_11-1_noise_vibration_M_locations.mxd - 7/29/2013 - 2:01:44 PM



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Cartography: RCH, AMS

Sample Noise Source 1
50 dBA Leq Noise Contour (2500 ft from Noise Source)
60 dBA Leq Noise Contour (1000 ft from Noise Source)
70 dBA Leq Noise Contour (320 ft from Noise Source)
Project Site
Exclusion Area
Excavation Limits
Processing Area
Hospital
School
Napa City Limits

N

0 1,000 2,000 Feet

1 inch = 2,000 feet printed at 8.5x11

Sources: ESRI - tele atlas; Napa County GIS

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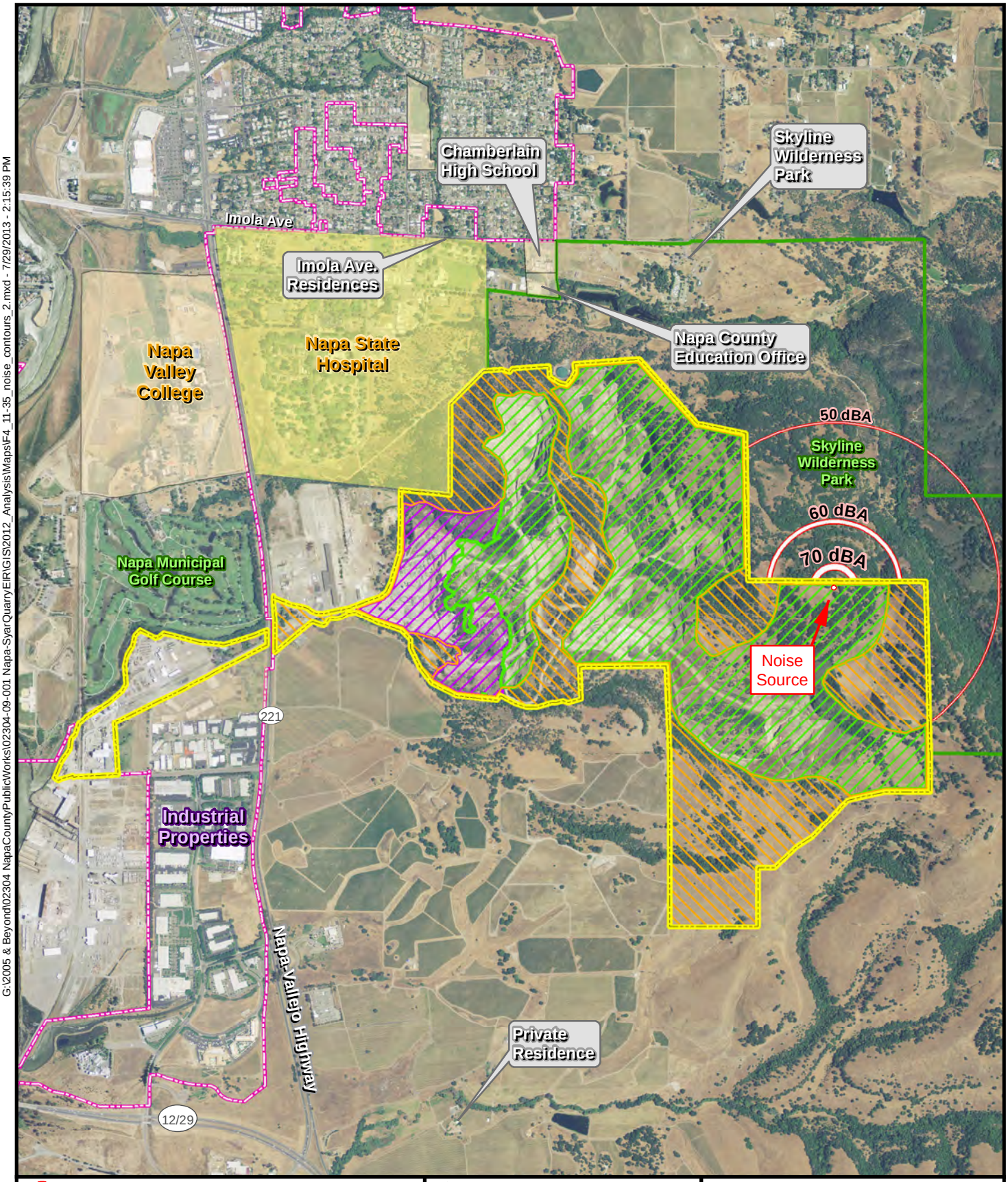
Figure 4.11-34
Noise Countors at Sample Noise Source 1

Draft EIR
Syar Napa Quarry Expansion



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Cartography: RCH, AMS

Sample Noise Source 2
50 dBA Leq Noise Contour (2500 ft from Noise Source)
60 dBA Leq Noise Contour (1000 ft from Noise Source)
70 dBA Leq Noise Contour (320 ft from Noise Source)
Project Site
Exclusion Area
Excavation Limits
Processing Area
Hospital
School

N

0 1,000 2,000 Feet

1 inch = 2,000 feet printed at 8.5x11

Sources: ESRI - tele atlas; Napa County GIS

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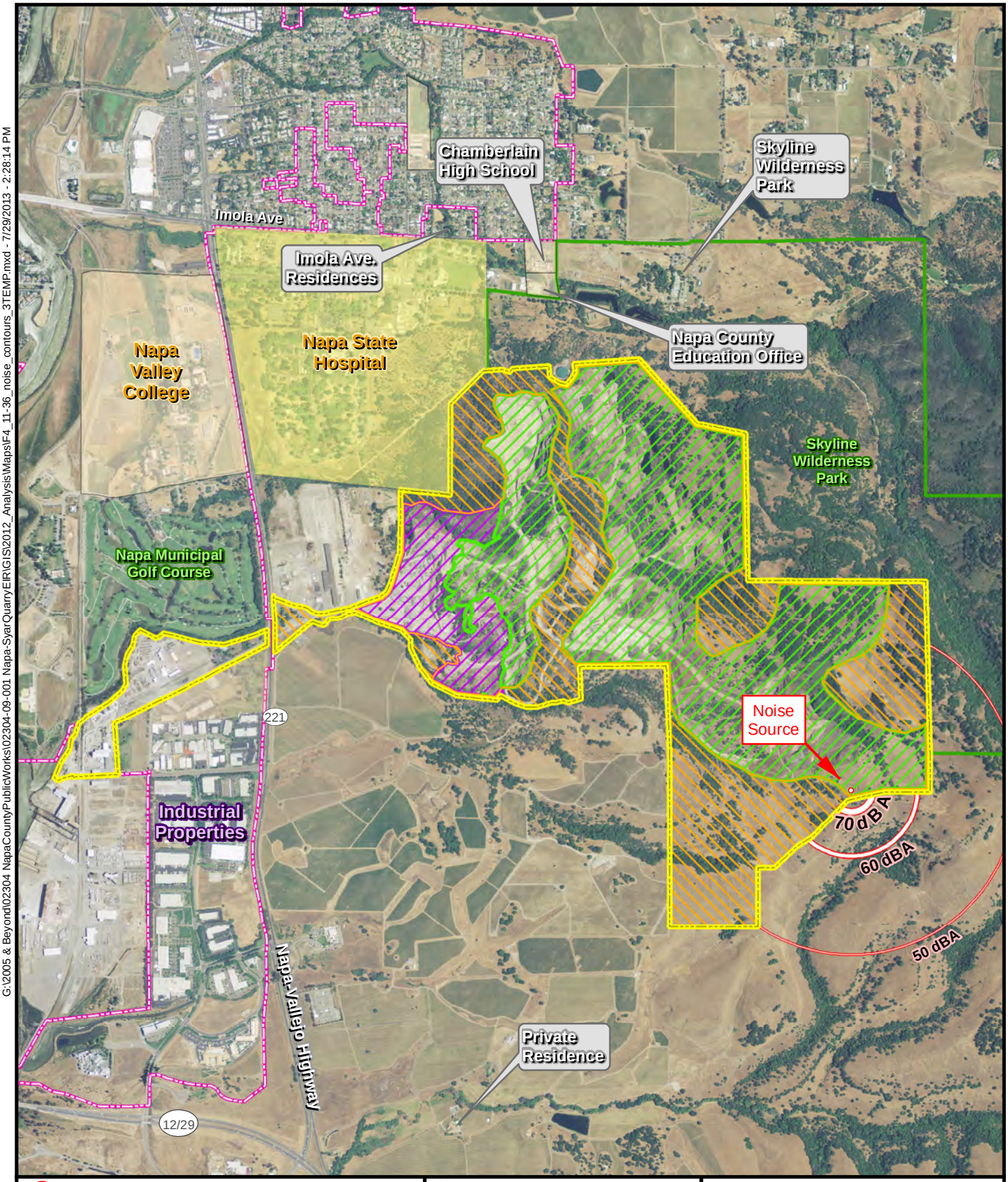
Figure 4.11-35
Noise Countors at Sample Noise Source 2

Draft EIR
Syar Napa Quarry Expansion



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Cartography: RCH, AMS

Sample Noise Source 3
50 dBA Leq Noise Contour (2500 ft from Noise Source)
60 dBA Leq Noise Contour (1000 ft from Noise Source)
70 dBA Leq Noise Contour (320 ft from Noise Source)
Project Site
Exclusion Area
Excavation Limits
Processing Area
Hospital
School

N

0 1,000 2,000 Feet

1 inch = 2,000 feet printed at 8.5x11

Sources: ESRI - tele atlas; Napa County GIS

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Figure 4.11-36
Noise Countors at Sample Noise Source 3

Draft EIR
Syar Napa Quarry Expansion

Snake Pit area at 470 ft. elevation looking east towards Pasini property.

*Not to scale

WINZLER & KELLY
www.w-and-k.com

Cartography	Date	Project #
BV	8/3/2012	0230409001

Figure A.13
Snake Pit Area Deep Excavation

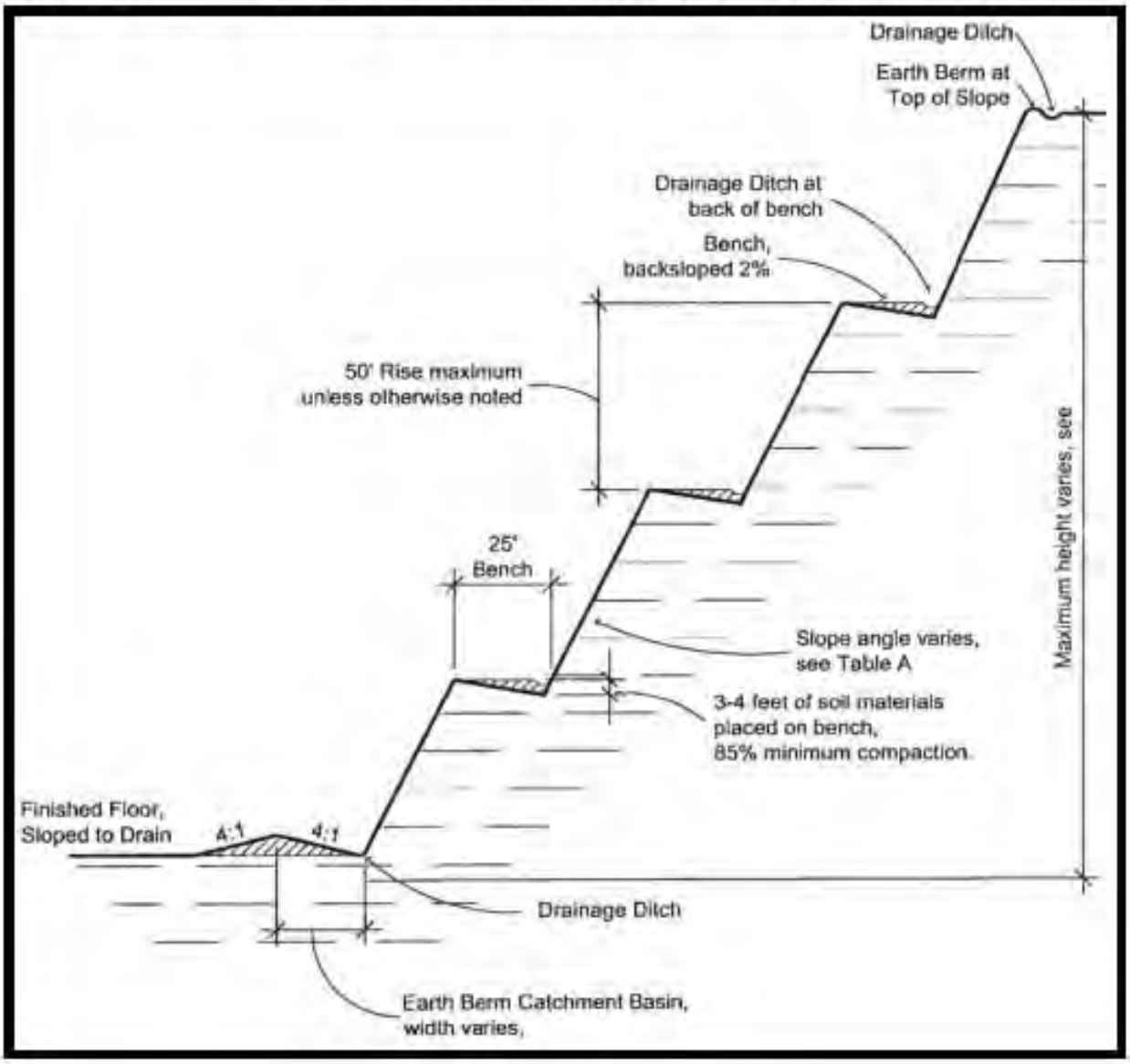
Hydrologic Study
Syar Napa Quarry Expansion

Image 3: Example of a view of existing exposed quarry faces (photo taken from JFK Park looking eastward)

Image 4: View of existing east-facing quarry face from Skyline Wilderness Park (photo taken looking westward)

Image 9: Vegetative screening and directional quarrying as minimization techniques for visual impacts

IMAGE 3-1: SLOPE CROSS-SECTION FOR EXTRACTION ACTIVITIES



Source: 2012 Napa Quarry MRP, Figure 9a (see appendix K of the MRP).

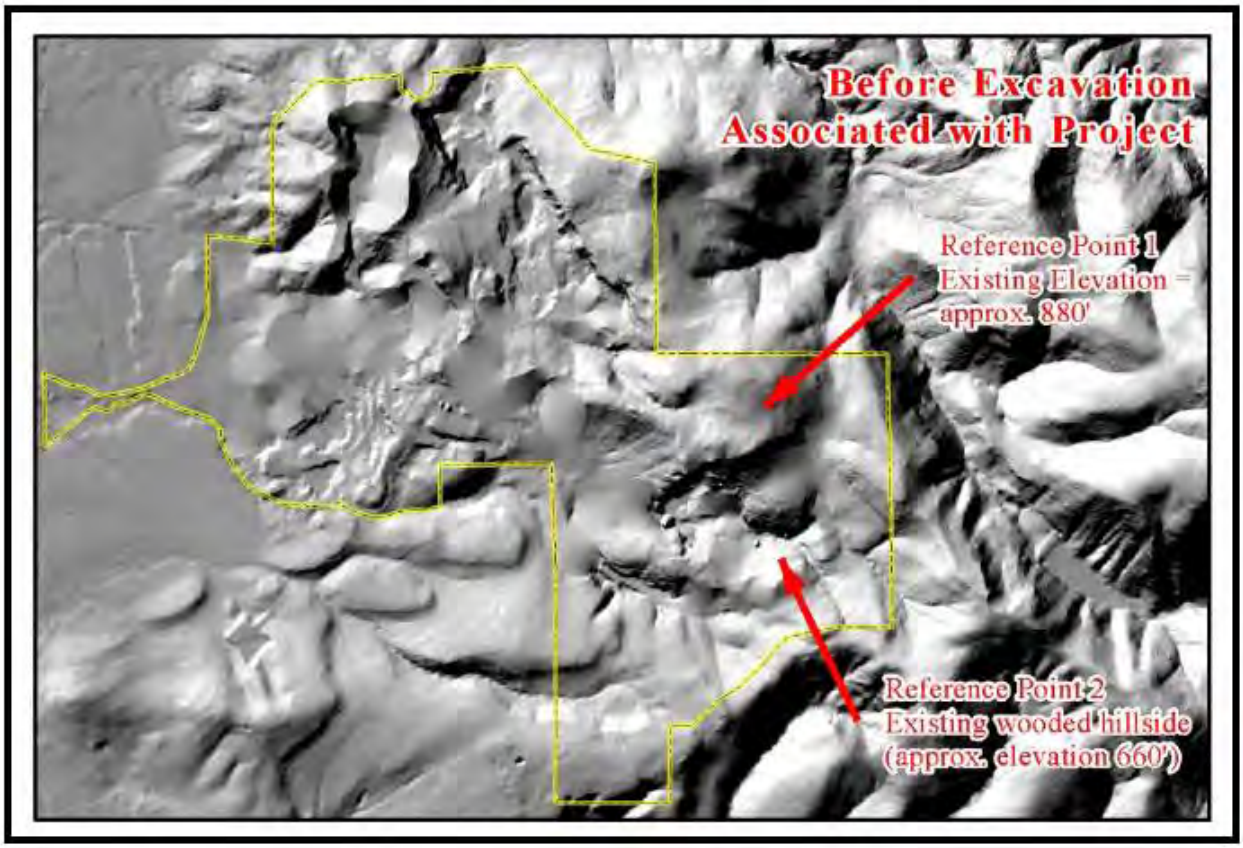


Image 11: Before Excavation

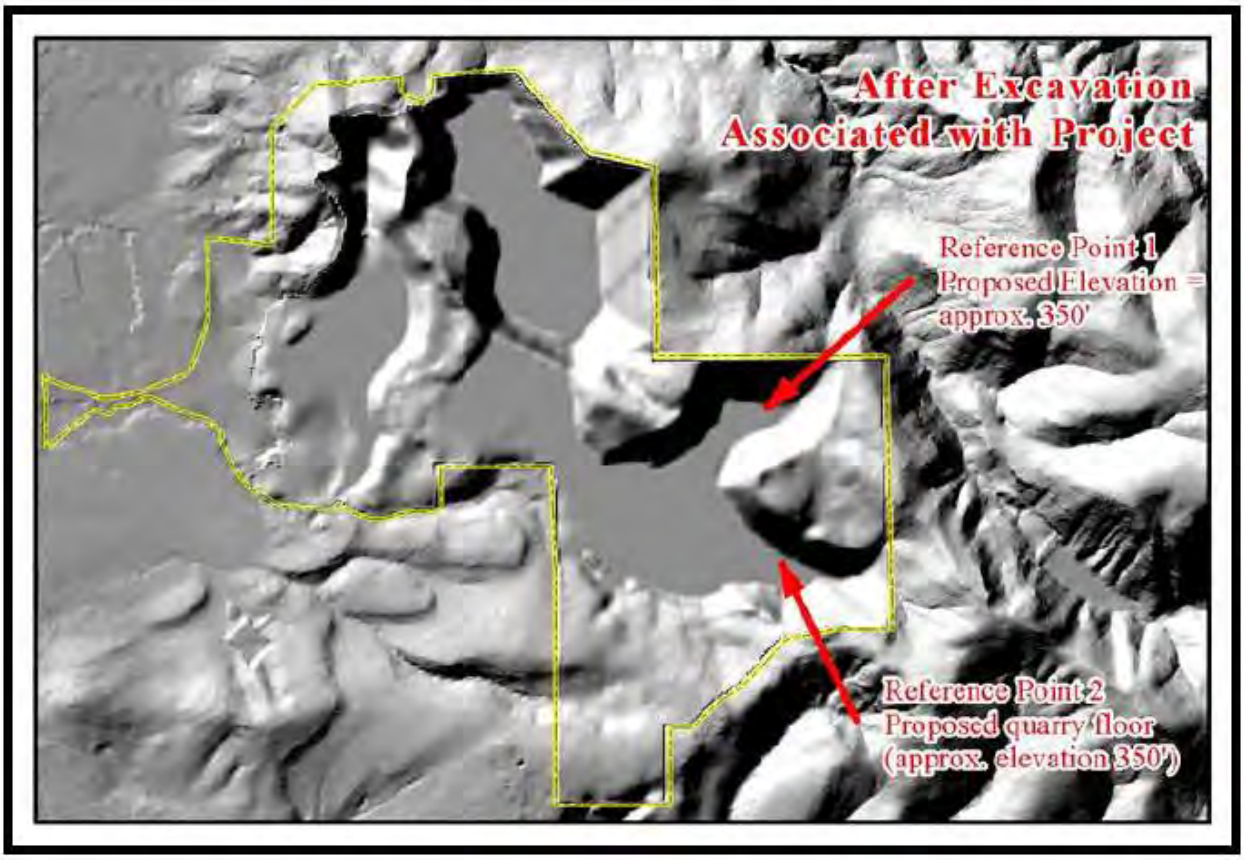


Image 12: After Excavation

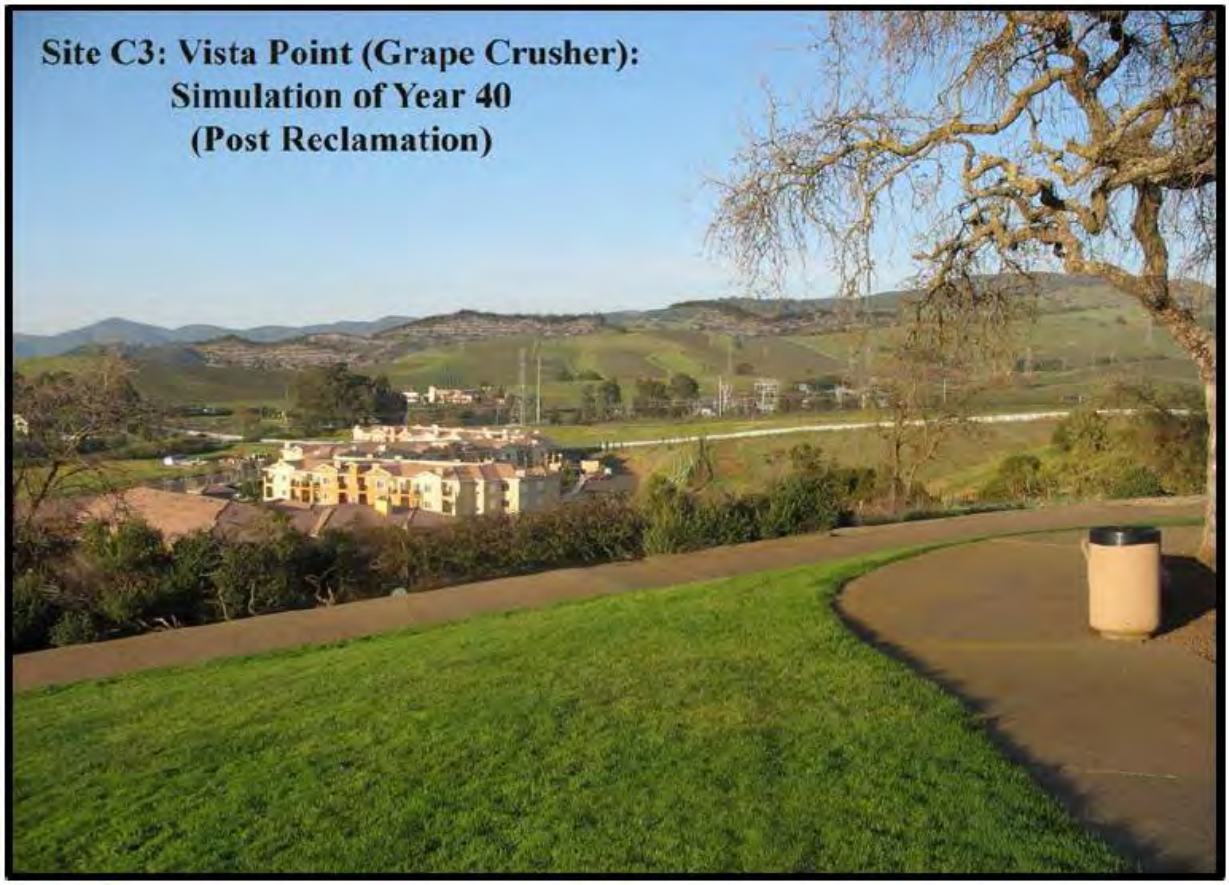


Image 15: Aesthetics

Image 21: Aesthetics

Image 23: Aesthetics

Image 26: Aesthetics

Image 31: Aesthetics

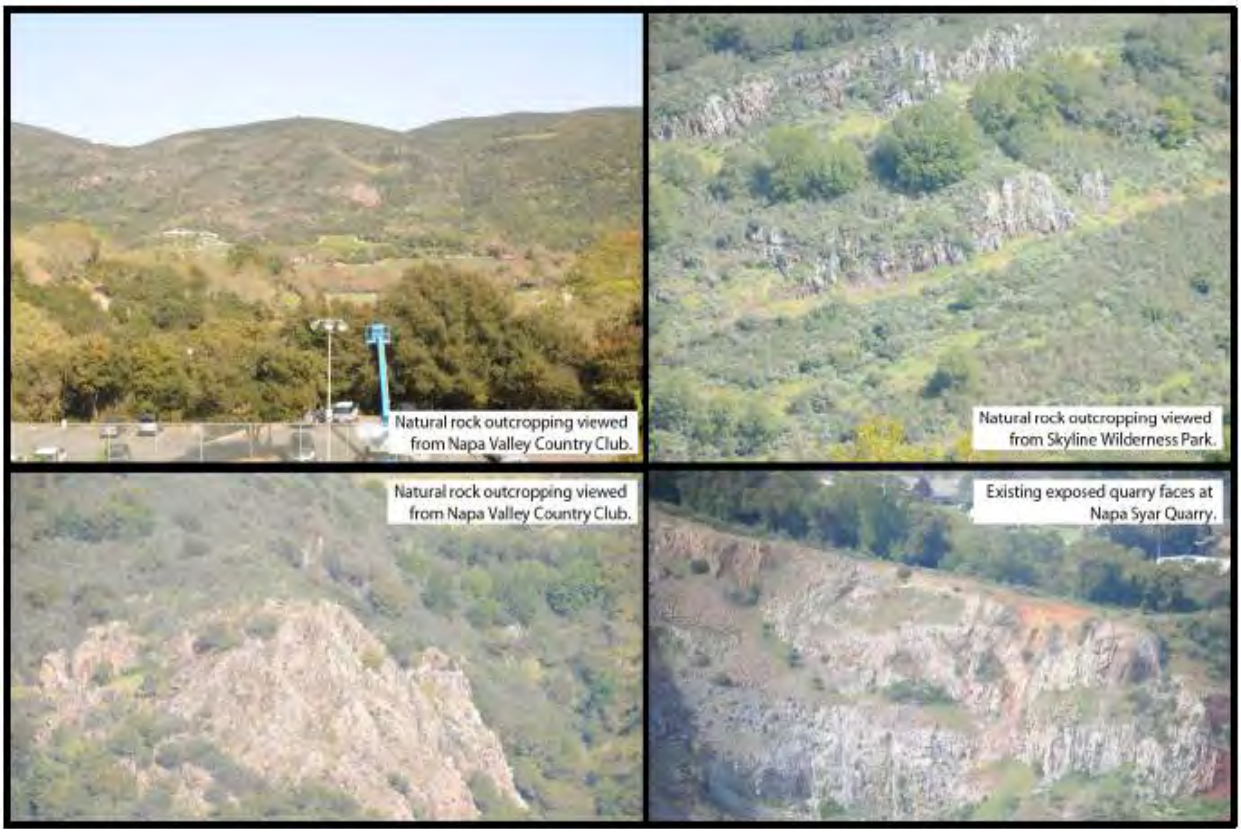


Image 41 Aesthetics

Image 42: Aesthetics

TABLE 4.3-10 PROJECT (1.19 MILLION TONS INCREASE) EMISSIONS IMPACTS

Source	Emissions (tons per year, metric tons per year for CO_2)						
	ROG	CO	NOx	CO_2	PM_{10}	$PM_{2.5}$	SOx
Combustion Emissions							
Onroad Haul Trucks - Offsite	0.70	3.4	7.17	4,252	0.41	0.41	0.041
Onroad Haul Trucks - Running Onsite	0.20	0.54	1.36	164	0.064	0.059	0.0017
Onroad Haul Trucks - Idling Onsite	0.068	0.35	0.73	53	0.0067	0.0062	0.00056
Onroad Worker/Utility Trips	0.018	0.52	0.07	64	0.0005	0.0005	0.00081
Offroad Emissions	5.1	61	62	3,455	3.15	2.9	0.00009
Plants - Asphalt	1.9	7.7	3.26	1,772	0.33	0.33	0.65
Plants - Portable	0.025	0.18	0.17	38	0.012	0.011	-
Rail and Barge - Offsite	0.23	0.50	4.82	177	0.11	0.11	0.32
Rail and Barge - Idling Onsite	0.0058	0.012	0.12	4.48	0.0029	0.0029	0.0081
Explosives Detonation	-	4.3	1.08	22	-	-	0.13
Total Combustion Emissions	**8.3**	**79**	**81**	**10,002**	**4.1**	**3.9**	**1.2**
Dust Emissions							
Fugitive Dust - Material Drops	---	---	---	---	1.4	0.43	---
Fugitive Dust - Onroad Truck Road Dust	---	---	---	---	27	5.6	---
Fugitive Dust - Offroad Truck Road Dust	---	---	---	---	57	12	---
Plants - Aggregate	---	---	---	---	2.2	0.63	---
Plants - AB	---	---	---	---	0.013	0.0038	---
Offsite Road Dust	---	---	---	---	4.4	1.1	---
Blasting	---	---	---	---	0.080	0.0046	---
Total Dust Emissions:	---	---	---	---	**92**	**20**	---
Total Facility Emissions:	**8.3**	**79**	**81**	**10,002**	**96**	**24**	**1.2**
Significance Thresholds	**10**	**None**	**10**	**None***	**15**	**10**	**None**
Exceeds Threshold?	**No**	**n/a**	**Yes**	**n/a***	**Yes**	**Yes**	**n/a**

Source: Appendix I, Syar Napa Quarry Draft EIR
Notes: * See GHG Section for significance determination. n/a = not applicable. --- = zero

TABLE 4.3-12 MITIGATED PROJECT (1.19 MILLION TONS INCREASE) EMISSIONS IMPACTS

Source	Emissions (tons per year, metric tons per year for CO_2)						
	ROG	CO	NOx	CO_2	PM_{10}	$PM_{2.5}$	SOx
Combustion Emissions							
Onroad Haul Trucks - Offsite	0.70	3.43	7.17	4,252	0.41	0.41	0.04
Onroad Haul Trucks - Running Onsite	0.20	0.54	1.36	163	0.06	0.06	0.00
Onroad Haul Trucks - Idling Onsite	0.07	0.35	0.73	53	0.01	0.01	0.00
Onroad Worker/Utility Trips	0.02	0.52	0.07	64	0.00	0.00	0.00
Offroad Emissions	1.53	(6.93)	(7.58)	3,455	(0.17)	(0.03)	0.00
Plants - Asphalt	1.89	7.69	3.26	1,772	0.33	0.33	0.65
Plants - Portable	0.02	0.18	0.17	38	0.01	0.01	-
Rail and Barge - Offsite	0.23	0.50	3.16	177	0.11	0.11	0.32
Rail and Barge - Idling Onsite	0.01	0.01	0.12	4.5	0.00	0.00	0.01
Explosives Detonation	-	4.26	1.08	22	-	-	0.13
Total Combustion Emissions	**4.67**	**10.55**	**9.53**	**10,002**	**0.77**	**0.90**	**1.15**
Dust Emissions							
Fugitive Dust - Material Drops	---	---	---	---	1.44	0.43	---
Fugitive Dust - Onroad Truck Road Dust	---	---	---	---	(11.56)	(2.57)	---
Fugitive Dust - Offroad Truck Road Dust	---	---	---	---	(0.76)	(0.17)	---
Plants - Aggregate	---	---	---	---	2.16	0.63	---
Plants – AB	---	---	---	---	0.01	0.00	---
Offsite Roads					4.36	1.07	
Blasting					0.08	0.00	
Total Dust Emissions:	---	---	---	---	**(4.27)**	**(0.60)**	---
Total Facility Emissions:	**4.67**	**10.55**	**9.53**	**10,002**	**(3.50)**	**0.30**	**1.15**
Significance Thresholds	10	None	10	None*	15	10	None
Exceeds Threshold?	No	n/a	No	n/a*	No	No	n/a

Source: Appendix I, Syar Napa Quarry Draft EIR
Notes: * See GHG Section for significance determination. n/a = not applicable. --- = zero.

TABLE 4.3-13 EFFECTS OF MITIGATION 4.3-3

Scenario	Production (tons/yr)	Mitigated Cancer Risk before Mitigation Measure 4.3-3 (per million exposed)	Mitigated Cancer Risk after Mitigation Measure 4.3-3 (per million exposed)	Engine Activity (Percentage of Horsepower-Hours per Year)
Baseline	810,363	7.0	7.0	12% Tier 2 or better.
1	945,000	16.7	8.8	< 45% from Blue/Grey Pits or 44% Tier 2 or better.
2	1,100,000	10.5	3.5	< 45% from Blue/Grey Pits or 56% Tier 2 or better.
3	1,300,000	3.2	3.2	5 % Tier 3 or better and 72% Tier 2 or better.
4	1,550,000	-1.4	-1.4	25% Tier 3 or better and 91% Tier 2 or better.
5	1,750,000	-1.1	-1.1	60% Tier 3 or better and 95% Tier 2 or better.
6	2,000,000	7.0	7.0	97% Tier 3 or better.

Source: Appendix I, Syar Napa Quarry Draft EIR

Notes: * Cancer risk can be negative because mitigation includes reducing emissions from equipment operating in the Baseline as well as equipment operating as part of the Project. Values represent standard 70 year risk.

ATTACHMENT B

SYAR INDUSTRIES, INC.

March 17, 2015

Mr. Don Barrella, Planner III
Napa County
Conservation, Development & Planning Department
1195 Third Street, Suite 210
Napa, California 94559

Subject: Syar Industries, Inc. - Napa Quarry Permit

Dear Don:

As you have requested, I am sending this letter to formally request the following modifications be made to the Syar Industries, Inc. (Syar) Napa Quarry Project. We first want to acknowledge that Syar is agreeable to the Reduced Production Alternative being the County's recommendation to the County Planning Commission. Also, as stated in our E-Mail to you on February 13, 2015, Syar is making these modifications to their project in response to the concerns raised at the January 7th Planning Commission hearing on the Napa Quarry Project. These proposed revisions are intended to balance public concerns regarding potential impacts, with the project objectives of providing a local, reliable, affordable, and consistent source of high quality aggregate and aggregate-related materials to customers in the Napa region for the next 35 years. Syar proposes to make the following modifications:

- Reduce the size of the expansion areas as shown on the attached maps. In the Pasini area, this includes doubling the size of the setback from the property line, as shown in Exhibit 1, attached. This would reduce the mineable area by approximately 5 acres. In the northeast area of State Blue, this change consists of removing the northern-most 10 acres of the expansion area, as shown in Exhibit 2. These modifications to the expansion areas should reduce potential noise, vibration, and visual impacts of the project. It also reduces the impacts on oak woodlands, particularly in the northeast area. Along with this modification to Syar's project, Syar is willing to develop a license agreement, with the County of Napa, that will allow the existing trails, currently located on Syar property, to remain.

- We suggest the County clarify Mitigation Measure 4.11-1 to indicate: (1) the mitigations will be applied in both expansion areas, and (2) clearing of topsoil and overburden are limited to the hours of operation stated in Section 3.5.7. As additional mitigation in the expansion areas, we will also: (1) limit blasting to the hours of 10:00 am to 4:00 pm weekdays, with no blasting on Saturdays, Sundays, or holidays, and (2) within 400 feet of the property line, and where such activities are visible from the trails in Skyline Park, limit

2301 NAPA-VALLEJO HWY. • P.O. BOX 2540 • NAPA, CA 94558-0524 • PHONE: 707/252-8711 • FAX: 707/257-2630

topsoil and overburden removal activities to the hours of 7:00 am to noon on weekdays, with no such activities on Saturdays, Sundays, or holidays.

- To provide additional visual screening, Syar will plant oak trees in the setback of the Pasini expansion area, in the general location shown on Exhibit 1, within the first 2 years of the permit term.

- Syar will provide 48 hours notice of blasting via our website, in addition to providing a 48 hour notice via email/phone call to anyone who requests to receive a notice.

- To address the potential dust concerns expressed by Cakebread, we agree to not blast when sustained wind speeds at the quarry exceed 20 mph.

Please let me know if you have any further questions with respect to these changes to the project. You can call me at 707-259-5826 or email me at jperry@syar.com.

Sincerely,

John F. Perry
Vice President, Engineering

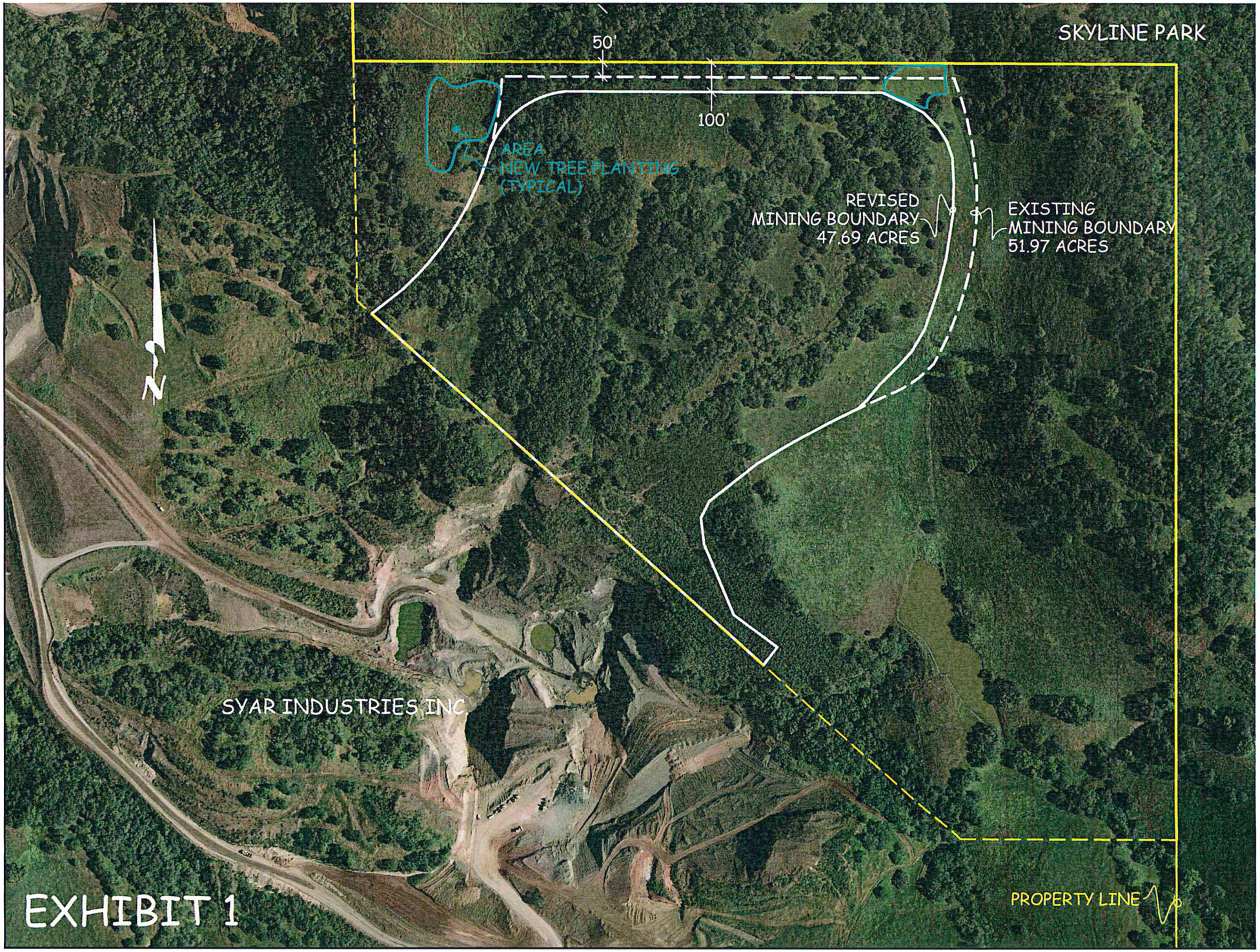

SKYLINE PARK
50'
100'
AREA
NEW TREE PLANTING
(TYPICAL)
REVISED
MINING BOUNDARY
47.69 ACRES
EXISTING
MINING BOUNDARY
51.97 ACRES
N
SYAR INDUSTRIES INC
PROPERTY LINE
EXHIBIT 1


EXHIBIT 2
10.7 +/- ACRES
EXISTING
MINING BOUNDARY
SKYLINE PARK
EXISTING
ROCK WALL
&
REVISED
MINING BOUNDARY
50'
SYAR INDUSTRIES INC.
N
PROPERTY LINE

ATTACHMENT C

The Following is a list of commenters who made verbal comments during the Planning Commission public hearing on January 7, 2015 (Agenda Item: 9A Syar Napa Quarry Expansion and SMP #P80-00337)
For documents associated with this hearing in concluding and archive video please go to http://napa.granicus.com/ViewPublisher.php?view_id=21

Name	Address
Susanne von Rosenberg	2168 Penny Lane, Napa
Sandra Booth	2100 Seville Drive, Napa
Daryl Chinn	115 Kreuzer Lane, Napa
Jim Riley (Operating Engineers Vacaville)	1500 Lock Road, Vacaville
Toby Halkovich (Cakebread Cellars)	8300 St. Helena Highway, Rutherford
Berry Christian (Napa Co Parks &Open Space Dist.)	105 Landana Street, American Canyon
David Allred	214 East Berna Avenue, Napa
Brian Jones	711 South Minahen Street, Napa
Mike Costanzo (Napa Co Bike Coalition)	3379 Solano Avenue #1700, Napa
David Finigan (Napa Co Parks &Open Space Dist.)	1195 Third Street Second Floor, Napa
Julia Winiarski (Wildlife Rescue Center Napa)	9 Bonita Avenue, Napa
Patrick Gilleran	2164 Patton Avenue, Napa
Kathy Felch	2196 Penny Lane
Dorothy Glaros (Skyline Wilderness Park Citizens Association)	2100 Imola Avenue, Napa
John Aranson (Skyline Wilderness Park Citizens Association)	Marin County
Lynn Wyman	1081 Green Valley Road, Napa
Fred Parker (Skyline Wilderness Park Citizens Association)	2732 Azalea Street
Planning Commissioners	
Heather Phillips	
Matt Pope	
Michael Basayne	
Terry Scott	
Anne Cottrell	

The Following is a list of correspondence received from January 5, 2015 through May 31, 2015 (in chronological order) after publication of the Final EIR which comment on the EIR, followed by the actual correspondence. Please note the attached correspondence do not include correspondence received that is in general opposition or support of the proposed project: for all correspondence received on the Project please go to http://www.countyofnapa.org/Syar/

Name	Agency or Group	Correspondence
Bernhard Krevet	Friend of the Napa River	Letter received 1/5/15
Steven Booth	Napa Resident	Letter received 1/6/15
Sandra Booth	Napa Resident	Letter received 1/6/15
Bruce Cakebread	Cakebread Cellars	Letter received 1/6/15
Jake Ruygt	CA Native Plant Society	Letter received 1/6/15
Dorothy Glaros	Skyline Park Citizens Association	Letter received 1/6/15
Roslyn Potter	Napa Resident	Email received 1/6/15
June Dougherty	Napa Resident	Email received 1/6/15
Susanne von Rosenberg	Napa Resident	1/7/15 PC presentation
Patrick Gilleran	Napa Resident	Letter received 1/13/15
Milton Bosch	Napa Resident	Email received 1/13/15
Genever Fox	Napa Resident	Email received 2/10/15
Roslyn Potter	Napa Resident	Email received 2/18/15
Sandra Booth	Napa Resident	2-18-15 PC presentation document
Dave Finigan	Napa Co. Regional Park and Open Space District	Letter received 3/17/15
Christina Benz	Sierra Club of Napa Group	Email received 3/20/15
Susanne von Rosenberg	Napa Resident	Email received 3/26/15
Janet McBride	Bay Area Ridge Trail Council	Letter received 4/1/15
Sandra Booth	Napa Resident	BAAQMD complaint received 4/21/15
Sandra Booth	Napa Resident	Amended BAAQMD complaint received 5/4/15

Friends of the Napa River

P.O.Box 537, Napa, CA 94559
Phone 707-254-8520
www.fonr.org
info@fonr.org

December 30, 2014

Napa County Planning, Building, and Environmental Services Department
Attention: Donald Barrella, Planner III
By Email: donald.barrella@countyofnapa.org

Response to Comments ("L") on the Draft Environmental Impact Report (DEIR) for the proposed Syar Napa Quarry Expansion and Surface Mining project #P08-00337-SMP

Dear Donald:

Friends of the Napa River (FONR) provides these further comments in reaction to your responses to our December 4, 2013 Letter (referenced "L"). In the sincere interest of aiding a truly transparent public review process as expected under the California Environmental Quality Act (CEQA) and to help ensure environmental integrity of a viable watershed amongst valuable existing oak woodlands adjacent to parklands in public usage, we submit these additional observations and comments:

- The Reduced Footprint/Conservation Alternative is incomplete and inconsistent with CEQA requirements.
- The buffer areas along publicly used lands need better definition and institutional protection.
- The use of the Pasini property remains questionable; it should be left alone.
- The seasonal Pasini pond feature and its associated Arroyo Creek sub-watershed deserve further intensive review.

Please find our detailed comments on the following pages.

Sincerely,

Bernhard Krevet
President, Friends of the Napa River
CC: Review Team (Barry Christian, Tony Norris, Phill Blake)

Responses to Comments ("L") on the Draft Environmental Impact Report (DEIR) for the proposed Syar Napa Quarry Expansion and Surface Mining project #P08-00337-SMP

1. The Reduced Footprint/Conservation Alternative mentioned in the DEIR must be presented as wholly as any other alternative for the public and their elected and appointed decision-makers to have comparable selection of alternatives clearly understood. This selection process remains a central tenet of CEQA to enable identification of the environmentally superior alternative. Though it sounds nice, the Reduced Footprint/Conservation Alternative lacks mapped and measurably sufficient details thereby failing to provide comparable and comprehensible information to remain consistent with CEQA expectations for the public and their agents to understand what constitutes the environmentally superior alternative. The DEIR as presented (which remains essentially unchanged at this time) now risks being regarded as incomplete. The opinion of one consultant as to applicability cannot countermand the clear intent of CEQA to enable a publicly vested review of alternatives *in toto*. Perhaps, what will possibly continue the DEIR process to conclusion now is to only make the traditional CEQA fallback alternative selection of no project (no expansion, in this case) as the clear environmentally superior alternative.
2. The buffer areas along publicly used lands could and ought to be protected via conservation and public access easements by conveyance acceptable to the County of Napa with associated conditions which anticipate reductions of environmental and cultural impacts. This is a FONR recommendation. It will be instructive to also know in detail that, for those quarry properties acquired by Syar from the State of California if there may be existing deeded restrictions which spell out the nature and intended use of buffer areas. Further, it will be instructive to know what the rational is for the 'one-size-fits-all' fifty foot wide buffer areas in most instances as proposed. Surely the underlying mineral strata do not just stop abruptly on straight lines as drawn on paper. Where might there be delineation of those buffer areas which more realistically indicate site fitted needs and correspond to on the ground features of topography, native plant community groupings, patterns of positive drainage (into quarry edge or public lands), width anticipated for wildlife corridors as well as set-backs for various safety concerns? Would it not be possible, due to conditions on the ground, which could give further definition for mitigation of impacts that a buffer area width can range widely on a specific site fit basis, and in so doing give further refinement to areas for mitigation of impacts?
3. The Pasini property in its current use and in its prior agricultural uses functions and has functioned (for the most part) as an important component of the local watershed excluded from quarry operations. Its oak woodland and meadow cover is a valuable depository to understand where broader mitigation measures contiguous with adjacent public oak woodlands and meadows may be counted against quarry impacts elsewhere. The County General Plan so far is not indicating the property for mineral resources. If a State agency has adjusted maps to include such mineral resources within that property there is still no automatic trigger to include quarry expansion to within that property. The County of Napa General Plan will have to be adjusted first through a publicly vested process by this local Napa County community. Otherwise the highest and best use of the Pasini property remains as left alone.

4. A fifty foot buffer setback on the northeast Pasini property may be insufficient in consideration of the above and moot as that property stays in its highest and best use now.

5. FONR still contends, as per our previous letter (referenced herein) that the knoll and ridge along the north portion of the Pasini property has valuable elevation, vegetative cover and situated to protect water percolation in itself. It stands as a significant buffer now for public lands beyond and cannot be sliced off of the surface of the earth easily without significant impacts. What is more, it continues to block industrialized noise, dust, scents and possible associated toxicants which will certainly blow through to public parklands from the gap created if removed. This knoll and ridge is a leading 'linchpin' component in the highest and best use of the land as it currently stands, which is not easily dismissed.

6. The seasonal Pasini pond feature and its associated Arroyo Creek sub-watershed certainly deserve further intensive review. Seventy percent removal and reorientation of that sub-watershed to the pond may for a greater part be moot as the Pasini property stays in its highest and best use now. It is disquieting for FONR to learn that Syar now has legally directed obligations to clean up, install check filtration and monitor runoff flows from current quarry operations into the Arroyo Creek and on into the Napa River and San Pablo Bay. Agreement by Syar to do so and also conduct educational outreach may say a lot in time for their stewardship responsibility on the land and for the Napa community and regional public interests downstream. Syar may not easily obtain permits to place necessary check dams proposed on the creek in the meantime. Prudence would indicate suspending further quarry expansion into the Arroyo Creek until Syar has shown their due diligence to the satisfaction of the regulatory agencies. The DEIR certainly will want to now address and embrace these directed actions as indicator mitigations needed to further reduce impacts at an elevated scale should there be further quarry expansion.

Steven Booth
P. O. Box 6063
Napa, CA 94581
T. 707.257.6958
E-mail: juniperbooth@hotmail.com

January 6, 2015
Attn: Donald Barella
Napa County Conservation, Planning & Development
1195 Third Street, Suite 210
Napa, CA 94559
T. 707.299.1338
E-mail: donald.barrella@countyofnapa.org

Re: The proposed extension of the current Syar Napa quarrying and processing use permits (UP-128182 and UP-27374) and the proposed permit to allow the Syar Napa Quarry Expansion - #P08-00337-SMP.

Dear Mr. Barella,

Thank you for sending an invitation to attend the Planning Commission hearing for the Syar Napa Quarry Expansion Project, Wed., January 7, 2015 at 9:00 a.m. Unfortunately, I will be at work at that time and will not able to attend. By scheduling a hearing during work hours public participation and comment are suppressed. In the public interest, please schedule another public hearing of an evening, so all interested persons are able to attend to hear and to be heard.

The following are some thoughts to consider before certifying the Final Environmental Impact Report and/or adopting its findings:

1. For over 70 years, Syar Napa Quarry, unchecked, has produced and released into the air fugitive dust containing respirable, crystalline, silica dust – a Class I carcinogen – along with other toxic, fugitive emissions from the operation of equipment and asphalt plants. The crystalline, silica dust is not visible, is the most damaging to health, can remain suspended in the air for weeks and can travel 5-20 miles depending on the prevailing winds. Knowing of his daily dose of dust causes daily stress.

2. The prevailing winds in south Napa carry and distribute this toxic dust over businesses, schools and large residential areas to be inhaled by unsuspecting adults and children in the City of Napa and beyond, including visiting tourists. Being subjected to toxic dust and other toxic emissions is unjust. When the Napa Pipe Development is completed, more and more people will be exposed to this toxic silica dust.

3. Now, Syar Napa Quarry is proposing to double its production and extend its daily hours of operation, 24/7. So, in the next 35 years, Syar Napa Quarry will release as much

or more fugitive, silica dust as it has released in the past 70 years. In the Final Draft of the Environmental Impact Report (EIR), the ways proposed to prevent the release of fugitive silica dust and emissions are insufficient. At best, the proposed dust controls will allow Syar Napa Quarry to continue releasing fugitive silica dust at its current level. The technology and procedures exist to greatly reduce the release of this toxic silica dust, but the Final Draft of the EIR does not reflect these available methods and controls. This dust and other toxic emissions must not be allowed to escape into the air. Do not permit it.

4. A permit to operate a mine is not a permit to pollute. If a permit is granted it must be contingent on compliance with and enforcement of strict regulations to prevent the release of pollutants. Fugitive releases of toxic dust and emissions must not be allowed. County officials occupy a position of special trust. The people of Napa Valley have given County Planners jurisdiction and authority to oversee the land use permit process and to act on behalf of the public to insure that an applicant's current or planned land use activity will not compromise public health, safety and/or welfare.

5. The typography of the area north of Syar Napa Quarry creates a natural basin, from Imola to Silverado Country Club, trapping and concentrating the toxic, fugitive dust and emissions created by Syar's mining operation. Neither the First Draft nor the Final Draft of the EIR present any studies to quantify or qualify the effect of the fugitive dust and emissions on the human population in the City of Napa. It would seem the County Planners would be irresponsible and negligent to extend the Syar Napa Quarry permit before a thorough, independent study is conducted to quantify and qualify the content and distribution of the daily dose of fugitive dust, over the residents of the City of Napa, carried by the prevailing wind. Also, it would seem incumbent on the City of Napa to protect the residents of Napa from decisions made by the County that compromise the residents' health, safety and/or welfare. At the very least, any permit issued to Syar Napa Quarry should be provisional and contingent upon the results of a study to determine the environmental impact on the human population exposed to the fugitive emissions from Syar's mining operation. Seventy years and counting – a study is long overdue.

6. The residents immediately north of Syar Napa Quarry are being unjustly, and for the most part unknowingly, exposed on a daily basis to fugitive, respirable, silicon dioxide dust and emissions. Every day, when the mine is operating and the prevailing wind is blowing north, which is most of the time, a visible layer of dust settles over the entire area, onto plants, cars, window sills, over everything. Clean the windows of the car, that same day a layer of dust forms on the window again. And, the dust reflects light like millions of small shards of glass. The dust is not normal, it is from freshly fractured, silicon based rock. A captive population in homes, schools and businesses in the City of Napa should not be subjected to the pollution generated by a business operating in the County. It is negligent for both the County and the City to allow Syar Napa Quarry's unstudied experiment to continue, knowingly subjecting a human population to toxic air pollution.

7. The tires of all trucks leaving the Syar Napa Quarry should be cleaned with water before the trucks enter the public roadway. How? The truck drives over a grate the length

of the truck, the tires are sprayed with water, the mud and water fall through the grate into a pit beneath the grate, the water is strained and recycled, periodically the mud is hauled to a landfill area. Dust from the mine property should not be allowed on the public highway or the same problem of toxic, fugitive silica dust will line the entire roadway getting into peoples cars and into their lungs and blowing into the schools, businesses and residences. What sort of road improvement cost assessment is being made for Syar's increased truck traffic, the wear and tear on the roads and traffic congestion?

8. There is no reason to have the mine operate before 6 A.M. or after 6 P.M. Aggregate can be stockpiled during low demand times to be shipped during high demand times. Syar's own charts predict the progression for demand in the future and they can plan around that. The residents north of Imola will not tolerate being subjected to noise and dust in the evening and night. Most of the homes in the area do not have air conditioning and depend on opening windows to cool the house down in the evening and night. No one needs to breath toxic dust when they are home from work or sleeping.

9. The only real way Syar Napa Quarry can continue operating in such close proximity to residential areas, schools and businesses is to prevent the release of fugitive dust and toxic emissions. They must stop them at the source, on their own property, and by doing so prevent the dust and emissions from leaving their property. Syar has a right to mine its land but only if it contains its pollution. As County Planners, you must exercise your jurisdiction and authority and make sure Syar Napa Quarry agrees to install all the control measures necessary to eliminate fugitive dust and emissions. You must enforce this agreement and make any permit contingent on compliance with hefty fines for violations.

10. The Final Draft of the EIR does not have any compliance teeth. A real-time video monitoring system must be set up to verify Syar Napa Quarry's compliance. If dust is visible in the air, a violation is taking place and enforcement with fines should ensue. The video feed should be available to the public to monitor as well. Once control measures and video monitoring are in place, Syar Napa Quarry will become a good environmentally conscious, corporate neighbor. Syar Industries, Inc.'s Mission Statement concludes, ***We actively pursue these good neighbor relationships while maintaining a safe and environmentally conscious environment for our employees, our customers and our local communities.*** I'm pro business, responsible business, that is. So, let us build on this stated goal and help Syar Napa Quarry become a model of environmental and social responsibility. Let us, all together, help them make their words become a reality. They're not there yet.

.

Sincerely,

Steven Booth
Napa City Resident

Sandra Booth
2100 Seville Drive, Napa CA 94559
Phone: 707-257-6958 Email: juniperbooth@hotmail.com

January 6, 2015

Attn: Donald Barrella
Napa County Planning, Building & Environmental Services
1195 Third Street, Suite 210
Napa CA 94559
707-299-1338
Email: donaldbarrella@countyofnapa.org

Re: The proposed extension of the current Syar Napa Quarry and process usage permits (UP-128182 and UP-27374) and the proposed permit to allow the Syar Napa Quarry Expansion-#PO8-00337-SMP.

Dear Mr. Barrella,

I wrote a letter in August of 2009 regarding my concerns about the expansion of the Surface Mining Permit at the Syar Napa Quarry and its health affects on people. During the period of time between 2009 and now, the beginning of 2015, an environmental impact report has been compiled by the industry without any reporting from unbiased, non-industry studies or onsite investigations. No scientifically sound studies have been done to actually measure the pollution *created by the Syar operation* that falls over the City and County of Napa.

I am a person who is all for environmentally sound quarrying businesses and I am all for Syar mining operation succeeding as an environmentally sound operation that contains its carcinogenic dust. The sharp edged micro-dust produced at Syar is not the same as agricultural dust. Syar Corporation, aware for years about the concerns of the families living so close to the Syar operations both in the county and in the City of Napa, in good faith Syar Corporation would have started doing something substantial to mitigate the nuisance and health risks it creates for it's employees and the citizens of Napa County and the City of Napa. No steps have been taken to improve the pollution situation since we moved into the Napa Highlands subdivision in 1989. We are captives because our homes are right here, less than ½ mile from the edge of the mining operation. And so are the residents of Alta Heights affected and other neighborhoods close by. Hiking in Skyline Park is not always as healthy a thing to do as one would hope. From vantage points to the west, I have seen the clouds of dust rise up from Syar Quarry with my own eyes and being caught in the prevailing wind drift over the whole area extending over to and beyond Alta Heights as a shroud some days and thinner but still present on many other days. We are receiving constant doses of carcinogenic, crystalline glass dust.

Many things by the way of technologies have been created in the last 26 years and earlier that should have been implemented at Syar to measure and keep the carcinogenic dust

down. What happened to the good faith? Unfortunately, this is yet another example of the need for regulation and protection of the public with an enforcement arm that really works for the health of the community or else the offending corporation will brush it off and do nothing to correct the unhealthy situation. The Syar situation is just as bad as if the county allowed a pesticide company to locate next to Con Dam and allow contaminated waste water from this company to be released into a drinking water supply.

There really has to be substantially improved practices and compliance written into this expanded Syar mining permit. Syar really does need to make the investment to make the operation, at last, clean and to contain the carcinogenic, fugitive dust. It really is irresponsible to allow Syar, Inc. to define its own terms of compliance, especially with all the new growth planned to happen in the near future next to the mining operation, putting even more residents and business people at risk of shortened lives. The county should more fully research the issue of respirable, crystalline silicon dioxide dust from sources independent of the mining industry. There are many good sources available. Hazardous crystalline silicon dioxide *is* being released continuously from the Syar mining property into the air of our neighborhoods, and other hazardous products, which also have not been tracked, may very well be out of compliance with government code when on site and neighborhood empirical evidence is properly evaluated which has never been done. Thorough investigation needs to be done. There is a whole list that I have of state and national organizations and experts that were left out of this impact report that should have been drawn from to get a balanced picture of the risks and what corrections to the operations should be made.

Ideally, on behave of the residents of the City and County of Napa I think our county DA's office or other appropriate city or county or private office should file an appeal to this permit. A last resort would be a class action lawsuit. This permit is just not good enough as it stands and does not describe substantial improvements and enforcement to be implemented in the practices at Syar mining. Nor are there any tracking technologies required to have in place to protect the public health in any concrete, measurable way. The County Planning, Building and Environmental Services cannot get this one wrong. The citizens of the City and County of Napa are depending on you to do the responsible thing and get this right. Then we will be most happy for the Syar Mining Operation.

Everyone who sees the dust raising from Syar Quarry over the neighborhoods and schools as is seen from the Napa River Trail, or other locations or experiences at your property the dust, noise or shaking due to Syar dynamiting should report it as a nuisance by calling the Consumer Affairs Hotline for complaints at 707-253-4059 or go online to get a City of Napa complaint form or fill out a County of Napa complaint form online.

Sincerely,

Sandra Booth

cc.

Sandra Booth
2100 Seville Drive, Napa CA 94559
Phone: 707-257-6958 Email: juniperbooth@hotmail.com

Sept. 23, 2009
Revised August 6, 2010

Conservation, Planning & Development
1195 3rd St., Suite 210, Napa, CA 94559
Phone: 707-253-4417

Attn: Donald Barrella
Napa County Conservation Division

Re: Syar Napa Quarry Expansion - #PO8-00337-SMP
Is an expanded surface mining operation by Syar Napa Quarry, adjacent to the City of Napa, the State Hospital and Skyline Park, appropriate? At what cost to the health and well being of its citizens will enacting the expansion plan cause without first enacting great improvements that ensure the well being of the people and the environment?

We live within the neighborhood just north of the Napa State Hospital just under ½ mile from the edge of the Syar open pit mining operation. At various times of its operation, we have noticed plumes of dust and a general dusty fog rising from the Syar operation when looking southeast while crossing over the Maxwell Bridge, and while taking our walks on the Napa River Trail between Kennedy Park and the Animal Shelter. We have noticed that our vehicles in the driveway and items on our patio and the foliage with normally shiny leaves in our garden have been covered routinely with about 3 to 4 times the dust as our son experiences at his house which is located in the neighborhood just north of Lincoln Ave. and west of California Blvd. More frequent washing of vehicles is required. More time is required to keep houses, patios, and windows clean in our neighborhood with the current level of operation at Syar. How much more dust will be generated by a 24/7 operation? How much more frequently will our neighborhood hear the sound and feel the after shock of the dynamiting?

Napa has its surrounding agricultural areas, but Syar mining dust goes beyond that. Is the daily dose of dust harmful that is created by Syar Industries quarry operation, carried by the prevailing wind and distributed over the neighborhoods, state hospital, junior college and elementary schools, marina and parks? Or, are the dust plumes rising from the various mining locations a benign nuisance? What is the chemical and mineral composition of all the deposits and dust from them? What is forecast as the particulate level per volume of air, and what is the projected volume if this operation were to go forward over all the years 24/7? Over how large an area do the dust plumes extend? Are there monitoring stations in the neighborhoods? If not, some should be set up to begin surveillance of the dust created and reports sent out to the EPA and the people living in the affected areas. I would like to see the reports giving scientific results for all my questions.

What effect can the dust from the quarry have on human lung tissue? What respiratory and other affects does it have generally and specifically. How does the dust affect the plants and animals in the natural setting of Skyline Park? How does it affect crops, vineyards, and orchards in the affected area? What affect is it having on the waterways and creeks and underground water? What is being done to address the erosion and run-off? What affect is the dust having on the efficiency of solar collectors in the area? What affect on future development of nearby properties adjacent to the Syar area, like what may be decided at the Napa Pipe property, which would bring more urban growth and traffic to the area?

Something that should be required right away is that during operation Syar should be keeping all its roads constantly watered down that its tractor trailers drive over, back and forth hauling the rock material to the processing area, and at all times there should be dust containment with all its manufacturing machinery and equipment and hauling trucks, as well. That won't do anything for the acres of stripped land whose dusty top layer is picked up by the winds daily. Implementation of technology beyond just the extraction of the mining material is needed to deal with the mining pollutants; this is of equal or greater importance, and lags behind.

Points of Contention:

Another concern with this expansion proposal is the mining to zero sea level request. A mining operation that would be creating such a huge, carved out area having straight sides down from the hills adjacent to a state hospital, schools, parks, and neighborhoods would be very ugly and out of character with the surrounding land uses. Also, since sea levels will be rising in the several decades ahead, this effort to extract every last bit of profit out of the removal of this ground seems outrageous. Is this mining location really slated to create a huge cavern at one of the "gateways" to Napa below the level of the Napa-Vallejo Highway that may ultimately fill with water seasonally if not permanently? If any mining operation at all is to move forward, it needs to be in sculpted terraces blending up to the surrounding hills and adjacent park with correctly developed roadbeds that take into consideration the future urban development of this acreage once the mining operation is closed down. The creation of shear cliffs with the potential of rockslides would also be creating a safety hazard to hikers and cyclist and to the future land use of the pit. Remember, we live in a beautiful valley that depends on tourism. How have other closed mining operations been redeveloped (and those that have not and why) should be investigated.

Also of concern is the seismic damage and nuisance caused to surrounding properties, that may experience sheetrock shearing and other damage to properties up to a mile away. The affects of the explosions are multiplied through the fault lines running through the eastern hills that the Syar operation is blasting into. In my opinion, dynamite blasting should not occur any closer than 1¼ miles from any state building, school, business or residence to reduce the pollution, shock, noise and damage. Mining 24/7 would be totally unacceptable. The 8-hour shift is a problem, currently, without constant environmental

monitoring and clean up plan in operation. As in the case of former Sawyers and Calnap tanneries, which the city grew around, is an open pit mining operation adjacent to the City of Napa inappropriate moving forward? The cost of health and safety improvements that should be required will be bulked at and said to be prohibitively expensive. Syar is currently operating adjacent to residential neighborhoods in southeast Napa. Would a permit ever be given to Syar to operate a similar mining operation adjacent to the residential neighborhoods of Silverado Country Club? I think not. Also, is Syar ready to fairly compensate the citizens who live and work adjacent to its operation?

Again, of great concern is the fact that testing stations have not been set up at Syar Industries and throughout the adjacent neighborhoods to collect dust samples daily for testing of the dust created by Syar Industries. The fact that testing has not been regularly ongoing is a business expense Syar has been able to avoid due to weak regulation. The dusty materials from the hundreds of dirt tracks should also be tested regularly. Again, what damage can we expect to be done by air born silicates to students, residents and workers in near by schools, homes and businesses? Mercury is a known component in the ground behind the state hospital and asbestos is a substance that exists in areas throughout the Napa Valley. What alternate plans will be in place to stop the mining operation if these or any other known carcinogens are discovered? Are carcinogenic materials currently being mixed in with the aggregate produced and sold? Is Syar ready and willing to run a smaller operation and invest in all that it will take to make the operation safe, non-polluting and aesthetic enough to be along a Gateway to Napa? If not, there are other wonderful options Syar has with regards to the use of this property location.

The mining operation is not in the city limits, but because this proposal for expansion of this operation as stated is so huge and without the proper environmental controls or over-site, the City of Napa and its citizens who will be directly affected, should definitely have a role in the decision making moving forward, in my opinion. I know it must be very tempting to the county to just move ahead with this expansion (with minimal additional health and safety requirements) for the monetary benefits to the county. But what is best for the health, safety and thoughtful development of our community must out-weigh the monetary temptation.

Sincerely,
Sandra Booth

See attached image of dust creation at Syar.
Go to Google Maps (Satellite) and Google Earth to view Syar Quarry operation.
Copies sent to others.

Cakebread Cellars

Mr. Donald Barrella, Planner III
Napa County Planning, Building, & Environmental Services
1195 Third Street
Napa, CA 94559

January 5th, 2015

Mr. Barrella,

With regards to the Environmental Impact Report for the proposed Syar Napa Quarry Expansion (State Clearing House #22009062054), Cakebread Cellars would like to readdress the issues raised in our letter of November 30th, 2013 (Letter F) and the response to our letter. As previously stated, Cakebread Cellars farms a vineyard that spans two parcels (APN#s: 046-370-031 and 046-400-034) to the south of the proposed site and have concerns regarding the proposed mitigation measures. Our operations and vineyard productivity have the potential to be directly impacted by the proposed expansion.

An area of concern for Cakebread Cellars is the issue of air quality and dust control. Drifting dust can have potentially negative impacts on the health of our employees and our viticulture operations. Dust accumulation on the leaves of grape vines often times leads to outbreaks of spider mites, which would compromise our integrated pest management and sustainable pest control programs. Additionally, dust residue on the harvested fruit can have a significantly negative impact on wine quality. Mitigation Measure 4.3-2B states that blasting will be prohibited within 1000 feet of the vineyards if instantaneous wind speed exceeds 25 miles per hour. In the opinion of Cakebread Cellars, the benchmark of 25 miles per hours is exceedingly high. Best management practices for agricultural operations restrict spraying operations to wind speeds below 10 mile per hour. Additionally, in reviewing the data from the weather station on the Cakebread Cellars-Suscol Springs Vineyard, it demonstrates that since January of 2011 just five days would have had restrictions on blasting. Even during substantial wind events the instantaneous speed rarely exceeds 25 miles per hour. In the interest of protecting our employees and our farming operations, Cakebread Cellars requests that restrictions be placed on blasting at instantaneous wind speeds above 20 miles per hour. Additionally, we are concerned about the amount of dust generated during non-blasting activities, such as vehicle traffic on dirt roads and heavy equipment operations and request that measure be put into place to reduce dust drift for these operations as well.

8300 St. Helena Highway, P.O. Box 216, Rutherford, California 94573-0216
Offices: (707)963-5221 Fax: (707)963-1067 Visitors' Center: (707)963-5222
Email: cellars@cakebread.com Website: www.cakebread.com

Given the vital importance of irrigation water on the productivity of our vineyard, Cakebread Cellars is very concerned with the potential impacts the Syar expansion may have on ground water distribution. In the Final Environmental Impact Report (Response to Comment F-2) it is stated that surface water detention ponds will "impound surface water runoff so that the runoff of the proposed project will mimic pre-project conditions. The impounded water will infiltrate into the regional ground water system." While this statement attempts to address the issue ground water volume, it does not acknowledge our concern that even if ground water volume is constant, changes in topography may impact the distribution of ground water by altering the subterranean flow. To address the concerns of Cakebread Cellars we request that:

- Syar Napa Quarry installs a monitoring well between the proposed project site and Cakebread Cellars wells.
- A mutually agreeable protocol is established for tracking the water level of the monitoring well.
- A mutually agreed upon "trigger point" is established, by which it will be determined that Cakebread Cellars ground water levels have, or have not been impacted.
- If it is determined by a hydrologist that water levels have been impacted, Syar will provide additional water to Cakebread Cellars at required times and in an amount sufficient to conduct our viticulture operations.

Currently, Cakebread Cellars will absorb the burden should the quarry expansion impact ground water distribution. It is our belief that a process be established to confirm that this distribution in not impacted, how the impact will be monitored, and what action will be taken should ground water distribution be impacted.

The extent of our concern, is to make sure that Syar's neighbors have adequate protections in place should the currently mitigation measures not be sufficient. If their analysis is correct and ground water levels are not impacted, then our requests will have little to no bearing on Syar's operations. However, if they are wrong, then the burden of reduced ground water and associated consequences will fall upon their neighbors. As the mitigation measures are currently proposed, Cakebread Cellars must absorb a great deal of risk and additional protections need to be put in place.

Sincerely,

Bruce Cakebread
President/COO
Cakebread Cellars

Sincerely,

Toby Halkovich
Director of Vineyard Operations
Cakebread Cellars

California Native Plant Society

January 5, 2015

To: Donald Barella
Napa County Department of Planning, Building and Environmental Services
1195 Third St., Suite 210
Napa, CA 94559

Re: Responses to Comments, Final EIR, Syar Quarry Expansion (SCH # 2009062054)

The following comments address the responses to comments submitted by the Napa Valley Chapter of CNPS on November 21, 2013.

Response J-2 and J-4 - It is incumbent on CNPS to insure that proper field analysis of the site has occurred and this is not indicated in the Draft Environmental Impact Report. Our comment letter pointed out that field botanists did not adequately survey the site according to Department of Fish and Wildlife and Napa County Guidelines to determine presence or absence of special status species. The responses to the comments suggest that two survey periods about 1 month apart adequately covers the potential of the site. We would like to reiterate that this is not the case. Survey guidelines state that "a sufficient number of visits spaced throughout the growing season are necessary to prepare an accurate inventory of the plants that exist on the site". Voucher collections of special status species should be collected and deposited and field survey forms must be submitted to CNDDB. A recent search of the DFW RareFind Database shows no record of the Syar population of *Ceanothus purpureus* despite work having been done 6 years ago. Local records of 9 occurrences of *Brodiaea leptandra* show flowering times from May 25 to July 18. A search conducted on May 4 must include a preliminary confirmation of flowering at a reference site to validate the negative finding. Additionally, the earliest of 6 local records of *Erigeron greenei* in flower is June 23. There is no indication in the report that a reference site was visited in May to confirm that this species is identifiable at that time. *Sidalcea hickmanii* ssp. *napensis* has been found only on volcanic substrate to date and *Hesperolinon bicarpellatum* occurs on volcanics in Skyline Park. These species were not on the botanists radar and can not be ruled out.

Response J-3 – California Sagebrush Series is not designated as rare but impact to this community is locally significant and should be addressed. The proof is in the numbers. The Information Center for the Environment determined that less than 35 acres of this habitat type occur in the county. This is < 0.01% of the county. Whether or not the county has seen fit to recognize this, it is inappropriate to ignore the fact. Too many habitats have already been extirpated due to such oversight.

Response J-8 - This response does not address suggested monitoring of creeks that may receive sediment from the quarry expansion.

Sincerely,
Jake Ruygt

Jake Ruygt
Conservation Chairman, Napa Valley Chapter CNPS
2201 Imola Ave. Napa 94558

January 6, 2015

To: Donald Barrella
Napa County Department of Planning, Building & Environmental Services
From: Dorothy Glaros
President of Skyline Park Citizens Association
Re: Comments to the Syar Quarry Expansion FEIR

The Skyline Park Citizens Association and its Board of Directors appreciate this opportunity to comment on the FEIR responses to our original comments in the DEIR. While our originally submitted document contained informational paragraphs, these were responded to in the FEIR. We have no need to comment on those comments but will only address those we have issue with. Because we do not address some of the FEIR comments does not mean that we agree or disagree with the FEIR comments.

U-3, U-4 and U-5. The FEIR did not answer our concerns/suggestions or provide any analysis of all the options of not moving the trail, moving the trail with seventeen switch backs or moving the trail with three switch backs.. This relocation is a part of the project and will significantly impact Skyline Park and its world wide users along with various wildlife forms and vegetation/trees. It is not speculative as the DEIR comments. Skyline's alternative trail proposal is not subjective. It is good trail design and needs to be addressed in this document. A real and viable solution is called for. If Skyline Trail is not moved and just cut off, it is a significant loss to the park. If Skyline Trail is moved with their version of seventeen switch backs or our better trail design suggestion of three switch backs, the environmental impacts of the move need to be analyzed or you do not have a good document.

U-8. Removing Skyline Trail is a significant impact unless it is mitigated. The EIR proposes to mitigate it by moving Skyline Trail. All FEIR comments up through U-8 beg the question. Moving the trail creates a significant impact and the alternatives need to be addressed in this FEIR document. They have not been addressed. This should not be put off until later as the FEIR suggests. In order to mitigate moving Skyline Trail, it must be a realistic, legally adequate mitigation and it needs to be analyzed in this document.

U-9. There is no factual basis for this FEIR claim. This is definitely part of CEQA. A mitigation that is not paid for is not a mitigation.

U-13, U-14 and U-15. We disagree. Skyline lies to the north and east of the quarry. In the 1973 EIR, it was stated and is a well-known fact by Napa residents that the winds come from the south west daily so in fact we would in fact be impacted contrary to what the FEIR states. Even if the winds have now somehow changed since their 1973 EIR and come from just the south as this FEIR states, we will still be impacted. In the DEIR, their noise analysis stated that the noise from the Passini Ranch exceeds the County standard. People do not always stay on trails. For example, if they are bird watching, they travel off the trails close to property lines in their pursuit and will thereby be effected.

U-17. The Passini Ranch is not designated as a mineral resource area now nor has it been in the past. Right now this is a significant impact. When the County reviews their general plan, they may review this area but there is no guarantee that the County will re-designate it as a mineral resource area.

U-18. Their response is inadequate. This incompatibility needs to be addressed and answered directly. This is admittedly a significant impact and cannot be ignored.

U-20. Their proposal to deal with this at a future time is inadequate. It needs to be specifically spelled out in this document in order to assess its effectiveness as a mitigation measure. Mitigation plan specifics have to be in place before the FEIR can be properly reviewed or it is not guaranteed to actually be a mitigating measure. If you have a choice between two sites for tree replacement, the site closer to the impacted area is always a better choice since that is the area most negatively impacted.

U-22. Their response is inadequate. Please see our response to their response about noise concerns.

U-23. Again, they are not responding to our concerns. We asked specifically asked to be notified of when they will be dynamiting/blasting so we may inform our park users for their safety and their answer of "comment noted" is completely inadequate when lives are at stake.

U-24. Acoustical shielding has not been investigated or addressed as to what the shielding is and how effective it is. "As possible" was written in the FEIR. Does this mean 10% of the time, 80% of the time? How much is this, and is it adequate? The "quietest available equipment" defines what? What is this equipment; how will it reduce noise; how much noise will it reduce; and what proof is there that their "quietest available equipment" will actually reduce noise? "The County will monitor the noise levels." How will this help? If you have an existing quarry that is expanding and they go over the DBAs, will the quarry be shut down? If they go over the DBA, will they voluntarily shutdown the quarry?

U-25. The FEIR has not yet proven the effectiveness of their mitigating measures in actually mitigating issues/concerns. Many times their responses were "comment noted" instead of actually answering the issues presented. Their responses were more dismissive than informative and did not directly address specific comments and concerns.

For the above reasons, among others unlisted for the sake of brevity, this FEIR is incomplete.

Thank you for your time and consideration.
Dorothy Glaros
President Skyline Park Citizens Association

From:	McDowell, John
To:	Frost, Melissa; Barrella, Donald
Subject:	FW: Please read this objection to Syar"s expansion into the record at the 1/7/15 Planning Commission Meeting
Date:	Tuesday, January 06, 2015 5:40:56 PM

From: roslyn potter [mailto:rozpotter1@gmail.com]
Sent: Tuesday, January 06, 2015 4:45 PM
To: McDowell, John
Cc: roslyn potter
Subject: Fwd: Please read this objection to Syar's expansion into the record at the 1/7/15 Planning Commission Meeting

From: **roslyn potter** <rozpotter1@gmail.com>
Date: Tue, Jan 6, 2015 at 4:34 PM
Subject: Please read this objection to Syar's expansion into the record at the 1/7/15 Planning Commission Meeting
To: donald.barella@countyofnapa.org
Cc: roslyn potter <rozpotter1@gmail.com>, Sandra Booth <juniperbooth@hotmail.com>

Napa Planning Commission Members,

Vote NO to Syar's Napa Quarry Expansion Project.

The Syar project includes expansion of asphalt production. The current Syar facility includes an asphaltic batch plant. A yes vote will expand this plant to 300,000 tons per year and add a Reclaimed Asphaltic Product (RAP) handling facility

Asphalt plants mix gravel and sand with crude oil derivatives to make the asphast used to pave roads, highways, and parking lots across the U.S. These plants release millions of pounds of chemicals into the air during production each year, including many cancer causing toxic air pollutants such as arsenic, benzene, formaldehyde, and cadmium. Other toxic chemicals are released into the air as the asphalt is loaded into trucks and haulded from the plant site, including volatile organic compounds, polycyclic aromatic hydrocarbons (PAHs) and very fine condensed particulates (EPA).

Asphalt processing and asphalt roofing manufacturing facilities are major sources of hazardous air pollutants such as formaldehyde, hexane, phenol, polycyclic organic matter and toluene. (Source EPA) “

“According to one health agency, asphalt fumes contain substances known to cause cancer, can cause coughing, wheezing or shortness of breath, severe irritation of the skin, headaches, dizziness, and nausea. Animal studies show PAHs (Polycyclic aromatic hydrocarbons**)** affect respiratory reproduction, cause birth defects and are hazardous to the immune system. (NJDHSS). The US Department of Health and Human Services has determined that PAHs may be carcinogenic to humans. “

“In addition to smokestack emissions, large amounts of harmful “fugitive emissions” are released as the asphalt is moved around in trucks and conveyor belts, and is stored in stockpiles. A small asphalt plant producing 100 thousand tons of asphalt per year may release

up to 50 tons of toxic fugitive emissions into the air. (Dr. R. Nadkarni). Stagnant air and local weather patterns often increase the level of exposure to local communities. In fact, most asphalt plants are not even tested for toxic emissions.

The amounts of these pollutants that are released from a factory are estimated by a computer and mathematical formulas rather than by actual stack testing, estimates that experts agree do not accurately predict the amount of toxic fumes released or the risks they pose"

Source:
http://www.bredl.org/pdf/BeSafe_Asphalt.pdf[bredl.org]

From:	June Dougherty
To:	Barrella, Donald
Subject:	Syar napa quarry expansion project, permit#PO8-00337-smp
Date:	Tuesday, January 06, 2015 11:01:56 PM

January 6, 2015

Mr. Donald Barrella
Planner III
Napa County Planning, Bldg, and Envir. Services Dept

Dear Mr. Barrella:
Thank you for receiving my comments at this time. Below are a few brief comments on the Final EIR for the Syar project. I have only just reviewed the document and will provide more detailed comments should the response period be extended to January 21.

My comments on the document and the impacts are focused on 2 primary impact areas, aesthetics and noise, and on the general approach of the comment responses.

Aesthetics:
In general the photos and simulations, and lines of site are generally too far away to adequately visually define the true nature of the visual change that will be evident to the residents that live to the north and east of the project area. Also there should be an overlay of the topos and photos to accurately display the true nature of the mining operations and its affect on the view. Presently no such image exists in the report and this omission thus downplays the severity of the visual impact. An impact that can not ever be mitigated.
Based on information available in the report the reader is left to make their own conclusions of the future state of the view from the north and east. I am a resident on Penny Lane and I have included photos (in the next email) of the view of the backside of the project area from my home. I suggest that this close up view be or similar be incorporated into the document, with a simulation showing how much of the south west portion view of the hillside will be gone if the proposed expansion is permitted. In addition, property value declines should be assessed in the areas north of Imola over to the middle school, as the aesthetic view from these properties would be permanently marred and altered. This impact had not been adequately addressed in the document.

Noise:
The noise impact section is pedestrian at best. While is contains basic information and preliminary baselines, it does not take into account the actual noise levels within the residential areas away from Imola avenue, nor does it account for the alteration in the travel of the additional noise once the current terrain barrier is lowered. Noise levels that were taken within 180 feet of Imola are not representative of actual residential noise levels, and should not be used as the baseline. Also, as quarry activities proceed up in elevation and terrain is removed, noise will travel much further along the valley floor than it currently does, and the reverberation/echo affect from the western and eastern hills will increase the "canyon affect" across larger expanses of the valley floor than just the immediately adjacent properties that are included in the report. The noise impact needs to be better analyzed.

Response to comments:
In general this area of the document is dismissive and repetitive in its responses without substantial basis. For example, the use of the historical use of the property as a precedence for future use is erroneous in this context for numerous reasons, that I will not detail here, yet is is used repeatedly as an assumed acceptable reason for ignoring the true severity of future impacts. Several commenters have described this error in great detail in the draft, but it has not been addressed in the final document. Furthermore, the "we were here first" argument does not hold weight in today's development negotiations.

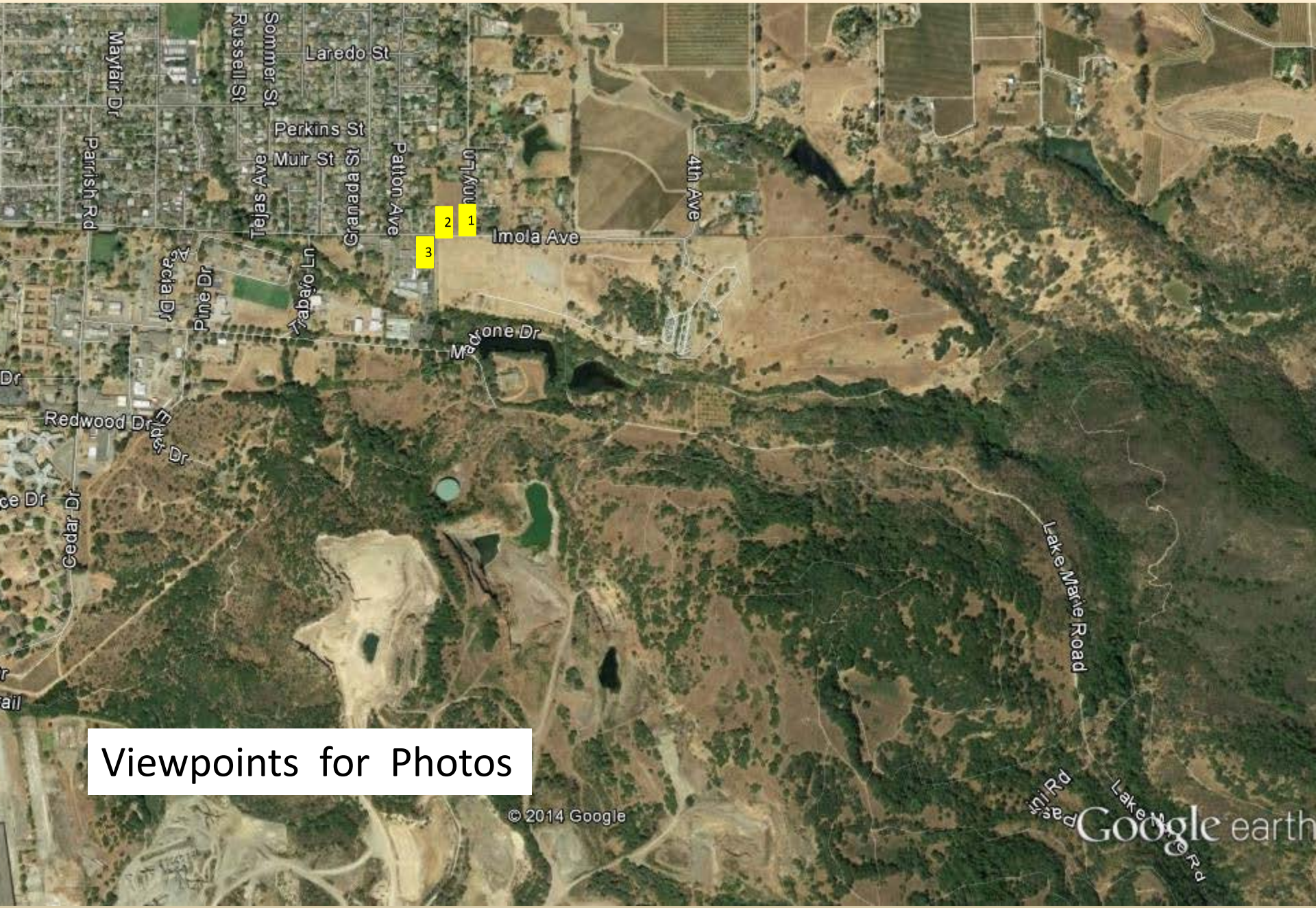
Thank you for the opportunity to submit these comments,
Sincerely,

June Dougherty
Resident, 2168 Penny Lane
Environmental Scientist, Air and Noise Specialist

Syar Napa Quarry Expansion Project
Foreground Visual Impacts

Napa County Planning Commission Hearing
January 7, 2015


Google Earth Image Dated 8/13/2014
Laredo St
Maylair Dr
Russell St
Sommer St
Perkins St
Muir St
Parrish Rd
Tejas Ave
Granada St
Patton Ave
Penny Ln
4th Ave
Imola Ave
Acacia Dr
Pine Dr
Laguna Dr
Madrone Dr
Redwood Dr
Elm Dr
Cedar Dr
Lake Marie Road
© 2014 Google
Google earth

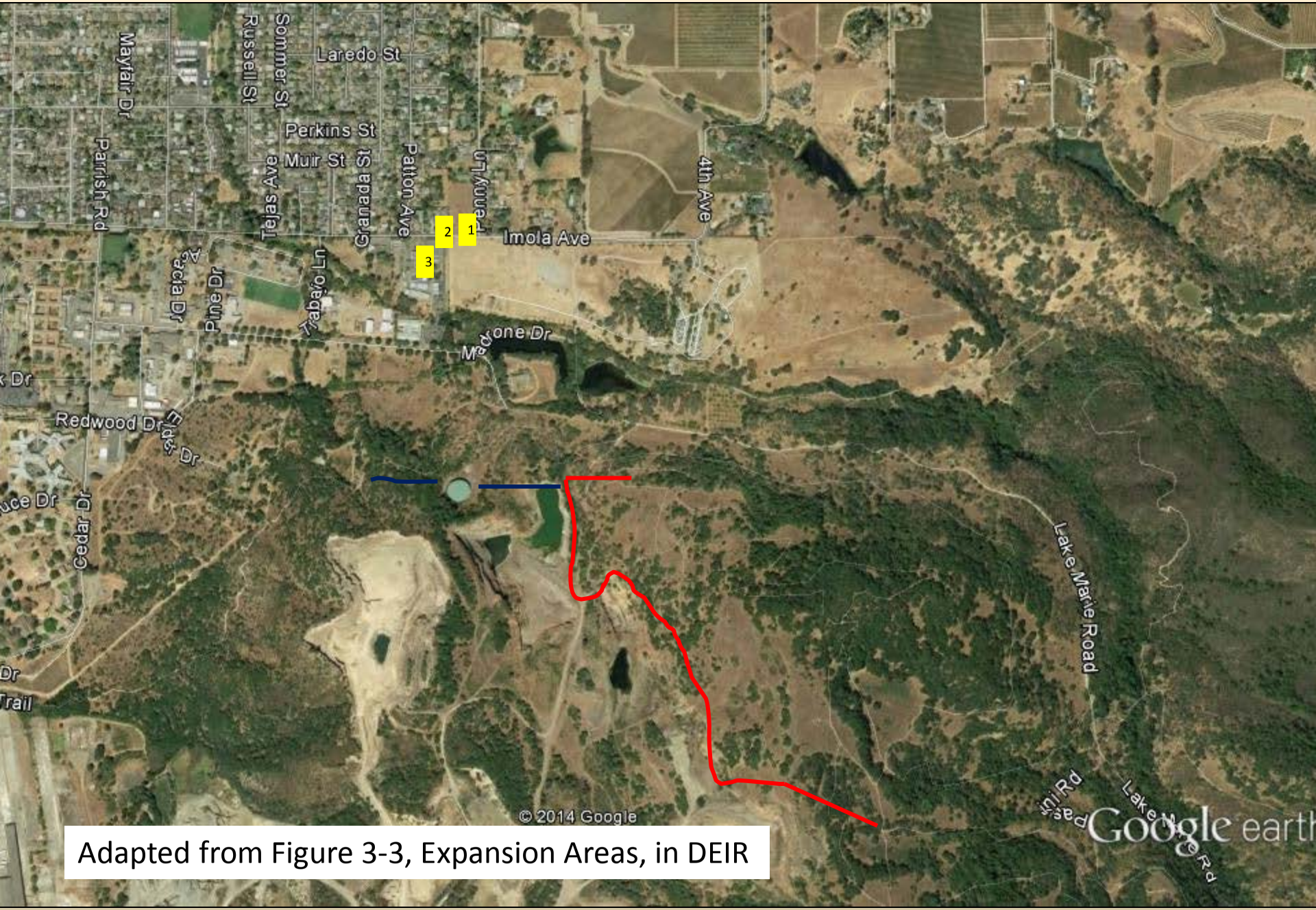


Viewpoints for Photos

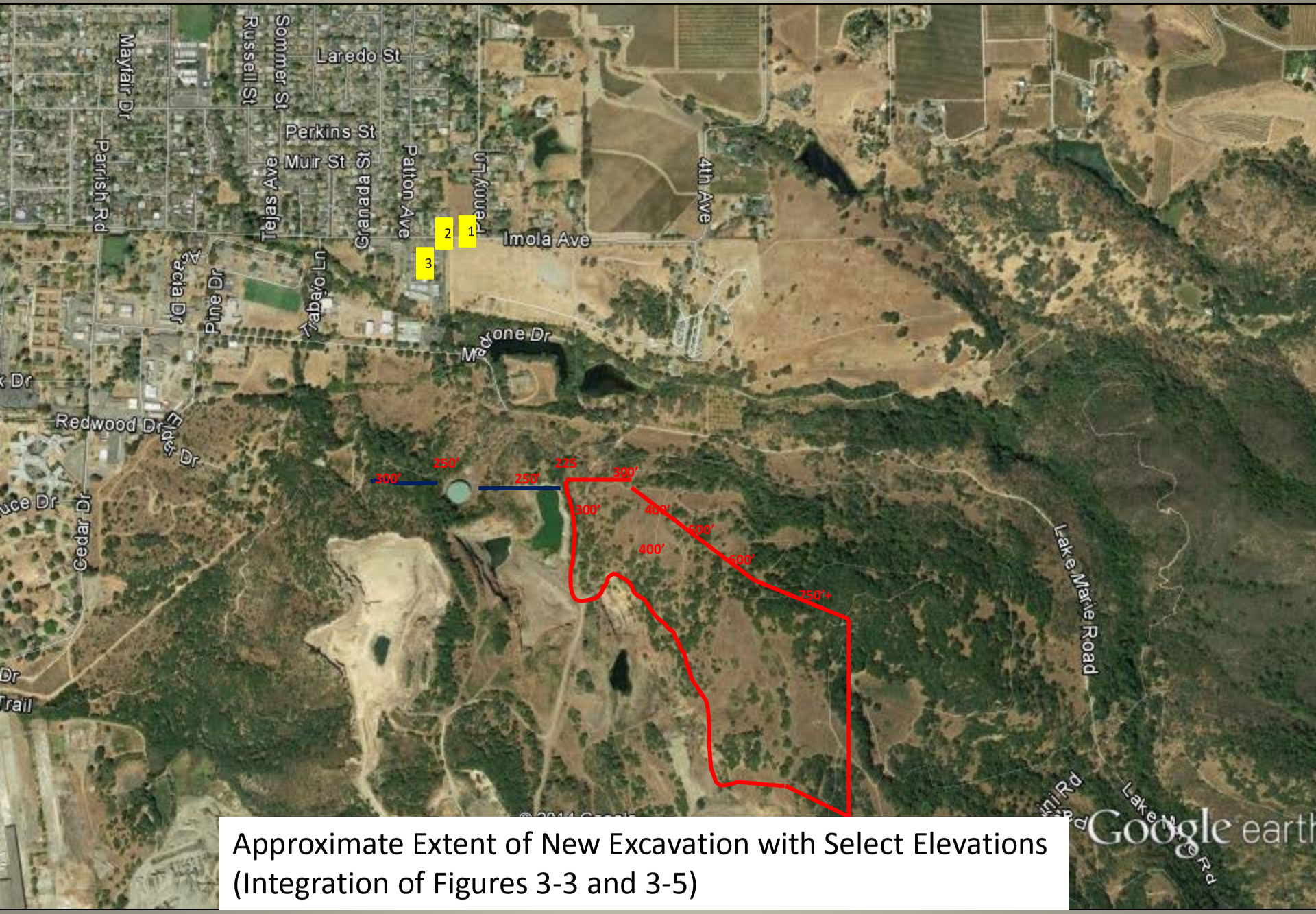

PENNY LN
1


2


3



Adapted from Figure 3-3, Expansion Areas, in DEIR



Approximate Extent of New Excavation with Select Elevations (Integration of Figures 3-3 and 3-5)


3


3

THANK YOU

To: Donald Barrella
Napa County Department of Planning, Building & Environmental Services
Engineering and Conservation Division
1195 Third St. #210
Napa CA 94559

January 13, 2015

From: Patrick K. Gilleran- Napa Resident
2164 Patton Ave
Napa, CA 94559

Subject: Syar Napa Quarry Final EIR and Surface Mining Permit-Fugitive Dust Mitigation FEIR

Donald,

I wanted to touch base with you; I made a public comment January 7, 2014 addressing the fugitive dust mitigation language in the EIR as not being forward thinking and does not address the potential impact to the Napa resident downwind of the quarrying operation.

First I would like to give you some of my background; I'm a retired engineer who worked for the Judicial Council of California, Administrative Office of the Courts (AOC), Office of Court Construction Management. The Judicial Council is the policymaking body of the California courts, the largest court system in the nation.

Senate Bill 1407 made way for the transferring of 532 facilities from county control to the AOC. This was a radical change for the AOC, there were no policies or procedures dealing with facility management, every aspect of facility management in the organization had to be developed.

I had a number of opportunities to work on air quality issues as a Regional Engineer and then as the Senior Engineer for the AOC. I was tasked with developing AOC documentation to support regulatory compliance in a number of areas, one of which was ozone depleting substances/ refrigerant management plan which would cover the entire state.

The California Air Resources Board has oversight of the 35 quality management districts however each district can impose additional requirements exceeding the federal requirements or the Air Resources Board requirements. While researching the requirements for the 35 different districts, I found the most robust regulatory requirements from the South Coast Air Quality Management District (SCAQMD). Based upon the SCAQMD requirements I developed a refrigerant management plan, it was the **best available management practice** available.

I sought this path for the AOC's because it was the **right thing to do**; to exceed the regulatory requirements of the other 34 districts. This would insure that the AOC was doing everything possible to decrease the impact of ozone depleting substances and protect the environment. The AOC leadership looking to the future approved the plan I submitted. The plan did cost more to implement however it was the **right thing to do** to protect the citizens of California and the environment.

Quality of the EIR

I've worked with Winzler and Kelly (W&K) a number of times during my 38 years in public service. I have not been impressed with their work; W&K always appeared to be the lowest bid but not always the best value.

With regard to air quality, how can W&K suggest that one sampling / monitoring point for air quality is representative sampling and there will be no impact to residents downwind of the quarry operation? One sample is not a representative sample. If an engineering student in college tried to submit an assumption as did W&K in a report, the student would not make the grade. It takes multiple samples to support a statement with such assurance otherwise the statement is conjecture.

Regarding wind in the valley the EIR states regarding wind: *"During the day, the prevailing winds flow up valley from the south about half of the time. A strong up valley wind frequently develops during warm summer afternoons, drawing air in from the San Pablo Bay. Daytime winds sometimes flow down valley from the north. During the evening, especially in the winter, down valley drainage often occurs. Wind speeds are generally low, with almost 50 percent of the winds less than 4 mph. Only 5 percent of the winds are between 16 and 18 mph, representing strong summertime up valley winds and winter storms."*

Despite this being a BAAQMD quote ,this observation does not make sense, base upon the information from "Weatherspark" the wind is much more than 5% of the time. The chart below is based on the historical records from 1998 to 2012 from the weather station at the Napa County Airport. Over the past 14 years wind had exceeded the percentage noted in the FEIR on numerous occasions.

https://weatherspark.com/about :The data that powers WeatherSpark comes from several sources:Weather.gov: The National Oceanic and Atmospheric Administration serves up both historical data for the world and forecasts for the United States.met.no: The Norwegian Meteorological Institute provides weather forecasts for the world.World Weather Online: A for-fee weather forecasting service that offers a web API.

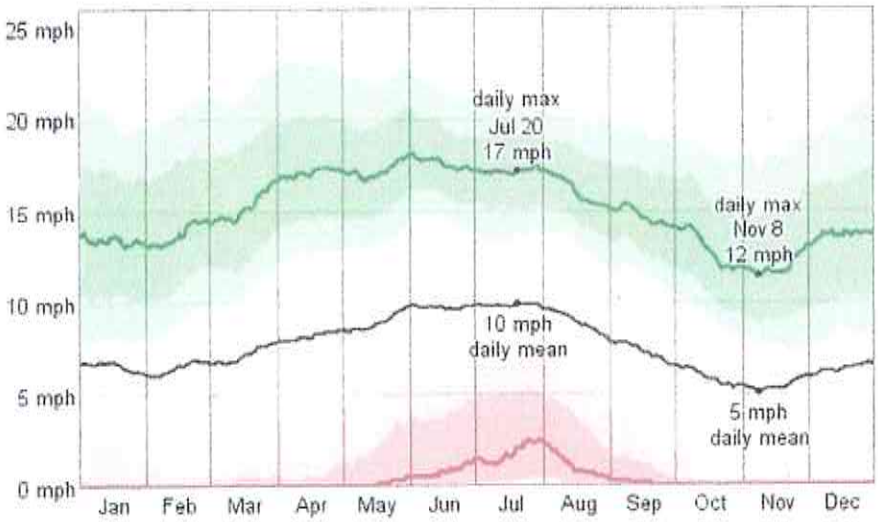
Wind

Over the course of the year typical wind speeds vary from 0 mph to 18 mph (calm to fresh breeze), rarely exceeding 23 mph (fresh breeze).

The *highest* average wind speed of 10 mph (gentle breeze) occurs around July 20, at which time the average daily maximum wind speed is 17 mph (moderate breeze).

The *lowest* average wind speed of 5 mph (light breeze) occurs around November 8, at which time the average daily maximum wind speed is 12 mph (gentle breeze).

Wind Speed



The average daily minimum (red), maximum (green), and average (black) wind speed with percentile bands (inner band from 25th to 75th percentile, outer band from 10th to 90th percentile).

The wind is most often out of the *west* (19% of the time), *south west* (18% of the time), and *south* (17% of the time). The wind is least often out of the north east (2% of the time), south east (4% of the time), and north west (4% of the time).

https://weatherspark.com/averages/29638/Napa-California-United-States

The EIR data does not take into account the effect of the wind velocity, turbulence and wind speedup effect associated with wind hitting the slope and terrain of the hill side. It should be noted the windiest months are during peak operational times of the quarry April-November. The FEIR mean wind speeds are not correct; the bottom line it is much windier in the hilly areas of the quarry than stated in the EIR, there is a greater opportunity for blowing fugitive dust.

What's next?

With that said the Syar "Finale" EIR fugitive dust control mitigation deserves more than six items noted in the present Syar EIR to protect the residents and sensitive receptors downwind of the quarry.

Attached are the Marin County's (8) pages of mitigation measures noted in the San Rafael quarry operations FEIR (see attachment see link below for the full FEIR), you will see Marin County has looked forward and placed safe guards to protect the residents and sensitive receptors downwind of the quarry.

I have not counted the number of pages that take into account the safe guarding of flora and fauna but they greatly exceed the few words that are in the EIR to protect the residents and sensitive receptors downwind of the quarry.

Please take the time to look at these links:

- Marin County's mitigation measures on the San Rafael quarry http://www.marincounty.org/~/media/files/departments/pw/land-use/feir-response-to-comments-amendment.pdf ,
- SCAQMD Rule 403 http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4 and their Fugitive Dust Handbook the **best available management practice**
- SB 656 List of Air District Measures that Reduce Particulate Matter. http://www.arb.ca.gov/pm/pmmeasures/board_approved_list.pdf .

Please review the attached Lehigh Southwest Cement Company, **"Fugitive Dust Control Plan"** it is a great plan.

All of these items once reviewed will make a reasonable person see the mitigation measures are sub standard for the Syar expansion. The FEIR must address fugitive dust with the **best available management practice** it is the right thing to do for the residents of Napa.

Best Regards,

Patrick K. Gilleran

Patrick K. Gilleran

2.2 Master Responses

Master Response 101: PM2.5

Two comments (C-4, C-9) express concern with health effects of PM2.5 emissions (fine particulate matter with a diameter of 2.5 microns or less) from Quarry operations and reclamation grading. In addition, since the close of the comment period on the final EIR, the County's Health and Human Services agency has expressed concern regarding potential exposure of neighbors of the Quarry to elevated PM2.5 levels, in light of recent research on health effects of PM2.5 exposure. This master response reviews recent information on PM2.5 health effects, the regulatory standards for PM2.5 concentrations, PM2.5 concentrations in the vicinity of the Quarry, and the mitigation measures contained in the Final EIR that reduce PM2.5 emissions.

The California Air Resources Board (CARB), in collaboration with the Office of Health Hazard Assessment (OEHHA) established a new state PM2.5 standard in 2002, in which the annual average standard was lowered to 12 $\mu g/m^3$ (twelve micrograms per cubic meter; a microgram is one millionth of a gram). This standard is more stringent than the annual federal standard of 15 $\mu g/m^3$ (the federal 24-hour standard is 35 $\mu g/m^3$; the State does not have a 24-hour standard). In April 2006, CARB staff informed the Board that they planned to revise and improve the health impacts methodology by updating methods for evaluating changes in PM2.5 exposure and premature death. CARB acknowledged that new studies had appeared in the literature indicating that adverse health effects can occur at exposure levels lower than the State standard. In October, 2008, CARB published a report that reviews the latest information regarding exposure to PM2.5 and consequent health outcomes (CARB, 2008). In this report, the relationship of changes in health outcomes to different levels of PM2.5 exposure is examined, and recommendations are made for assessing health outcomes of PM2.5 exposure. The report, which was authored by 6 staff members of CARB, was peer reviewed by 13 scientists working in the field and located throughout the U.S.

In the CARB report, the relative risk of premature death associated with PM2.5 exposure is evaluated based on a review of all relevant scientific literature, and a new relative risk factor is developed. This new factor is a 10% increase in risk of premature death per 10 $\mu g/m^3$ increase in exposure to PM2.5 concentrations (uncertainty interval: 3% to 20%). Using this new factor, CARB staff estimates that in the year 2005, PM2.5 as a component of diesel particular matter emissions (DPM) contributed to 3,500 premature deaths statewide (uncertainty interval 1,000 to 6,400). Also, staff estimates that exposure to ambient PM2.5 concentrations above 5 $\mu g/m^3$ can be associated with about 18,000 premature deaths statewide annually, with uncertainty ranging from 5,600 to 32,000 deaths, based on 2004-2006 air quality data.

The 2008 CARB publication reports a linear relationship between mortality and long-term exposure to PM2.5 but acknowledges that definitive studies to establish a cut-off level below which adverse health effects would not occur would be difficult or impossible to conduct, since a very large and diverse population with high variation would have to be included, and they noted that there are very few observations of health outcomes from exposure to PM2.5 at low levels.

The reviewers recognized that selecting a cut-off level involves professional judgment due to limited empirical evidence in the low PM2.5 concentration range. The consensus of the peer review panel was that a cut-off level of 4 to 5 $\mu g/m^3$ was reasonable based on the lowest observed short-term levels associated with mortality. The report concludes that empirical evidence indicates that mortality can be associated with long-term exposure to PM2.5 levels as low as 6 $\mu g/m^3$, and the consensus of the reviewers was that effects are likely to occur down to the level of 4 to 5 $\mu g/m^3$. (The report also notes that the non-anthropogenic, i.e., natural, background level of PM2.5 in California is 2.5 $\mu g/m^3$.) Therefore, in consideration of the more recently published reports, and the outcome of the CARB independent peer review, the report recommends that a cut-off level of 5 $\mu g/m^3$ be established; below this level, adverse health effects are not expected to occur. To date, the State has not taken up the possible revision of the annual PM2.5 standard, which remains 12 $\mu g/m^3$.

The County-sponsored study of ambient air quality downwind of the Quarry in 2004-2005 by Sonoma Technology, Inc. (STI) included monitoring of PM2.5 concentrations at the Via Montebello Pump site for a period of approximately 3 months (STI, 2005). The results of this monitoring effort found average concentrations at this location to be about 3 $\mu g/m^3$ during the monitoring period. STI also monitored PM10 concentrations over a 14-month period, including during the PM2.5 monitoring period, and found a good correlation between PM2.5 levels and PM10 levels, with PM2.5 levels about one-third PM10 levels. Using this correlation, STI estimated the annual concentration of PM2.5 at the Via Montebello Pump site to be between 5-6 $\mu g/m^3$. Using the same methodology, the annual concentration at the Marin Bay Park monitoring site would be about 6 $\mu g/m^3$. Note that the annual PM2.5 concentrations reported by CARB at greater Bay Area monitoring sites in 2004 ranged from 8.3 to 12.8 $\mu g/m^3$ (9 stations), and in 2005 from 7.6 to 11.8 $\mu g/m^3$ (eight stations).[1] The annual average PM2.5 levels at both of STI's monitoring sites therefore were below levels found at other monitoring stations around the Bay Area, below the State standard, and near the cut-off level below which no adverse health effects are expected.

Quarry operations and planned reclamation grading result in PM2.5 emissions as a component of dust emitted during blasting, transport and processing of rock, and other activities. PM2.5 is also a component of DPM emissions. Dispersion of PM2.5 emissions from the Quarry were not modeled as part of the Health Risk Assessment (HRA) conducted for the EIR. However, based on the modeling of PM10 emissions and dispersion conducted for the Final EIR, it is possible to estimate PM2.5 concentrations at residential locations near the Quarry. Assuming that the fraction of PM10 from fugitive dust that is PM2.5 is 30 percent[2], the maximum annual average concentration of PM2.5 from fugitive dust at a residential location near the Quarry would be about 1.29 $\mu g/m^3$. In addition, DPM emissions from heavy duty trucks and diesel-powered mining equipment contribute to PM2.5 levels. Measurement of diesel exhaust has shown that nearly all of particle emissions from diesel exhaust are one micron or smaller in size (Ecopoint, 2002). If we assume that 100% of DPM emissions are PM2.5, then the modeled maximum annual average DPM concentration of 0.026 $\mu g/m^3$ would be added to the predicted concentration of

1 California Air Resources Board, Select 8 Summary, www.arb.ca.gov/adam, accessed June 17, 2009.
2 USEPA, AP-42, 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing.

1.29 $\mu g/m^3$ from fugitive dust to result in a total average annual PM2.5 concentration of 1.31 $\mu g/m^3$. This is the maximum modeled concentration of PM2.5 at a residential location near the Quarry attributable to Quarry emissions, and should be considered a worst-case (high-end) estimate. It is very likely that actual dispersal of dust and DPM to the surrounding neighborhood results in lower concentrations of PM2.5. These figures do not account for PM2.5 from other sources other than the Quarry, including other anthropogenic sources and natural sources.

The Quarry's existing permits include several requirements to reduce dust emissions. These are noted on page 4.2-13 of the Final EIR, and include the following:

Existing Particulate Control Measures (required by BAAQMD permit)

- Use of baghouses, scrubbers and pulse jets on applicable stationary sources;
- Throughput restrictions for crushers and screening equipment, conveyors and storage piles;
- Facility-wide particulate emission limitation of Ringlemann 0.5[3];
- Watering of storage piles and roads;
- Particulate emissions restriction of 0.01 grains per cubic foot for primary crushers and screening equipment to be confirmed with source testing; and
- Maintenance of throughput records for crushers and screening equipment.

Dust Control Measures Required by County Surface Mining and Quarrying Permit

11: The Permittee shall employ such measures to keep the dust nuisance to a minimum and at the request of the Department of Public Works will water the working area to reduce the amount of dust when it is excessive.

The Final EIR also notes on page 4.2-13 the following:

An independent assessment of air quality permits and emissions at SRRQ was conducted for the County in August of 2005 (STI, 2005). This assessment found that all applicable stationery sources on site were operating under BAAQMD permit. The study also concluded that BAAQMD inspectors had found the facility to be operating in compliance with its permits, with historical violations occurring in 1996 and 2004 as the result of non-permitted equipment installation and visual emissions in excess of standards, respectively. The assessment identified improvements to water spraying techniques as the appropriate method of further particulate matter emissions control.

In addition, numerous mitigation measures are specified in the final EIR to reduce fugitive dust and DPM emissions from Quarry operations and reclamation grading. These include the following:

3 A series of shaded illustrations used to measure the opacity of air pollution emissions, ranging from light grey through black; used to set and enforce emissions standards.

Dust Control Mitigation Measures Contained in the Final EIR

Mitigation Measure R4.2-1c: *SRRQ already implements several measures to control dust. These will be continued under the project:*

- *All trucks leaving the Quarry shall be washed down, including the undercarriage, prior to entering Point San Pedro Road (except trucks transporting asphalt). The wash down and adjoining areas shall be paved to minimize tracking of dust and dirt. Point San Pedro Road will be swept up to two times per day, except on rain days, when no sweeping will occur, subject to the approval of the City of San Rafael;*

- *The Quarry shall maintain all required erosion control measures and stormwater management plans, and shall keep current and comply with all permits required by the Regional Water Quality Control Board; and*

- *The Quarry shall maintain all dust abatement devices [such as baghouses on screening and crushing equipment] and shall keep current and comply with all permits required by the BAAQMD.*

Mitigation Measure R4.2-1d: *The project sponsor shall be required to continue existing emission reduction practices, including use of alternative fuels, use of low-emission diesel equipment, and dust abatement measures.*

Mitigation Measure R4.2-1e: *The applicant shall implement additional dust abatement measures identified by BAAQMD as feasible dust control, during all reclamation grading activities:*

- *Cover all trucks hauling soil, sand, and other loose materials as a part of reclamation activities, or require such trucks to maintain at least two feet of freeboard between the top of the material and top of truck;*

- *Pave, apply water at a minimum three times daily in dry weather, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the Quarry;*

- *Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at the Quarry;*

- *Hydroseed, apply non-toxic soil stabilizers, or water to inactive reclamation areas (previously graded areas inactive for ten days or more);*

- *Limit traffic speeds on unpaved roads to 15 miles per hour;*

- *Install sandbags or other erosion control measures to prevent silt runoff to public roadways;*

- *Replant vegetation in disturbed areas as soon as the growing seasons dictates;*

- *Install wind breaks or plant trees/vegetative wind breaks at the windward sides of the reclamation areas until such time as the vegetation is established;*

- *Suspend reclamation-related excavation and grading activities when wind (as instantaneous gusts) exceeds 25 miles per hour; and*

- *Limit the area subject to reclamation-related excavation, grading and other construction activity at any one time.*

Mitigation Measure P4.2-6b: *Implement Mitigation Measures R4.2-1d through R4.2-1j* [see below] *for ongoing quarrying operations as well as reclamation activities.*

DPM Reduction Mitigation Measures Contained in the Final EIR

Mitigation Measure R4.2-1a: *The project applicant has recently initiated the use of biodiesel fuel in all quarry rolling stock.... The most common blend, and that currently used at SRRQ, is a 20 percent biodiesel and 80 percent conventional diesel (B-20). B-20 will reduce particulate and CO emission by approximately 12 percent, and reduce hydrocarbon emissions by approximately 20 percent. Use of biodiesel may increase or decrease NOx emissions (McCormick et al, 2006).*

Mitigation Measure R4.2-1b: *SRRQ has already upgraded SRRQ's entire fleet of off-road diesel equipment to USEPA Tier 3 standards, ahead of regulatory requirements that at least 10 percent of the fleet be upgraded each year. SRRQ also plans to upgrade its tug boat fleet to Tier 2 standards prior to the end of 2008.*

Mitigation Measure R4.2-1d: *The project sponsor shall be required to continue existing emission reduction practices, including use of alternative fuels, use of low-emission diesel equipment, and dust abatement measures.*

Mitigation Measure R4.2-1f: *The project applicant shall keep all off-road equipment well-tuned and regularly serviced to minimize exhaust emissions, and shall establish a regular and frequent check-up and service/maintenance program for all operating equipment at the Quarry.*

Mitigation Measure R4.2-1g: *To further reduce emissions from off-road diesel equipment, the applicant shall fuel on-site diesel-powered mobile equipment used in reclamation activities with a minimum 80 percent biodiesel blend (B-80) or use other equipment and/or fuel that achieves the same reduction in particulate (PM10) and CO emissions.*

Mitigation Measure R4.2-1h: *Off-road diesel equipment operators shall be required to shut down their engines rather than idle for more than 5 minutes, unless such idling is necessary for proper operation of the vehicle.*

Mitigation Measure P4.2-6b: *Implement Mitigation Measures R4.2-1d through R4.2-1j for ongoing quarrying operations as well as reclamation activities.*

Mitigation Measure P4.6-6a: *The applicant proposes to limit daily truck traffic to 250 one-way trips per day (125 in and 125 out). This appears to be less than the daily average during the period 1980-1982 and within the baseline for Quarry operations.*

Mitigation Measure P4.6-6b: *Quarry operations shall be limited to the levels of intensity extant in 1982, at the time that the Quarry became a legal nonconforming use.*

Together, the above mitigation measures are expected to reduce emissions of dust, DPM, and PM2.5 substantially.

In conclusion, County-sponsored monitoring in 2004-2005 at residential sites downwind of the Quarry indicate relatively low levels of PM2.5 concentrations. Monitored levels are well below state standards, and near the cut-off level below which adverse health effects are not expected to occur. The contribution of the Quarry to PM2.5 concentrations in the surrounding neighborhoods is small. The Final EIR contains numerous mitigation measures to further reduce dust and DPM emissions, which will further reduce PM2.5 concentrations in the vicinity of the Quarry.

References for Master Response 101: PM2.5

California Air Resources Board (CARB), *Methodology for Estimating Premature Deaths Associated with Long-Term Exposure to Fine Particulate Matter in California*, Staff Report, October 24, 2008. http://www.arb.ca.gov/research/health/pm-mort/pm-mort_final.pdf

Ecopoint, Inc., *Dieselnet Technology Report, Diesel Exhaust Particle Size*, 2002. http://www.dieselnet.com/tech/dpm_size.html

Sonoma Technology, Inc. (STI), *Results from Air Quality Monitoring near the San Rafael Rock Quarry, 2004-2005.* Prepared for Marin County, November, 2005

USEPA, *AP-42, Compilation of Air Pollutant Emission Factors. Volume I: Stationary Point and Area Sources. Chapter 11: Mineral Products Industry. Section 11.19.2 Crushed stone processing and pulverized mineral processing.* Updated August, 2004. http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s1902.pdf

LEHIGH
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January 20, 2011

Subject: **Lehigh Southwest Cement Company - Permanente Plant: Fugitive Dust Control Plan**

To Whom It May Concern:

In agreement with the Bay Area Air Quality Management District (BAAQMD), the Fugitive Dust Control Plan (FDCP) at Lehigh Southwest Cement Company's Permanente Plant is designed to control fugitive dust emissions and their potential impacts on the environment and the surrounding community. The Plan consists of mitigation measures to control fugitive dust emissions generated by activities at the facility. The Plan outlines ways for preventing dust emissions, guidelines for training of employees, and procedures to be used during operations and maintenance activities.

This Plan does not address particulate or gaseous emissions form the kiln, cooler or other permitted point sources which are regulated under the plant's operating permits. Additionally, the plan is meant to work in conjunction with the Plant's *Operations and Maintenance Plan* (O&M Plan) per the *National Emission Standard for Hazardous Air Pollutants* (NESHAPs) requirements, the *Continuous Assurance Monitoring* (CAM) requirements, and current operating permit's regulations and requirements. The FDCP addresses fugitive dust emissions from material handling equipment and operations, non-point sources and area sources.

Please contact me with any questions or comments regarding this FDCP.

Sincerely,

H. Wesseling

Henrik Wesseling
Plant Manager
Lehigh Southwest Cement Company – Permanente Plant

cc: Brian Bateman – BAAQMD
John Marvin - BAAQMD
Thu Bui – BAAQMD
Scott Renfrew – LSCC Permanente Plant

LEHIGH
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Lehigh Southwest Cement Company
Permanente Cement Plant

Fugitive Dust

Control Plan

Prepared:
September 10, 2010
Revised:
January 20, 2011

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Fugitive Dust Control Plan

Introduction:

The Fugitive Dust Control Plan (FDCP) at the LEHIGH SOUTHWEST CEMENT COMPANY (Lehigh) – Permanente Plant consists of dust mitigation measures to control fugitive dust emission generated by activities at the facility and their potential impacts on the environment and the surrounding community. This plan does not address particulate or gaseous emissions from the kiln, clinker cooler, or other permitted point sources. The purpose of this plan is to establish and implement dust control measures to limit particulate emissions from material handling operations, non - point sources and area sources that may occur during operation and maintenance activities.

Preventing fugitive dust emissions is the prime objective. Some of the newest and most efficient pollution control equipment is being utilized at the Permanente Plant. This plan is intended to work in conjugation with Plant's *Operations and Maintenance Plan* (O&M Plan) per the *National Emission Standard for Hazardous Air Pollutants* (NESHAPs) requirements, the *Continuous Assurance Monitoring* (CAM) *Plan*, and current and future operating permit regulations and requirements

The FDCP is intended to provide guidelines for the implementation of control procedures and the creation of a training program at the cement plant, rock plant and quarries. The plan, upon acceptance by the Bay Area Air Quality Management District (BAAQMD) will further enable the facility to comply with the Bay Area Air Quality Management District's visible emissions regulation and Public Nuisance Rule. The FDCP outlines techniques and practices for monitoring and preventing dust emissions, guidelines for employee training, and procedures that can be used during operations and maintenance activities.

Fugitive Dust Control Plan

Background:

Site Location and Description:

Lehigh Southwest Cement Company's Permanente Plant is located on a 3600(+) acre parcel at 24001 Stevens Creek Blvd. in Cupertino, California (Figure 1). The property is located within an unincorporated foothill area of Santa Clara County, approximately 2 miles west of the City of Cupertino. The main access road to the facility is at the west end of Stevens Creek Boulevard. The nearest freeway is Interstate I-280, which lies approximately one mile to the north, or two miles from the main access gate by surface roads utilizing Foothill Boulevard.

The Portland cement manufacturing process at this site involves mining and processing of raw materials, raw material milling and kiln feed preparation, pyroprocessing, coal preparation, clinker cooling, and finish milling. Additionally, the site supplies the local market with commercial bulk and bagged Portland cement, and construction grade bulk aggregate materials. Local transportation of these materials, and incoming supply of fuel and raw materials utilized in the production of Portland cement, is predominately via bulk truck. Lehigh does not own or operate any of the bulk transportation trucks: these are owned and operated by the facility's customers or 3rd party independent contractors.

The facility area consists of gentle to steep terrain, and a series of ridges and valleys which build in elevation following a general east –west direction. Elevations range from about 500 to 2,000 feet above sea level. The prevailing climate conditions feature rainfall averaging between 20 – 25 inches annually, with the majority falling during the October – April wet season designation. Temperatures range from approximately 40 – 65 degrees Fahrenheit from November through April, and high 40's through high 80's during the remainder of the year. There is not a prevailing wind direction, and wind speeds rarely approach + 25mph except during winter wet weather conditions. The facility maintains a 10 meter metrological station on-site, sharing the data with BAAQMD. A wind rose pattern from 2008 indicates the site varied wind directions (Figure 3)

Site History:

The site's quarry has been in operation for over a century. A California State Geologist's report dated 1906 indicates that the quarry was in operation and producing limestone as early as 1903. In 1939, the quarry site and surrounding 1,300 acres were purchased by the Permanente Corporation, an enterprise headed by industrialist Henry J. Kaiser. The Permanente Corporation limestone mine and subsequent Portland cement facility supplied the major building supplies for the Shasta Dam. In the 1940s, the facility provided cement and limestone to support the U.S. Military effort in World War II.

After the war, the production levels for cement and aggregates remained and increased, and the Bay Area commercial and residential population swelled. The plant went through a major permitting and cement manufacturing modification from 1979 through 1982, utilizing high heat and energy efficient preheater / preacalciner rotary kiln cooler process technology. Additionally, the use of dynamic separators on the raw finish grinding circuits, in addition to a minimization of mobile transportation of materials, makes this facility a leader in cement quality energy efficiency.

The Permanente facility is strategically located within the San Francisco Bay Area Market, supplying the majority of the area's cement supplied. Lehigh, the current operator, accounts for an estimated 65% of all cement used in the Santa Clara County, 55% of all cement used in the Bay Area, and 18% of all cement used in Northern California.

Fugitive Dust Control Plan

SECTION I -- LOCAL AND STATE REGULATIONS APPLICABLE TO FUGITIVE DUST

In 2008, during initial discussions with BAAQMD pursuant to Title V operating permit renewal, Lehigh agreed to define and implement a FDCP for the Permanente Plant. This plan addresses sources of fugitive dust, lists control measures and actions that will reduce or minimize fugitive dust, and implements an employee training program to recognize potential sources of and best management practices to avoid fugitive dust occurrences.

The Plan was designated and designed to supplement the facility's Federal requirements for a NESHAPs O&M Plan and additional CAM applicability. The FDCP addresses fugitive dust emissions associated with material handling equipment, non – point and area sources.

I. BAAQMD Rules and Regulations

Note: The following District Rules and Regulations are enforced for the facility regardless of CEQA lead agency or Board approved project CEQA control requirements.

REGULATION 1 – General Provisions and Definitions

1-301 Standard

Public Nuisance: No person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property. For purposes of this section, three or more violation notices validly issued in a 30 day period to a facility for public nuisance shall give rise to a rebuttable presumption that the violations resulted from negligent conduct.

REGULATION 6 - PARTICULATE MATTER - RULE 1 GENERAL REQUIREMENTS

6-1-100 GENERAL

6-1-101 Description: The purpose of this Regulation is to limit the quantity of particulate matter in the atmosphere through the establishment of limitations on emission rates, concentration, visible emissions and opacity.

6-1-110 Exemption, Temporary Sandblasting Operations: Temporary Sandblasting operations are exempt from the provisions of this Rule. Such operations are subject to the provisions of Regulation 12, Rule 4.

6-1-111 Exemption, Open Outdoor Fires: The limitations of this rule shall not apply to emissions arising from open outdoor fires.

6-1-200 DEFINITIONS

6-1-201 Exhaust Gas Volume: The volume of gases discharged from an operation; or an emission point.

6-1-202 Particulate Matter: Any material which is emitted as liquid or solid particles or gaseous material which becomes liquid or solid particles at the testing temperatures specified in the Manual of Procedures, excluding uncombined water.

6-1-203 Process Weight: The total weight of all material introduced into an operation, excluding liquids and gases used solely as fuels, air which is not consumed as a reactant, and combustion air.

6-1-204 Process Weight Rate: A rate established as follows:

204.1 For continuous or long-run steady-state operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portions thereof.

204.2 For cyclical or batch operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this section, that interpretation which results in the minimum value for allowable emission shall apply.

6-1-300 STANDARDS

6-1-301 Ringelmann No. 1 Limitation: Except as provided in Sections 6-1-303, 6-1-304 and 6-1-306, a person shall not emit from any source for a period or periods aggregating more than three minutes in any hour, a visible emission which is as dark or darker than No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to an equivalent or greater degree.

6-1-302 Opacity Limitation: Except as provided in Sections 6-1-303, 6-1-304 and 6-1-306, a person shall not emit from any source for a period or periods aggregating more than three minutes in a any hour an emission equal to or greater than 20% opacity as

perceived by an opacity sensing device, where such device is required by District regulations.

Enforcement: The District has trained staff capable of performing a Visible Emissions Evaluation (VEE). VEE courses are offered to regulators and the regulated community (for a fee) at regular intervals by staff of the California Air Resources Board.

Fugitive Dust Control Plan

SECTION I -- LOCAL AND STATE REGULATIONS APPLICABLE TO FUGITIVE DUST

II. State Laws

California Health and Safety Code

Section 41700. Except as otherwise provided in Section 41705, no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Section 41701. Except as otherwise provided in Section 41704, or Article 2 (commencing with Section 41800) of this chapter other than Section 41812, or Article 2 (commencing with Section 42350) of Chapter 4, no person shall discharge into the atmosphere from any source whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is: (a) As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subdivision (a).

California Vehicle Code

Section 23114 requires: No vehicle shall transport any aggregate material upon a highway unless the material is covered. Exception 23114(e) (4): Vehicles transporting loads of aggregate materials shall not be required to cover their loads if the load, where it contacts the sides, front, and back of the cargo container area, remains six inches from the upper edge of the container area, and if the load does not extend, at its peak, above any part of the upper edge of the cargo container area. For purposes of this section, "aggregate material" means rock fragments, pebbles, sand, dirt, gravel, cobbles, crushed base, asphalt, and other similar materials.

SECTION II – Sources and Controls

I. Potential Sources of Emissions

Facility activities that have the potential to generate fugitive dust emissions include but are not limited to the following:

- Material Stockpiles – Stockpiles of delivered fuels and raw materials, of intermediate limestone and cementious materials, overburden, and of finished aggregate materials may contribute to windborne dust emission.

- Active Areas – areas that are in process of being excavated or quarried, where soils or rock are being removed, or areas that are being graded for reclamation

- Materials handling stationary equipment – conveyor belts, transfer points, crushers, and material screens have the potential to emit fugitive dust.

- Inactive Areas – areas that have been excavated, where soils or rock have been removed, or areas that have been graded for reclamation.

- Mobile equipment on paved and unpaved roads – movement of personnel or material mining equipment on paved or unpaved roads has the potential to produce fugitive emissions.

- Fine material transportation – the loading / unloading and transportation of fine material via mobile equipment may cause fugitive emissions.

- Track-out – truck or other road accessible vehicles may carry dry or wet and mudding material outside the facility. This material may spill onto public roadways, causing fugitive dust emissions.

- Maintenance activities – accessing de-energized equipment for preventive maintenance activities may allow release of fine material into the atmosphere. This material may lead to wind borne fugitive dust emissions.

- Housekeeping and materials cleanup – fine material that may accumulate in, around and under moving machinery needs to be cleaned up. The actions used in the cleanup procedures, including: clearing, shoveling, loading into / out of transporting equipment, disposal or reuse, could lead to fugitive dust emissions

Fugitive Dust Control Plan

SECTION II – Sources and Mitigations

II. Fugitive Dust Mitigation Control Measures

This section presents mitigation measures to control sources of fugitive dust.

1. Disturbed open areas and unpaved roads – Fugitive dust emissions from disturbed open areas and unpaved roads will be controlled with the following mitigation measures. Inactive areas are defined as areas not having vehicular traffic for more than 7 days.

    a) Accessed open areas and unpaved roads shall be watered, as needed, to maintain adequate wetness.
    b) At inactive areas, the exposed soils will be stabilized by the use of water, aggregate and / or approved non-toxic soil stabilizers.
    c) At inactive areas, limit vehicular access to these designated areas through the use of signage and vehicular access barricades.
    d) Reestablish ground covering on the disturbed area as soon as possible through use of aggregates, berms or permanent blockage in combination with hydroseeding or seeding and watering.
    e) Use of aggregated material to control and stabilize soil in limited vehicular locations.

2. An operational water truck will be onsite at all times to prevent fugitive dust emissions.

    a) Apply water to control dust frequently or as needed to prevent visible emissions and offsite dust impacts from all mining, aggregate and cement plant operations.
    b) Water truck operations may be curtailed during wet and incumbent weather.
    c) Plant will incorporate a daily District approved log of all water truck operations including date, time, locations and activities.

3. Active Storage Piles – Fugitive dust emissions from active storage piles will be controlled with the following mitigation measures. NOTE: material may be defined as "dry" with less than 5% moisture content. Fine material may be defined as "fine" if fugitive dust emission may occur from wind speeds in excess of 10 mph.

    a) Fine, dry material will be covered and have wind breaks installed. This type of material is not available for water dust suppression due to negative quality association with water.
    b) Water and/or soil stabilizers will be employed to reduce windblown dust fugitive emissions. Water may be supplied by mobile water truck operations and / or temporary / permanent water spray equipment.

c) In areas around the storage piles, the soils will be stabilized by the use of water, aggregate and / or approved non-toxic soil stabilizers.

4. All transfer processes involving a free fall of any mined, purchased or manufactured materials – these operations / processes may involve material pile addition / reclamation utilizing fixed or mobile equipment. Examples are stockpiling from belt (tripper) conveyors, front end loading of materials to vehicular transport and bin transfer to vehicular transport. Fugitive dust emissions will be controlled with the following mitigation measures.

   a) Drop heights will be minimized when dropping any mined, purchased or manufactured materials. This is a practice for all front end loaders transferring materials for mobile transportation (quarry haul truck, transfer truck, bulk truck).
   b) Incorporate wind breaks, enclosures, and area covers.
   c) Installation of temporary or permanent water sprays systems.
   d) For infrequent material transfer operations, water truck may be incorporated to increase material moisture content and / or suppress fugitive dust emission from transfer operation.
   e) Hepa filter vacuum available for vacuuming of any spilled cement powder (fine material) during cement bulk loading operations into mobile equipment.

5. Track-out Prevention and Control

   a) Wheel and vehicle washers are installed where customer vehicles and/or equipment, if they traveled on unpaved roads, must pass prior to exit onto public paved streets.
   b) Company vehicles and/or equipment shall be washed prior to each trip onto public paved streets.
   c) Where customer vehicles and/or equipment do not travel on unpaved roads, an optional vehicle wash is installed and available.
      - These washers are located on-site near the guard gated entrance / exit at 24001 Stevens Creek Boulevard, Cupertino, CA 95014.
   d) Any visible track-out on the paved roadway between the plant entrance and the facility boundary will be removed using a street sweeper on a daily basis.

6. Paved plant and public roads shall be swept frequently.

   a) 3rd party street sweeper utilization on Steven Creek and Foothill Boulevards on a weekly or more frequent basis as needed.
   b) Material (cement, aggregate limestone, other) cleanup of all facility paved roads will be maintained using a facility-owned street sweeper.
      - Emphasis on plant entrance / exit and corridors and those areas frequently by vehicles that travel off site: bulk transfer trucks, employees, visitors.

7. Minimize, maintain and enforce vehicle traffic speeds on paved and unpaved roads, or any other location within the facility.

   a) Speed limit is a maximum of 15 mph at any and all facility locations.
   b) Stevens Creek posted 25 mph truck speed limit posting on Stevens Creek Boulevard.
   c) The facility has equipped and maintains video and photographic monitoring, and speed sensors. All visitors and employees must abide by the posted speed limits.
   d) Provide appropriate training, onsite enforcement, and signage.
   e) For customers or visitors who are deemed to be travelling in excess of posted speed limits, the following actions are taken in progressive order: 1) warning, 2) facility access limited, and then 3) facility access denial.
   f) For employees who are deemed to be travelling in excess of posted speed limits, the following actions are taken in progressive order: 1) warning, 2) progressive discipline up to and including termination.
   g) Contractors and subcontractors who are deemed to be travelling in excess of posted speed limits, the following actions are taken in progressive order: 1) warning, and then 2) site removal with access denial.

8. Quarries

   a) Blasting shall not occur if hourly averaged wind speeds are 25 mph or greater...
   b) Quarried and graded materials shall be kept adequately wet to minimize airborne dust.

9. Material handling equipment – the facility employs a variety of dust mitigation techniques to prevent fugitive dust, such as spray bars on conveyors and shrouds on drop points.

   a) At the start of each shift or material handling equipment startup, the operators shall access the operational status of the water spray abatement equipment or confirm the materials are sufficiently wet as to not require water spray abatement and shall record these determinations in a District-approved log.

10. Housekeeping and material cleanup
   a) All housekeeping activities are to be performed so as to minimize fugitive dust emission.
   b) Plant personnel will be trained on techniques and Best Management Practices (BMPs) to avoid fugitive dust emissions.

Fugitive Dust Control Plan

SECTION III -- TRAINING

PURPOSE

Training of employees (company employees, contracted and subcontracted personnel) is an ongoing task. Employees frequently encounter new procedures and skill requirements. On some occasions, employees need to receive a refresher or reminder of proper procedures. Training will enhance each employee's job skills, especially those that involve safety and avoidance of dust emissions.

Training will deal with specific tasks/skills, addressing the specific problems associated with the job assigned to the employee, as opposed to the general approach taken in the sessions dealing with education. Education is attitude development. Training is skill development.

Many of the tasks that are outlined refer to the PM (Preventive Maintenance – Maintenance Work Order). Not all the tasks are listed in this program; however, many of the required checks and procedures are spelled out in the PM. A general outline is established which can be used on any selected task.

SCOPE

Training will point out specific pieces of equipment, operating procedures and activities which can cause dust emissions. It will outline steps to follow when considering a task which may create dust emissions. It will prescribe procedures to take when performing these tasks.

TASK/SKILL: Reporting a Dust Emission.

TAUGHT TO: All employees.

OBJECTIVE: The employee will take action when sighting a dust emission by contacting the Control Room Operator (CRO) and/or his/her supervisor or other management personnel.

INSTRUCTIONS:

Point out to the employee that when a dust source cannot be arrested or corrected by simple means, it should be reported as soon as possible. The report should be made to the Control Room where it will be logged. The employee may report the dust emission to his/her supervisor or any other management personnel who will see that it is recorded in CRO Operators Log.

A dust source should never be ignored. It should be reported, even if the employee thinks that someone else has reported the same source earlier.

The employee should be sure to provide the following information when reporting a dust emission:

- Location - Where, in the plant, the rock plant or the limestone quarry is the dust emission? Is it continuous or intermittent?

- Source - What piece of equipment is causing the emission? Can you name it? Use equipment numbers when possible, i.e. the 6-BC-13 Clinker Conveyor Belt at the south transfer point. This will help the Control Room Operator to select which department should be alerted. By doing so, the problem can be corrected as soon as possible.

- Suggestions - What is the problem? Have you tried to correct the problem? What type of maintenance/repair is required?

Remember, when reporting a dust emission contact the CRO, by radio or telephone, or the Shift Supervisor, and tell him the location of the emission, what piece of equipment is the source and what suggestions you have to stop the emission.

TASK/SKILL: Receiving Dust Emission Reports.

TAUGHT TO: Control Room Operators, Shift Supervisor, And Supervisory Staff.

OBJECTIVE: The Control Room Operator (CRO) who receives a dust emission report will record it in the Operators Log and will convey the information to the appropriate Department Supervisor and Shift Supervisor for the action needed to suppress the dust emission.

INSTRUCTIONS:

All employees should be made aware of the reporting procedure. It is as follows:

1. All fugitive dust emission events should be reported to the Control Room Operator (CRO) or a supervisor.

2. The Control Room Operator (CRO) or supervisor will contact the appropriate or assigned Department Supervisor responsible for the corrective actions. This should always include the Shift Supervisor.

3. The Control Room Operator (CRO) will make a notation in the Operators Log. It should include: the name of the person reporting; the time and location; and what action was taken. The Shift Supervisor or Department Supervisor will also make an entry into their

daily log, commenting on the origin and corrective action taken for each of the dust emissions reported.

4. The Quarry and Rock Plant Departments will report incidents to the Control Room Operator in addition to that department's supervisor.

TASK/SKILL: Initiating Appropriate Action for the Correction of Dust Emissions.

TAUGHT TO: Shift Supervisor, Quarry Supervisor, and Rock Plant Supervisor.

OBJECTIVE: The Supervisor will contact the appropriate Department Supervisor and request that the necessary action be taken to correct or arrest the dust source.

INSTRUCTIONS:

The Supervisor will convey the information provided by the person who made the initial report to the appropriate Department Supervisor. It may be necessary to contact more than one department. The Department Supervisor should then dispatch the personnel needed to correct the dust problem.

Thorough instruction should be given to the persons who will be responsible for correcting the dust problem. All precautions should be taken to insure that said action will not worsen the situation. If necessary, the equipment should be taken out-of-service and a work order prepared which would specify what actions are required to correct the problem.

TASK/SKILL: Examination of the Operator Logs.

TAUGHT TO: Environmental Department / Production Department.

OBJECTIVE: Environmental / Production Departments to review Operator Logs

INSTRUCTIONS:

The Environmental / Production Departments have the responsibility of acting as an advisor on specific dust control problems and will act to coordinate on extensive and follow-up procedures. The Environmental / Production Departments will utilize the Supervisor meetings for communication with various supervisors.

TASK/SKILL: Reporting an Upset-Breakdown to the District.

TAUGHT TO: Plant Manager, Rock Plant Supervisor, Quarry Supervisor, Control Room Supervisor, Shift Supervisor, and Environmental / Production Departments.

OBJECTIVE: Persons responsible for reporting upset-breakdown / deviations will do so subsequent to examination of dust emissions related to breakdown / deviation conditions.

INSTRUCTIONS:

The decision to report an upset breakdown / deviation will be made by the Environmental Department and / or Control Room Supervisor (during normal business hours, Monday – Friday) or the Shift Supervisor (when the Control Room Supervisor / Environmental Department are not at the plant). The Quarry Supervisor and Rock Plant Supervisor will contact the Environmental Department / Control Room Supervisor or Shift Supervisor if a breakdown / deviation occurs in their department. If any employee has a question about an occurrence, he or she should contact the appropriate supervisor. Because upset breakdown / deviation conditions must be reported to the District in a timely manner, it is necessary to contact the appropriate person as soon as is reasonably possible after any such condition is observed.

TASK/SKILL: Abating a Point Source Emission - Emergency Shutdown.

TAUGHT TO: All Plant Personnel.

OBJECTIVE: The employee will take the necessary steps required to remove a piece of equipment emitting dust from service.

INSTRUCTIONS:

No piece of equipment should be removed from service without first consulting the Control Room Operator, Shift Supervisor and / or appropriate supervisor. A procedure for emergency shutdown has been outlined in the SOP for the Control Room Operator's. Failure to follow established shutdown procedures could cause emissions to occur or to become worse.

TASK/SKILL: Operating Mobile Equipment.

TAUGHT TO: All Plant Personnel.

OBJECTIVE: Employees will operate mobile equipment in a manner which will minimize fugitive dust emissions.

INSTRUCTIONS:

Operating a vehicle in an environment where fugitive dust can be created requires the operator to exercise special concern. It is the operator's responsibility (1) to operate the vehicle so as to minimize the amount of dust created by the vehicle; (2) to avoid areas laden with fugitive dust;

and (3) to report dust problems to the Control Room Operator or his/her supervisor, as outlined previously and the supervisor should call for the water truck to wet the area down.

TASK/SKILL: Transporting Fine Dry Materials.

TAUGHT TO: Mobile Equipment Operators.

OBJECTIVE: Mobile Equipment operators will exercise precaution while transporting fine materials.

INSTRUCTIONS:

When transporting fine, dry material that may contribute to or be a possible fugitive dust emission, operators must take special care to insure that excessive dust is not emitted from the vehicle or vessel containing the material being transported. When operating a haul truck check that the load is minimized, thereby reducing the chance that material spills may occur. Material spills spread out along the road may cause fugitive dust as a result of the subsequent vehicular traffic. Wet the load down if possible. Check that the dust abatement system on the belt conveyor unloading system is activated when raw, fuel and / or cementious materials. Check that skirting and suppression systems are in place while loading the haul truck. Operate the haul truck at a slow-to-moderate speed to prevent airborne dust.

All mobile equipment operators should take precautions. When loads are laden with fine, dry material, the operator should travel at a speed that helps to reduce the generation of airborne dust to a minimum. When transporting bins or hoppers care should be taken to insure that the hopper or bins are not too full; when possible, wet the load down. When mobile equipment is used to transfer fin material, drop heights should be limited to minimize visible emissions.

TASK/SKILL: Housekeeping.

TAUGHT TO: All Plant Personnel.

OBJECTIVE: Employees will exercise a conscious effort to reduce fugitive dust in the work place.

INSTRUCTIONS:

The need for housekeeping is ever present so that material does not accumulate and become a problem. When cleaning up a work area after a job has been completed take time to stack the material so that it is out of the way. This will prevent material from being scattered and creating "tripping" hazards. However, be sure to place the material in a location that is accessible to the machinery and equipment used to finish the cleanup job. If, for example, a bobcat / skid steer front-end loader may be used to do the final material transportation, place the pile in an area

where it will not have to move it more than twice. When the material has been accumulated, have it picked up and disposed of as soon as possible. Scrap material piles have a tendency to collect dust and are soon a source of dust, instead of just a pile of "junk."

It is important to have this material cleaned up as soon as possible. It is not acceptable to wash this material down with excessive amount of water. In accordance with our storm water requirements we must eliminate excessive runoff, erosion, and washing dust or settlements down the drains.

TASK/SKILL: Shoveling and Sweeping.

TAUGHT TO: Laborers, Process Utility, Packhouse, Quarry, and Rock Plant.

OBJECTIVE: Employees will exercise caution when shoveling or sweeping dust and dust-laden materials.

INSTRUCTIONS:

Inform the employee that moving dust while using a shovel and broom requires care if the "fugitive dust" is to be kept at a minimum. The employee should not throw the dust from the shovel into a container or onto a lower work level; nor should the employee sweep so briskly that it creates airborne dust. Care in shoveling and sweeping can reduce a substantial amount of dust. After material has been accumulated into piles, it should be picked up as soon as possible. Material piles should not be left in the walkways and driveways where it can be scattered by passing pedestrian and vehicular traffic.

Material/dust spills in high places should never be tossed over the side. Containers should be used to lower the material or the vactor or sweeper should be utilized. To help eliminate material from entering the drains, please run the vactor or sweeper before utilizing the water truck.

TASK/SKILL: Preventive Maintenance (PM) Inspection/Service.

TAUGHT TO: All Plant Personnel.

OBJECTIVE: Employees who perform PM inspections and/or servicing will use the procedures outlined on the PM Task Sheet and in the "EMPLOYEE AWARENESS PROGRAM," Section III - Training, TASK/SKILL: Equipment Maintenance.

INSTRUCTIONS:

Each piece of dust control equipment or material transport equipment is potentially a dust source. When such pieces of equipment are inspected or serviced they should be examined for dust emissions. The schedule for examining the equipment is noted on the PM Task Sheet sent out each week. There is a procedure outlined on the Standard Description attached to the PM Task Cover Sheet. The employee performing the inspection or service should review the procedure. Should a point source or fugitive dust problem exist, it should be reported, as outlined previously, and noted on the PM Task Cover Sheet.

TASK/SKILL: Equipment Maintenance.

TAUGHT TO: Dust Collector Personnel, Belt Person, Instrumentation, Electricians, Welders, Mechanics, Machinists, and Repair Personnel.

OBJECTIVE: Employees will take into consideration those aspects of the task that could cause "dust emissions."

INSTRUCTIONS:

When performing routine service or periodic or scheduled repair, one of the employees' responsibilities is to prevent fugitive dust. Before beginning any job an employee should, after taking into consideration all safety requirements and material needs, look at the task and determine if there is a dust source. If there is a possibility that dust may be generated, the employee should ask, "What precautions can be taken?" Each of the following tasks is a dust source. Take the appropriate actions to prevent "fugitive dust."

Elevator Inspection/Service -

1. Check that unit is locked out or in local mode, depending on the service being performed.
2. Check that the elevator is empty before opening any access doors.
3. Clean any material buildup from around doors. Use care not to create fugitive dust. Use a vactor if available.
4. Do not operate elevator at a rapid rate without doors in place. Use the jog button only.
5. When securing doors, check that they seal well. Use sealing material, such as silicone, to obtain a good seal.
6. Start equipment and check seal. Correct if needed.

Bin or Hopper Entry -

1. Check that the bin or hopper is empty before opening any doors or gates.
2. Clean any material buildup from around the doors and hoppers. Use a vactor if available.
3. Remove any material buildup near the door that will be used for bin entry. Use a vactor if available.
5. Wear appropriate respiratory equipment when entering bins and hoppers.

6. When securing doors check that they seal well. Use sealing material, such as felt, rubber, or silicone.
7. Start equipment and check for leaks.

Feed and Conveyor Screws -

1. Check that equipment is properly locked out.
2. Remove appropriate covers.
3. If possible, remove material from screw with vactor before pulling out the screw flight. If excessive spillage is expected, or if the material is hot and cannot be removed with a tractor, refer to the task - "Managing Dust During a Breakdown" and follow those procedures.
4. Make the necessary repairs.
5. Secure lids on the conveyor or feed screw. Do not leave lids off of the screws. Be sure to use proper sealing materials to insure a good seal on the lids or covers.

Airslides -

1. Check that the equipment is properly locked out.
2. Remove covers. Be certain that the area around the covers has been cleaned so that fugitive dust will not occur during repair of the device.
3. Remove the covers. Extract the material in the airslide by using the vactor if possible. If excessive spillage is expected, or if material is too hot to handle, refer to this task - "Managing Dust During a Breakdown."
4. Never blow an airslide out with a compressed airline. This would also apply to any other piece of dust-conveying equipment.
5. Since many of the airslides in the plant are in high places, take care not to allow the dust to cascade over the floor deck or through the grated floor plates.
6. Perform repairs.
7. Secure lids or covers. Use proper sealing material.

Bins, Hoppers, Pneumatic Transport Lines -

1. Shut down conveying equipment if possible. If line can be taken out-of-service, perform complete repair or replacement. If a line cannot be taken out-of-service, place a patch over the hole and secure it in place using duct tape.
2. Repair the damaged line or replace it with a new one. Take care to empty the line before replacing.
3. Secure the line in place, insuring that proper gaskets and seals are used at each joint if required.
4. Place the line into service and check for leaks.

Managing Dust During a Breakdown –

Since breakdowns are unplanned events, it is quite possible that the dust conveying system, whether it be a drag chain, elevator, screw, airslide, belt, chute or pneumatic transport line, could be filled with material when a breakdown occurs. In some instances, this material is extremely hot. Failure to take immediate action could result in extensive damage or create a hazardous

situation. The prudent action at this time is to empty the conveying line. This does not relieve the employee of the responsibility to minimize the impact of the dust spill into the environment. Because each case is different, specific instructions cannot be given for every incident in advance. If it becomes necessary to empty a conveying system, the following actions should be taken:

1. Consider all options before taking action. The decision to empty a conveying system should be made after consultation with the Shift Supervisor and/or Production Manager. In cases where the decision is to be made by the Quarry Supervisor or Rock Plant Supervisor, the Environmental Department should be consulted prior to emptying any system or device. Immediate action should be taken to prevent equipment damage.

2. Minimize the impact on the environment by considering such items as:

   - Time of day. If the material can be emptied during day shift there is a larger workforce available to manage the spill.
   - The available equipment. It is always best to have equipment on hand that will be needed to clean the spill. In some cases, the water truck or vactor is all that may be required.
   - The size of the crew. The plant operates on a tight manpower basis. A skeleton crew may not be enough to manage a large spill. Consider calling out additional help.

3. Contain the spill. If possible, place the material in containers, such as a bin, a barrel or a bag. On large spill areas it may be necessary to construct a barrier or windbreak to keep the material within a designated space until a cleanup crew or a piece of cleanup equipment is available. Wet the fine material down with water, if possible, or cover small piles with plastic or other suitable material.

4. Monitor the activity. If emptying the conveying system constitutes an excessive emission it should be reported. Reference TASK/SKILL: Reporting an Upset-Breakdown to the District, outlined previously.

Material spills are undesirable. Good preventive maintenance will minimize the number of times breakdown spills will occur.

Fugitive Dust Control Plan

SECTION IV -- OPERATION AND MAINTENANCE PROCEDURES

PURPOSE

An Operation and Maintenance Procedures outline is an essential part of an effective Dust Control Program. There are some specific tasks that require special handling, such as evacuation of material from bins or hoppers, purging transport lines, and bag and filter medium removal from dust collectors. Most of these tasks are performed on a regular basis. These tasks are outlined in the "PREVENTIVE MAINTENANCE PROGRAM FOR DUST CONTROL AT LEHIGH SOUTHWEST CEMENT COMPANY - PERMANENTE PLANT" Some other specific tasks are outlined in Section II - Training.

This section of the program is intended to provide general information for procedures involving possible dust emissions. Specific guidelines can be found in maintenance manuals and in Department SOP's.

SCOPE

This program is designed to provide a general outline or guide for dust control during operation and maintenance activities. The guidelines will include: methods of monitoring, provisions for detection of airborne dust, provisions for reporting and correcting dust emissions, and directions on how to clean up after a spill.

MONITORING -

During operations, equipment will be monitored on a regular basis. The frequency of the monitoring will be based on each piece of equipment's operating history. The information collected on the PM Notification is submitted to the Maintenance Department, which will input pertinent information into the PM work order system. Thus the history of each piece of equipment will be recorded.

DETECTION -

Detection of airborne dust is everyone's job. Dust sources can be classified as either "point source" or "fugitive dust" emissions. "Point source" emissions are emissions from a specific "point," such as a dust collector discharge duct. They may be the result of damaged or faulty equipment or carelessness in operation of said equipment. The key to minimizing point source emissions is early detection. Early detection will result from PM inspections, routine Departmental tours by operators and management and by observant employees performing their regular tasks.

"Fugitive dust" is defined, for the purpose of this program, as dust which has no specific "point source." This type of dust usually is a result of wind blowing, vehicular or pedestrian traffic, malfunctioning dust collection equipment or poor/dirty work habits. Fugitive dust is difficult to control. There are, however, a number of ways to correct and prevent fugitive dust.

Once again, the key to controlling dust is detection. A detailed outline of the reporting procedures can be found in this program under Section II - Training, TASK/SKILL: Reporting a Dust Emission.

CORRECTION -

Point source and fugitive dust emissions are to be corrected as soon as possible. In some instances, shutting down a piece of equipment will be necessary; at other times, closing a hatch, sealing a hole or just sweeping up a pile of dust is all that is required for correction.

Equipment shutdown and procedures for sealing ports and doors are covered in Section II - Training, TASK/SKILL: Equipment Maintenance.

REPORTING -

It is necessary to report fugitive dust emissions resulting from maintenance and/or servicing activities. The same rules apply as shown in Section II - Training, TASK/SKILL: Reporting a Dust Emission.

CLEANUP -

Prompt cleanup after an operational spill or maintenance job is the first line of defense in preventing fugitive dust emissions. The second line of defense is containment. If an employee realizes that a certain amount of material will be spilled, that employee should take immediate steps to contain such a spill, thereby, reducing the manpower and equipment needed to perform the cleanup. This also prevents fugitive dust.

Fugitive Dust Control Plan

Appendix: Figures

4. Regional Location Map
5. Vicinity Location
6. Wind Rose Diagram

From:	Milton Bosch
To:	Barrella, Donald
Subject:	Fwd: Syar asphalt processiong/production expansion
Date:	Tuesday, January 13, 2015 5:01:44 PM

To Napa County Commissioners and Staff,
c/o Donald Barella
Forwarded copy of letter sent to the recipients below.
Thank you,
Milton K.D. Bosch, MD
----- Forwarded Message -----
From: Milton Bosch <miltonbosch@comcast.net>
To: mattpope384@gmail.com, tkscottco@aol.com, napacommissioner@yahoo.com
Sent: Wed, 14 Jan 2015 00:54:34 -0000 (UTC)
Subject: Syar asphalt processiong/production expansion
Dear Sirs,

I am writing you as a long time (26 year) resident of the City of Napa. My professional qualifications are 1) Chemist, and 2) Medical doctor, Board Certified in Internal Medicine and subspecialized in Addiction Medicine.

I strongly oppose Syar's request to expand their asphalt production/processing by 300,000 tons annually. For inexplicable reasons, toxic compounds released into the air by asphalt are rarely tested for, despite the emission fumes having known human carcinogens and toxins. These include PAH's (polynuclear aromatic hydrocarbons - such as those released when any carbon-containing substance is burned, such as tobacco, wood, charcoal, and meat - the best known of which is Benzo[a]pyrene), toluene, benzene (a substance known to cause leukemia), formaldehyde (a known human carcinogen), hexane (a known neurotoxin), and phenol.

If the Syar quarry was proposed as a new project in such close proximity to the City of Napa, it would be turned down with little or no debate.

This type of industrial activity in such close proximity to Napa residences and Napa State Hospital puts residents at risk of increased incidence of malignancies, respiratory illnesses, neurologic damage, depressed immune systems, and birth defects.

Rather than actual stack testing, the amounts of toxic compounds released by asphalt is done with mathematical formulas and computer models. These models estimate that the proposed asphalt production expansion of 300,000 tons annually releases approximately 150 tons of the above pollutants. Experts believe these models grossly underestimate the actual stack emissions and "fugitive" emissions. Fugitive emissions are those released as asphalt is moved by conveyor belt or stored in piles.

Asphalt is basically the heaviest fraction of petroleum...the gunk left behind after the more volatile substances have been boiled off. Crude petroleum contains many known carcinogens. Asphalt should actually be listed under California's Proposition 66 labelling law for any substances that might cause cancer or reproductive harm in humans.

I cannot overemphasize what danger this represents to our community, especially during the winter where high pressure systems prevent the air from mixing, and trigger Spare the Air days. We have tied last years record with 11 Spare the Air days this year. During these days, the concentrations experienced by nearby Napa residents would be substantially greater than similar days with wind or rain. I ask that you move to deny the Syar Quarry's request for expansion for the sake of the health of our community. It is a wonder we have tolerated Syar's presence so close to the hospital and residential housing for as many years as we have. It's an even greater wonder that Syar would expect this proposed expansion to be approved. You might as well just set up an apparatus to aerosolize 150 tons of a toxic mixture of PAHs,

benzene, toluene, formaldehyde, hexane, and phenol directly into Napa's nearby neighborhoods, because the end result would be the same. It's like forcing people to smoke cigarettes, or directly breathe wood smoke, except that it is worse.

Actual stack emission tests would likely show that the 150 ton estimate is much lower than reality. This is a very serious issue. I cannot emphasize that enough.

Sincerely,

Milton K.D. Bosch, MD

Napa, CA

From:	Genever Fox
To:	Barrella, Donald
Cc:	heather@vinehillranch.com; napacommissioner@yahoo.com; anne.cottrell@lucene.com; tkscottco@aol.com; mattpope384@gmail.com; McDowell, John
Subject:	Proposed Syar Expansion Project
Date:	Tuesday, February 10, 2015 6:28:54 PM

Dear Mr. Barrella and Commissioners,

As a longtime resident of Napa and of a neighborhood adjacent to Skyline Park I would like to voice my opposition to the proposed expansion of the Syar Napa Quarry currently under consideration. In spite of the "mitigation" described in the FEIR, I do not believe that visual, sound and air quality impacts are being adequately addressed. I also do not think that traffic impacts on Hwy 121 from the expanded activities at the quarry are being addressed at all.

It is clear that with the expansion, quarry activities will be much more visible from areas of Skyline Park. There really is no way to mitigate this and since Skyline Park is a wilderness park, users of the park will be very much impacted by the intrusion of quarry views and quarry noise into their experience. Syar's argument that this impact is "insignificant" is at best, subjective and at worst, disingenuous.

Currently quarry noise and odors are somewhat blocked by the hillside that the quarry expansion would encompass, and presumably, remove. Even with this hillside somewhat intact, occasional quarry noises are heard and odors are smelled by Skyline Park users and even by residents along Imola Ave and the adjacent neighborhoods. If this hillside is removed, as the expansion plan appears to call for, quarry noises and odors are likely to be worsened. The "acoustical shielding" being provided by the hillside seems pivotal to the noise mitigation plan proposed in the FEIR, yet this hillside is doomed to destruction if the expansion proceeds as proposed. Monitoring noise levels, as currently proposed, is meaningless without a plan as to what to do if those levels exceed acceptable limits. And "using the quietest available equipment" means nothing unless it is determined how quiet that equipment is and whether it is quiet enough.

Skyline Park, the DOE and associated schools, Napa State Hospital, the neighborhood along and adjacent to Imola Ave and portions of Coombsville are all downwind of Syar, regardless of what the FEIR implies, because the prevailing winds are from the southwest. With the wind comes noise, dust and odor. Removal of the hillside between the quarry and Skyline can only exacerbate this process since the hillside currently blocks the wind to some degree.

The proposed expansion will also require the use of more trucks or larger trucks to haul the expanded amount of quarried material out of the quarry. Currently Syar's trucks enter Hwy 121 by crossing over the northbound lanes into a merge lane that enters the left southbound lanes. The trucks are large and slow and visibly slow traffic as they merge. Traffic is already bad along this portion of 121. I am concerned that the expanded number of trucks will dramatically worsen the existing traffic problem. Syar has offered no plan to mitigate this and, more or less, punts this issue to Napa County and CalTrans, thereby shirking responsibility to aid in any solution to it.

Syar was sued last year by a watchdog group called San Francisco Baykeeper for violation of the

Clean Water Act. The group alleged that for at least 5 years Syar allowed water contaminated with pollutants from the mining operations and the accumulation of trash, debris, unused equipment and scrap metal to run off into Arroyo Creek, into the Napa River and from there, into the San Francisco Bay. On December 10, 2014, Baykeeper announced a settlement of the suit that requires Syar to remove the scrap metal, trash, debris, and unused equipment along Arroyo Creek and to install pollution controls to filter and treat storm water before it leaves the Syar facility, and also to install check dams to control the flow of contaminated mud and sand off of the quarry site. This suit highlights the fact that Syar really has little interest in the impacts it's business has on the environment and the people of Napa county and the greater Bay Area. I find it "convenient" that Syar quickly settled this suit the month before the first public meeting after the FEIR was released. The fact that this suit was necessary to get Syar to clean up its act demonstrates that Syar is neither a good business citizen nor a good land steward.

For these reasons, I urge you to not approve Syar's expansion project.
Thank you for your consideration of my concerns.

Sincerely,

Genever Fox
1086 4th Ave
Napa, CA 94559

Barrella, Donald

From: roslyn potter <rozpotter1@gmail.com>
Sent: Wednesday, February 18, 2015 9:17 AM
To: Barrella, Donald; McDowell, John; anne.cottrell@lucene.com; heather@vinehillranch.com; Matt Pope; tkscottco@aol.com; napacommissioner@yahoo.com
Subject: Syar Quarry Adaptive Management Mining Strategy
Attachments: Concerns about Adaptive mining strategy.pdf

Dear Mr. Barrella, Commissioners and Deputy Commissioner,

I write to you today about an obscure but nonetheless important aspect of the Syar Napa Quarry Proposal.

The Adaptive Management Mining Strategy allows Syar to mine only undisturbed land. Syar is currently mining 11% of the property. All of it disturbed land. Under the mining strategy, 25% of the property can be mined. And all will be undisturbed.

Not only will more acreage be mined, but significantly more aggregate will be found in undisturbed areas, than has been extracted from previously mined areas.

All mining activities will be more intensive, including the use of heavy equipment, blasting, drilling, excavating and transporting. Impacts will be substantially greater than in the past. And these more intensive, more frequent operations will take place within 50 feet of Skyline Wilderness Park, and a half-mile from neighboring homes and schools.

The Adaptive Management Mining Strategy will allow Syar to mine several areas simultaneously near Skyline Park and nearby neighborhoods, using more blasting heavy equipment and drilling, and extracting more aggregate than ever before. There is less incentive than ever to comply with mitigation measures which require work stoppage or slowing to carry out. No, the incentive, aided by this mining strategy, is to mine heavily where rich blue deposits of basalt lie - on the Passini parcel and later, in Skyline Wilderness Park. There is plenty of incentive to not comply with mitigation measures. To defeat the very purpose of a wilderness area and cause park attendance to fall. To purchase a huge rich source of basalt at a bargain price when Skyline's 50 year lease expires in 2033, just 18 short years away.

Citizens of Napa who live or work near Syar's mining and asphalt operations do not need an EIR to inform them of impacts or the ineffectiveness of mitigation. measures. They know mitigation has been ineffective. They see it, breathe it, hear it and smell it. No report is necessary, particularly one that is out of date, self-serving and filled with flaws.

To use a common legal phrase, res ipsa loquitur. The Thing Speaks for Itself..

Thank you for allowing more deliberation for Syar's disproportionate mining plan for which Napans will pay even more dearly in the future, than they have in the past for no good reason except the relentless pursuit of profit.

Please see the attachment for more details and questions I would like answered.

Thank you for your commitment to the common good. You have a very tough job.

Roslyn (Roz) Potter, RN, MA

204 E. 1st Street

To: Mr. Don Barrella,
Napa Planning Commission Members February 17 2015

Syar Quarry Adaptive Management Mining Strategy

Please enter this letter into the public record of concerns regarding the Syar EIR

Dear Mr. Barella and Planning Commissioners,

As I understand it, the Adaptive Management Mining Strategy (Strategy) allows Syar Industries to mine where it chooses (with minor exceptions) in its 870 acre land holding *each year*. This would occur on a continual basis for 35 years (or longer if a permit extension is requested), as long as the total mined area does not exceed 25%, or 218 acres. Syar only need submit a new mining plan each year to the County, who would approve or deny it. The public would not participate, and new impact and mitigation reports would not be required.

At present, Syar is mining 11% of the property. Under the mining Strategy, up to 25% can be mined. Not only will more acreage be mined, but more aggregate will be found in undisturbed areas utilizing the mining Strategy, than has been extracted from previously mined areas.

Only undisturbed areas will be mined using the Strategy. The process for mining an undisturbed area involves using a **bulldozer**, **excavators** and **front-end loaders. Heavy ripping equipment** is used to construct steep slopes or **drilling and blasting** are used to develop benched configurations. Harvested rock is then transported by a **loader** to the appropriate processing plant.

In short, under the mining Strategy, mining of exclusively undisturbed areas will proceed. Mining activities will be more intensive, use more heavy equipment, blasting and drilling, and remove more aggregate, than mining activities that have taken place in the past. The mining Strategy also permits mining in several different areas simultaneously, including areas adjacent to Skyline Wilderness Park. And, areas within ½ mile of residential neighborhoods.

I do not understand why this Strategy is recommended for use by Syar's open pit quarry, located in an urban area adjacent to or in very close approximation to homes, schools, a college, Napa State Hospital, Skyline Wilderness Park, Kennedy Park and vineyards. Syar uses blasting, excavation and drilling to mine. The quarry also has three noisy, odorous asphalt manufacturing facilities, with a fourth under consideration. Why has this plan been recommended for a quarry and what will be four asphalt plants, located in a sensitive area in such a pristine place as the Napa Valley?

During mining operations, in neighborhoods close by, a dark dust invades homes, and covers automobiles, trees and gardens. Noise from diesel trucks, heavy equipment, aggregate and asphalt manufacturing equipment regularly disturbs the peace of rural neighborhoods, families and schoolchildren. Unexpected blast vibrations and sounds are disconcerting, if not frightening. The pungent, powerful odors of asphalt invades some homes, schools, and portions of Napa State Hospital. Homes in these areas are less desirable to buyers

I have lived in Napa since 1967. I love this city, this valley. And I, along with tens of thousands of people, treasure Skyline Wilderness Park. I do not understand how use of the mining Strategy will benefit Napans or Napa.

I am concerned and I have questions:

1. When the Adaptive Management Mining Strategy (Strategy) the County recommends for the Syar Napa Quarry was researched, what mines in the greater Bay Area or California, were found to be using this method? What problems did they encounter? Has the impact of this strategy on sensitive receptors been evaluated?

2. *Only undisturbed areas that have never been mined, will be included in the Strategy.*
   - Can several different undisturbed areas *adjacent* to Skyline Park be mined without environmental impact reports that would reflect additional and cumulative impacts to the Park, and to nearby residential areas and schools?
3. Was the Strategy taken into account when considering cumulative impacts of the new Jail (if built at the currently proposed site), Napa Pipe Project, vineyards, other projects in the approval pipeline, or areas (South Napa Marketplace?) not included in the current EIR
   - If the more intensive impacts of the mining Strategy have not been considered in the current EIR, please advise how true impacts to Skyline Wilderness Park, the residential areas to the north and east, and other sensitive receptors can be evaluated? How can current mitigation measures be valid?

4. Will the environmental impact report for the Passini parcel accurately determine impacts and mitigation for other undisturbed areas that have not been studied? Can impacts from one area be applied to another?

5. If all undisturbed areas in the 870 acres have not been studied, how can true impacts be determined? For some studies, calculations are based upon the distance from a subject to a source. As these distances will vary, from area to area, data from one source at a particular geographical distance should not be used for a source at a different distance. Such findings would not be valid.

6. *I understand the **357 acre exclusion area includes only currently disturbed and mined areas**.* Impacts from undisturbed areas would also be greater than those from disturbed areas due to preparation, infrastructure and other work required. Are these additional requirements for new areas taken into account when determining total impacts and the mitigation required?

   - Are schools, residents, Napa State Hospital and other receptors advised in advance of mining impacts, such as blasting and measures they can take to reduce them?
   - Is mitigation proportional to the sum of impacts for all areas being mined at one time?
   - Are impacts for disturbed compared to undisturbed acreage weighed differently?

7. What parcels does the 870 acres include? Specifically, does the 870 acres include the 188 acre parcel Syar purchased from the State of California in the 1990's and the Passini parcel?

   - Is any mining designated property (current or future) excluded from the 870 acre total?
   - If the 188 acre parcel is included, will impact studies be completed for the parcel?

8. Syar will determine the location of shared boundary lines by survey. Fences, stakes, and other markers or barriers will be installed by Syar according to Syar's survey. These stakes, fences and other markers delineating ownership will be moved frequently by Syar workers according to mining needs.

   - How will the rights and property of adjacent landowners be protected if Syar is moving fences and other boundary markers on a frequent basis, according to a survey ordered by Syar?

9. What safeguards will be put in place to verify information provided by Syar? For example, what is the verification process for determining total acreage being mined at any one time? Or total production amounts?

10 The Mining and Reclamation Plan describes the benefits to Syar of the Adaptive Management Mining Strategy. Of what benefit is the Strategy to Napa and Napans?

11. An example of a 12 month mining plan is provided. Only very general information is included. What specific information and data will be required for the annual mining plan? What circumstances would trigger additional information or more frequent plans?

12. I believe the public should be involved in the annual mining plan approval process. Why is there no public participation when mining activities are so impactful with respect to noise, odors, vibrations, and dust to nearby receptors?

13. Who will provide oversight for the Strategy? What kind of oversight? The 218 acre limit for mining activity represents a very substantial increase in mining activity that is *not* reflected in an expected proportional increase in production. Production will increase from 810,000 tons to 1.3 million tons, an increase of 38%. But the acreage mined will increase from 97 to 218 acres, an increase of 57% without taking several important variables into account. The considerable depth of mining and, newly mined areas will produce far more aggregate than formerly mined areas. How then, can there be only a 38% increase in production when there is a 58% increase in acreage. These numbers don't add up.

    In the same vein, how can measures of current impacts be valid when they are based upon production numbers for 2004-2008?

14. If land to be mined is changed each year, how can the current EIR, which considers only the Passini parcel, provide an accurate and complete picture of impacts in other areas? How can mitigation measures be applied, if impacts for each area to be mined are not studied? Syar's 870 acre parcel is large and diverse.

Roz Potter RN, MA

204 E. 1st Street
Napa, CA 94559
February 17, 2015

Former: Napa Valley College Trustee; Member, Board of Directors, Napa Valley Museum; Member, Board of Directors, Community Resources for Children; Research Associate, the Rand Corporation, Lecturer and Curriculum Developer, UC Berkeley Center for Infectious Diseases and Emergency Readiness; Founder and Principal: Defying Disaster; Health and Safety, Disaster Preparedness and Infection Control Education and Consultation; Creator: Defying Disaster Game; Manager Infection Prevention and Control and Employee Health Programs in hospitals and health care centers

Current: Consultant, Registered Nurse, Educator, Mother, Grandmother, Concerned Citizen

Resident of Napa: 1967-1977; 1983-present

Napa County Regional Park
and Open Space District

Karen Bower Turjanis	Tony Norris	Michael Haley	Dave Finigan	Barry Christian
Director Ward One	*Director Ward Two*	*Director Ward Three*	*Director Ward Four*	*Director Ward Five*

March 17, 2015

County of Napa Planning Commission
1195 Third Street, Second Floor
Napa, CA 94559

RE: Supplemental Comments on the Draft Final Environmental Impact Report for the proposed Syar Quarry Expansion

Dear Commissioners:

On behalf of the Board of Directors of the Napa County Regional Park and Open Space District, I am writing to supplement the District's prior comments of December 24, 2014.

As conveyed in our prior comments, the District continues to be concerned about the proposed expansion of the quarry operation into the Pasini property because of its potential to adversely affect Skyline Wilderness Park. The recent offer by Syar to increase the buffer from the property line, from 50 feet to 100 feet, does not reduce this impact in any significant way, since the ridge that separates the park from the quarry operation would still be mostly removed. A setback of approximately 350 feet is necessary to retain the full height of this ridge, which provides a physical barrier to the transmission of noise, dust, smell and visual impact. Without a reduction in the proposed quarry footprint so that the existing ridge on the northern boundary of the Pasini property is retained, there is no way to effectively protect Skyline Park from the adverse impacts of expanded mining.

However this big issue is resolved, the District Board would like to make three specific requests that are modest in scope:

(1) Require that the loss of Oak Woodlands be mitigated *before* the expansion of mining that creates the impact. Timing is very important to the wildlife that depends on Oak Woodland habitat.

(2) Require that the off-site portion of the mitigation for the loss of Oak Woodlands be accomplished through payment of an in-lieu fee made to the County of Napa. This fee should be for the sole purpose of protecting comparable Oak Woodlands, and the amount of the fee should be equal to the estimated cost to purchase comparable Oak Woodlands in the in the same general vicinity as the quarry, as determined by the County of Napa in consultation with the Napa County Regional Park and Open Space District. Without this requirement, there is no guarantee that the off-site mitigation will provide effective habitat for impacted species; instead the result will likely be the acquisition of an isolated few acres in a remote location where land is cheap.

(3) Even with proposed mitigations for specific impacts, the requested expansion of the quarry will still have a cumulative adverse impact on the public's recreational use of Skyline Park. One effective way to mitigate this cumulative impact, which our District recommends, is to require the applicant to grant a trail easement to facilitate the completion of the recreational trail between Kennedy Park and the Napa Pipe property. Such an easement would have no apparent adverse impact on quarry operations, but is very important to the completion of the Napa River Trail, Napa Valley Vine Trail and San Francisco Bay Trail.

We look forward to reviewing the latest revisions to the draft Final Environmental Impact Report when they are available.

Thank you for your consideration of our concerns.

Sincerely,

Dave Finigan

Dave Finigan
President, Board of Directors

cc: David Morrison

Sandra Booth, Artist
2100 Seville Drive, Napa CA 94559

Presentation before the Napa County Commissioners, 2-18-15

Syar Napa Quarry should not be expanded. In Syar's EIR the stated goal is to keep production for local consumption. The State and County agree that hauling aggregate short distances decreases pollution, which is also a goal of our State and County. We want an audit of the last three years, 2012, '13 and '14 of production and distribution of the products mined at Napa Quarry. We want to know how much was actually used in Napa County for each of these years. We want the breakdown of product used in each City in Napa County and used in the County, and the accounting of the aggregate product that was sold outside of the County of Napa.

For the purpose of conservation, this will give us an idea of the yearly need for aggregate and the estimates for calculating a yearly cap on the amount of aggregate that Syar may mine out of the Napa Quarry per year. All this research should have been done before the EIR was produced. We want a cap written into the permit as a conservation measure to make sure the materials produced at our local mine are not being shipped out of the Napa area.

A cap on production matching the Napa area's *actual needs* will reduce pollution and insure there will be plenty of rock for 35 years. A cap on production of aggregate is a very good conservation measure. Syar owned Lake Herman Quarry in Vallejo is 5 times larger than the Napa Quarry and can more efficiently provide aggregate for the American Canyon area, Vallejo and other points south and to southern Napa County and City. On their web site Lake Herman boasts they deliver "on time for the best price" *throughout Central California*. We certainly don't want little Napa Quarry shipping out of the area. And, again, Syar's stated objective in the FEIR is to ship locally.

Also, BoDean's solar powered Mark West Quarry more efficiently provides aggregate north of St. Helena. This is another reason the Napa Quarry operation does not need to expand, but actually it would be better to reduce it, or re-designate the use. It is not necessary for the Napa Quarry operation to continue when aggregate is so close by "on time for the best price" from Lake Herman Quarry. The addition in cost would only amount to a few dollars per ton. Actually, Syar owned Lake Herman Quarry is about as ideal a distance from us as we could hope for. Napa Quarry should not be expanded. There are better alternatives.

Sandra Booth

Barrella, Donald

From: Christina Benz <christinabbenz@gmail.com>
Sent: Friday, March 20, 2015 8:18 AM
To: Barrella, Donald
Subject: Syar Quarry Expansion

March 20, 2015

To:
Napa County Department of Planning, Building and Environmental Sciences
Attn: Don Barrella, Donald.Barrella@countyofnapa.org
1195 Third St., Suite 210
Napa, CA 94559-3092

Re: Final EIR: Syar Napa Quarry Expansion

The Sierra Club, Napa Group strongly urges the Napa County Planning Commission not to accept the Final EIR for the Syar Napa Quarry Expansion and not to permit the expansion for the following reasons:

- The Response to Comments on the Final EIR does not adequately explain how Syar will design the required detention ponds to meet state permitting requirements (Response to Sierra Club comment T-13) to protect the watershed. As stated in our comment dated December 3, 2013, we do not believe this is possible due to the California Department of Fish and Wildlife's not permitting in-stream damns. The Syar Napa Quarry was recently forced (by a San Francisco Baykeeper lawsuit settled in November of 2014) to keep contaminated water from running off its facility into Arroyo Creek. Syar needs to demonstrate that they can prevent polluting the creek and the Napa River.
- Increased mining at this site is not compatible with the Napa County General Plan priority of maintaining the rural character of our county. Many residents and the City of Napa have commented that increased mining will greatly diminish the scenic views at the southern entrance to the valley as well as diminish the open space so important to that rural character.
- Many residents and the County Superintendent of Schools have expressed concern about the negative effects of increased blasting and noise on local students and residents. The Final EIR does not adequately address these concerns.
- An overwhelming need to source aggregate locally has not been demonstrated by Syar. The needs of Napa's residents would be better met by sourcing aggregate and construction material from Syar's Lake Herman Quarry in Vallejo and retaining the hills and oak woodlands in Napa that surround our treasured Skyline Wilderness Park.

Mining activities at the Syar Quarry should not be expanded, but instead should be wound down and restoration of the site begun so that Napa can lay claim to protecting and improving our open spaces and scenic views in line with the commitment made in our county's General Plan. The Pasini parcel should not be destroyed by mining but should be made a permanent part of Skyline Park, ideally by a conservation easement or direct purchase.

Sincerely,

Christina Benz

Writing on behalf of the Sierra Club Napa Group Executive Committee
(707) 252-7462
christinabbenz@gmail.com

From: Susanne von Rosenberg
To: heather@vinehillranch.com; mattpope384@gmail.com; anne.cottrell@lucene.com; napacommissioner@yahoo.com; tkscottco@aol.com
Cc: Caldwell, Keith; Eric Gallenkamp; Barrella, Donald
Subject: Syar Quarry Expansion EIR: Comments on noise analysis and mitigation
Date: Thursday, March 26, 2015 1:56:05 PM

Dear County Planning Commissioners and Staff

This letter provides more detail on the noise concerns raised by the undersigned at the February 18 Planning Commission meetings and includes a number of points that, due to the time constraints on public comments, were not raised.

1. **Proposed Project Does Not Conform to Napa County Policies**

Allowing the proposed doubling of Syar's current quarry operations and expanding into the Passini Parcel will violate the noise policies in Napa's general plan as well as aspects of the Recreation and Open Space and Conservation elements.

Policy CC-7 focuses on protecting the people of Napa County from exposure to excessive noise and Policy CC-8 talks about minimizing noise impacts by placing new noise-generating uses in appropriate areas. *The extent and impact of this expansion and the new operations (asphalt recycling proposal) constitutes a new noise generating project.* The proposed expansion will do irrevocable harm to Skyline Wilderness Park and thus runs contrary to Policy ROS 15 which assures "permanent protection" of Skyline Wilderness Park. Finally, the EIR analysis and proposed mitigations do not meet the standards set forth in Policy CON 39 which highlights that resource extraction activities shall fully address all environmental implications.

2. **Noise Impacts are Not Adequately Disclosed, and are Understated and Minimized**

In examining the EIR produced by Syar, it is clear that the analysis understates the noise impacts of this project on the surrounding noise sensitive areas and overestimates the effects of the proposed mitigations. As we all know, Syar is closely situated to a number noise sensitive areas (including a hospital, schools, neighborhoods, and parks) on it northern, eastern and parts of its western property line. The impact of this proposed project on these areas must be closely examined. Syar's proposed modifications, which were submitted February 13, 2015, reduce the footprint of the project, but do not provide any associated information required to reassess noise impacts (e.g., updated topographic contours, revised noise modeling contours, etc.).

In reviewing the EIR noise and vibration analysis:

- It is clear that all noise contour analysis and diagrams do not take into account the effect of the hillsides and ridgelines which comprise Skyline Park. Skyline Park is essentially a long canyon running from the parking lot to Lake Marie and beyond. In referencing Figures 4.11-34, 35, & 36 which illustrate noise contours from three source points, the smooth and consistent rings representing decreasing decibel levels are based upon flat and open space and do not take in the echoing effect and channeling of noise which will occur nor the height at which the noise will be

generated. Furthermore, the noise analysis also sets aside consideration of the prevailing wind direction, and the overall effect of the fact that the quarry is located in a valley that will channel noise to the north and south. This already troubling noise analyses, which is described as "Worst Case" noise contours, clearly underestimates the impact of the noise from this project.

- The EIR also highlights that portions of the trails within Skyline Wilderness Park close to the Snake Pit will come within 100 feet of Quarry operations. Mining activities at this distance will generate noise at 80 dBA L50 and maximum instantaneous noise of 85dBA L50. The report only states that this is a potentially significant impact. Moving the maximum expansion area inward 50 feet would not appreciably reduce this noise level. The quarrying activities would have to be moved west by 900 feet or so from the originally proposed boundary to result in an acceptable day-time noise level.
- The EIR does not conduct a noise analysis of blasting operations or removal of overburden. These activities are inherently noisy, and to fail to provide any noise analysis is a failure of the EIR.
    - The document states (on page 14.11-15) that "…removal of overburden is temporary, and this activity is similar to construction, and as such, is not normally regulated by County Noise Ordinance Standards that address long-term operations." This is clearly a fallacious argument, as by analogy any industrial activity that is does not occur on a continuous basis would also be regulated as a construction activity. To describe this activity as similar to construction activities is an inappropriate and is backed by no data or analysis. In fact, overburden removal is a predictable and routine activity *required* to conduct quarry operations in the expansion areas. The EIR's noise section fails to describe of how long removal of overburden would take, and does not quantify overburden. It is impossible for the lay reader to determine what percentage of materials that would be removed would be classified as overburden. What is the exact definition of an overburden? Because the EIR does not provide data regarding this aspect of mining and thus failed to provide a complete analysis of noise impact, it is incomplete. Questions that must addressed include: What are the noise projections for such activities? How many machines will be used at one time, what is the projected dBA, what are the hours of operation, are there limit on the hours or number of days of this type of operation (overburden and top soil removal appears to be exempt from all standard operating hours proposed for quarry operations)? Removing overburden is an integral aspect of the mining operations and must be included in all noise analyses. While in the 2/13/15 email Syar has now proposed to restrict overburden removal to the standard operating hours (which are still extremely long, far exceeding the operating hours allowed under any other on-going noise-generating activity of similar frequency and magnitude), there is still no evaluation of the potential noise associated with the activity.

3. <u>Noise Mitigation Approach Treats Skyline Park Areas as "Noise Buffer Zone"</u>

Mitigation Measure 4.11-1 defines "nearest sensitive receptors" to the north and east as consisting of residences and Skyline Park trails. It ignores 1) campers at Skyline Park, 2) the

schools and day care center, and 3) day users of the Park in and around the park entrance (educational areas, native plant garden, archery range, horse arena, etc.). All of these are closer to the north of the expansion area than the closest residences. The mitigation measure therefore does not provide for noise control within the northern areas of Skyline Park or at the schools and day care center, and does not provide for noise control for the most sensitive receptors within Skyline Park (campers at night time).

4. **Syar Agreed to a Higher Level of Noise Protection at its Lake Herman Quarry Than is Proposed for Napa**

The Lake Herman quarry EIR certified by Solano County last year has a noise standard of 60dbA L1 (i.e., the level that can be exceeded 1% of the time) at the property boundary, as compared to the 50dBA L50 at the nearest residential and trail receptor proposed in the Napa EIR. While Syar argues in the Napa EIR that L50 is most appropriate for a continuous operation, surely the Lake Herman quarry is also a continuous operation? The closest analogy to the L1 level is the 1 minute maximum criterion included in the L50 definition, which would allow a noise level of 65dBA at the closest sensitive receptors for 1 minute per hour (1.7% of the time). Therefore, the nearest residences would be exposed to a higher level of noise than is allowed at the property boundary for the Lake Herman quarry. It should also be noted that the Lake Herman quarry property boundary is at least 2,500 feet from the closest residences, which is about twice as far as the closest residences north of the proposed expansion area. In other words, residents of Vallejo would enjoy a substantially greater level of noise protection than Napa residents, if this EIR is approved with the current noise mitigation measures and thresholds.

5. **Noise Monitoring Baseline Data Lack Context**

The long-term noise monitoring data presented in the EIR indicate that they were collected during "quarry operating hours" but do not indicate what quarry operations were actually occurring and when. Was mining occurring? Aggregate processing? Asphalt production? Loading/sales? Some combination or all of these activities? When were these activities occurring? At night or only during the day? Were loading/sales operations deliberately halted in the afternoon and recommenced in the evening as is apparently the practice as shown from some truck trip data? Where were these operations occurring? Absent this context, it's impossible to determine whether the baseline data represent a "best case," "typical," or "worst case" scenario. he noise analysis attributes much of the ambient noise on the north side of the quarry to traffic on Imola, but fails to make its case by not disclosing whether quarry operations were occurring, where, and at what level at the time the noise measurements were undertaken. The noise measurements also did not indicate that some readings were taken in the immediate vicinity of mowing at Skyline, which only occurs on a monthly basis or less.

6. **Night-time Noise Effects are Understated**

Susanne von Rosenberg has previously commented on the issue of night-time noise from quarry operations, including the issue of back-up alarms. The EIR states (p. 4.11-15) "Only in the absence of local traffic were quarry operations audible." However, that is precisely the conditions that occur on nights and weekends (as also appears to be demonstrated by the noise monitoring, which shows a distinct drop in night-time and weekend noise levels at the

long-term noise monitoring locations). The EIR further states (same page) that "Backup alarms were audible at times, but were not measurable above ambient levels." It is highly doubtful that the Illingworth & Rodkin noise monitoring staff were present at long-term noise monitoring locations 24/7, so one must assume they are referring to not being able to measure back-up alarm noise during the weekday working hours. Had they been present at night when quarry operations are occurring near the northern side of the State Blue Pit, they most certainly would have been able to hear (the frequently occurring) back-up alarms.

7. **<u>The Proposed Night-Time Noise Threshold is Too High</u>**

The proposed threshold for night-time noise is 45 dBA L50 at the closest residential receptors. However, noise monitoring data at the closest noise monitoring location to these residential receptors is generally below 40 dBA L50 (50 out of 54 night-time noise hours recorded), and below 35 dBA L50 close to half the time (21 out of 54 night-time noise hours recorded). As stated in the EIR, a noise increase of 5dBA is generally considered significant; thus allowing a night-time noise standard of 45 dBA L50, although strictly-speaking compliant with county noise standards, would in fact result in a significant impact. This impact is not disclosed in the document. Recirculation of the document's noise analysis is required.[1]

8. **<u>The Maximum Noise Level Used to Model Unmitigated Noise Levels is Too Low</u>**

The noise contours presented in Figure 4.11-34 are based on a single unidentified noise source. One assumes that it is based on the 80 dBA measured for aggregate mining activities as part of Illingworth & Rodkin's noise monitoring discussed in Item 5. However, a typical noise analysis in an EIR describes the types of equipment that may be used, then calculates a maximum noise level that might occur if all equipment is used simultaneously, and then describes attenuation. There is no such clear pathway in this document, and the reader is left wondering if the noise analysis in fact considered the possibility that multiple pieces of equipment could be used simultaneously near the property boundary.

9. **<u>Mitigation Monitoring and Reporting Program in the Final EIR is Inadequate</u>**

The MMRP measure merely calls for noise levels to be measured by Syar, and reported to the County. There is no detail on the required frequency, duration, and location of the proposed monitoring. Until and unless Syar demonstrates that it consistently meets specified noise levels, monitoring must be continuous, must occur at multiple locations, and all data should be automatically uploaded to a County website accessible to the general public. Furthermore, Syar's operations must be described relative to the noise monitoring data (i.e., unless we know whether Syar is operating, it is impossible to tell whether occasional exceedances, if any, are due to their operations or other activities, and Syar could therefore dispute any findings of exceedances).

10. **<u>Mitigation Measure 4.11-1 is Inadequate and Critical Parameters Are Not Defined</u>**

There are multiple problems with this mitigation measure.

The <u>first bullet</u> indicates that Syar shall "…not carry out mining activates between the hours of 10pm and 7am in mining areas to north and east of State Blue Pit where there are residences not shielded by intervening terrain..."

- What is the definition of shielded? – Does that mean wooded areas, does that mean

landmasses, what size of landmasses, how will this be adjusted over time as the proposed project reduces the natural terrain features? A standard definition of shielded areas is not offered, thus "shielded" is left to open to interpretation.

- At this time, exactly which areas are considered as shielded and which are not cannot be determined.
- Noise generation at the Snake Pit is not included.
- The EIR failed to even consider the effects echoing and channeling effects that are created by the canyon, ridges and hills of Skyline Park.

The second bullet states that "With the exception of blasting and removal of overburden…"

- Why is blasting included as an exception? Blasting is described in the EIR as being only potentially audible to residents and "…. audible sounds from blasting events would not exceed typical ambient maximum noise levels from other area noise sources" (page 4.11-20). The EIR did not conduct a noise study of blasting, thus these statements are speculation and not supported by data.

- Further these speculations do not indicate that this noise would be insignificant within Skyline Park. There is no basis provided in this report for removing blasting noise from the noise analysis.

- Removing blasting will not allow for in accurate representation of L50 noise levels.

The second bullet continues to discuss level of noise impacts at nearest sensitive receptors and proposes the quarry shall not exceed 50dBA L_{50} during 7am to 10pm and 45 dBA L_{50} from 10pm to 7am.

- Where are the exact locations of these receptors? The mitigation proposes not conducting mining activities within 2,500 feet of these receptors. Only vague references are made to locations near Napa State Hospital, NVC, and on some undisclosed location on Imola. There are receptors located within Skyline Park (campers, hikers, and day users) and at the schools and daycare center. Where are the receptors located on Imola? How much higher would noise levels be within the camping areas of the park? We do not have the data. The proposed day and night time dBA L50 criteria should be the levels recorded on the Syar property line and the maximum noise level should never exceed 60 dBA. Skyline Park should not be used as the noise buffer zone.
- Daytime 50 dBA L50 levels and night time 45 dBA L50 thresholds are also not appropriate criteria for noise in this project. Syar's own EIR shows that at monitoring location LT-2 (near skyline trail), the L50 Levels for daytime use are under 45dBA 95% of the time and are typically under 40 dBA at nighttime. So, at this is receptor site, setting day time levels at 50 dBA L50 and night time levels at 45 dBA L50 would represent a significant change from baseline (over 5 dBA) and create a significant impact as defined by the significance criterion established for noise ("A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project"). Please note this is an analysis conducted with data from the LT-2 site. If this proposed criterion is intended to be met somewhere on Imola (as it appears), then obviously Skyline Wilderness Park would be looking at noise levels

significantly higher, likely between 60 and 70 dBA range during day time hours.

Bullet 2, sub-bullet 2 provides the only mitigation offered for topsoil and overburden removal. This mitigation is entirely qualitative and unenforceable.

- What does "using the quietest equipment possible when removing topsoil and overburden" actually mean? Does that mean the quietest that Syar has on the Napa site? What efforts would be made to modify the equipment to reduce noise generation? How does Syar's equipment compare to the quietest equipment actually available in the market place today? There has been no analysis of noise for the machines that Syar plans on using. We can only reference their pollution ratings to get an idea of the age of their machinery and reference noise ratings from there. The Draft EIR, at the top of page 4.3-36, indicates that 39% of Syar's machines areTier 0, which means the were put into operation between 1988 to 1994 before regulatory standards for emissions were established, and 49% of their machines meet Tier 1 regulations. Tier 1 regulations for emissions were established from 1994 to 2001. Thus 88% of their machines were originally put into operation between 1988 and 2001. These are old machines, we have no idea of how quiet – or noisy — they are. To provide mitigation that is this vague ("using the quietest machines possible") without providing any data that allows the public to assess the quality of this mitigation is inappropriate and renders the mitigation invalid.

- Finally, the mitigation measure that states Syar will maintain the acoustical shielding for receivers north or east of the quarry so that existing terrain features provide the maximum amount of shielding for the longest time possible is not a viable long-term mitigation. What is the timetable for this mitigation, how long will the terrain features remain in place? What will happen after those features are gone? Maintaining the intervening terrain as long as possible is merely sound business practice, and does not rise to the standard of a mitigation measure, especially given the absence of any timetable for this "mitigation." The EIR does not provide any of this information and this cannot be considered as valid mitigation without detailed information and commitments.

No mitigation is offered for particularly objectionable noise such as back-up alarms. It should be noted that while Syar has stated typically operating hours, Susanne von Rosenberg's personal experience is that equipment begins to operate as much as 30 minutes before and continues to operate for up to 30 minutes after the allegedly operating hours (presumably to move equipment into and out of position). Back-up alarms are frequently heard during these time periods. It is not clear what actually constitutes "operations" as contemplated by the EIR. Do operations only refer to active quarrying, processing, and loading operations? Or is equipment movement considerd part of operations?

The DEIR comment response states:

> "With the exception of backup alarms, quarrying noise would not be considered to be tonal, repetitive (such as hammering or riveting), or contain music or speech. For this reason, no correction for the character of sound would be required in the assessment of noise generated by mining and the appropriate noise limit for such noise is 50 dBA

L50.

> Infrequent and short-duration sounds resulting from backup alarms could be considered to be tonal. However, the just audible sounds resulting from backup alarms would not be expected to approach the daytime or nighttime noise limits even when adjusted down five dBA to account for tonality (70 dBA Lmax daytime and 65 dBA Lmax nighttime) or ambient maximum instantaneous noise levels during daytime or nighttime periods."

However, the characterization of back-up alarms as "infrequent" and "just audible" is patently incorrect and cannot be determined from one week of noise monitoring (even if it were constantly attended by a human). While a record has not been established to document how many minutes out of every hour back-up alarms occur, it is surely typically more than 1 minute per hour at night, and frequently much more than that (5 minutes or more). Additional noise monitoring is required at night to characterize back-up alarms and other especially objectionable noises, as well as noisy activities. It should be noted that back-up alarms are specifically designed to be heard, and that even if the decibel volume may be lowered than permissible under County standards, the particularly objectionable quality of the noise must be considered. Noise mitigation (such as using strobe lights rather than back-up alarms at night) must be provided for back-up alarms.

Furthermore, it is not at all certain that quarry noise, which involves a lot of banging and rattling, is not tonal – if hammering is an example of tonal noise, much of the quarry certainly qualifies. This issue needs to be addressed further.

11. <u>Cumulative Noise Impacts are Understated</u>

The cumulative impact analysis does not consider two important factors contributing to cumulative noise in the neighborhood north of the quarry: 1) traffic volumes, and therefore traffic noise, have increased noticeably since Coombsville was formally identified as an appellation, and 2) the changes in airport operations, leading to larger aircraft and more flights have substantially increased noise levels in the neighborhood under certain wind conditions (the neighborhood is under the approach flight path for certain wind conditions).

12. <u>Cumulative Blasting Vibration Impacts Are Not Addressed</u>

Cumulative blasting noise impacts are discussed, but cumulative vibration effects to structures are not addressed. Are overpressure thresholds intended as one-time thresholds, or are they intended to be acceptable for repeat exposures over a long duration? At what point do structures weaken to the point of failure from repeat "acceptable" vibration exposures? Just because windows don't crack from a single blast event does not mean that there will not be cumulative effects to foundations and other structural elements from repeated shaking.

In closing, Syar's analysis of and mitigation proposed for noise and vibration are limited, inadequate and do not provide any conclusive data that the mitigations will result in a less than significant noise/vibration impact from this proposed expansion.

Cordially,
Eric Gallenkamp and Susanne von Rosenberg

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[1] Recirculation is required when important new information is identified; failure to adequately analyze and disclose a significant impact, and/or adding mitigation that would be required to address that impact would constitute such important new information.

Bay Area Ridge Trail Council

April 1, 2015

Donald Barrella
Napa County Department of Planning, Building & Environmental Services
Engineering and Conservation Division
1195 Third St. #210
Napa CA 94559

Subject: Syar Napa Quarry Expansion Project

Dear Mr. Barrella:

Thank you for the opportunity to comment on the subject project. The Bay Area Ridge Trail Council is a 501(c)(3) non-profit organization dedicated to completing a continuous 550-mile public trail on the ridge lines surrounding San Francisco Bay. The trail will connect open spaces and parklands, and afford stunning views and recreational opportunities for hikers, mountain bicyclists, and equestrians of all ages and abilities.

In addition to its bay-wide primary alignment, the Ridge Trail combines with "sister" trail systems such as the San Francisco Bay Trail and the Napa Valley Vine Trail to create smaller regional trail loops that are critical links for recreational and alternative-transportation opportunities. Connector trail segments in Skyline Wilderness Park that link to the Bay Trail and Vine Trail around Napa, Kennedy Park, and American Canyon may be adversely affected by the proposed project's expansion as it passes the Pasini property (APN 046-390-002).

The Ridge Trail is particularly concerned about potential adverse physical and aesthetic impacts to trail users and the entire Skyline Wilderness Park as a whole (impacts such as noise, dust, odors, habitat removal, oak woodland degradation). We therefore respectfully request that the knoll portion of the Pasini property be removed from the expansion project, thereby preserving a critical physical/geographic barrier between incompatible quarry and public access uses.

Please contact Ridge Trail staff if you'd like further information, and we will stay tuned as to the rescheduling of the public hearing.

Cordially,

Janet McBride

Janet McBride
Executive Director
Bay Area Ridge Trail Council

1007 General Kennedy Avenue, Suite 3, San Francisco, CA 94129-1405 • Phone 415-561-2595 • www.RidgeTrail.org • info@RidgeTrail.org

3-23-15, Sandra Booth
2100 Seville Dr. Napa CA 94559, juniperbooth@hotmail.com

Dust Complaint Reported to the City of Napa, BAAQMD and submitted for the Syar EIR Record

Syar Napa Quarry Fugitive Mining Dust in our Neighborhoods

We bought our home in the southeast quadrant of the City of Napa in 1989. We did not know that Napa Quarry located near our home was mining the same way mining had been done since the turn of the century before homes, schools or businesses existed near it---mining in a way that did not properly mitigate for all the dust that was created. It was not known back then that mining dust is a real health threat.

There were many things we did not know in 1989 about Syar's Napa Quarry that we do know now. I always wondered about all the dust we were experiencing in our neighborhood. We have lived near vineyards before and never experienced agricultural dust compared to anything like this dust. We have also learned that mining dust is not like agricultural dust and the difference is mining dust produces man-made respirable, micron-sized and fractions of a micron sized crystalline silica particles. Newest findings confirm it causes cancer and other bad health affects. But we didn't know that then. We went about our lives and didn't ask ourselves if there was anything we should be doing about it.

Then in 2005, we started walking the Napa River Trail and by 2006 we were walking there two or three times a week during Syar Napa Quarry times of operation. On the days during the week, we routinely noticed clouds of dust in the direction of the eastern hills. And in 2009, because we live close to the Quarry, we got the County's notice about Syar's request to extend its permit. That is when we realized it was Napa Quarry creating all the dust we saw when we were out on our Napa River Trail walks. So, we started looking into it.

We saw Napa Quarry was either not mitigating the mining dust or doing so little that it was useless, especially when we saw trucks going way too fast up and down the long unpaved switchbacks kicking up dust hundreds of feet into the air, nothing you would ever see in a vineyard. We took our camera with us sometimes on our walks. Steve Booth called BAAQMD and spoke with a gentleman there who told Steve that what he described was a violation of Syar Napa Quarry's operating permit.

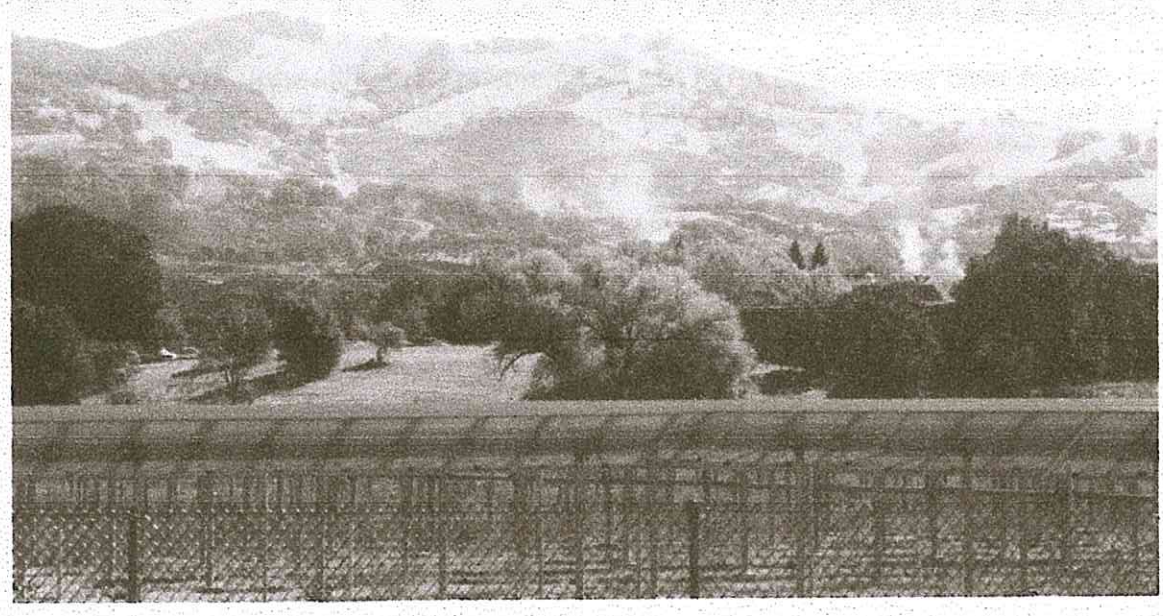
We now realize that the public should report sightings of dust from the Napa Quarry as well as excessive noise, vibrations, and odors from the asphalt plants, or any other nuisances. Mining dust rises up and is blown by the prevailing winds into our neighborhoods regularly, where thousands of people live and work just north of the Syar Napa Quarry.

From 2009 to the present the County of Napa has been working on an EIR as part of the mining permit process required by CEQA. CEQA encourages citizens to participate in this process. During this process time we have observed that Syar Napa Quarry has not, in good faith, attempted to control its dust even after the problem has been brought to its attention and there still aren't mitigation practices being implemented to control dust any better in April 2006 clear through to January 2015. Steven Booth and I have been eyewitnesses all this time during our walks on the Napa River Trail, which is about one mile from where all the dust is generated.

It is totally inappropriate for this quarry to create huge amounts of air born dust and allow it to routinely blow off its property over our Napa City neighborhoods and Skyline Park. And it is purely negligent that the people in our southeastern neighborhoods continue to experience this disregard for our health. Self-monitoring by Syar has been the same as going un-monitored and unregulated and without any consequences to the operation of this quarry for its years of bad neighbor behavior. Syar's employees have obviously not been properly trained.

The City and the County are charged with the safety and health of its citizens. The Syar EIR does not have any language in it to insure the protection of the City, the County or the people from the intolerable, fugitive mining dust problem. The County Planners and Supervisors and BAAQMD goal to protect comes first.

Below: Image of Syar's mining dust fills the sky and clouds up all of the view of hills with dust in this photo taken from the Napa River Trail by S.J. Booth, 2009.



Another aspect to this is that the area has been mined for a long time and Syar has continued to expand the acreage of surface area that resembles desert covered with small particles down to the very small respirable dust size particles that gets blown off the bare, grainy surfaces of the quarry in the prevailing south wind and into the neighborhoods whether the mine is in operation or not. This multiplies the exposure of our population to greater potential of contracting harmful chronic conditions and diseases including lung and kidney cancer from the mining dust that is continually blown from the higher elevation of the mine into the lower elevation of our Napa neighborhoods, and thereby reducing life expectancy for many. See recent OSHA studies and others on respirable silica.

As an eyewitness I can definitively say the Syar EIR overstates the mitigations and understate the pollution coming off the Napa Quarry property. And our unique situation of the Napa Quarry being adjacent to the City of Napa, where thousands of people are affected, has never been tested or monitored on the perimeters of the mine nor in our neighborhoods. CEQA says that you err on the side of health and safety and when it is a health issue that has been witnessed, identified and untested, maximum best practices have to be put in place to protect our thousands of residents and our thousands of visitors. I would add that redesigning and upgrading all aspects including all vehicles used at the Syar Napa Quarry is a must to help mitigate the problem.

In looking at the big picture, what would good planning look like, and why do we need the Napa Quarry anymore when Syar Lake Herman Quarry is so close and available to cover the needs of the south Napa Valley, and BoDean's Mark West Quarry covers the north Napa Valley? Reducing Syar Napa Quarry's area of mining would be appropriate and help reduce the dust volume problem, while expansion would be totally inappropriate. We have been told by an ever growing number of Napa professionals that use aggregate that the aggregate from both Lake Herman and Mark West is reliably better than Napa Quarry's aggregate.

The intolerable, unhealthy dust problem has got to be tackled and Syar Napa Quarry's infringement of our air space in the City and County of Napa has got to stop.

Sincerely,

Sandra Booth

Sandra Booth

3-23-15, Sandra Booth
2100 Seville Dr. Napa CA 94559, juniperbooth@hotmail.com

Amended 5-1-15 Dust Complaint Reported to the City of Napa, BAAQMD and submitted for the Syar EIR Record

Syar Napa Quarry Fugitive Mining Dust in our Neighborhoods

We bought our home in the southeast quadrant of the City of Napa in1989. We did not know that a quarry was located nearby, out of sight. We now know mining dust is a health risk and the few mitigation practices at Syar Napa Quarry are not stopping respirable silica dust from entering our neighborhood air space and exposing the people in our neighborhood to this health threat involuntarily.

I had always wondered where all the dust we were experiencing in our neighborhood was coming from. We have since learned that mining dust is not like agricultural dust and the difference is mining dust produces man-made respirable, micron-sized and smaller crystalline silica particles. Newest findings confirm it causes cancer and other serious health affects. But we didn't know that then. We went about our lives and didn't ask ourselves if there was anything we should be doing about it.

In 2005, we started walking along the Napa River Trail and by 2006 we were walking there two or three times a week. On the days of the week when Syar Napa Quarry was in operation, we routinely noticed clouds of dust in the direction of the eastern hills being blown to the north. And in 2009, because we live close to the Quarry, we received the County's notice about Syar's request to expand and extend its permit. That is when we became very concerned and realized the extent of the health hazard Syar Quarry posed to our residential area and the greater Napa region.

We saw Napa Quarry was either not mitigating the mining dust or doing so little that it was useless, especially when we saw truck after truck going way too fast up and down the long unpaved roads kicking up dust hundreds of feet into the air. Occasionally, we took our camera with us on our walks and took some photos of the dust being created by Syar Quarry. In speaking with a gentleman from the Bay Area Air Quality Management District (BAAQMD), we learned the dust we witnessed leaving the boundaries of the quarry property was a violation of Syar Napa Quarry's operating permit. We have observed these violations in excess of 150 occasions while on our walks along the river.

Daily, when Syar's open-pit surface mine is operating, mining dust rises up into the air and is carried by the prevailing winds over areas where thousands of people live and work and where tourists visit: residential neighborhoods, Napa State Hospital, the Napa County Office of Education, hotels and resorts, schools, businesses, Napa Valley College, Cakebread Vineyards and Skyline Wilderness Park.

Syar Napa Quarry's pollution and bad practices in such close proximity to a human population is intolerable and must be corrected. We have learned complaints should be filed using the BAAQMD website at www.baaqmd.gov , or call the complaint number at 800-334-6367, or write: BAAQMD Headquarters, 939 Ellis St., San Francisco CA 94109 Attn: Enforcement Division. Request how to send in your photos and/or videos. BAAQMD is a complaint driven agency and is required by law to act on complaints. They need to hear from us. We have learned that the public should report sightings of dust from the Napa Quarry as well as excessive noise, vibrations and odors from the asphalt plants, or any other nuisances.

Before 2009 to the present, the County of Napa has been working on an Environmental Impact Report (EIR) as part of the mining permit process required by CEQA, the California Environmental Quality Act. CEQA encourages citizens to participate in this process. During the time this CEQA process has been going on, we have observed that Syar Napa Quarry has not, in good faith, attempted to control its dust even after serious, avoidable problems have been brought to their attention. While on our walks on the Napa River Trail we have been eyewitnesses to Syar's dust violations from 2006 to the present. Syar continues to create fugitive dust in violation of its operating permit.

In the EIR, Napa County *has left out* available strict mitigation and monitoring required of other mines nearby by other counties for control of the mining dust *routinely blown* into our Napa City neighborhoods and Skyline Park. The County has not fulfilled its oversight responsibilities in this EIR process. And it is purely negligent of our County to unfairly discriminate against the southeastern neighborhoods by continuing to disregard our health and safety and our right to breathe clean air.

Syar's interest as a private business is in making money from the Quarry and doesn't want to acknowledge that it's pollution is a problem. The current equipment and operating practices at Syar Napa Quarry are out-dated and dangerous for our community's health. Syar Napa Quarry has not applied the updates available in infrastructure and technology that a responsible corporation would have implemented over the course of the years to increase efficiency and reduce pollution, including green house gas emissions.

Napa County is the lead agency charged with insuring safety and health and good management of our natural resource. The Syar EIR is missing that required language. The County Planners and Supervisors must pursue the goal to protect, first, the health of our citizens and, secondly, protect our environment and conserve our natural resources and require reduction in greenhouse gases. Syar Industries, Inc., undoubtedly, is the worst single polluter in the Napa Valley. We need to see stiff measures written into this permit to change their behavior and protect ourselves from their abuse.

Syar Napa Quarry was given a permit to operate for 30 years, starting in 1989, with no explicit end date. The lack of a specified end date is the fault of the County. Essentially, the Quarry has been operating for 6 years without a permit, without upgrading oversight or mitigation of its pollution and practices.

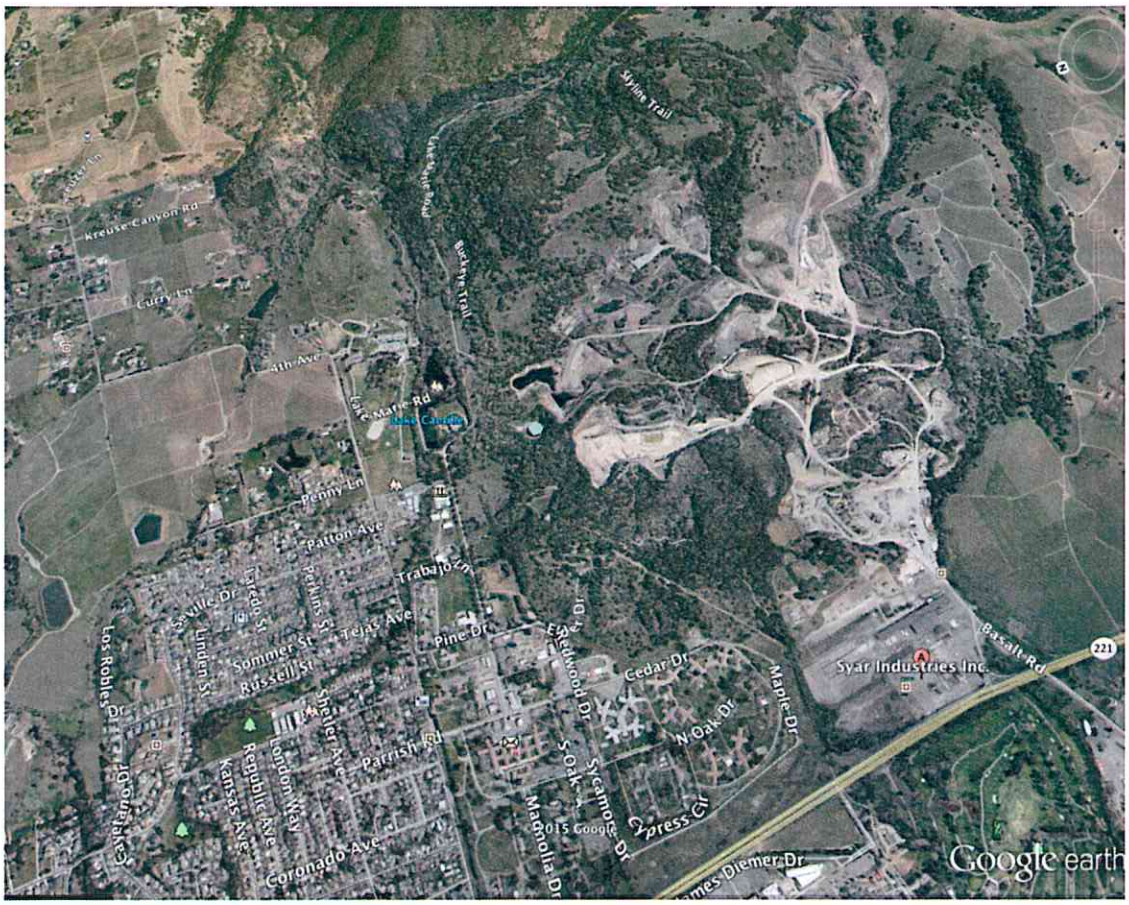
Above: An image of a typical day of operation showing Syar's mining dust as it escapes into the air in violation of Syar's operating permit. Photo taken from the Napa River Trail by S.J. Booth, 2009.

Our Napa Valley is a small, closed valley; the dust concentrates and stays suspended for weeks. We really need to find out through *local* testing if the concentration of respirable silica is below permissible levels per cubic meter. Syar EIR testing used a controlled test study done at another location where the silica content of the rock processed is not representative of the rock processed or the conditions present locally at the Napa Quarry.

As an eyewitness I can definitively say the Syar EIR overstates its mitigation and understates the pollution coming off the Napa Quarry property. And our unfortunate situation of the Napa Quarry being adjacent to the City of Napa, where thousands of people are affected, has never been tested nor monitored on the perimeters of the mine nor in our neighborhoods. CEQA says that one should err on the side of health and safety especially when it is a health issue. And this is a problem that has been witnessed and identified. It is essential that mitigation using maximum best available technology and practices is put in place along with

monitoring and compliance. The County must require Syar to upgrade all aspects of its operation and replace all of its old tier 0 and tier 1 vehicles; this is something that already should have happened. Also, all vehicles are to be driven at reduced speeds to mitigate the dust problem. The rule must be if dust is visible, reduce speed until visible dust is not present. Or, stop driving until dust control (water or chemical suppressant) is applied.

Another aspect poorly addressed is that the Quarry has been mined for 30 years by Syar with very little reclamation and Syar has continued to enlarge the area of surface mining with vast exposed areas. Currently, approximately 500 acres are bare, dusty ground. See aerial view below:



This image shows how close Syar Napa Quarry is located to the human population.

Dust gets blown off the bare, dusty surfaces of the Quarry into the neighborhoods whether the mine is in operation or not. This additional source of uncontrolled dust multiplies the exposure to our population increasing respiratory infections, harmful chronic respiratory conditions and diseases including lung and kidney cancer. Sensitive groups are at higher risk. It is important to realize, the

mining dust is blown from a higher elevation onto the residential areas, schools and businesses positioned at a lower elevation.

This intolerable, unhealthy dust problem - being denied by some - but which truly exists has got to be eliminated. Syar Napa Quarry's infringement of our air space in the City and County of Napa has got to end. And, the proposed expansion of the Quarry is absolutely unnecessary and must be denied.

Sincerely,

Sandra Booth

ATTACHMENT D

MITIGATION MEASURES

~~A)~~I. AIR QUALITY

A. Mitigation Measure 4.3-2a: Reduce NOx: Any time production of 810,363 tons (i.e. the Baseline Condition) of Aggregate or Aggregate-related Materials has been achieved within the previous 12-month period, the ~~Applicant~~ Permittee shall demonstrate ~~emissions reductions necessary to ensure~~that NOx emissions are less than 10 tons per year.~~the significance threshold by one or more of the following methods:~~

~~1.~~ To document operational emissions the Permittee shall ~~P~~prepare a Horsepower-Hour Log ("Log") of monthly horsepower-hours for offroad vehicles operated within the previous 12-month period. The Log shall include the rolling 12-month total horsepower-hours. Low use equipment operated less than 20 hours per year ~~is~~ shall be excluded. The Log shall sum the horsepower-hours for each tier of engine and calculate the percent of horsepower-hours operated by engines in each tier category. The Log shall be updated by the Permittee no less than semi-annually (i.e. every six months) or with greater frequency as necessary to ensure compliance with this mitigation measure.

The Permittee shall reduce NOx emissions by one or more of the following methods:

1. Baseline conditions are established at 810,363 tons with a fleet mix of 39% Tier 0, 49% Tier 1, 10% Tier 2 and 2% Tier 3. The following tiered approach shall be followed:
   a) Production up to 945,000 tons per year shall be allowed upon continued demonstration that 12% of horsepower-hours operated are Tier 2 or better.
   b) Production up to 1,100,000 tons per year shall be allowed upon continued demonstration that 44% of the horsepower-hours are Tier 2 or better.
   c) Production up to 1,300,000 tons per year shall be allowed upon continued demonstration that 5% of horsepower-hours are Tier 3 or better and 72% of the horsepower-hours are Tier 2 or better.
2. Reduce NOx from rail transport by using a locomotive with a Tier 0 or better engine.
3. Reduce on- and/or off-site emissions by some other approved means. On-site reductions may include, but are not limited to, source controls at the asphalt plants, electrifying processes that require offroad equipment (such as automated loadout conveyor systems to reduce haul truck emissions), or using alternate fuels such as biodiesel or electric motors. Off-site may include purchasing offsets. The purchase of any offsets shall be real, surplus, permanent, quantifiable, and enforceable.
4. The effectiveness of this measure shall be demonstrated to the County by submittal of an Emissions Calculations report prepared by a qualified professional (at the Permittee's expense). Both the Log and Emissions Calculations report shall be submitted to the County for review semi-annually and in the Annual Compliance Report required by Condition of Approval #2L, or as requested by the County to demonstrate compliance. If the County finds that operations have not achieved the required reductions, the Permittee shall immediately scale

back production to the limits identified above until required reductions have been achieved. Reduced production levels that result in emission compliance shall be maintained as long as necessary until the Permittee provides documentation demonstrating that increased production levels would result in compliant emissions. As necessary ~~T~~the ~~c~~County will either hire a consultant (at the Permittee's expense) or enlist the BAAQMD to assess and determine ~~initial~~ compliance ~~and determine whether the complexity of the task requires further outside assistance in future years~~.

~~The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I of the DEIR. For instance, control of NOx by installation of a VDECS on an engine or several engines may be sufficient to offset necessary reductions from overall fleet.~~

~~The Log shall be updated upon request by the County and as necessary for the Applicant to ensure compliance with this mitigation, but not less than semi-annually. If the County finds that operations have not achieved the required reductions, the Applicant shall scale back production as necessary until reductions are achieved.~~

B. Mitigation Measure 4.3-2b: Reduce Fugitive Dust: Any time production of 810,363 tons (i.e. the Baseline condition) has been achieved within the previous 12-month period, the ~~Applicant~~ Permittee shall demonstrate ~~emissions reductions necessary to ensure~~that PM_{10} and $PM_{2.5}$ emissions from ~~the proposed Project (i.e. expansion of the~~ Quarry operations~~)~~ are less than 15 tons per year for PM_{10} and 10 tons per year for $PM_{2.5}$. If the County finds that fugitive dust emissions from Quarry operations have exceeded identified emission levels as detailed below~~not achieved the required reductions~~, production shall be scaled back immediately to the levels identified in Mitigation Measure 4.3-2a(1) ~~as necessary~~ until required reductions are achieved and PM emissions do not exceed 15 tons per year for PM_{10} and 10 tons per year for $PM_{2.5}$. Reduced production levels that result in emission compliance shall be maintained as long as necessary until the Permittee provides documentation demonstrating that increased production levels would result in compliant emissions. The Permittee shall ~~R~~reduce~~tion of~~ fugitive dust ~~shall be achieved~~ through compliance with Item 1, and one or more of the methods listed in 2 through 5, below:

1. ~~Applicant~~ The Permittee shall clean internal paved roads daily using a particulate matter efficient street sweeper.
2. ~~Applicant~~ The Permittee shall maintain chemical dust suppressant, equivalent dust suppressant that achieves similar control, on the unpaved road surfaces as described in the manufacturer's specifications. Materials used for chemical dust suppressant shall not violate State Water Quality Control Board standards. Materials accepted by the California Air Resources Board and the US EPA, and which meet State water quality standards shall be considered acceptable.
3. The Permittee ~~Applicant~~ shall apply water to blast sites where and when feasible prior to detonation.
4. The Permittee ~~Applicant~~ shall limit speeds on unpaved areas to less than 15 MPH.
5. The Permittee ~~Applicant~~ shall reduce on-site emissions by some other means (e.g. surface moisture content performance standard, watering frequency, installing or utilizing water

spray systems), or electrifying processes that require off-road equipment (such as automated load-out conveyor systems to reduce haul truck emissions). Stationary source emissions of particulates can be reduced by: installing baghouses to aggregate processing equipment; installing bags with higher removal efficiencies in existing baghouses (such as the asphalt plants); installing scrubbers; or, installing water spray systems.

6. Blasting ~~is~~ shall be prohibited ~~within 1,000 feet of vineyards~~ during high wind conditions. High wind conditions means when two-minute average~~instantaneous~~ wind speed exceeds 20~~25~~ miles per hour as measured using the methods described by South Coast Air Quality Management District in Attachment A to the Rule 403 ~~and the Rule 403~~Implementation Handbook.

The effectiveness of this measure shall be demonstrated to the County by submittal of an ~~e~~Emissions ~~c~~Calculations report that has been prepared by a qualified professional (at the expense of the Permittee). The Emissions Calculations report shall be submitted to the County for review in the Annual Compliance Report required by Condition of Approval #2L, or as requested by the County to demonstrate compliance. As necessary the County will either hire a consultant (at the operator's/permittee's expense) or enlist the BAAQMD to assess compliance~~similar to those in Appendix I of the DEIR~~.

C. Mitigation Measure 4.3-3: Reduce Health Risk. The Permittee~~Applicant~~ shall implement the following mitigations to reduce health risk at sensitive receptors:

~~2~~1. Using the ~~Horsepower-Hour~~ Log described in Mitigation Measure 4.3-2a~~A~~, the following tiered approach shall be followed:

a) Production up to 810,363 tons per year shall be allowed upon the Permittee's continued demonstration that 12% of horsepower-hours operated are Tier 2 or better.

b) Production up to 950,000 tons per year shall be allowed upon the Permittee's continued demonstration that that 44% of horsepower-hours operated are Tier 2 or better.

c) Production up to 1,100,000 tons per year shall be allowed upon the Permitttee's continued demonstration that 56% of horsepower-hours operated are Tier 2 or better.

d) Production up to 1,300,000 tons per year shall be allowed upon the Permitttee's continued demonstration that 5% of horsepower-hours operated are Tier 3 or better and 72% of horsepower-hours operated are Tier 2 or better.

~~a) Production up to 950,000 tons per year shall be allowed upon Applicant's continued demonstration that:~~

~~i. The total excavated from Blue and Grey Pits combined does not exceed Baseline amount of 45% of facility total and 12% of horsepower-hours operated are Tier 2 or better; or~~

~~ii. The total excavated from Blue and Grey Pits combined does not exceed 60% of facility total and 44% of horsepower-hours operated are Tier 2 or better.~~

~~b) Production up to 1,100,000 tons per year shall be allowed upon Applicant's continued demonstration that:~~

~~i. The total excavated from Blue and Grey Pits combined does not exceed Baseline amount of 45% of facility total and 12% of horsepower-hours operated are Tier 2 or better; or~~

~~ii. The total excavated from Blue and Grey Pits combined does not exceed 60% of facility total and 56% of horsepower-hours operated are Tier 2 or better.~~

2~~3~~. Reduce on-site emissions by some other means such as~~. For instance~~, control of particulates by installation of verified diesel emissions control systems~~a~~ (VDECS) on ~~an engine~~

~~or several~~ engines that operate within the ~~Blue and/or Grey Pits~~Quarry ~~may be sufficient~~ to ~~offset necessary~~ reduc~~etions~~ emissions from the overall fleet. VDECS are defined by the California Air Resources Board and listed on the CARB website.

The effectiveness of this measure shall be demonstrated to the County by submittal of Emissions Calculations report prepared by a qualified professional (at the Permittee's expense) in a manner that is satisfactory to the County for such a review. The emissions calculation report shall be submitted to the County for review semi-annually and in the Annual Compliance Report required by Condition of Approval #2L, or as necessary to demonstrate compliance. As necessary the County will either hire a consultant (at the Permittee's expense) or enlist the BAAQMD to assess compliance.

~~If the County finds that operations are not consistent with the measures above, then the Applicant shall scale back production until compliance is achieved. The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I of the DEIR.~~

~~B)~~II. BIOLOGICAL RESOURCES

A. Mitigation Measure 4.4-1a. Holly-leaf ceanothus (*Ceanothus purpereus)* impact reduction.~~Implementation of the Mitigation Measure 4.4-1 by the Applicant would reduce this biological impact to a less-than-significant level by providing avoidance where feasible, requiring replacement of individual plants and enhancement of habitat, establishing success criteria, and monitoring to ensure success criteria are achieved as follows:~~

~~a)~~1. Avoidance and Preservation. Prior to initiation of any vegetation or overburden removal, earthmoving or earth-disturbing activities, or quarrying or mining activities occurring in any undisturbed areas (including any expansion areas), the Permittee shall revise the Mining and Reclamation Plan (at the permittee's expense) to clearly delineate and show the 5-acre "Ceonothus Preservation and Replanting Area" required by this measure. The revised plan shall be submitted to the Engineering and Conservation Division for review and concurrence to demonstrate compliance with this measure. Avoidance and Preservation areas shall also be established and identified in the field through the placement of signage that clearly identifies the area(s) to be avoided so that accidental encroachment or removal of vegetation does not occur. Sign design and locations shall be included in the revised the Mining and Reclamation Plan. ~~Through designation of a 5-acre "Ceonothus Preservation and Replanting" area within chamise chaparral habitat previously slated to be designated as "Processing Area" (see Figure 4.4-4 of the DEIR), direct and indirect impacts to approximately 42% of the mapped ceanothus plants shall be avoided (i.e., 23 of the 55 plants will be preserved). This area shall also be utilized for mitigation for potential direct and indirect impacts for the balance of up to 32 plants. There are several plants that are not expected to be directly impacted, as they are within avoidance areas; however, they are located on the edge of the existing mine and/or expansion area. Their close proximity to the future mine face could result in indirect impact to these plants. Accordingly, these plants are included in the impact calculation and mitigation is identified for them at the same ratio as direct impacts.~~

~~b)~~2. Plant Replacement. Each holly-leaf ceanothus plant shall be replaced at a 3:1 ratio within the 5-acre "Ceonothus Preservation and Replanting" area for the impact~~s~~ to approximately 32 plants. ~~A total of~~No less than 96 individual holly-leaved ceanothus plants shall be planted to provide replacement and compensation for direct and potential indirect impacts. ~~Since these individual plants are scattered within chamise chaparral area as well as a small area of coast live oak, and with a plant width of approximately 3.5 feet each, the occupied habitat of these 32 individual plants is estimated to be approximately 392 square feet. At a minimum, the existing habitat is estimated to be double the occupied area, allowing for spacing between individual plants (therefore, total of approximately 784 square feet, or 0.02 acres).~~

~~c)~~3. Planting Plan. A qualified biologist shall prepare a Planting Plan for holly-leaf ceanothus for review and approval by the Napa County PBES Department 12 months prior to any vegetation or overburden removal, earthmoving or earth-disturbing activities, or quarrying or mining activities occurring in any undisturbed areas (including any expansion area) where Ceonothus plants would be removed~~and replanting~~. The Planting Plan shall specify plant sizes and protection measures identified in item #4 below, methods of plant propagation/procurement (i.e., plant salvage, propagation plan, etc.), habitat enhancement of replanted area, appropriate planting densities, watering protocol (duration/quantity/schedule), ~~and~~ maintenance requirements, and monitoring and success criteria identified in Item #5 below. The Planting Plan also shall address avoidance and conservation methods (i.e., fencing, etc.) for existing individual plants that are avoided by the mining footprint and designated processing area, or that occur in the "Ceonothus Preservation and Replanting Area".

~~d)~~4. Additional Planting Specifications. Replacement plants shall be from one-gallon size or larger containers and shall be planted in the fall in clusters of 3 to 20 individual plants, based on details provided in the Planting Plan. Mesh shelters or other equally effective measures shall be installed around the plants to protect them from rodent damage and deer browsing. Plants shall be mulched to enhance moisture retention and discourage weeds during the plant establishment period, and the area immediately surrounding the plants shall be weeded to reduce competition.

~~e)~~5. Monitoring and Success Criteria. A qualified biologist shall monitor the enhanced habitat and plantings on an annual basis to ensure the replantings achieve a minimum of 80% success/survival rate after three years, and to ensure habitat conditions remain adequate to support target species. If the success criterion has not been met after three years, supplemental plantings shall be made at the direction of a qualified biologist, and the plant establishment period shall be extended for an additional two-year period, with additional annual monitoring events. The Permittee~~Applicant~~ shall submit documentation of monitoring to the County on an annual basis, in conjunction with the Annual Compliance Report required by Condition of Approval #2L, for a minimum of three years or until success criteria are achieved, including survival rates, photographs, and a description of any maintenance or other pertinent issues identified by the monitoring biologist. The monitoring report shall also include information to illustrate the condition and location of any failed plantings.

B. Mitigation Measure 4.4-1b: Special-status plant species protection. ~~Implementation of Mitigation Measure 4.4-1b would ensure that potential for impacts to changing populations of special-status plants (CRPR) are reduced to a less-than-significant level by requiring~~

1. The Permittee shall have a qualified biologist prepare (at the Permittee's expense) updated seasonally-appropriate plant surveys prior to initiation of any vegetation or overburden removal, earthmoving or earth-disturbing activities, ~~and/~~or ~~grading/~~ quarrying mining activities in undisturbed areas (including expansion areas) that contain potential habitat for special-status plant species. Since plant surveys are typically considered valid for a two- to three-year period, updated plant surveys ~~will~~ shall be conducted on a phased basis as necessary within areas anticipated for new mining and quarrying activities ~~expansion/disturbance within~~ no greater than three years prior to planned ground-disturbing activities.

2. If new or expanded California Native Plant Society (CNPS)~~CRPR~~ sensitive-listed plant species populations (i.e. List 1 or 2) are identified within areas planned for project ground vegetation-disturbing activities ~~within three years~~, a plant replacement plan shall~~will~~ be prepared by a qualified biologist. The plant replacement plan ~~will~~ shall specify a replant/replacement area, a 3:1 replacement ratio, methods of plant propagation/procurement (i.e., plant salvage if feasible, propagation plan, etc.), habitat enhancement of replanted area, planting densities, watering protocol (including duration~~/~~, quantity~~/~~ and schedule), planting schedule, protective measures such as mesh shelters or other equally effective measures (and/or fencing) to protect plant establishment from rodent damage or deer browsing, maintenance requirements, success criteria, and monitoring to ensure success criteria are achieved. The plant replacement plan ~~will~~ shall be prepared for and submitted for approval by CDFW and the county prior to conducting ~~expansion~~ any mining or quarrying activities within the area of identified plant population(s).

3. A qualified biologist shall monitor the enhanced habitat and plantings on an annual basis to ensure the replantings achieve a minimum of 80 percent success/survival rate after three years, and to ensure habitat conditions remain adequate to support target species. If the success criterion has not been met after three years, supplemental plantings shall be made at the direction of a qualified biologist, and the plant establishment period shall be extended for an additional two-year period, with additional annual monitoring events. The ~~Applicant~~ Permittee shall submit documentation of monitoring to the ~~c~~County and CDFW on an annual basis for a minimum of three years or until success criteria are achieved, including survival rates, photographs, and description of any maintenance or other pertinent issues identified by the monitoring biologist. The monitoring report shall also include information to illustrate the condition and location of any failed plantings.

4. All surveys, plans, and reports required by this mitigation measure in shall also be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary to demonstrate compliance.

C. Mitigation Measure 4.4-2: American Badger protection measures. ~~Even though the species is unlikely to occur at or in the vicinity of the project site, as a precautionary measure, Mitigation Measure 4.4-2 addresses any potential direct or indirect impacts. Implementation of the following would reduce Impact 4.4-2 to a less-than-significant level:~~

~~a)~~1. The Permittee~~Applicant~~ shall retain a qualified biologist (at the Permittee's expense) to perform pre-construction surveys for American badger prior to initiation of ~~p~~Project activities including vegetation or overburden removal, earthmoving or earth-disturbing activities, or quarrying or mining activities occurring in any undisturbed areas (including any expansion areas) that occur in potential badger habitat (grassland and low density woodland areas with less than 2 trees per acre).

~~b)~~2. No more than two weeks before earthmoving activities begin within areas determined to be potential badger habitat (grassland and low density woodland with less than 2 trees per acre) and that have not previously been disturbed, a qualified biologist shall conduct a survey for burrows/dens and American badgers of onsite areas within 500 feet of new quarrying or earthmoving activities. Surveys shall be submitted to the County for review prior to the removal of vegetation or overburden, and earthmoving or earth-disturbing activities. The purpose of the survey will be to determine whether burrows/dens exist within the area considered for disturbance within that construction year. Surveys shall not be required for areas already disturbed and/or where there is not American badger habitat present.

~~c)~~3. If occupied burrows are found during pre-construction surveys, the biologist shall consult with CDFW and the County to determine whether the ~~p~~Project activities would adversely disrupt the breeding activity of the badger.

~~d)~~4. If the biologist determines that construction activities would disrupt breeding activity, the Permittee~~Applicant~~ shall ensure that occupied areas are avoided from March through August. Implementation of project activities within 500 feet of onsite occupied burrows during this time shall be delayed until a qualified biologist can determine that juvenile badgers are self-sufficient enough to move from their natal burrow and avoid project activities. Documentation shall be provided to the County Department of Planning, Building and Environmental Services.

5. All surveys, plans, and reports required by this mitigation measure in shall also be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary to demonstrate compliance.

D. Mitigation Measure 4.4-3: Special-status bird species protection. ~~Consistent with and pursuant to California Department of Fish and Game Code Sections 3503 and 3503.5,~~ The Permittee shall not disturb active bird nests ~~shall not be disturbed~~ without a permit or other authorization from USFWS and/or CDFW. Prior to commencement of vegetation or overburden removal, earthmoving or earth-disturbing activities, or quarrying activities within any undisturbed areas, the Permittee~~Applicant~~ shall retain a qualified biologist to conduct pre-construction surveys for raptors and passerine birds ~~prior to vegetation removal conducted~~for Project activities occurring during ~~potential~~ the nesting season (i.e. February 1st through August 31st).

~~a)~~1. For vegetation or overburden removal, earthmoving, earth-disturbing activities, or quarrying activities within previously undisturbed areas (including areas of grassland, shrubs, and trees) occurring between February 1st through August 31st, a qualified wildlife biologist

shall conduct preconstruction surveys for passerine bird and raptor nests (including off-site areas with public access, excluding off-site private property) as follows: i) for areas that are not adjacent to lands within the Skyline Wilderness Park Combining District (NCC Chapter 18.90) surveys ~~will~~ shall be conducted within a 300 foot radius of earth-disturbing activities; and, ii) for areas that are adjacent to Skyline Wilderness Park designated lands surveys shall~~will~~ be conducted within a 0.25 mile radius of earth-disturbing activities. Because raptor nests may be difficult to identify during the egg laying, incubation, or chick brooding periods (late April to early June), an early season survey is ~~recommended~~ required if ~~p~~Project activity areas are known prior to late April. The biologist shall conduct the preconstruction surveys within the 14-day period prior to vegetation removal and ground-disturbing activities (~~it is recommended that~~ a minimum of three separate days of surveys shall occur within that 14-day period).

~~b)~~2. In the event that nesting passerine birds and/or raptors are found, the biologist shall consult with CDFW and the County to obtain approval for specific nest-protection buffers as appropriate based on the species ~~found prior to commencement of ground and vegetation disturbing activities~~. Generally, a minimum 150-foot buffer is required around active passerine bird nests and a minimum 300-foot buffer is required around active raptor nests during the breeding and nesting season, or until it is determined by a qualified biologist that all young have fledged. Nest protection measures shall apply to both onsite and offsite active nests that are located within 300 feet of ~~p~~Project activities. These buffer zones may be modified in coordination with CDFW based on existing conditions at the ~~p~~Project site. Buffer zones shall be fenced with temporary construction fencing, which shall remain in place until the end of the breeding season or until young have fledged.

~~c)~~3. If ~~p~~Project-related work lapses for 15 days or longer during the breeding season, a qualified biologist shall conduct another bird and raptor preconstruction survey and consult with CDFW as set forth above in sections (a) and (b) before project work may be reinitiated.

4. All surveys, plans, and reports required by this mitigation measure in shall also be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary to demonstrate compliance, commencing one year from the date of approval of permit.

E. Mitigation Measure 4.4-5: Special-Status Bat Species protection and avoidance. Prior to commencement of any vegetation or overburden removal, or project or quarrying activities within any undisturbed areas ~~occurring between March 1 and August 31~~ that contain trees, the Permittee~~Applicant~~ shall implement, at the Permittee's~~Applicant's~~ expense, the following measures:

~~a)~~1. The Permittee~~Applicant~~ shall retain a qualified biologist to conduct a habitat assessment for special-status bat habitat within 14 days of ~~p~~Project initiation or tree removal.

~~b)~~2. If the habitat assessment identifies suitable special-status bat habitat and/or habitat trees, the biologist shall submit an avoidance plan for review and approval by the County, ~~and~~ who may consult with CDFW if determined to be necessary. The avoidance plan shall identify and evaluate the type of habitat present at the ~~p~~Project site and specify methods for habitat and/or habitat tree removal. Trees with cavities, crevices and deep bark fissures shall be avoided. Bat

habitat/tree removal shall occur in two phases conducted over two days under the supervision of a qualified biologist. In the afternoon on day one, limbs and branches of habitat trees without cavities, crevices and deep bark fissures would be removed by chainsaw. On day two, the entire tree can be removed.

3. All surveys, plans, and reports required by this mitigation measure in shall also be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary to demonstrate compliance, commencing one year from the date of approval of permit

~~**Mitigation Measure 4.4-6:** The Applicant shall retain a qualified professional biologist to conduct resource surveys for any future trail relocation areas that have not been previously surveyed as part of the planning process prior to construction. Surveys shall be conducted for special-status wildlife and plant species and habitats that may occur in the trail relocation area(s) and vicinity, and if any sensitive biological resource is identified, it shall be avoided. Trail relocation in areas not previously surveyed shall not occur unless alignments would completely avoid sensitive biological resources. If impacts to biological resources as a result of trail relocation cannot be avoided through project design, then alternate segment alignments shall be considered.~~

F. Mitigation Measure 4.4-7: Wetlands and riparian communities. ~~The overall goal of mitigation for impacts to wetlands and riparian communities is that no net loss occurs. Implementation of the following mitigation measure(s) would mitigate these potential impacts through the avoidance and preservation, creation, restoration, and/or enhancement, the implementation of best management practices (BMPs) to prevent and reduce potential impacts, and the development of a detailed mitigation and/or restoration plan to offset loss of these habitats that would monitor success and ensure that once mitigated or preserved, these habitats are appropriately protected from disturbance. The result of these efforts, in combination with compliance with the Clean Water Act (Sections 404 and 401), the state Fish and Game Code, NPDES regulations, and local standards and policies, would be either avoidance of existing features, or on or offsite mitigation as permitted by the regulatory agencies. Implementation of these mitigation measures would reduce the impact to sensitive riparian habitats to a less-than-significant level.~~ To reduce potential wetland impacts, the Permittee~~Applicant~~ shall:

~~a)~~1. Prior to initiation of ~~p~~Project activities~~y~~ (i.e. vegetation and overburden removal within any undisturbed areas)that may affect the areas identified as C1 and C2 in the USACE-jurisdictional determination (USACE File Number 2009-00284N) through direct removal, the Permittee~~Applicant~~ shall obtain a Clean Water Act Section 404 permit from the USACE. If a 404 permit is obtained, then the Permittee~~Applicant~~ shall also obtain a water quality certification from the RWQCB under Clean Water Act Section 401. The Permittee~~Applicant~~ shall compensate for the loss of wetland habitat in these areas to ensure no net loss of habitat functions and values. If mitigation is determined by the County to~~Onsite mitigation may not~~ be infeasible due to lack of ~~because there are no accessible remaining undisturbed~~ areas suitable for wetland creation, the County may approve a suitable offsite location(s) ~~that are not already planned for project activities~~. A detailed wetland mitigation plan (subject to approval by the USACE) to provide compensation wetlands shall be required that includes a 5-year monitoring program and reporting requirements, responsibilities, performance success criteria, and contingency

requirements. At the end of each monitoring year, an annual report shall be submitted to the USACE, RWQCB, and the Napa County Engineering and Conservation Division. The report shall document the hydrological and vegetative conditions of the mitigation wetlands, and shall recommend remedial measures as necessary to correct deficiencies. The compensation wetlands shall be located within the same watershed as project impacts. In lieu of creating compensation wetlands, the PermitteeApplicant may purchase mitigation credits from an approved mitigation bank at a ratio of 2:1, or as otherwise approved by the USACE.

b)2. Prior to initiation of pProject activity (including vegetation and overburden removal) that may affect sensitive wetland habitats in non-USACE-jurisdictional areas, the PermitteeApplicant shall obtain permits as may be required by the RWQCB, CDFW, and Napa the County, and shall replace wet areas, at a 2:1 ratio or as directed by the RWQCB, CDFW, and/or Napa the County, to ensure no net loss of habitat functions and values. If onsite mitigation is determined by the County toOnsite mitigation may not be infeasible due to lack of because there are no accessible remaining undisturbed areas suitable for wetland creation that are not already planned for project activities,. Aa detailed wetland mitigation plan to provide compensation wetlands shall be required (subject to approval by applicable state and/or local jurisdictions) that includes a 5- year monitoring program and reporting requirements, responsibilities, performance success criteria, and contingency requirements. At the end of each monitoring year, an annual report shall be submitted to the regulatory agencies. The report shall document the hydrological and vegetative conditions of the mitigation wetlands, and shall recommend remedial measures as necessary to correct deficiencies. The compensation wetlands shall be located within the same watersheds (i.e. the Arroyo Creek or Cayetano Creek watersheds/drainages) as pProject impacts or other suitable areas as determined by Napa County.

c)3. As part of the proposed Project, a 50-foot setback is included from the main stem of Arroyo Creek for new pProject elements beyond the extent of existing roads and development, thus avoiding impact to the riparian corridor along the main stem Arroyo Creek. The 50-foot setback will be determined by mapping the Ordinary High Water Mark (OHWM) of the main stem (below 300-foot elevation) of Arroyo Creek on the pProject site. The OHWM and 50-foot setback shall be flagged in the field for review and approval by state and/or local jurisdictions.

In two small areas, located in the southwest corner of the property south of the former Grey Rock Plant (as shown on DEIR Figure 4.4- 4), the 50-foot setback shall be increased to approximately 60 feet to avoid two small riparian areas (0.07 acres) that extend beyond the 50-foot setback (see DEIR Figure 4.4- 4). The drip-line of this additional vegetation shall be flagged in the field for review and approval by state and/or local jurisdictions.

4. All surveys, plans, and reports required by this mitigation measure in shall also be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary to demonstrate compliance, commencing one year from the date of approval of permit.

G. Mitigation Measure 4.4-8: Invasive Species Management within Preservation /Replanting Areas.

1. ~~At t~~The Permittee, at their~~Applicant's~~ expense, ~~the Applicant~~ shall retain a qualified biologist to prepare an Invasive Species Management Plan (ISMP) for protected native perennial grassland areas (Purple Needlegrass Series) and replanted mitigation areas (i.e., the Ceonothus Preservation~~-~~/Replanting Area~~"~~ described by Mitigation Measure 4.4-1). The ISMP shall be submitted to the County Department of Planning, Building and Environmental Services for review and approval within 12 months of the effective date of this permit. The ISMP shall target invasive plant species either existing on the ~~p~~Project site or that could colonize in the future, and shall specify methods of early detection, management, and control of invasive plant species to improve and protect onsite habitats.

The ISMP shall provide a list of target invasive species to be managed at the site with Cal- IPC rating of moderate or higher for the Napa and Mt. George quadrangles and specify success criteria for managed invasive species. Star thistle, medusa head grass, and french broom are known to occur on a nearby vineyard property and shall be included on the list of target invasive species identified in the ISMP.

2. The ISMP shall be implemented by the Permittee~~Applicant~~ within 12 months of approval of the ISMP by PBES to control infestations of invasive species onsite as needed to minimize impacts of such species on remaining protected sensitive habitat areas. Targeted invasive species identified in the ISMP may be managed by handpulling, local application of herbicide, and/or light grazing, or other techniques recommended by the ISMP. Guidance through managed grazing helps reduce fire fuel loads and, if timed properly, can favor the maintenance and expansion of native plant species. Selective control of invasive species shall be employed using best-management practices (BMPs) to minimize soil erosion, water contamination, or non-target herbicide effects that could occur during implementation of invasive species management techniques.

3. All surveys, plans, and reports required by this mitigation measure in shall also be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary to demonstrate compliance, commencing one year from the date of approval of permit.

H. Mitigation Measure 4.4-9: Oak woodland avoidance, replacement, and preservation. The ~~Applicant~~ Permittee shall, at the ~~Applicant's~~ Permittee's expense, compensate for direct and indirect impacts to approximately ~~130~~ 121 acres of native oak woodlands at a total mitigation ratio of 2:1, including combination of onsite avoidance and preservation (see DEIR Figure 4.4-3 exclusion areas and 50 foot buffer zone along property lines), onsite replacement (see DEIR Figure 4.4-4), and offsite as summarized in the table below.

All documentation associated with on and off-site oak woodland mitigation shall be submitted to the County in accordance with the timeframes identified herein and shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary at the request of the County to demonstrate compliance.

Summary of Proposed Oak Avoidance, Replacement, and Preservation

Row	Type	Acres	Notes
A	Coast Live Oaks Impact	~~130~~121	~~117.3~~108.3 direct plus 12.4 indirect for root impacts
B	2:1 Ratio Mitigation Package Total	~~259~~242	
C	Avoidance and Preservation (Onsite)	~~136~~145	Buffer and exclusion areas onsite
D	Net Additional Mitigation Required	~~123~~97	Rows B-C
E	Replacement and Preservation (Onsite)	12	Onsite plantings adjacent to existing oaks
F	Additional Replacement and/or Preservation	~~111~~85	Offsite
G	Total Replacement and Preservation	~~123~~97	Rows E+F

Project mitigation shall be accomplished through a combination of onsite avoidance and ~~/~~preservation, partial onsite replacement and~~/~~ preservation, and additional off-site preservation (as necessary) in accordance with a plan prepared by a qualified biologist. ~~The additional preservation shall be achieved through onsite or offsite mitigation, in-lieu fee payment to the Oak Woodlands Conservation Fund or through other mitigation activities consistent with Public Resources Code section 21083.4 as developed and approved by the County.~~

1. Avoidance. The proposed Project would avoid 136 acres of onsite oak woodlands in the Exclusion areas shown on Figure 4.4-3 of the DEIR and as modified by the Permittee. These areas shall be protected via deed restriction in a form acceptable to the County and shall be recorded prior to the commencement of any mining activities in any previously undisturbed area or any new vegetation or overburden removal activities within the Project area.

2. Replacement. A site evaluation of oak woodlands on the ~~p~~Project site prepared by an ecologist mapped out areas that appeared suitable for initiating oak replacement plantings (see DEIR Figure 4.4-4), and these activities would provide added benefit of enhancing the age structure of oak woodland at the site. These areas amount to approximately 12 acres of suitable area for potential onsite replacement for partial mitigation of impacts to oaks (additional onsite suitable area may be available upon additional investigation). The oak woodlands evaluation also concluded that planting and/or management practices could be conducted on site to enhance seedling establishment, improve the age structure of the oak woodlands, and increase the sustainability of the oak stands, although these activities can be a challenge to implement due to long term commitment requirement, cost and labor intensive management techniques, and remote nature of some of the onsite areas for access for maintenance.

A qualified biologist shall prepare an oak woodland establishment and~~/or~~ restoration plan~~, in compliance with state and local requirements and~~ subject to County approval. Prior to the commencement of any mining activities in any previously undisturbed area or any new

vegetation or overburden removal activities within the Project area the Oak Woodland Establishment and Restoration Plan shall be initiated and completed (i.e. all replacement trees identified in the Plan shall be planted). Once the success criteria identified in the plan (as described below) is achieved the Plan will be considered finaled.

The plan shall specify the location of a minimum of 12 acres onsite for oak replacement/restoration (generally as shown in Figure 4.4-4 of the DEIR), methods of implementation, plants or propogule source(s), watering (schedule/amounts/duration), and maintenance of the oak woodland replacement areas, including measures to avoid deer browsing, as well as a monitoring protocol. The plan shall also specify minimum success criteria consistent with those identified in Section 6.3.2 (Planting Success Criteria) of the Syar Napa Quarry Mining and Reclamation Plan and Condition of Approval #3C.

The Plan and documentation demonstrating planting and survival and success shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as requested by the County to demonstrate compliance.

3. Off-site Preservation. An additional ~~111~~ 85 acres off-site shall be permanently preserved via easement or deed restriction ~~or in-lieu fee payment to the Oak Woodlands Conservation Fund consistent with Public Resources Code section 21083.4 as developed and approved by the County~~. Off-site preservation shall be phased in as part of the Project. Based on implementation of provisions H1 and H2 above the removal of approximately 78-acres of oak woodland could occur before off-site mitigation is necessary. Prior to the commencement of mining operations, or vegetation or overburden removal within any undisturbed areas (including expansions areas), that would remove in total more than 78-acres of on-site oak woodlands (i.e. those areas beyond oak woodland acreage covered by the deed restriction avoidance and replacement on-site) the Permittee shall provide the County with an Off-site Oak Woodlands Preservation Plan containing no less than 85-acres of oak woodlands for review and approval by the County.

Off-site location(s) shall be located within the Napa River watershed~~Napa County~~ and be of like quality and habitat value as those being removed, as determined by a qualified biologist and the County. So that offsite mitigation provides the maximum benefit to the area most affected by the project and occurs within the geographic context of the Project, preference shall be given to comparable oak woodlands that are located within the close proximity of the quarry (i.e. within 3.5 miles of the outer portion of the project boundary).

In the event ~~potential~~ offsite preservation areas are determined to be of lesser quality and habitat value relative to the areas removed from the project site, the County ~~would~~ may consider an increase in preserved acreage beyond the required ~~111~~ 85 acres to offset the inequity in quality and biological value. The PBES Director will make final determinations related to quality of oak woodlands and any increases in preserved acreage to offset any inequities in quality of the preserved woodland.

If off-site mitigation is determined by the County to be infeasible due to lack of areas suitable for oak woodland replacement or preservation, the County may approve, provided all

other replacement and preservation means are exhausted, additional preservation through an in-lieu fee payment. In-lieu fee payments shall be made to the County for the purpose of purchasing and preserving oak woodlands within the Napa River Watershed or to provide payment to the Oak Woodlands Conservation Fund consistent with Public Resources Code section 21083.4 as developed and approved by the County.

I. Mitigation Measure 4.4-10: Creek Buffer Establishment. ~~Although the proposed Project is exempt from County setback requirements for creeks pursuant to Napa County Code Section 18.108.050(P) (which exempts earthmoving activity associated with mining and mining-related activities conducted pursuant to and in compliance with an approved Surface Mining Permit), it is recommended that the proposed Project implement a setback from the upper Arroyo Creek/headwaters to protect both the upper reaches and the main stem of Arroyo Creek. According to Napa County Code Section 18.108.025, for areas with slopes of 30-40 percent adjacent to creeks (which is the average for upper reaches of Arroyo Creek), generally an 85-foot setback would be required for development. The Syar Project is exempt from this requirement, yet due to the nature of the future quarry face cut of 76 degrees, t~~The Permittee~~Applicant~~ shall provide a setback of a minimum of 85 feet from the upper reaches of Arroyo Creek and provide a setback of a minimum of 60 feet from the lower reach of Arroyo Creek (as shown in Figure 4.4-4 of the Project's DEIR) to reduce potential impacts on biological resources and functions consistent with the measurement requirements contained in Chapter 18.108.025 of the Napa County Code.

~~C)~~III. CULTURAL AND PALEONTOLOGICAL RESOURCES

~~**Mitigation Measure 4.5-3: Conduct Field Surveys for Historic and Archaeological Resources and Avoid Impacts from Trail Relocation.** Once the Skyline Trail relocation corridors are selected, the corridors shall be surveyed by a qualified archaeologist retained by the Applicant at the Applicant's expense. Any identified potentially significant archaeological or historical resources that would be directly or directly impacted by trail relocation and use shall be avoided. The archaeologist shall identify, and the County shall review and approve, the appropriate buffer area around the resource to ensure both direct and indirect impacts are avoided. The size of the buffer area shall be determined by a qualified archaeologist based upon the type of resource found and the visibility of the resource from the trail.~~

A. Mitigation Measure 4.5-4: Avoid or Minimize Impacts to Unknown Historical or Archaeological Resources. In accordance with CEQA Guidelines Section 15064.5(f), should any previously unknown prehistoric or historic archaeological resources, such as, but not limited to, obsidian and chert flaked-stone tools or toolmaking debris, shellfish remains, stone milling equipment, concrete or stone footings, filled wells or privies, or deposits of metal, glass, or ceramic refuse be encountered during vegetation or overburden removal or other ground disturbing activities, work within 100 feet of these materials shall be stopped, and the Permittee~~Applicant~~ shall, at the Permittee's~~Applicant's~~ expense, consult with a professional archaeologist. The Permittee shall notify the County within 24 hours of encountering any cultural resources as a result of mining and quarrying activities and operations, and the County shall inspect the site immediately thereafter to ensure the find is adequately protected.

The archaeologist shall prepare an assessment report and recovery plan to evaluate the significance of the find and identify appropriate mitigation measures as may be necessary if the deposit contains significant archaeological materials. The Permittee shall provide the assessment report and recovery plan to the County Engineering and Conservation Division for review and approval, and those mitigation measures shall be carried out prior to any resumption of related ceased earthwork or quarrying activities. The archaeologist shall also undertake data recovery of the deposit unless the ~~p~~Project can be modified to allow the materials to be left in place. Data recovery efforts must follow standard archaeological methods and all significant cultural resource materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards, and the report shall be provided to the County Engineering and Conservation Division as necessary.

In the event that the cultural resources identified within the Project area results in a reduction or modification of mining/quarrying boundaries due to avoidance, the Mining and Reclamation Plan shall be revised by the Permittee and submitted to the County for review and approval.

Documentation of any occurrence that triggers the provisions above shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as necessary to demonstrate compliance. The County Engineering and Conservation Division shall monitor this requirement.

B. Mitigation Measure 4.5-5: Avoid or Minimize Impacts to Unknown Human Remains. Should human remains, associated grave goods, or items of cultural patrimony be encountered during quarry ~~expansion~~ or ~~during~~ other ground-disturbing activities, the Permittee~~Applicant~~ shall comply with the following procedures as required by Public Resources Code section 5097.9 and Health and Safety Code section 7050.5. In the event of discovery or recognition of any human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Napa County Coroner has determined that the remains are not subject to his or her authority. If the coroner determines the human remains to be Native American, he or she shall contact, by telephone within 24 hours, the State Native American Heritage Commission (NAHC). The NAHC shall assign a Most Likely Descendent (MLD). The MLD may provide recommendations regarding the treatment of the human remains and any associated cultural materials. If the Applicant rejects the recommendations and the mediation by NAHC fails to provide acceptable measures, then the Applicant shall rebury the Native American remains and associated grave goods with appropriate dignity on the property, in a location not subject to further subsurface disturbance.

Furthermore, the permittee shall notify the County within 24 hours of encountering any human remains as a result of mining and quarrying activities and operations that the County Coroner determines to be Native American. The County shall inspect the site immediately thereafter to ensure the find is adequately protected. Prior to any further mining or quarrying activities in areas where human remains have been encountered, the Permittee shall provide documentation that they have consulted with the NAHC regarding the treatment of the human

remains. In the event that the human remains identified within the Project area result in a reduction or modification of mining/quarrying boundaries, the Mining and Reclamation Plan shall be revised by the Permittee and submitted to the County for review and approval.

Documentation of any occurrence that triggers these provisions above shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as requested by the County, to demonstrate compliance.

C. Mitigation Measure 4.5-6: Evaluation and Treatment of Paleontological Resources. If paleontological resources (e.g., vertebrate bones, teeth, or abundant and well-preserved invertebrates or plants) are encountered during ~~p~~Project activities, work in the immediate vicinity shall be diverted away from the find and protective fencing shall be installed a minimum of 50 feet from the exterior bounds of the find to protect it until a professional paleontologist assesses and salvages the resource, if necessary.

The Permittee shall notify the County within 24 hours of encountering any paleontological resources as a result of mining and quarrying activities and operations, and the County shall inspect the site immediately thereafter to ensure the find is adequately protected. Prior to any further mining or quarrying activities in areas where paleontological resources have been encountered, the Permittee shall provide an assessment report and salvage plan prepared by professional paleontologist for review and approval by the County. In the event that the paleontological resources are identified within the project area that result in a reduction or modification of mining/quarrying boundaries, the Mining and Reclamation Plan shall be revised by the Permittee and submitted to the County for review and approval.

Documentation of any occurrence that triggers the provisions above shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as requested by the County, to demonstrate compliance.

~~D)~~IV. GEOLOGY AND SOILS

A. Mitigation Measure 4.6-2a: Supplemental Geotechnical Design Criteria. ~~No new buildings are proposed for the project. Therefore, no mitigation is necessary regarding potential future impacts to buildings. However, berms and dams associated with detention/sedimentation basins and other related structures constructed during the implementation and ongoing operation of the proposed Project could potentially be subject to strong ground shaking and potential structural failure.~~

The Permittee~~Applicant~~ shall not locate facilities on unstable slopes, to the extent feasible. Prior to construction of any roads, berms or dams associated with detention/sedimentation basins, or related structures, the Permittee ~~Applicant~~ shall, at the Applicant's expense, retain a licensed geotechnical engineer and, when appropriate, a structural engineer to conduct a construction-level geotechnical investigation for the facility(ies). The slope stability inspection reports required by Mitigation Measure 4.6-2b may be included in this report.

The geotechnical investigation shall evaluate seismic hazards and provide recommendations to mitigate the effect of strong ground shaking and unstable soils and slopes to ~~a level of~~ avoid~~ance of~~ structural failure. The geotechnical study shall provide design criteria to mitigate strong seismic ground shaking. The seismic design criteria shall take into account the active faults in the Napa area ~~and beyond~~**.**

The geotechnical study shall include an evaluation of unstable land in the areas of stormwater improvements and road construction, including any areas susceptible to liquefaction or settlement, and any areas that may contain expansive soils. The study shall provide measures to repair, stabilize, or avoid such soils or slopes, and may include, but not be limited to:

- Removal and replacement of unstable materials in an existing landslide or in an actively eroding area with a stronger material;
- Grading to remove loose material and provide an acceptably stable topographic configuration by terracing, reducing slope angles, and reducing the height of cut and fill slopes;
- Installation of drainage facilities, such as subdrains and dewatering wells to reduce pore water pressure and reduce the risk of slope failure;
- Covering steep slopes with concrete or vegetation;
- Buttressing the slope or the toe of slopes to provide additional support to the slope. Where buttressing is not feasible, internal reinforcement such as a pinning system or lattice grid can be incorporated into the slope design to strengthen the slope;
- Retaining walls or other external applications to strengthen slopes;
- Placement of slope fencing or other material to stabilize rock fall from cut slope and mitigate hazards from falling rocks;
- Removal of native soils and replacement with engineered fill materials not prone to seismically-induced liquefaction or shrinking and swelling;
- Soil stabilization, such as lime treatment to alter soil properties to reduce shrink-swell potential to an acceptable level; and/or,
- Deepening support structures to a depth where unstable soils are no longer present.

~~The proposed~~ Project facilities shall be designed and constructed in conformance with the specific recommendations contained in design-level geotechnical studies, including recommendations for grading and ground improvement.

The geotechnical investigations and any associated documents or reports required by this measure shall be submitted within 12 month s approval of this permit and shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as requested by the by the County, to demonstrate compliance. As necessary the County will either hire a consultant (at the Permittee's expense) assess geotechnical investigations and compliance.

B. Mitigation Measure 4.6-2b: Slope Stability Criteria. A California registered Geotechnical Engineer, retained and paid by the Applicant, shall conduct slope stability inspections during excavation of undisturbed areas including the expansion areas. Inspections shall be completed on an annual basis, at a minimum, as well as after heavy rain events (precipitation falling with an intensity in excess of 0.30 inches per hour) or earthquakes with a magnitude of 6.0 or greater. Inspections shall include mapping and movement monitoring of the

slopes to assess the potential for project excavation, grading, and overburden storage to trigger movement of debris flow and landslides. If a slope condition presents a risk to safety or the potential for mass movement, repair measures shall be recommended and promptly implemented by the Permittee~~Applicant~~. This may include repair, stabilization, or avoidance of landslides and areas of soil creep or possible debris flow. A memorandum summarizing the findings of the inspections and any recommendations shall be prepared and submitted to the Napa County Engineering and Conservation Division and Syar each year. Engineering recommendations for slope repair or stabilization shall be approved by Napa County and incorporated into the Syar Napa Quarry Mining and Reclamation Plan as necessary~~proposed Project~~.

Slope stability inspection reports/memorandums and any associated documents or reports required by this measure shall be submitted within 12 months of approval of this permit and shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as requested by the County, to demonstrate compliance. As necessary the County will hire a consultant (at the permittee's expense) to assess slope stability memorandums/reports and compliance.

~~E)~~V. HAZARDS AND HAZARDOUS MATERIALS

A. Mitigation Measure 4.7-2: Standard operating procedures (SOPs) shall be used during the handling of hazardous materials for the operation and maintenance of vehicles and equipment; and an approved Hazardous Material Business Plan shall be maintained for the project site.

~~(a)~~1. Syar shall develop SOPs for the use of hazardous materials including fuels and lubricants used onsite prior to implementation of the ~~proposed~~ Project including any vegetation or overburden removal, mining or quarrying activities, or earth-disturbing occurring in undisturbed areas. Quarry personnel shall follow written SOPs during onsite operation and maintenance of all equipment. The SOPs, which are designed to reduce the potential for incidents involving hazardous materials, shall include the following information and protocols:

- Refueling shall be conducted only with approved pumps, hoses, and nozzles.
- Catch-pans shall be placed under equipment to catch potential spills during servicing.
- All disconnected hoses shall be placed in containers to collect residual fuel from the hose.
- Vehicle engines shall be shut down during refueling.
- No smoking, open flames, or welding shall be allowed in refueling or service areas.
- All refueling, maintenance of vehicles and other equipment, handling of hazardous materials, and staging areas shall occur at least 100 feet from water courses, existing groundwater wells, and any other water resource to avoid the potential for risk of surface and groundwater contamination.
- Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents.
- A spill containment kit that is recommended by the Napa County Environmental Health Division (EHD) or local fire department ~~will~~ shall be onsite and available to staff if a spill occurs.

- A rinse water containment area shall be established outside the proposed creek setbacks and away from any areas that could potentially drain off site or potentially affect surface and groundwater quality. When quarry equipment is cleaned, only rinse water that is free of gasoline residues, other chemicals, and waste oils ~~should be~~is allowed to diffuse back into the quarry area. No rinse water shall be drained to a septic system or discharged to ground or surface water to prevent the release of hazardous materials into the environment during operation and maintenance of the proposed Project.
- To prevent the accidental discharge of fuel or other fluids associated with vehicles and other equipment, all workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

In the event that contaminated soil and/or groundwater or other hazardous materials are generated or encountered during quarry operations, all work shall be halted in the affected area and the type and extent of the contamination shall be determined by the County Environmental Health Division. Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with federal, state, and local regulations. If containment and size of the spill is beyond the scope of the attending personnel, proper authorities shall be notified. The Permittee shall notify the County Engineering and Conservation Division and the Environmental Health Division within 24 hours of any potential soil or groundwater contamination that has occurred or is a result of quarry operations.

~~(b)~~2. Syar's ~~has prepared a~~ Hazardous Materials Business Plan (HMBP) ~~for the Syar Napa Quarry. The HMBP~~ shall be updated annually as required by law. Syar shall amend the existing HMBP inventory form for the Syar Napa Quarry, in accordance with state law, in the following instances if warranted as a result of the ~~proposed~~ Project:

- A 100 percent or more increase in the quantity of a previously disclosed material; or,
- Any handling of a previously undisclosed hazardous material above the reportable quantity thresholds of 500 pounds of solid, 55 gallons of liquid or 200 cubic feet of gas.

~~(c)~~3. The ~~Syar Napa Quarry~~Permittee's HMBP shall also meet the standards of the *Hazardous Material Business Plan and Emergency Action Plan* (Napa County Department of Environmental Management, 2008 or as amended) and shall be subject to approval by Napa County. The amended HMBP shall include: an inventory of the type and quantity of hazardous materials stored onsite; a site map; risks of using the hazardous materials; spill prevention methods; emergency response plan; employee training and emergency contact~~s~~ information.

~~(d)~~4. The HMBP shall also include a review of each chemical used onsite and a determination on whether any substitution with less hazardous chemicals can be made. Changes shall be made as appropriate. The hazardous materials inventory, site map, emergency response plan, business owner form, and business activities form must be submitted to the County Environmental Health Division (EHD). The Permittee shall notify the EHD within 30 days of ~~If there is~~ any change in storage of a hazardous material or if there is a 100 percent increase in quantity of a hazardous material previously disclosed in the HMBP~~the EHD must be notified within 30 days~~. An employee training record shall be filed onsite and may be inspected by the EHD once every three years.

~~(e)~~5. Waste oil containers shall be stored in secondary containments that include oil-impervious bermed areas or liners, retaining walls, and/or are stored on impervious concrete floors. Waste oil containers shall be covered during rain events and shall not be stored within any buffers, creek setback, or other exclusion areas. Waste oil containers shall be labeled "waste oil". The containers shall also be labeled with the following information: accumulation start date; the hazardous properties of the waste (ex. flammable, corrosive, reactive, toxic, etc.) and the name and address of the facility generating the waste. All waste oil containers shall be transported offsite by a licensed transporter and taken to a waste oil recycling facility.

6. The SOPs, amended/updated HMBP, and any associated documents or reports required by this measure shall be submitted within 12 month s of approval of this permit and shall be included in the Annual Compliance Report required by Condition of Approval #2L, and as requested by the County, to demonstrate compliance

~~F)~~VI. HYDROLOGY AND WATER QUALITY

A. **Mitigation Measure 4.8-1: Update Industrial Storm Water Pollution Prevention Plan to address new land disturbance and operations changes**. Prior to initiation of any vegetation removal, earthmoving or earth-disturbing activities, or quarrying or mining activities occurring in any undisturbed areas (including any expansion areas) ~~construction~~ and annually as necessary, the Permittee~~Applicant~~ shall update ~~the~~ Syar Napa Quarry's existing Industrial SWPPP (WDID#228I005111) to reflect additional areas of land disturbance and changes in operation resulting from the ~~proposed~~ Project. The Permittee~~Applicant~~ shall modify the SWPPP as the project progresses and as conditions warrant to remain consistent and compliant with SWRCB Order No. 2014-0057-DWQ[1]~~97-03-DWQ~~, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.

The updated SWPPP shall identify the sources of pollution that may affect the quality of industrial stormwater discharges and authorized non-storm water discharges, and describe and ensure the implementation of BMPs to reduce or prevent pollutants in industrial stormwater discharges. The updated SWPPP shall also include monitoring measures and other requirements contained in Order No. ~~97-03~~2014-0057-DWQ. Implementation of the SWPPP shall include reviews, inspections ~~and~~ or monitoring by the County Engineering and Conservation Division on a quarterly basis. The Permittee~~Applicant~~ shall continue to compare quarterly monitoring results to current and future EPA suggested benchmark levels ((i.e. Numeric Action Levels (NAL) identified in Order No. 2014-0057-DWQ)) to determine the effectiveness of onsite control measures and make adjustments accordingly. ~~The Regulatory Benchmark Levels presented in Table 4.8-2 of the DEIR shall be used as a basis for compliance where n~~No discharges from the site shall exceed 100 mg/l of Total Suspended Solids or 200 umho/cm (i.e. micromhos per centimeter) of Specific Conductance[2]. In addition the ~~p~~Project shall not result in a net increase in sediment load. Quarterly monitoring reports shall be submitted to the County for review to

[1] Industrial General Permit (IGP) adopted by the SWRCB April 1, 2014, effective date July 1, 2015: replaces IGP Order no. 97-03-DWQ that expires June 30, 2015.
[2] Source: Table 4.8-2 of the Draft Environmental Impact Report.

determine compliance and corrective actions to achieve benchmarks and assess the effectiveness of previously implemented BMPs.

Should ongoing oversight by the County Engineering and Conservation Division or the Environmental Health Division show any exceedances of EPA Benchmarks that have persisted for more than 12 months (that are not attributed to naturally occurring environmental conditions, or background conditions), the Permittee shall, within 30 days of notification by the County, implement additional or new BMPs to adequately address the exceedances.

The updated SWPPPs and any associated documentation, including annual monitoring reports submitted to the RWQCB shall be submitted within 12 months of approval of this permit and shall be included in the Annual Compliance Report required by Condition of Approval #2L, or as requested by the County to demonstrate compliance. Updated SWPPPs will be appended to the Mining and Reclamation Plan as necessary in order to satisfy the erosion and sediment control of SMARA.

B. Mitigation Measure 4.8-2: Avoid depleting groundwater supplies or interfering with groundwater recharge mechanisms including maintaining a 10-foot vertical separation between final grade and regional groundwater potentiometric elevation. The Permittee~~Applicant~~ shall maintain existing volumes of groundwater recharge and shall ensure that a vertical buffer of undisturbed native soil/rock remains in place which maintains the final grade elevation no closer than 10 feet above the spring season regional groundwater potentiometric elevation. The Permittee~~Applicant~~ shall not excavate and/or mine material within 10 feet of the regional groundwater potentiometric surface to prevent the creation or expansions of open water bodies subject to evaporation or springs which can drain regional groundwater to surface drainages or creeks.

~~The proposed Project does not include direct groundwater extraction from the vicinity of Arroyo Creek. However, excavation deeper than the regional groundwater potentiometric elevation could allow regional groundwater to drain to the ground surface and be discharged from the project area as surface water. In order t~~To avoid depleting groundwater supplies in ~~the vicinity of Arroyo Creek (and~~ all mined areas ~~of~~ within the Syar Napa Quarry~~)~~ the grade of the excavation shall be maintained at a minimum of 10 feet above the elevation of the regional groundwater potentiometric elevation. This mitigation will preclude regional groundwater from discharging as surface water ~~and draining to the Arroyo Creek channel~~. To ensure that groundwater infiltration/recharge volumes are maintained, pre-project (baseline) infiltration volumes shall be compared with project groundwater infiltration volumes. If there is a deficit, BMPs shall be adjusted or consumptive use of water shall be curtailed until groundwater recharge volumes are greater than or equal to pre-project volumes. Pre-project infiltration volumes were calculated at 685 acre-feet in the Arroyo Creek watershed/drainage and 442 acre-feet in the State Blue watershed/drainage, totaling 1,067 acre-feet (see Figure 4.8-2).

For the upper reaches of the site, this mitigation measure shall be achieved through a combination of best management practices (BMP's) that entail: managing recharge areas [or detention/infiltration ponds] so that pre-project (baseline) groundwater infiltration volumes are maintained, limiting the depths of excavation and or mining to 10 feet above the regional

groundwater table and, limiting the depths of excavation and or mining near Arroyo Creek so as to not change the flow path of the creek or surface runoff entering the creek.

For the lower reaches of the site (and any offsite interactions), this mitigation measure shall be achieved by maintaining pre-project flow conditions in Arroyo Creek. These conditions include the flow rates, timing of peak runoff, and volume of water in the creek. This mitigation measure requires the monitoring of stream flow in the lower reach of Arroyo Creek. Impacts to the amount of water and timing of peak flows entering the creek are managed through the use of surface grading, surface cover, and detention basins.

~~The estimated regional groundwater potentiometric elevations presented in DEIR Figure 4.8-6 are based on a compilation of existing data which include well data on- and off-the project site and observations of areas were regional groundwater appears to have been intersected by quarry activities (i.e. State Blue Pit).~~ It is expected that the actual elevation of regional groundwater potentiometric elevation will vary from the estimates provided in Figure 4.8-6. Adherence with this mitigation measure requires accurate and contemporary understanding of the regional groundwater potentiometric elevation under the Syar Napa Quarry. This understanding is necessary in order to avoid excavating into the 10-foot vertical buffer zone. To accomplish this and to obtain the data necessary to comply with this mitigation measure, the Permittee~~Applicant~~ shall provide ~~Napa~~ the County with an Annual Groundwater Elevation Monitoring and Use Report, prepared under the direction of a qualified Professional Engineer or Professional Geologist, that quantifies the groundwater potentiometric elevations during spring of each year (when groundwater elevations are expected to be highest at the Syar Napa Quarry)~~.~~ and through the following means:

1. The Permittee shall monitor stream flow and pond elevation throughout every year the Quarry is in operation. This information, along with publicly available climactic data, shall be used to calculate the groundwater infiltration volumes quarterly, in a manner consistent with Appendix J. The results of the monitoring and water balance infiltration analysis shall be provided to the County quarterly and be included in the Annual Groundwater Elevation Monitoring and Use Report.

2. The Permittee~~Applicant~~ shall install ~~exploratory borings~~piezometers ~~and/~~or monitoring wells as required to quantify the regional groundwater potentiometric elevation in areas of active mining prior to ~~when the~~any mining excavation that will cause an increase in mining depth beyond existing conditions and/or is likely to extend to within 50 feet of the groundwater elevations presented on Figure 4.8-6. The results of groundwater potentiometric elevation monitoring shall be provided to the County quarterly and be included in~~or~~ the ~~most recent~~ Annual Groundwater Elevation Monitoring and Use Report which is required by this Mitigation Measure. All excavation activity at the Syar Napa Quarry shall be conducted to maintain a 10-foot separation of undisturbed native soil/rock between the finished grade and the underlying groundwater potentiometric elevation as determined by the most recent Annual Groundwater Elevation Monitoring and Use Report. Increased mining depth in areas that are already at or below the groundwater potentiometric elevation, including but not limited to the State Blue Pit, shall not occur.

a) To determine the location, number, and timing of piezometer or monitoring well installation that are necessary to accurately determine the groundwater potentiometric elevation in areas of active mining, the Permittee shall provide a monitoring piezometer/well plan prepared by a qualified Professional Engineer, Professional Geologist, or Professional Hydrogeologist to the County for review and approval prior to commencing any mining activities that would increase the depth of mining beyond existing conditions. The monitoring piezometer/well plan shall also be included in the Annual Groundwater Elevation Monitoring and Use Report.

3. To avoid interfering with the groundwater recharge mechanisms, the Permittee~~Applicant~~ shall also ensure that any subsurface flow in fractures or soil that is exposed or intercepted by the excavation shall be reinfiltrated within the same watershed boundaries. Any surface water that is not the direct result of surface water runoff during rain events ~~is~~ shall be infiltrated or directed to areas that provide groundwater infiltration onsite (such as project detention ponds/basins) and within the same watershed and as depicted on Figure 4.8-10. Surface water which is the direct result of rain events ~~is~~ shall be infiltrated to groundwater or directed to the existing channels. Spring season monitoring shall be conducted by the Permittee concurrent with SWPPP monitoring (required by Mitigation Measure 4.8-1) to ~~visually~~ verify that springs and subsurface flow exposed as a result of mining activities is infiltrated back into the subsurface before reaching the surface flow channels. If persistent springs are formed by mining activities the ~~owner/operator~~Permittee shall hire a qualified professional to assess springs and provide an evaluation to the County to determine if the elevation of these springs are part of the regional groundwater potentiometric surface; if so, mining shall not advance further below this elevation.

4. While no direct groundwater extraction has been proposed or approved in the Arroyo Creek vicinity, ~~the~~ existing Well #4 could be activated for extraction or an additional well could be installed. The extraction of groundwater from Well #4 or from any additional well at the project site, including in the Arroyo Creek vicinity, shall be subject to the groundwater extraction limitation~~s~~ of 140.6 acre-feet per year pursuant to Mitigation Measure 4.4-8 and Condition of Approval #2D.~~discussed under Impact 4.8-4 which are related to the extraction of groundwater from the Quarry Well~~. Any new groundwater wells shall subject to additional environmental review pursuant to CEQA and modification of this surface mining permit.

Any monitoring reports, including annual documentation of groundwater infiltration/recharge volumes and mining elevations in relation to the estimated regional groundwater potentiometric elevations (presented in DEIR Figure 4.8-6), and documentation of any exploratory borings and/or monitoring wells required to be installed or that have been installed, shall be submitted within 12 months of approval of this permit and shall be included within the Annual Groundwater Elevation Monitoring and Use Report required by this measure. Additionally, any documentation required by this mitigation measure shall also be included in the Annual Compliance Report required by Condition of Approval #2L, or as requested by the County to demonstrate compliance.

C. Mitigation Measure 4.8-3: Avoid reducing the groundwater potentiometric elevation by increasing consumptive use of surface water or surface occurrence of regional groundwater as a result of quarry activities. The Permittee shall ensure that ~~A~~all water

extracted from open bodies of water that are at the regional groundwater potentiometric elevation shall be reinfiltrated in surface detention/infiltration basins within the same watershed from which the extraction occurs (i.e. the State Blue or Arroyo Creek watersheds) or ~~is~~it will be considered a consumptive use of groundwater. This will prevent depletion of the groundwater resource by consumptive use of water derived from open bodies of water such as State Blue Pit. This Mitigation Measure 4.8-3 shall not apply to the draining of ponded surface water which is at an elevation higher than the underlying regional groundwater potentiometric elevation, provided the water is not used outside of the watershed it was derived form. Ponded surface water which occurs in temporary low areas in active mining areas may be pumped to detentions ponds within the same watershed for reinfiltration purposes.

As part of quarry activities, water may be~~is~~ pumped from open water bodies such as State Blue Pit for consumptive quarry activities such as dust control and other uses where the water is not reinfiltrated. The volume of groundwater that is pumped from those water bodies where the water surface elevation is effectively the same as the regional groundwater potentiometric elevation (i.e. State Blue Pit) shall be considered part of the maximum allowable annual groundwater use allocation of 140.6 acre-feet per year for the ~~p~~Project. Consumptive use from open water bodies such as State Blue Pit shall be recorded and considered a part of the groundwater allocation in the same manner as the groundwater pumping from the Quarry Well. The volume of water used to wash materials shall not be included in the quantification of groundwater use if it is returned to the aquifer by reinfiltration. The volume of wash water returning to detention ponds for infiltration is not considered in quantifying groundwater use because it is not a consumptive use of groundwater.

To help ensure that groundwater infiltration volumes are not decreased, pre-project infiltration volumes shall be compared with project groundwater infiltration volumes. If there is a deficit, BMP shall be adjusted or consumptive use of water shall be curtailed until groundwater recharge volumes are greater than or equal to pre-project volumes. Pre-project infiltration volumes were calculated at 685 acre-feet in the Arroyo Creek drainage and 442 acre-feet in the State Blue drainage, totaling 1,067 acre-feet.

Maintaining groundwater recharge volume shall be addressed by routing stormwater runoff to existing ponds or new surface detention/infiltration basins that shall be constructed on recharge areas to ensure that groundwater infiltration volumes are equal or greater than pre-project groundwater infiltration volumes. To ensure that existing volumes of groundwater recharged are maintained the Permittee shall monitor pond elevation throughout the year. This information, along with publicly available climactic data, shall be used to calculate the groundwater infiltration volumes quarterly, in a manner consistent with Appendix J. The results of the monitoring and water balance infiltration analysis shall be provided to the County quarterly and be included in the Annual Groundwater Elevation Monitoring and Use Report.

Monitoring reports required by this measure shall be submitted within 12 months of approval of this permit and shall be included within the Annual Groundwater Elevation Monitoring and Use Report required pursuant to Mitigation Measure 4.8-2. Additionally, reports required by this mitigation measure shall also be included in the Annual Compliance Report

required by Condition of Approval #2L, and as necessary or requested by the County to demonstrate compliance.

D. Mitigation Measure 4.8-4: Avoid depleting groundwater supplies by water reuse and obtaining new supplies of additional water for operations. No additional groundwater from ~~onsite~~ existing ~~re~~sources is available to accommodate the additional water demand of the proposed Project. The Permittee's~~Applicant's~~ maximum allowable annual groundwater usage for ~~the proposed Project~~ all quarry operation and associated activities shall not exceed 45.8 million gallons (or 140.6 acre-ft) per year. This mitigation measure includes metering to verify that demands upon ~~onsite~~ water resources are not exceeded. This mitigation measure also includes accommodating any additional water demands with a combination of water reuse, new water sources or water conservation methods. ~~Monitoring usage is preferred over monitoring the elevation of groundwater in the aquifer because a number of occurrences which are not related to the proposed Project can have an effect on the elevation of the regional groundwater elevation.~~

In order to document~~monitor~~ the use of the existing ~~onsite~~ water sources, the Permittee~~Applicant~~ shall continuously monitor, meter and maintain records of all water use at the Quarry site. These monitored sources shall include:

1. Groundwater from the Quarry Well, or any other groundwater well ~~located anywhere onsite or~~ related to the project that could have a similar impact (i.e. Well #4 and/or the Latour Court well);
2. Water collected from open water bodies in contact with the regional groundwater potentiometric elevation (as identified in Mitigation Measures 4.8-2 and 4.8-3); and/ or
3. Impounded surface water that would otherwise infiltrate to groundwater.

Monitoring reports required by this measure shall be submitted within 12 months of approval of this permit and shall be included within the Annual Groundwater Elevation Monitoring and Use Report required pursuant to Mitigation Measure 4.8-2. Additionally, reports required by this mitigation measure shall also be included in the Annual Compliance Report required by Condition of Approval #2L, and as requested by the County to demonstrate compliance.

If new wells are installed and/or if existing wells (i.e. Well #4) are brought into production~~,~~ the extraction from these wells shall be included in the annual usage total. The total of groundwater/surface water used for quarry operations shall be totaled and reported ~~annually~~ monthly to the County. ~~The annual usage will be compared against the baseline usage on an annual basis.~~ Any new groundwater well shall subject to additional environmental review pursuant to CEQA and modification of this surface mining permit.

On-site water that is used which can be used non-consumptively such as a controlled process were the water is used for sand washing and then recharged to the groundwater through a detention basin would not be included in the total of water used for the Quarry if it can be demonstrated through monitor~~ed~~ing and report~~ed~~ing as part of the annual water usage report that it is recharged to groundwater.

The PermitteeApplicant shall also off-set additional water demands by reusing water and increasing processing efficiencies. This could include gravel application to roadways and production areas to reduce dust generation and the need for dust suppression by water application. It could also include process revisions to reuse sand wash water rather than allow the water to drain off as surface water or to allow it to evaporate in shallow ponds that have low infiltration benefit.

If additional water is required for the proposed Project, the additional water shall be obtained from offsite sources such as new wells outside of the MST. Off-site sources of recycled water are available and water can be purchased from public or private sources. If additional water sources are not available then the PermitteeApplicant shall reduce its production volume to a level that the water use does not exceed the maximum allowable annual usage of 45.8 million gallons (140.6 acre-feet) per year. Any new or additional water sources for Quarry operations shall subject to additional environmental review pursuant to CEQA and modification of this surface mining permit.

The County Engineering and Conservation Division shall monitor this requirement. Compliance of this measure shall be subject to Article VI (Enforcement) of Napa County Code Chapter 16.12 (Surface Mining and Reclamation).

E. Mitigation Measure 4.8-5: Reduce Potential for Offsite Runoff. The PermitteeApplicant shall design and construct detention ponds in the mined watersheds to reduce stormwater runoff volume, rates and sedimentation in addition to maintaining infiltration to groundwater. The specific locations of these detention ponds shall be determined during the development of the grading and drainage plans, as required by the County's Surface Mining and Reclamation Ordinance (Napa County Code Chapter 16.12). To facilitate this, tThe PermitteeApplicant shall submit a final detailed design-level hydrologic and hydraulic analysis within 12 months of approval of this permit as necessary or as part of the annual mining plan (that is a component of the Project's Mining and Reclamation Plan) proposed as part of the project to the Napa County Engineering and Conservation Division detailing the implementation of the proposed drainage plans, including detention pond facilities that shall conform to the following standards and includes the following components:

1. The project shall ensure peakPeak runoff in 2-, 10-, 50-, and 100-year storm events during the years of active mining and at the end of mining shall not exceed is not greater than under existing conditions. The final grading and drainage plan, including detention pond designs, shall be prepared by a California licensed Professional Engineer. All design and construction details shall be depicted on the grading and drainage plans (or SWPPP) and shall include, but not be limited to, inlet and outlet water control structures, grading, designated maintenance access, and connection to existing drainage facilities.

2. The Napa County Department of Engineering and Conservation Division shall review and approve the grading and drainage plans prior to implementation to ensure compliance with Napa County standards. The PermitteeApplicant shall implement any additional improvements deemed necessary by the County.

3. Once constructed, the drainage components, including detention ponds designed for the watersheds, shall be inspected by the County's Engineering and Conservation Division annually to ensure they are~~and~~ maintained per the guidelines outlined in the Sediment Basin BMPs found in the Napa Quarry SWPPP. The Permittee~~Applicant~~ shall ensure that all disturbed areas of the quarry are graded and maintained in conformance with the approved grading and drainage plans or SWPPP, and are designed in such a manner as to direct stormwater runoff to a properly sized detention pond.

4. All calculations, plans, and reports required by this mitigation measure shall also be included in the Annual Compliance Report required by Condition of Approval #2L, or as requested by the County to demonstrate compliance.

F. Mitigation Measure 4.8-6: Update Industrial Storm Water Pollution Prevention Plan to address hazardous materials spill response actions. The Permittee~~Applicant~~ shall revise its Spill Prevention and Countermeasure Plan, Hazardous Materials Business Plan, and Emergency Response Plan as necessary to directly address the potential for a spill or release of hazardous material near or into a water body that is directly connected to the regional aquifer. The revision shall include provisions for training in spill response and containment and maintaining access to the needed equipment to respond to a spill. The revisions to the plan will also contain provisions to eliminate or minimize the storage of hazardous materials in areas which drain to portions of the project site where the regional groundwater is exposed. These revisions shall then be incorporated into the SWPPP by summary and reference. The Permittee shall provide the revised Spill Prevention and Countermeasure Plan, Hazardous Materials Business Plan, and Emergency Response Plan to the County for review and approval within 12 months of approval of this permit.

Thereafter, any time the Spill Prevention and Countermeasure Plan, Hazardous Materials Business Plan, and Emergency Response Plan is revised or updated it shall also be submitted to the County in the Annual Compliance Report required by Condition of Approval #2L, or as necessary to demonstrate compliance. If the County finds that the Permittee has not revised and updated the plan as necessary the Permittee shall have 30 days to submit the plans to the County for review and approval. Compliance with this measure shall be subject to Napa County Code Sections 16.12.600 through 16.12.660 (Surface Mining and Reclamation – Enforcement).

~~G)~~VII. NOISE AND VIBRATION

A. Mitigation Measure 4.11-1: Noise Restrictions in Expansion Area North and East of the State Blue Pit and Snake Pit (Pasini Parcel): To reduce noise impacts of mining, quarrying, and associated operations the Permittee shall adhere to the following:

1. No aggregate mining ~~activities~~ operations shall occur between the hours of ~~10~~6:00 PM and 7:00 AM in mining expansion areas to the north and east of the State Blue Pit where there are residences not shielded by intervening terrain.
2. With the exception of blasting and the removal of overburden the Permittee~~Applicant~~ shall: 1) ~~Not conduct~~Limit daytime aggregate mining ~~activities~~ operations to

~~(~~between the hours of 7:00 AM and ~~10~~12:00 PM~~)~~ in unshielded areas to the north and east of the State Blue Pit or Snake Pit areas within 2,500 feet of the nearest sensitive receptors (residences, schools, or trails within Skyline Park); 2) Ensure that noise levels at the nearest receptor locations north or east of the quarry shall not exceed 50 dBA L_{50} from 7:00 AM to 10:00 PM and 45 dBA L_{50} from 10:00 PM to 7:00 AM.

3. The Permittee~~Applicant~~ shall utilize the following measures or equivalent:
   a) Maintain acoustical shielding for receivers north or east of the quarry so that existing terrain features provide the maximum amount of shielding for the longest time possible.
   b) Use the quietest available equipment when removing topsoil and overburden (e.g., well-maintained, modern equipment such as higher Tier engines, having sufficient engine insulation and mufflers, electric or hydraulic powered equipment, or equipment operation settings at the lowest possible power levels).
   c) Conduct noise monitoring and maintain noise monitoring reports to ensure that daytime noise levels from aggregate mining and operations ~~within the expansion areas to the north and east of the State Blue Pit~~ do not exceed 50 dBA L_{50} at the nearest receptor locations north ~~or~~ and east of the quarry (i.e. along the norther and eastern property lines in the vicinity of the State Blue Pit or Snake Pit areas), which are areas where monitoring sites should be located. Noise monitoring shall be conducted daily for the first five years of the Permit: thereafter the Planning Commission shall determine the extent of ongoing noise monitoring as part of their Project and Permit review required by Condition of Approval #1F. ~~Submit n~~Noise monitoring reports shall be submitted monthly to the County Environmental Health and Engineering and Conservation Divisions, or upon request, to verify compliance. If and as necessary the County will either hire a consultant (at the Permittee's expense) to assess compliance or provide 3rd party independent noise monitoring of the Project.
   ~~c)~~d) Noise monitoring results shall also be submitted to the County in the Annual Compliance Report required by Condition of Approval #2L, or as necessary to demonstrate compliance. If the County finds during annual compliance review that noise levels of Quarry Operations are excessive, the Permittee shall modify Quarry Operations or the Mining and Reclamation Plan so that the noise limits identified herein are not exceeded.

B. Mitigation Measure 4.11-2: Blasting Vibration Reduction Measures. To reduce vibration impacts, the Permittee~~Applicant~~ shall:

1. Monitor peak particle velocity and peak sound pressure during each blast event to ensure that vibration levels are under 0.20 in/sec PPV and air-blast overpressures are under 133 dB(L) at sensitive land uses (residences and schools). Monitoring sites shall be located along the northern property boundary and along Imola Avenue adjacent to sensitive land uses. Blasts shall be modified to reduce the charge weight per delay. The charge weight per delay shall not exceed 175 lbs. for blasting near the northernmost property boundary (i.e. within 1,000 feet) to maintain vibration levels below 0.20 in/sec PPV and air-blast overpressures below 133 dB(L) at sensitive land uses.

~~1.~~2. The effectiveness of this measure shall be demonstrated to the County by submittal of vibration calculations/measurements and monitoring records for each blast event that are satisfactory to the County for effectiveness review. Monitoring records shall be provided to the County Environmental Health and Engineering and Conservation Divisions ~~upon request~~monthly, or as necessary at the request of the County, to demonstrate and verify compliance with this measure. If the County finds that the Permittee has not maintained the required vibration levels during blasting events, the Permittee shall immediately lower charge weights as necessary, below the limits identified above, until required reductions have been achieved.

~~2.~~3. Conduct stemming and burdening (filling the drilled holes with dirt and rock above the explosive charge) of the blast holes to confine the blast charges into the ground and to minimize acoustic overpressure levels.

4. To ensure that surrounding residence and sensitive receptors are aware of blasting events, Syar shall notify the County, sensitive receptors, and surrounding residences prior to blasting. The following uses/facilities shall be included in this notification: Skyline Wilderness Park, Napa County Office of Education, Chamberlin High School, Liberty High School, Creekside Middle School, the Napa Preschool Program, the Napa Child Development Center, and the Napa State Hospital. The ~~Applicant~~ Permittee shall request contact information from residences and sensitive receptors that wish to be notified and provide notification at least 48~~24~~-hours in advance of the blast. This provision will be included as a condition of approval should the project be approved.

~~3.~~5. Vibration monitoring records shall also be submitted to the County in the Annual Compliance Report required by Condition of Approval #2L to demonstrate compliance. If the County finds during annual compliance review the Permittee has not maintained the required vibration levels during blasting events, the Permittee shall reduce charge weights as necessary to ensure specified vibration levels are not exceeded. As necessary the County may hire a qualified professional (at the Permittee's expense) to assess compliance.

~~**I) TRANSPORTATION**~~

~~**Mitigation Measure 4.15-1: Transportation Demand Management Program.** To reduce cumulative traffic impacts, Syar shall operate its sales activities to limit the number of new truck trips entering and exiting the quarry during the AM peak hour to no more than 50. A dedicated Syar staff coordinator shall monitor truck trips in accordance with this limit and report to the County annually regarding compliance. Additionally, it is recommended that permanent traffic count and classifiers be installed within the public right-of-way so that reported trip information can be verified.~~