

OCT 21 2015

Agenda Item # 9C

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October 19, 2015

Don Barrella, Plannr III
Napa Co. Dept. of Planning, Building & Environmental Services
1195 Third St. #210, Napa CA 94559
707-299-1338 donald.barrella@countyofnapa.com

Napa County Planning, Building
& Environmental Services

Attn: Don Barrella, PC and BOS

Note: Please include these comments in the Public Administrative Record for the Syar EIR.

- 1.) Syar Napa Quarry (SNQ) is not abiding by the stipulations of its operating permit to keep the mine's exposed surfaces watered to a moisture content of 3% or better and it is, therefore, not controlling its fugitive dust. With our photos we have documented that Syar Napa Quarry's bad practices and sporadic, insufficient watering have allowed huge amounts of dust including respirable silica to billow into Napa's common air space. We have documented quarry dust being kicked up into the air from the wheels of trucks leaving SNQ while merging into traffic on Napa-Vallejo Highway and at the end of Kaiser Road. SNQ production needs to be cut back because it doesn't have the water allotment to water the required amount needed to control the dust at its present production level. (See Steve Booth's water data, 10-16-15 Comment Letter on Water Usage for Dust Control at SNQ).
- 2.) The SNQ dust problem (PM10) has been calculated to be at a magnitude of 10 times worse than assumed in the Syar EIR. That is why the SNQ's permit to operate must include independent monitoring of dust at the perimeters and in the neighborhoods, and to be paid for by SNQ is obligatory. This is done at Marin County's San Rafael Quarry and is not an unusual quarry requirement. We especially need monitoring here because the prevailing wind blows Syar dust and emissions right over and *into* the City of Napa.
- 3.) The Machine Operator's local should be standing up for SNQ employees to get the worker health safety education and upgraded quarry safety practices and protective gear they need to halt employee exposure to respirable crystalline silica dust and the array of toxic emissions being spued out of the old AC plant that has not been updated to reduce pollution and in the processing of recycled materials that contain an array of toxic chemicals that are billowing from the processing areas and create an even larger health threat than aggregate processing does. (Yet, more data that was omitted from the Syar EIR.)
- 4.) We have determined the baselines used in the Syar EIR are inaccurate and whole categories of foundational information have been stated inaccurately or omitted. We did some research on the authors of the road dust models used in the EIR and discovered they are lobbyists for the mining industry.

5.) Remember when we banned the use of leaded gas? The State of CA is moving toward banning other really bad fuels that are still being used in our state. Our Air District and Napa County can help this along by banning the use of the worst diesel products being used at SNQ.

6.) One would assume our Air District is there to protect the air we breathe. Our Air District says it is complaint driven. I have had personal experience turning in Dust Complaints to our Air District, BAAQMD. Although my experience has been disappointing, our citizens have to stay vigilant and turn in complaints when we see dust or detect nuisance odors. When you turn in a complaint, one inspector, who has to take care of two counties, drives to SNQ, currently from Fairfield, and parks at the entrance and calls the Quarry manager. Operations at SNQ pretty much stop temporarily so the dust will stop. It does not appear the inspector comes dressed appropriately for inspection at the Quarry in protective clothing and respirator in hand. The inspector does not appear to bring along equipment such as a moisture meter to check the moisture content of the roadways in use and the aggregate piles at the AC and AB plants to see if the moisture content is 3% or better. The Syar EIR says SNQ is doing this currently and 3% or better is the standard for dust control. The inspector does not check the processing areas to see if the water spray equipment is fully operational on the crushers and conveyors and take some photos or wear a body cam to record it. With real inspection, the inspector would obtain verifiable proof on which to report the situation at SNQ. There is much more I can say about this, but that will be at a meeting with BAAQMD. We have many things to talk with the Air District about to improve the way they are handling dust and odor complaints in the field. Based on our experience, we can not depend on our Air District to accurately assess SNQ complaints.

7.) The Syar DEIR is riddled with contradictions. Just *one* example out of the many—is it 2 million tons/yr, 1.3 million tons/yr or 810,000 tons/yr of production allowable? What is it going to be? The County has to settle on what the conditions are going to be and *eliminate* all the rest of the multiple choices that have been left in the DEIR, I think. If the County doesn't bring clarity and compliance, Syar will essentially do what ever it wants to the detriment of our society and health safety. Our aggregate is a finite resource that should be extracted at a controlled rate to make it last. Napa County does not have to worry about Syar's wealth, which is extensive, but it does need to worry about the conservation of Napa County's aggregate resources which are limited.

Respectfully submitted,

Sandra Booth
Stop Syar Expansion
stopsyarexpansion@gmail.com

Gallina, Charlene

From: McDowell, John
Sent: Wednesday, October 21, 2015 8:02 AM
To: Frost, Melissa
Cc: Gallina, Charlene; Anderson, Laura; Apallas, Chris
Subject: FW: Comment
Attachments: 10-19-15 SNQ Comment Letter.pdf

Planning Commission Mtg.

OCT 21 2015

Agenda Item # 9C

From: Sandra Booth [<mailto:juniperbooth@hotmail.com>]
Sent: Tuesday, October 20, 2015 7:08 PM
To: jerigillpc@outlook.com; anne.cottrell@lucene.com; heather@vinehillranch.com; napacommissioner@yahoo.com; tkscottco@aol.com; McDowell, John; Morrison, David; Wagenknecht, Brad; Luce, Mark; Dillon, Diane; alfredo.pedrosa@countyofnapa.org; Caldwell, Keith
Subject: Comment

I wanted all the Planning Commissioners and the BOS to have a copy of my comment letter in preparation for the Public Hearing covering the Syar Napa Quarry Project at 1:30 PM tomorrow afternoon.

Best,

Sandra Booth

From: juniperbooth@hotmail.com
To: juniperbooth@hotmail.com
Subject: comment
Date: Tue, 20 Oct 2015 18:33:46 -0700

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Barrella, Donald

From: Keith E. Anderson <kedith@napanet.net>
Sent: Tuesday, October 20, 2015 12:18 PM
To: Barrella, Donald
Cc: Keith Anderson
Subject: SYAR Industries proposal before Planning Commission

Mr Donald Barrella;

My wife and I have lived in the County of Napa, and then in the City of Napa, for the past 35 years.

We have noticed the quarry and the Syar trucks loaded with rock products and the other local building products.

We have no connection with the company and have no axe to grind, but we strongly support their request before the Planning Commission.

It is a "no brainer" that Napa County should have their own source of badly needed products for road construction and maintenance.

The alternative would be to truck it all in from long distances and then there is the employment the company provides - both a positive.

Mining isn't as pretty and neat as vineyards are, but mined products are every bit as necessary for the needs of the County.

Keith and Edith Anderson
99 S Newport Drive
Napa CA 94559

707 257 0813

Barrella, Donald

From: David Sawyer <rndsawyer@yahoo.com>
Sent: Tuesday, October 20, 2015 10:26 AM
To: Barrella, Donald
Subject: SYAR

Put me on the approve list. We need high paying jobs, a local source of aggregate and building materials, and support for a great local job creator. I have live here for 50 years and have seen the demise of Kaiser Steel, Mare Island, and the rest of our industrial base. I can not see any positives in delaying this approval.

Thanks for your time and consideration.

David Sawyer
1 Abbey Ct.
Napa, CA 94558
707-812-0974

Barrella, Donald

From: Paulette Jonkovsky <pj1201@att.net>
Sent: Tuesday, October 20, 2015 7:49 AM
To: Barrella, Donald
Subject: Syar Quarry Project

Dear Mr. Barrella,

I am not able to attend the Wednesday, October 21, 2015 meeting for the Syar Napa Quarry Project.

I am asking you to certify the Project EIR and approve the project so that Napa County has a local supply of quality aggregate to improve our roads and infrastructure. Syar has been a good neighbor, employer, supplier and is critical to our local economy.

Please vote in favor of the project.

Sincerely,

Paulette Jankovsky
1201 Mt. Veeder Rd
Napa, CA



JOHN R. ROBERTSON
Sheriff - Coroner

NAPA COUNTY OFFICE OF SHERIFF- CORONER

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Napa County Planning, Building
& Environmental Services

October 8, 2015

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

Re: Syar Firearms Range

Mr. Barrella,

Upon the completion of the Syar Gun Range Lead and Arsenic Cleanup Project in December of 2003, the Napa Sheriff's Office converted to lead-free ammunition for all firearms training (except rifles). Employees are required, under the supervision of our Range Staff, to load their handguns with provided lead-free ammunition while participating in firearms training at the range. Employees from the California Highway Patrol, Napa Valley College Police Department and Napa State Hospital Police Department are also required to use lead-free ammunition while participating in firearms training at the range.

The Sheriff's Office also installed bullet traps to avoid further lead and arsenic contamination from any lead rounds being used in rifles. The Sheriff's Department has maintained the bullet traps as needed to prevent lead and arsenic contamination.

If you have further questions or concerns, please feel free to contact me at your convenience.

Respectfully,


John R. Robertson
County of Napa, Sheriff

Barrella, Donald

From: Gail <gail.randol@sbcglobal.net>
Sent: Monday, October 19, 2015 12:52 PM
To: Barrella, Donald
Subject: Syar Industries

I support the Napa Quarry Project. It is very necessary to Napa.
Gail Randol

1064 Delbrook Drive
Napa, Ca. 94558

Barrella, Donald

From: Ross Workman <rosswork@sbcglobal.net>
Sent: Monday, October 19, 2015 8:31 PM
To: Barrella, Donald
Subject: SYAR-- Stop The Torture

Don—

I really hope you can bring this saga to an end. SYAR must be the most patient applicant Napa County has ever had. But enough is enough. Please approve this necessary and not harmful project Napa needs.

Thanks,

Ross Workman
14 Peninsula Ct
Napa

254 7292



This email has been checked for viruses by Avast antivirus software.
www.avast.com

Barrella, Donald

From: Leslie Bucher <lbbk@sbcglobal.net>
Sent: Monday, October 19, 2015 9:18 PM
To: Barrella, Donald
Subject: Approve Syar Quarry Project

Napa needs affordable high quality aggregate. I am a 60 plus year Napa native and I have never written to support anything. The opposition to this project has me fired up. Syar has been a great neighbor and is a necessity for the county. Do opponents know the importance of aggregate to build roads, bridges, foundations, or even bike paths? They require "rock" and it needs to be good quality and nearby. The occasional blast is not an issue.

Please do what is good for the community and approve the project now!

Thank you.

Karl Bucher, resident and business owner

Sent from my iPad

Barrella, Donald

From: Wallace Francis <wallace@wallacefrancis.com>
Sent: Saturday, October 17, 2015 11:07 AM
To: Barrella, Donald; matt pope384@gmail.com; tkscottco@aol.com; napacommissioner@yahoo.com; McDowell, John; heather@vinehillranch.com; Wagenknecht, Brad; Luce, Mark; Dillon, Diane; Pedroza, Alfredo; Caldwell, Keith
Subject: save Skyline Park

Dear all-

I am writing to you to express my opposition to the current plan to allow Syar Industries to expand their operations and remove two hills that are currently part of Skyline Park. I do not believe the benefit outweighs the costs. I do not agree that the Environmental Impact Report accurately represents the threat to the health and well-being of the citizens of Napa and I have grave misgivings regarding the credibility of Syar Industries. I do not believe their track record demonstrates that they have the best interests of our citizens in mind. I have grave misgivings about what appears to be a presumption in the minds of anyone that this permanent, environmental change which our children and their children will be left with can be legitimated under the guise of good business. I do not think that anyone who supports this position is either truly informed or in touch with what is happening around them. The products that will be produced by the destruction of this fragile nature preserve are not sufficiently valuable to the community at large (and are available elsewhere as well) to support this decision.

Although it is a common misconception that our environment has the power to absorb the impact that our species has upon it, there is little scientific evidence to support this assumption and a vast body of information pointing to exactly the opposite proposition. Although the current struggle has been portrayed as an attempt to protect the natural beauty that surrounds us, it is, in fact, at its core a struggle to preserve the air, water, and soil that provide us with life. The psychological benefit of open-space, although of paramount concern, is not the true basis of the concerns.

Finally, I urge you (as many of you already do) to re-examine this conflict and move it away from a "nature versus business" false dichotomy and toward a state-of-the-art resolution in which interests may coincide rather than oppose one another. This need not be a zero-sum game.

Very truly yours,

Wallace Francis

--
Wallace Francis
Attorney at Law
100 E St. Ste 307
Santa Rosa, CA 95404
phone: 707-544-1134
fax:707-581-1870

Barrella, Donald

From: Patrick O'Neill <poneill1993@gmail.com>
Sent: Tuesday, September 29, 2015 10:53 AM
To: Barrella, Donald
Subject: I support Napa Quarry

Dear Mr. Donald Barrella,

I support the Napa Quarry Project and encourage you to approve the project for its value to the local economy, job creation, and as a critical source of local aggregate for Napa County.

Regards,
Patrick O'Neill
4457 Sandalwood St
Napa, CA 94558

Julia Winiarski, 9 Bonita Avenue, Napa

In the Alternatives Analysis, there are many references to “project objectives” and whether a given alternative meets those project objectives. On page 4 of the Staff Report, it says: “...[T]he commission can select an alternative...that attains most of **the basic objectives of the project...**”

So what are the basic objectives of the project? We have been told over and over, and we see it through this staff report, that the objective is to ensure a local - and therefore affordable - supply of aggregate.

But how much do we need? On page 18 of the staff report, it is stated that the figure of 8.9 tons per person per year is not used anywhere in the EIR to calculate local need. Then, I have to ask, what figure is being used? This figure has absolutely been used in presentations by the applicant and proponents of the expansion, both in these hearings and out in the community. We hear everywhere that the Quarry is running out of aggregate and needs to expand in order to stay open.

On page 19 of the staff report, we find: “The commission has latitude...including allowed annual production levels, and at their discretion can specify reduced production levels...ensure the **long-term production and supply of aggregate resources.**”

How is the Commission to address the issue of production permit limits to ensure the “long-term production and supply of aggregate resources” without addressing these three fundamental questions: How much have we historically used? How much will we need in the future? What are the current reserves?

We asked to see the historical records from Syar. We received after lengthy waits documents for one year, heavily redacted, lacking tonnages shipped and destinations. On this issue, as elsewhere, the County is making statements in support of the project that are not supported by documentation supplied to the public for review and analysis.

On page 18 the Staff report says that there is no law requiring that an EIR include a demonstration of need. This paragraph goes on to say this would be akin to requiring a winery permit applicant to “demonstrate the need for more wine, or vineyard development applicants (to) demonstrate the need for more grapes.

Aside from the fact that protecting our resources might actually make it a good idea to ask those questions as well, this is a fundamental misstatement of the issue. Wine and grapes are not non-renewable resources, as aggregate and groundwater are.

It is a serious question whether the groundwater use for this project, capped at the 140.6 acre, is even sufficient to meet the dust mitigation measures required.

In short, this EIR remains flawed and inadequate. Please, require a re-circulation.

Planning Commission Mtg.

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Napa County Planning, Building
& Environmental Services

**Air Quality Review and Comments:
Syar Napa Quarry Expansion EIR**

Prepared by:

Lindsey Sears

October 19, 2015

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Introduction

At the request of the Napa citizens' group Stop Syar Expansion, I reviewed the air quality and health risk analysis (HRA) provided in the Syar Napa Quarry Expansion Environmental Impact Report (EIR). In the following sections, I present my findings regarding the EIR's outdated modeling practices, inappropriate meteorological data, and failure to include any modeling of PM₁₀ emissions from the proposed expansion project.

I hold an M.A. (2012) degree in Geography from California State University, Northridge, where I specialized in GIS and air dispersion modeling. My thesis, titled "Diesel Trucks: Health Risk and Environmental Equity," involved the use of USEPA's AERMOD model to determine concentrations of diesel particulate matter (DPM) around several Southern California freeways, focusing on pollution from port-related diesel truck traffic. In addition, I performed population analyses, examining inequities related to race and income groups exposed to DPM.

I also have broad experience as a consultant providing litigation support. I have performed numerous air quality modeling analyses using air dispersion models such as AERMOD, prepared meteorological data using AERMET, performed health risk assessments, and created many detailed maps and graphics. I have experience preparing analyses of various emission types from many sources and facilities including coal-fired power plants, agricultural fields, and mobile sources.

The Syar EIR finds that PM₁₀ emissions from the project expansion will be less than the 15 tons per year significance criterion for this pollutant (DEIR, p. 37). This finding is only made possible by assuming the project expansion will use roadway fugitive dust emission controls that are much more effective than Syar's current practices. Syar could be using the proposed roadway fugitive dust emission controls now, which would reduce the current air quality impacts from the Syar facility.

A major flaw in the EIR is the complete lack of any PM₁₀ air quality impact analysis for the project expansion. PM₁₀ is a significant public health concern as these small particulates (less than 10 micrometers in size) can cause or exacerbate a number of conditions. From USEPA:

Major concerns for human health from exposure to PM-10 include: effects on breathing and respiratory systems, damage to lung tissue, cancer, and premature death. The elderly, children, and people with chronic lung disease, influenza, or asthma, are especially sensitive to the effects of particulate matter.¹

California has a long-established ambient air quality standard for PM₁₀. The 24-hour California Ambient Air Quality Standards (CAAQS) for PM₁₀ is 50 µg/m³. The 24-hour National Ambient Air Quality Standards (CAAQS) for PM₁₀ is 150 µg/m³. These health-based standards apply to areas of ambient air, which is any area outside the Syar facility fenceline.

¹ <http://www3.epa.gov/airtrends/aqtrnd95/pm10.html>

Given the EIR deficiencies, I performed a detailed PM₁₀ air dispersion modeling analysis, based on current USEPA modeling guidelines. My analysis shows that the mitigated Syar expansion will cause 24-hour PM₁₀ impacts in excess of 500 µg/m³. This offsite air impact greatly exceeds both the 24-hour CAAQS and NAAQS for PM₁₀. Furthermore, the area where Syar's mitigated project expansion will cause 24-hour PM₁₀ impacts exceeding the 24-hour PM₁₀ CAAQS extends well into the city of Napa, and covers many residential and sensitive population locations. These are significant air quality impacts that the EIR failed to identify.

Because of the HRA and PM₁₀ deficiencies in the EIR, the proposed project expansion must be denied.

I. Sespe Performed the Health Risk Analysis Using Outdated Modeling Practices

The EIR HRA and associated air dispersion modeling was performed by Sespe Consulting, Inc. In their HRA modeling, Sespe used the ISCST3 dispersion model (Version 02035). ISCST3 has not been in general use for roughly 10 years.

In 2005, the USEPA adopted AERMOD as the preferred air dispersion model for determining air impacts within 50 kilometers of air pollution emission sources, replacing the ISCST3 model.² Sespe's use of ISCST3 is inappropriate, and the entire HRA needs to be revised to include current modeling practices.

II. Sespe Failed to Use Appropriate Meteorological Data

Sespe used meteorological data provided by GHD for the years 1994, 1995, 1997, 2000, and 2001 from the Napa County Airport (DEIR Appendix I, Page 32). USEPA's definition of preferred meteorological data includes the most recent five years of National Weather Service (NWS) data. Currently, this condition is satisfied using 2010 through 2014 Automated Surface Observing Station (ASOS) data collected at the Napa County Airport. From Section 8.3.1.2 of the Guideline on Air Quality Models:

- a. Five years of representative meteorological data should be used when estimating concentrations with an air quality model. Consecutive years from the most recent, readily available 5-year period are preferred. The meteorological data should be *adequately representative*, and may be site specific or from a nearby NWS station. Where professional judgment indicates NWS-collected ASOS (automated surface observing stations) data

² USEPA, Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions, Appendix W to 40 CFR Part 51, November 9, 2005. http://www.epa.gov/scram001/guidance/guide/appw_05.pdf.

are inadequate [for cloud cover observations], the most recent 5 years of NWS data that are observer-based may be considered for use.

The use of 5 years of NWS meteorological data or at least 1 year of site specific data is required. If one year or more (including partial years), up to five years, of site specific data is available, these data are preferred for use in air quality analyses. Such data should have been subjected to quality assurance procedures as described in subsection 8.3.3.2. (*Italics in original.*)³

More importantly, pre-2006 meteorological data are usually based on airport wind measurements that include an over-stated number of calm conditions. To address this issue, the meteorological data should be supplemented with one-minute ASOS data processed with USEPA's AERMINUTE program (v. 14337) to reduce the number of calm hours.

At the 10th Conference on Air Quality Modeling, held in March 2012, EPA stated that the purpose of the revised AERMET and AERMINUTE programs is “not to introduce conservatism” into the model, but rather to “Reclaim data that was “lost” due to coding, making station more representative.”⁴ Furthermore, EPA “recommends that AERMINUTE should routinely be used to supplement the standard NWS data with hourly-averaged winds based on the 1-minute ASOS wind data (when available).”⁵

These recommendations have also been presented in a March 2013 Clarification Memo from EPA:⁶

Given the limitations and significant concerns regarding the adequacy of standard ASOS data, and considering the relevant recommendations in the *Guideline* related to these concerns, we recommend that AERMINUTE be routinely used to supplement the standard ASOS data with hourly-averaged wind speed and direction to support AERMOD dispersion modeling. Since the 1-minute ASOS wind data used as input to AERMINUTE are freely available to the public, this recommendation should not impose any significant burden on permit applicants applying the AERMOD model.⁷

³ *Id.*, p. 68244.

⁴ James Thurman, EPA/OAQPS, AERMINUTE, 10th Conference on Air Quality Modeling.
http://www.epa.gov/ttn/scram/10thmodconf/presentations/1-7-aerminute_update.pdf.

⁵ Roger Brode, EPA/OAQPS, Appendix W: Clarification Memoranda, 10th Conference on Air Quality Modeling.
http://www.epa.gov/ttn/scram/10thmodconf/presentations/1-4-Brode_10thMC_AppW_ClarificationMemos_03-13-2012.pdf.

⁶ EPA, Use of ASOS Meteorological Data in AERMOD Dispersion Modeling, March 8, 2013.
http://www.epa.gov/ttn/scram/guidance/clarification/20130308_Met_Data_Clarification.pdf.

⁷ *Id.*, p. 12.

EPA summarizes the recommended use of ASOS meteorological data as follows:

- EPA has developed the AERMINUTE processor to calculate hourly average winds from 1-minute ASOS winds, whose purpose is to replace the single 2-minute winds that represent an hour with an hourly-averaged wind that is reflective of actual conditions and more appropriate for input for dispersion modeling.
- EPA recommends that AERMINUTE be routinely used in general practice in AERMOD modeling as the hourly average winds better reflect actual conditions over the hour as opposed to a single 2-minute observation.
- EPA has also implemented a threshold option in AERMET to treat winds below the threshold as calms, with a recommended minimum wind speed of 0.5 m/s, consistent with the threshold required for site-specific data.⁸

For these reasons, all modeling included in the EIR's HRA needs to be revised using the USEPA AERMOD air dispersion model and the most recent five years of available meteorological data from the Napa County Airport. To ensure an accurate representation of actual conditions, the hourly wind data must also be supplemented with 1-minute ASOS wind data processed with AERMINUTE.

III. The Syar Napa Quarry Expansion Project with Proposed Mitigation Causes Significant 24-Hour PM₁₀ CAAQS Violations

The EIR claims that "Implementation of Mitigation Measure 4.3-2B will reduce PM₁₀ and PM_{2.5} emissions to less than the respective 15-ton per year and 10-ton per year significance thresholds as shown in Table 4.3-11." (DEIR, p. 37) The assumption is made that with mitigation measures, PM₁₀ impacts will be less than those under current practices, and therefore modeling of PM₁₀ impacts is unnecessary and not included in the EIR. However, this assumption is problematic.

First, the proposed mitigation practices are unenforceable. Should they not be implemented as described, the resulting impacts from fugitive dust would be higher than estimated.

Furthermore, there are no PM₁₀ monitors within a reasonable distance of the Syar Napa Quarry. It is probable that the current emissions from the quarry are in violation of the California Ambient Air Quality Standard (CAAQS), and are going undetected. If this is the case, it is not a viable assumption that project emissions with mitigation would be in compliance with standards.

⁸ *Id.*, p. 13.

To test this theory, I performed an air dispersion modeling analysis of PM₁₀ impacts, with results showing violations of the CAAQS. The CAAQS for PM₁₀ (50 µg/m³) is based on highest modeled 24-hour impacts. This level must never be equaled or exceeded. The following is a description of my analysis and results. Modeling output files are available upon request.

a. Modeling Methodology

This section describes the modeling methodology I used for verifying whether the Syar Napa Quarry Expansion Project causes violations of the 24-hour PM₁₀ CAAQS.

Dispersion Model

I performed 24-hour PM₁₀ modeling with USEPA's AERMOD program, v. 15181, obtained from the Support Center for Regulatory Atmospheric Modeling (SCRAM) website. Version 15181 is the latest version of the AERMOD model, which was completed on June 30, 2015. As stated in Section I., AERMOD is the preferred air dispersion model for determining air impacts within 50 kilometers of air pollution emission sources.⁹

Geographical Inputs

The "ground floor" of all air dispersion modeling analyses is establishing a coordinate system for identifying the geographical location of emission sources and receptors. These geographical locations are used to determine local characteristics (such as land use and elevation), and also to ascertain source to receptor distances and relationships.

I used the Universal Transverse Mercator (UTM) NAD83 zone 10 coordinate system for identifying the easting (x) and northing (y) coordinates of the modeled sources and receptors. I obtained the source locations from modeling files included with the EIR (DEIR, Appendix M). I verified the source coordinates using Google Earth Pro orthoimagery, which ensures consistency with the UTM NAD83 coordinate system.

Receptors

I created a grid of 2,806 receptors in 200 meter increments covering the Syar Quarry and surrounding areas. I also modeled the sensitive and fence-line receptors identified in the EIR.

⁹ USEPA, Revision to the Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions, Appendix W to 40 CFR Part 51, November 9, 2005.

Sespe's modeling analysis included in EIR Appendix I assumes flat terrain for all sources and receptors. However, this approach is only appropriate for scenarios with stable downslope flow, which are limited to certain conditions occurring during nighttime hours only. In the case of Syar Napa Quarry, modeling with flat terrain would actually overestimate impacts. For more accurate results, I modeled source and receptor locations with terrain elevation data, in meters above sea level. I obtained terrain elevation data for these locations using National Elevation Dataset (NED) GeoTiff data for the area encompassing the Syar facility and the modeled receptors. GeoTiff is a binary file that includes data descriptors and geo-referencing information necessary for extracting terrain elevations. I extracted terrain elevations from the NED files using USEPA's AERMAP program, v. 11103, with 1/3rd arc-second (10 meter horizontal) resolution.

Source Parameters and Emission Rates

I modeled using source parameters consistent with modeling provided in the EIR. The following table, from DEIR page 20 of Appendix H of Appendix I, includes the modeled sources:

Recommended Model Sources

Link	Description	Surface	On or Off Road	Length (ft)	Length (mi)
A	Fork to Rail Loading	Paved	Off	3,370	0.64
B	Fork to Scalehouse	Paved	Both	1,135	0.21
C	Fork to Freeway	Paved	On	800	0.15
D	Rail Loading to Barge Loading	Paved	Off	1,415	0.27
E	Barge Loading Onsite	Unpaved	Off	400	0.076
F	Scalehouse to AC Plants	Unpaved	On	900	0.17
G	Scalehouse to Sand Plant	Unpaved	On	1,650	0.31
H	seperated Scalehouse to Rip Rap	Unpaved	On	5,450	1.00
I	Scalehouse to Pit Road	Unpaved	Both	2,040	0.39
J	Pit Road to AB Plant	Unpaved	On	3,960	0.75
K	Fork Near Pits to Grey Pit Road	Unpaved	Both	1,990	0.38
L	Blue/Snake Pit Split to Blue Pit	Unpaved	Off	3,805	0.72
M	Blue/Snake Pit Split to Snake	Unpaved	Off	3,605	0.68
N	Plant Feed Approach to Blue/S	Unpaved	Off	2,250	0.43
O	Plant Feed Approach	Unpaved	Off	615	0.12
P	Plant Feed Approach to Grey I	Unpaved	Off	650	0.12
Q	Grey Pit Road to Rip Rap	Unpaved	Both	1,420	0.27
R	Rip Rap to Grey Pit	Unpaved	Off	680	0.13
S	Napa Vallejo Highway North	Paved	On	5,800	1.10
	Napa Vallejo Highway South	Paved	On	3,715	0.70
	Avg. (F,G) Scalehouse to main plant area	Unpaved	On	1,275	0.24

I modeled using PM₁₀ emission rates also obtained from the EIR, taken from pages 3-7 of the section titled “Fugitive Dust and Blasting Emissions,” found in Appendix I of Appendix I. It should be noted that I modeled emissions from fugitive dust only, and did not include combustion emissions in my modeling, which would cause even higher impacts. I modeled these emission releases from 6:00 a.m. through 6:00 p.m., with the remaining hours having emission rates of 0. The following table details the emission rates I used for modeling:

Source	ID	NSRC	Onroad	Offroad	Other	g/s	Surface	On or Off Road
			PM10 lb/hr	PM10 lb/hr	PM10 lb/hr			
On- and Offroad Travel Fork to Scalehouse	B	11	1.18	0.40		1.81E-02	Paved	Both
Onroad Travel Fork to Freeway	C	8	0.84			1.32E-02	Paved	On
On- and Offroad Travel Scale to Plant Area	avg (F,G)	17	9.90	3.15		9.67E-02	Unpaved	On
Onroad Travel Scalehouse to Fork	H	20	6.92			4.36E-02	Unpaved	Both
Onroad Travel Scalehouse to AB Plant	I	38	11.09			3.68E-02	Unpaved	On
Offroad Travel Onsite	n/a							
Fork to Grey Pit Haul Road	J	19	1.12	1.60		1.80E-02	Unpaved	Both
Blue Pit Haul Road	K	37		17.80		6.06E-02	Unpaved	Off
Snake Pit Haul Road	L	36		16.80		5.88E-02	Unpaved	Off
Plant Feed Approach to Blue/Snake Pits	M	21		21.30		1.28E-01	Unpaved	Off
Plant Feed Approach	N	7		7.40		1.33E-01	Unpaved	Off
Plant Feed Approach to Grey Pit Haul Road	O	7		0.70		1.26E-02	Unpaved	Off
Grey Pit Haul Road to Rip Rap	P	14	0.80	1.60		2.16E-02	Unpaved	Both
End of Grey Pit Haul Road	Q	6		0.80		1.68E-02	Unpaved	Off
Offroad Travel to Rail/Barge	A	33		1.22		4.66E-03	Paved	Off
Offroad Travel to Barge	D	14		0.37		3.33E-03	Paved	Off
Offroad Travel to Barge Site	E	5		0.71		1.79E-02	Unpaved	Off
Offroad Excavations					1.96			
Offroad in Grey Pit (23.7%)	03	1			0.46	5.86E-02		
Offroad in Blue Pit (21.6%)	01	1			0.42	5.34E-02		
Offroad in Snake Pit (54.7%)	02	1			1.07	1.35E-01		
Offroad in Processing Area	04	1			1.96	2.47E-01		
Rail Loading	10	1				0.00E+00		
Barge Unloading	11	1				0.00E+00		
Blue Plant (emissions attributed to Source 4)	n/a							
Asphalt Plants (emissions calculated elsewhere)	08, 09							
AB Plant	06	1				0.00E+00		
Napa Vallejo Highway North	R	56	0.10			2.25E-04	Paved	On
Napa Vallejo Highway South	S	36	0.40			1.40E-03	Paved	On

Methods Used to Prepare 2010 – 2014 Meteorological Data

The meteorological data required by AERMOD is prepared by AERMET. Required data inputs to AERMET are: surface meteorological data, twice-daily soundings of upper air data, and the

micrometeorological parameters surface roughness, albedo, and Bowen ratio.¹⁰ AERMET creates the model-ready surface and profile data files required by AERMOD. Using AERMET v. 15181, I created an AERMOD-ready meteorological data set to model the proposed Syar Napa Quarry expansion. This data set covers five years, 2010 through 2014, and is summarized as follows:

Meteorological data used for modeling the Syar Napa Quarry:

Surface data: Napa County Airport (KAPC);

Upper air data: Oakland International Airport (KOAK).

Surface Meteorological Data

I used 2010 through 2014 Integrated Surface Hourly (ISH) data obtained from the National Climatic Data Center (NCDC). From the ISH dataset, I extracted ASOS data from the Napa County Airport.

I also obtained 2010 through 2014 one-minute ASOS wind data from the Napa County Airport, which I processed with AERMINUTE v. 14337. I downloaded these one-minute data from the NCDC.¹¹ I input the ice-free wind instrument start date (March 18, 2008) and used default settings with AERMINUTE. As a quality assurance measure, I compared values developed from the one-minute data with the corresponding ISH data file.

I processed the ISH data through AERMET Stage 1, which performs data extraction and quality control checks. I merged the AERMINUTE output files with the processed AERMET Stage 1 ISH and upper air data in AERMET stage 2.

Upper Air Meteorological Data

I used 2010 through 2014 upper air data from twice-daily radiosonde measurements obtained

¹⁰ Albedo is the fraction of total incident solar radiation reflected by the surface back to space (whiter surfaces have higher albedo). The Bowen ratio is an indicator of surface moisture. It is the ratio of sensible heat flux to latent heat flux and drier areas have a higher Bowen ratio. Surface roughness, shown in shorthand as (" z_0 "), is an essential parameter in estimating turbulence and diffusion. Technically, it's the height above the ground that the log wind law extrapolates to zero. For our purposes, z_0 can be thought of as a measure of how much the surface characteristics interfere with the wind flow. Very smooth surfaces, like short grass or calm ponds, have very low values of z_0 -- on the order of 0.01 meter or less. Tall and irregular surfaces, which are a greater obstacle to wind flow, have higher values of z_0 -- up to 1.0 meter or more for forests.

¹¹ See: <ftp://ftp.ncdc.noaa.gov/pub/data/asos-onemin/>

from Oakland International Airport. These data are in Forecast Systems Laboratory (FSL) format which I downloaded in ASCII text format from NOAA's FSL website.¹² I downloaded and processed all reporting levels with AERMET.

Upper-air data are collected by a "weather balloon" that is released twice per day at selected locations. As the balloon is released, it rises through the atmosphere, and radios the data back to the surface. The measuring and transmitting device is known as either a radiosonde, or rawinsonde. Data collected and radioed back include: air pressure, height, temperature, dew point, wind speed, and wind direction. I processed the FSL upper air data through AERMET Stage 1, which performs data extraction and quality control checks.

AERSURFACE and Final Processing

I used AERSURFACE v. 13016 to develop surface roughness, albedo, and daytime Bowen ratio values in a region surrounding the meteorological data collection site (Napa County Airport). Using AERSURFACE, I extracted surface roughness in a one kilometer radius surrounding the data collection site. I also extracted Bowen ratio and albedo for a 10 kilometer by 10 kilometer area centered on the meteorological data collection site. I processed these micrometeorological data for seasonal periods using 30-degree sectors.

I applied the AERSURFACE outputs in Stage 3 AERMET processing. At this point, I also incorporated a 0.5 meter/second threshold velocity for one-minute ASOS winds that had been processed with AERMINUTE. I did not fill missing hours in the meteorological data sets as the data files exceed USEPA's 90% data completeness requirement.¹³

b. Modeling Results

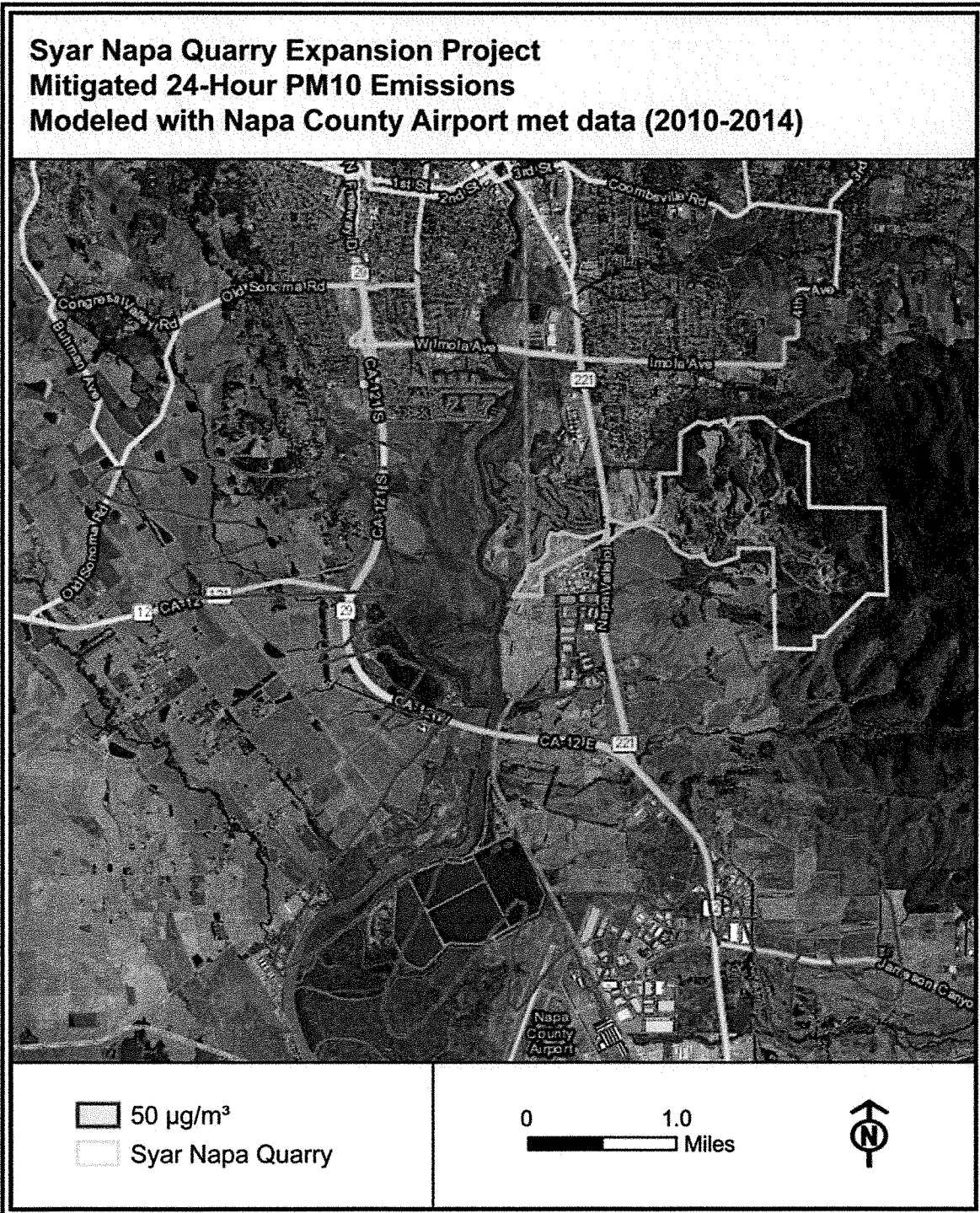
The 24-hour PM₁₀ CAAQS (50 µg/m³) is based on highest modeled 24-hour impacts. My modeling analysis indicates that the 24-hour PM₁₀ impacts from the Syar Napa Quarry Expansion Project, with proposed mitigation, will exceed this regulatory design concentration by over a factor of ten. The modeled impacts would also grossly violate the 24-hour PM₁₀ NAAQS (150 µg/m³). The highest modeled 24-hour average PM₁₀ concentration from the mitigated project is shown in the following table:

¹² Available at: <http://esrl.noaa.gov/raobs/>

¹³ USEPA, Meteorological Monitoring Guidance for Regulatory Modeling Applications, EPA-454/R-99-05, February 2000, Section 5.3.2, pp. 5-4 - 5-5. <http://www.epa.gov/ttn/scram/guidance/met/mmgrma.pdf>

Years of Meteorological Data	Highest 1 st High 24-hr PM ₁₀ Concentration (µg/m ³)	Easting Coordinate (meters)	Northing Coordinate (meters)
2010-2014	522.16	564332.36	423556.80

The following map illustrates the modeled area in violation of the CAAQS. To create the map, I generated an isopleth depicting the area in violation of the CAAQS, with 24-hour PM₁₀ concentrations equaling or exceeding 50 µg/m³, using Golden Software, Inc.'s Surfer Version 10. I exported the isopleth as a shapefile and created a map using ESRI's ArcGIS geographic information system (ArcMap v. 10). The isopleth is overlaid on USGS 1-meter orthoimagery obtained from ArcGIS online.



It should be noted that the modeling scenario that I have presented is based on emission rate assumptions made in the EIR, and even so, results are in violation of the CAAQS. The CAAQS levels are never to be equaled or exceeded.

Since the EIR indicates that mitigated project PM₁₀ emissions would be less than current emissions from the Syar Napa Quarry, it can be inferred that the Syar Napa Quarry's current emissions are already in violation of the CAAQS. These impacts are visible in photos taken by Sandra Booth over the past several years.¹⁴

These significant impacts were not identified in the EIR because of false assumptions that the PM₁₀ emissions under mitigated project circumstances would be lower than emissions under current practices, and therefore would be in compliance with the CAAQS. My modeling analysis shows that this is flawed logic, as PM₁₀ impacts from the proposed Syar Napa Quarry Expansion would indeed violate the CAAQS and therefore the proposed expansion must not be permitted.

Conclusion

The Syar Napa Quarry Expansion EIR is seriously flawed in that all air quality modeling was performed using defunct practices. The air dispersion model used, ISCST3, was replaced in 2005. The meteorological data used in all modeling analyses is far outdated, and does not include the supplementation of 1-minute wind data which would provide a more accurate meteorological representation. All air quality modeling presented in the EIR needs to be revised to amend these issues.

The EIR also completely fails to include any modeling of PM₁₀ emissions, citing the flawed assumption that less-than-current impacts would equate to insignificant impacts. The modeling analysis I prepared, using current modeling practices and based on emission rate assumptions made in the EIR, indicates that impacts for the proposed expansion with mitigation would violate both the 24-hour PM₁₀ NAAQS and the CAAQS. Based on these findings, the proposed Syar Napa Quarry Expansion is causing a significant air quality impact that the EIR failed to assess and identify. The EIR cannot be certified under this condition.

¹⁴ Comment letter from Sandra Booth to Donald Barella, available at: Syar Correspondence from 9-13 to 9-17 2015
<http://www.countyofnapa.org/syar/>

STOP SYAR EXPANSION

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Planning Commission Mtg.

OCT 21 2015

Agenda Item #

9C

October 16, 2015

Donald Barrella, Planner III

Napa County Department of Planning, Building & Environmental Services

Engineering and Conservation Division

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Attn: Donald Barrella:

On October 9, 2015, Tivonna Stern, Deputy County Counsel, e-mailed to inform me the County possesses no records responsive to my September 30, 2015 CPRA Request.

The purpose of my September 30, 2015 CPRA Request was to obtain the empirical data and calculations, the objective records and information, necessary to independently verify whether or not Syar Napa Quarry has a sufficient supply of water and is applying sufficient water to comply with Mitigation Measure 1 in Table 5.3, Page 36, Final EIR, March 2015, Appendix B. (See Table 5.3, below.)

Under the heading "EIR Applicability", the claim is made with assurance given that, "The facility already waters exposed surfaces two times per day and so this measure is part of the existing setting." The "existing setting" referred to is the baseline setting in the vicinity of the Project at the time the Notice of Preparation was published, 6-10-09.

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.

Please note: Mitigation Measure 1 is specific and declarative: "**All exposed surfaces** (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) **shall be watered two times per day.**" (My emphasis.) The purpose of Mitigation Measure 1 is to control fugitive dust generated from Syar Napa Quarry's exposed surfaces.

The dust from the Project's exposed surfaces poses present and foreseeable, significant, potential, adverse environmental effects requiring implementation of this Mitigation Measure 1. Remarkably, without explanation, the empirical data and calculations necessary to quantify and qualify the water needed and used to fulfill the requirements of the Mitigation Measure 1 were omitted from the Draft EIR Vols. I & II.

Furthermore, Tivonna Stern, County Deputy Counsel, confirmed the County possesses no records responsive to my request for empirical data and calculations in order to verify Syar Napa Quarry's compliance with or ability to comply with Mitigation Measure 1.

The County, the lead agency, responsible for the contents and objectivity of the Syar EIR acted irresponsibly when it omitted this essential, factual information. By this omission, the County has deprived the governmental decision makers and the public their right to understand and independently verify statements, assumptions, and conclusions made by the applicant, the County, and the County's consultants.

In the context of an Environmental Impact Review (EIR) process and the California Environmental Quality Act (CEQA), the County's omission of this essential information is as inexplicable as it is inexcusable. To knowingly omit is to knowingly obstruct. To not even have this foundational information to produce reveals incompetence. Whereas the County may wish to excuse itself for not having this essential, factual information, there is no excuse for this egregious failure; the information must be produced.

Information foundational to the objectivity (factual basis) of an EIR must be produced, cannot be overlooked, omitted, or deferred. The very intent and purpose of an EIR is to objectively inform governmental decision makers and the public about a project's potential adverse environmental effects and/or impacts.

Objectivity derives from and depends on empirical (factual) data. Factual data can be studied and verified, independently. Subjective data cannot; it confounds independent study and verification.

When an EIR lacks or loses a factual basis, it loses its objectivity and becomes subjective, enabling confirmation bias and path dependency to dictate and dominate governmental decision-making. The EIR process and CEQA came into being to eliminate subjectivity in governmental decision-making. **An objective EIR is paramount and that is what our group is striving to achieve.**

Water is a critically deficient resource in the Napa Region, generally, and in the MST, specifically. With the drought and development, water availability will only become more critical.

Since the County has not produced the empirical data and calculations requested, and since the Deputy Counsel confirmed the County has no records to produce, below, is a brief analysis of water sufficiency, and usage for required dust control of the quarry's exposed surfaces based on the following limited information available in the EIR, as quoted:

Quoted References:

1. DEIR, Vol. I, August 2013, Page 3-1: "The Syar Industries, Inc. (Syar) Napa Quarry is located within an approximately 920-acre holding (870 acres east of SR 221 "the project site" and 49.9 acres west of SR 221) ..." "The project would result in an approximately 124-acre expansion of the existing 497 acres presently disturbed by mining at the 870-acre project site."

Note: The "project site" must include dust control for the exposed surface areas within the 49.9 acres west of SR 221. Uncontrolled, fugitive dust is released by quarry operations where sand is barged in and from truck traffic on all of the quarry's paved roadways and out onto public roadways. Syar Napa Quarry is responsible for this dust pollution and must be made to control it.

2. DEIR, Vol. I, August 2013, Page 3-1: "The project would result in an approximately an 124 acre expansion of the existing 497 acres presently disturbed by mining at the 870-acre project site."

3. DEIR, Vol. I, August 2013, Page 3-4: "... the existing 497-acre quarry area is heavily disturbed ..."

4. DEIR, Vol. I, August 2013, Page 3-7: "Consistent with the MRP, Syar proposes an Adaptive Management Mining Strategy for the project where active mining areas of the property would consist of no more than 25 percent (or approximately 218 acres) of the entire 870-acre property at any given time.⁴ Presently, approximately 57 percent of the 870-acre project site (or approximately 497 acres) contains active mining."

5. FEIR, Vol. I, June 2015, Appendix B, Page 26: "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 totaling 51.97 acres."

6. DEIR, August 2013, Page 4.8-18: Groundwater Use: "Existing usage under baseline conditions is approximately 45.8 million gallons per year (approximately 140.6 acre-ft)." Groundwater Use: "

7. DEIR, Vol. I, August 2013, Page 4.8-30: "If additional is required for the proposed project, this additional water will be obtained from off-site 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 production volume will be reduced to the extent that the water use does not exceed the maximum allowable annual usage is 45.8 million gallons (140.6 acre-ft) per year.”

8. County Staff Report, October 14, 2015: “Because the Quarry’s water supply well is located within Milliken-Sarco-Tulucay (or MST) groundwater deficient area, mitigation (Mitigation Measure 4.8-4) as well as conditions of approval (#2D) have been proposed to limit (or cap) annual groundwater use to the baseline conditions of 140.6 acre-feet per year. In other words groundwater use will be mitigated and conditioned such that there will be no net increase in water use as a result of the project and from (sic) ongoing quarry operations. Additionally, this capped groundwater use is consistent with the Napa County Department of Public Works’ practice of requiring no net increase in groundwater use in the MST when new or expanded water uses are being considered. (sic) Both the mitigation measure and condition of approval include a monitoring program to ensure that the amount of annual groundwater use under this permit is not exceeded. Any water needed above the annual 140.6 acre-foot limit would need to come from other sources or through on-site water conservation. Any other proposed water source would need to be reviewed pursuant to CEQA and county policy and code prior to its installation and use.”

9. DEIR, Vol. I, August 2013, Page 4.8-30: “If additional water sources are not available then production volume will be reduced to the extent that the water does not exceed the maximum allowable annual usage is (sic) 45.8 million gallons (140.6 acre-ft) per year.”

10. DEIR Vol. II, August 2013, Page 22: “Moisture content of three percent (3%) is used based on the assumption that materials are watered as necessary to control dust.”

11. DEIR Vol. I, August 2013, Page 3-14: “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.”...“The start and end of “construction season” hours fluctuate somewhat with weather and market conditions, but the typical “construction season” is from June to November, and the typical “off season” hours are from December to May.”

A Brief Analysis of Water Sufficiency and Usage for Required Dust Control:

Note: The quarry acreage is mountainous. The topography is varied. The acreage is not on a flat plane. Also, the aggregate and waste piles are not flat. So, the actual exposed surface area requiring watering to control dust is much greater than 497 acres. On-site measurements must be made so the acreage of exposed surface can be calculated, accurately, to determine the total water usage required for prescribed dust control.

The quarry's construction season is 250 days per year spanning a six-month period from June to November. However, there are numerous days requiring water for dust control December to May. Plus, during drought periods, the construction season is extended. So, the actual number of days requiring watering will be greater than 250 days per year. For the calculations below, to be conservative, the 250 days/year value was used.

Of course, the purpose of watering is to control Syar Napa Quarry's fugitive dust pollution in order to protect human health and well being, and to maintain a healthy environment for all life. So, depending on environmental conditions and quarry activities, effective dust control may require watering more than two times/day. Because the quarry faces south and west, with constant sun and wind exposure, it is foreseeable more frequent watering will be required to achieve effective dust control, requiring a larger quantity of water usage.

1. Exposed Surface Area: One Acre = 4,046.86 Square Meters.
2. Quantity of Water Needed/Square Meter. One Liter/Square Meter = 3% Moisture.
3. One Gallon = 3.7854 Liters.
4. One Acre Foot = 325,851 Gallons.
5. Present Area of Active Mining of 870 Acres = 497 Acres of Exposed Surface.
6. Proposed Area of Active Mining of 870 Acres = 218 Acres of Exposed Surface.
7. Proposed Area of Active Mining of Pasini Parcel = 47.69 Acres of Exposed Surface.

Present Area of Active Minin (SNQ) With 497 Acres of Exposed Surface:

497 acres x 4,046.86 square meters/acre = 2,011,289.42 square meters
2,011,289.42 square meters x 1 liter/meter = 2,011,289.42 liters of water
2,011,289.42 liters divided by 3.7854 liters/gallon = 531,328.11 gallons
531,328.11 gallons divided by 325,851 gallons/acre foot = 1.63 acre feet
1.63 acre feet x 250 days/year = 407.5 acre feet/year, watering once/day
407.5 acre feet/year x 2 = 815 acre feet/year, watering twice/day

Total: 815 acre feet/250 days/year for 497 acres of exposed surface

Proposed Area of Active Mining (SNQ)With 218 Acres of Exposed Surface:

218 acres x 4,046.86 square meters/acre = 882,215.48 square meters
882,215.48 liters x 1 liter/meter = 882,215.48 liters of water required
882,215.48 liters divided by 3.7854 liters/gallon = 233,057.40 gallons
233,057.40 gallons divided by 325,851 gallons/acre foot = .715 acre feet
.751 acre feet x 250 days/year = 187.75 acre feet/year, watering once/day
187.75 acre feet/year x 2 = 375.5 acre feet/year, watering twice/day

Total: 375.5 acre feet/250 days/year for 218 acres of exposed surface

Proposed Area of Active Mining (Pasini) With 47.69 Acres of Exposed Surface:

47.69 acres x 4,046.86 square meters/acre = 192,994.75 square meters
192,994.75 liters x 1 liter/meter = 192,994.75 liters of water required
192,994.75 liters divided by 3.7854 liters/gallon = 50,983.9779 gallons
50,983.9779 gallons divided by 325,851 gallons/acre foot = .1565 acre feet
.1565 acre feet x 250 days/year = 39.125 acre feet/year, watering once/day
39.125 acre feet/year x 2 = 78.25 acre feet/year, watering twice/day

Total: 78.25 acre feet/250 days/year for 47.69 acres of exposed surface

Water Required With No Project (SNQ):

- Currently, the 497 acres of exposed surface requires 815 acre feet of water per 250 days/year to fulfill the prescribed conditions of Mitigation Measure 1, as specified in Table 5.3, above.
- The quarry's maximum allowable quantity of water is 140.6 acre feet/year for all uses including dust control and quarry operations.
- Of the 815 acre feet/250 days/year required, minus the maximum allowable of 140.6 acre feet/year, leaves a balance of 674.4 additional acre feet/year of water required.
- So the quarry has available only 17 % of the water required to fulfill the Mitigation Measure 1. The 140.6 acre feet/year maximum allowable divided by 815 acre feet/year required = only 17 % of the required water/year is available.
- Even if the quarry uses its 140.6 acre feet/year maximum quantity of water allowable for no other purpose than watering exposed surfaces, the quarry still has only 17 percent of the water required/year to fulfill Mitigation Measure 1.
- Therefore, held to account by its own terms, the quarry must reduce its production season from 250 days/year to 42.5 days/year. $17\% \times 250 \text{ days/year} = 42.5 \text{ days/year}$. Or, the quarry must reduce its production volume to 137,700 tons/year. $17\% \times 810,000 \text{ tons/year total production} = \text{a reduction in production volume to } 137,700 \text{ tons/year}$. (See quotes, number 7 and 9, above)

Water Required With Proposed Project (SNQ & Pasini):

- With the proposed project there will be 218 acres + 47.69 acres of exposed surface = 453.75 acre feet of water needed per 250 days/year to fulfill the prescribed conditions of Mitigation Measure 1, as specified in Table 5.3, above.
- The quarry's maximum allowable quantity of water is 140.6 acre feet/year for all uses including dust control and quarry operations.
- Of the 453.75 acre feet/250 days/year required, minus the maximum allowable of 140.6 acre feet/year, leaves a balance of 313.15 additional acres feet/year of water required.

- So, the quarry will have available only 45% of the water required to fulfill the Mitigation Measure 1. The 140.6 acre feet/year maximum allowable divided by 453.75 acre feet/year required = only 45% of the required water/year will be available.
- Even if the quarry uses its 140.6 acre feet/year maximum quantity of water allowable for no other purpose than watering exposed surfaces, the quarry still will have only 45% of the water required/per year to fulfill Mitigation Measure 1.
- Therefore, held to account by its own terms, the quarry will be required to reduce its production season from 250 days/year to 112.5 days/year. $45\% \times 250 \text{ days/year} = 112.5 \text{ days/year}$. Or, the quarry will need to reduce its production volume to 364,500 tons/year. $45\% \times 810,000 \text{ tons/year} = \text{a reduction in production volume to } 364,500 \text{ tons/year}$. (See quotes, number 7 and 9, above)

Obviously, Syar Napa Quarry has not been implementing the prescribed Mitigation Measures to control its fugitive dust pollution. In fact, the quarry does not have the water, equipment, and manpower available to do so, even if it wanted to. Consequently, uncontrolled, fugitive dust is being released every day the quarry is in operation. (See the attached photographs, below.) This social abuse is in violation of prescribed dust control compliance conditions, going unacknowledged and unenforced by our government officials. Overcome with confirmation bias and path dependency, the County and BAAQMD are enabling this abuse to continue, marching lockstep together with the project applicant. So, we, the public, are left to bring forth fact and identify the fundamental flaws in the EIR's content and objectivity while holding the legal line to allow truth and justice to prevail.

Fortunately, the Napa County Board of Supervisors provided enforcement provisions to fine and/or imprison the person or persons at Syar Napa Quarry responsible for violating the prescribed conditions of Mitigation Measure 1 (See Table 5.3, above): "Article VI of the Napa County Code Chapter 16.12 (surface Mining and Reclamation). This section of the code spells out the procedural requirements and penalties specific to noncompliance and or/violation of an approved SMP, County code, or the Surface Mining and Reclamation Act (SMARA)." Below are two sections of the Code pertaining to Syar Napa Quarry's daily, public nuisance violation of Mitigation Measure 1 that has been going on for over 30 years:

16.12.650 Violation-Public Nuisance.

A. The board of supervisors hereby declares that violation of the conditions regulating the operation and reclamation of mined lands within the county is a public nuisance in that compliance with such operating and reclamation conditions is necessary to prevent substantial harm to the environment and to protect the health, safety, and general welfare of the community.

B. Any person violating any term or condition of an approved master mining plan after receipt of a final notice of noncompliance pursuant to Section 16.12.61 O(C) shall be guilty

of conducting a public nuisance, and shall be guilty of a separate offense for each and every day such nuisance is maintained. (Ord. 1150 Section 2 (part), 1998)

16.12.660 Violation-Penalty.

A. Any person who operates, maintains or causes to be operated or maintained any surface mining operation which is not in conformance with the provisions of this chapter, the exploration or surface mining permit issued, or any requirement, term or condition of a master mining plan approved for the site being mined is guilty of a misdemeanor.

B. Each person violating or contributing in any way to the violation of any of the provisions of this chapter shall be deemed guilty of a separate offense for each during which such violation continues, and such violation shall be deemed to be a misdemeanor and shall be punishable therefore as provided below.

C. Any person convicted of a misdemeanor under the provisions of this section shall be punished by a fine not exceeding one thousand dollars, imprisonment in the county jail not exceeding six months, or by both. (Ord. 1150 Section 2 (part), 1998)

Due to its past and present history of continual, flagrant pollution, Syar Napa Quarry must be required to hire an independent environmental emissions control company to design and manage the quarry's emissions prevention, control, and compliance program with the authority to shut down quarry operations when emission controls are not in compliance. The long history of continual, uncontrolled dust pollution emanating from the quarry has proved neither the County, BAAQMD nor Syar Industries, Inc. are willing and/or capable of effectively implementing or complying with the prescribed Mitigation Measures 1. Currently, proper oversight is lacking.

In good conscience, the Final EIR cannot be certified, approved, or permitted until foundational, empirical data and calculations germane to this water and dust control issue are fully vetted and made available to the governmental decision makers and the public for review and comment.

The County, the lead agency, is obligated to adhere to CEQA's prescribed procedure. It's the law. Neither the County, nor the applicant, shall be permitted to sidestep or pre-empt CEQA to get what they want driven by subjective desire. The EIR process and CEQA were designed and implemented to thwart such inappropriate, impulse-driven decision making and replace it with fact-based decision making.

If the County and the project applicant want an expeditious conclusion to this EIR process, they must be responsive and produce the fundamental, empirical data requested and required and stop obstructing and deferring. Without delay, they must get the facts out to the governmental decisions makers and the public for review and comment so factual decisions can be made without further waste of time and money.

The photographs below are typical of Syar Napa Quarry's uncontrolled, toxic dust pollution. The technology and feasible management practices exist to prevent the quarry's out-of-control, socially and environmentally abusive pollution. It would be helpful to have competent governmental oversight to compel Syar Napa Quarry to implement Mitigation Measure 1, as prescribed in Table 5.3, above.

Please enter this letter with photographs into the public/administrative record for the Syar EIR. Thank you.

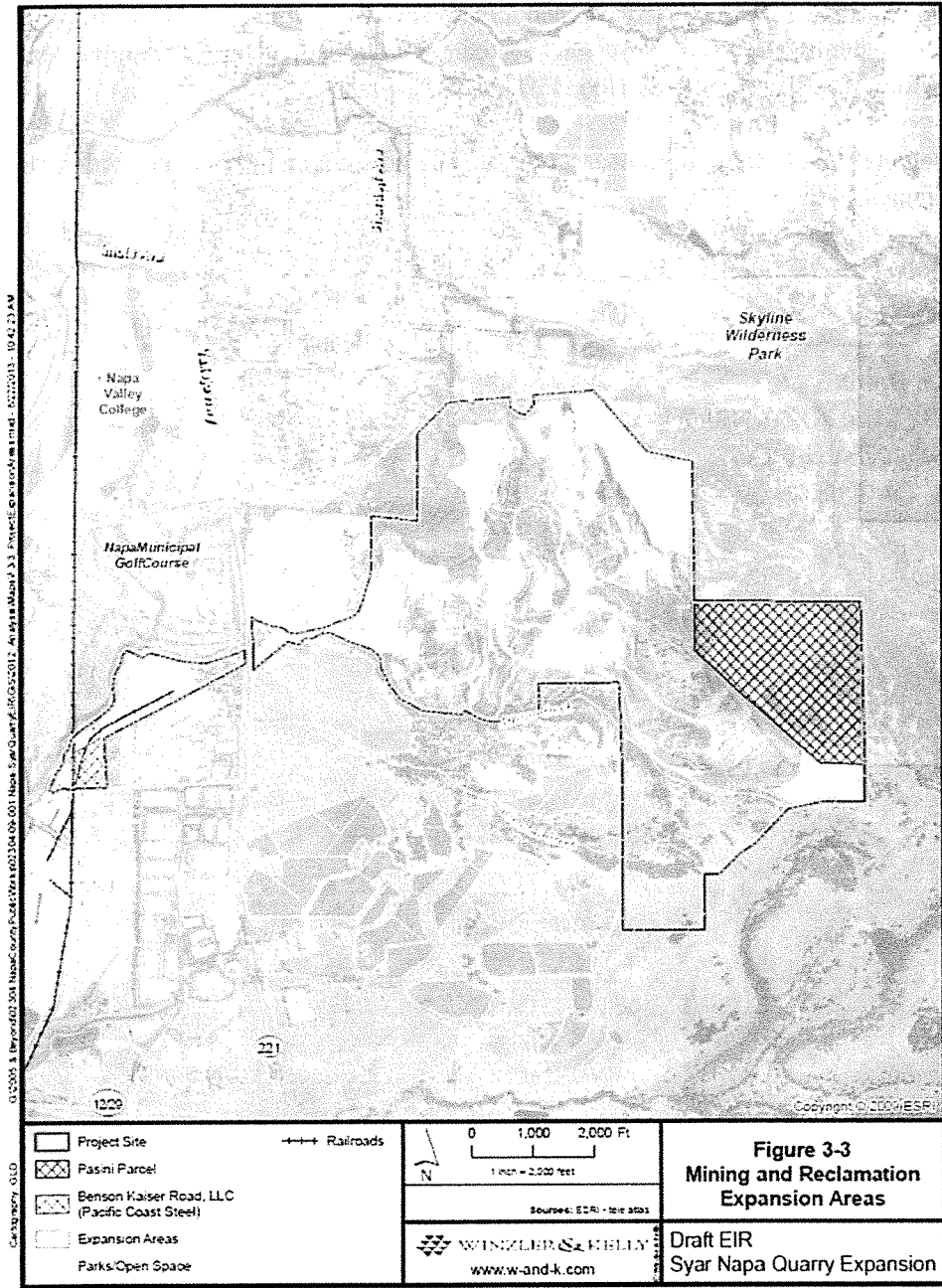
Sincerely,



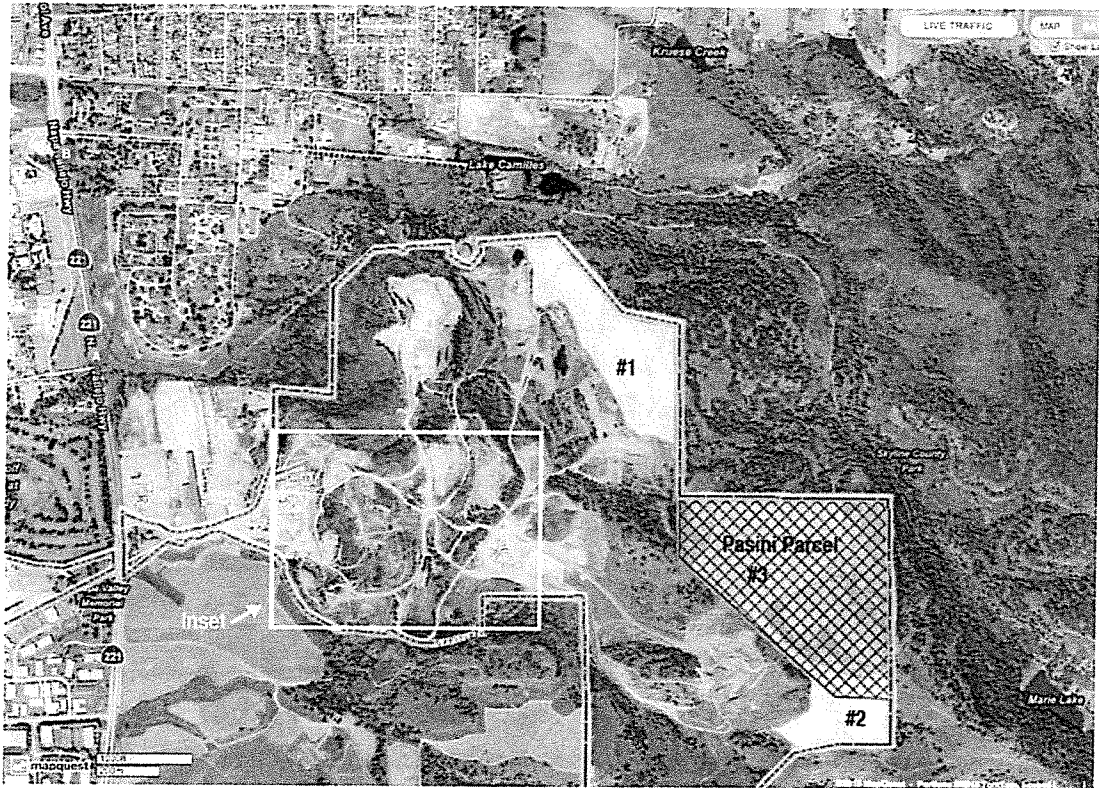
Steven Booth
STOP SYAR EXPANSION
952 School Street, #297
Napa, CA 94559



October 26, 2009: This photo was taken from the River Trail behind Napa Valley College. Uncontrolled dust pollution emanating from Syar Napa Quarry is being released into the public air space.



This Map is from the Draft Environmental Impact Report showing the boundaries of Syar Napa Quarry. The red, crisscrossed area is the Pasini Parcel. Syar Industries wants to expand mining operations into the Pasini Parcel, encroaching closer to Skyline Wilderness Park. Dust must be controlled on the entire Syar Napa Quarry property.



This aerial image shows the boundaries (in yellow) of Syar Napa Quarry and the quarry's close proximity to surrounding businesses, residences, schools, and Skyline Wilderness Park. Syar Industries, Inc. proposes to expand mining into the Pasini Parcel (#3) and into areas #1 and #2. The need to expand into the Pasini Parcel has not been proved. An expansion into this area will encroach on Skyline Wilderness Park, exposing hikers, disc golfers, campers, mountain bikers, and those riding horses to toxic mining dust, emissions, and noise, ruining their recreational experience and harming their health.

See all of the exposed surfaces? These areas are required to be watered twice daily to control fugitive dust, uncontrolled toxic mining dust. This required watering is not being done in violation of the prescribed Mitigation Measure 1. (See Table 5.3 in the text of the letter above)

The white rectangular inset area in the image above pertains to the close up image on the next page.



This is a close up image of the area shown in the white rectangle of the image on the previous page. All of the exposed surface disturbed by mining and roadways are required to be watered twice daily. This is not being done. Syar Napa Quarry does not have the water, equipment, and manpower to comply with the prescribed Mitigation Measure to control its fugitive, toxic mining dust.

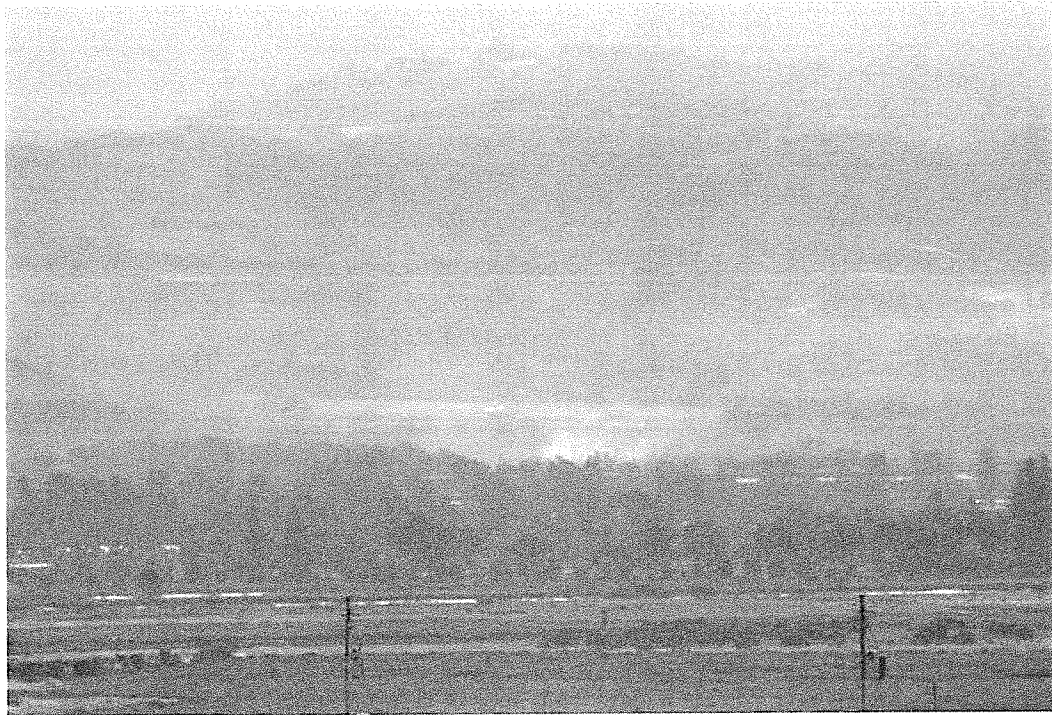
Also, old rusting materials and obsolete equipment are stored on the property contributing to toxic runoff after rainstorms. Is this a surface-mine or a junkyard?

There is no need to expand the mine's footprint. The mine just needs to be cleaned up, organized, and managed more efficiently. The Pasini Parcel must be left untouched by mining and, ideally, deeded to Skyline Wilderness Park to maintain a buffer between the mine and the Park.



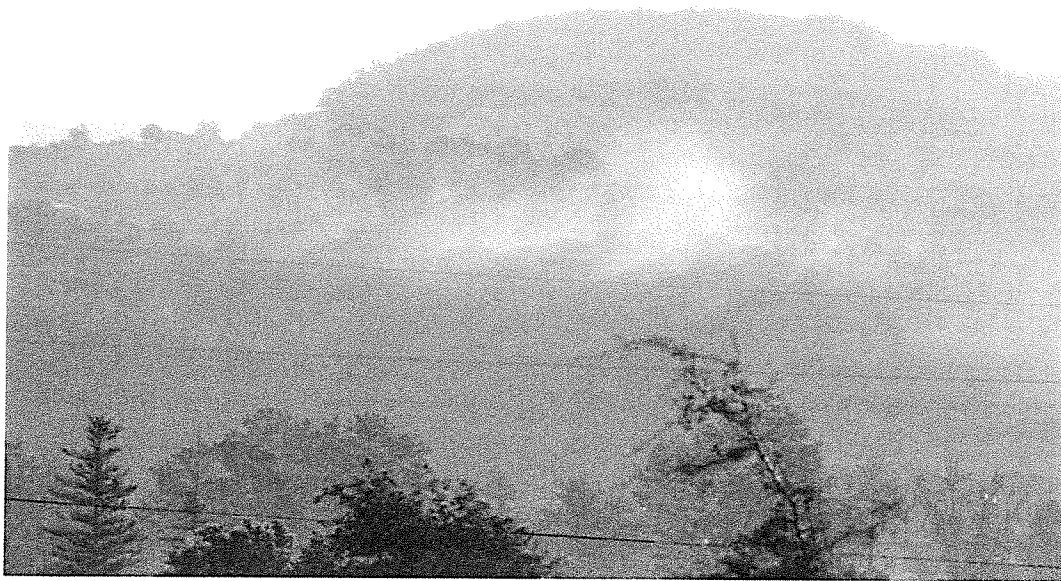
September 8, 2015: This photograph was taken from Foster Road on the west side of the Napa Valley, facing east. This is a view from approx. 5 miles away. The uncontrolled, toxic dust pollution from Syar Napa Quarry's operations, containing significant quantities of cancer causing respirable crystalline silica (RCS), extends for square miles, blanketing the Napa Valley College, the Municipal Golf Course, Kennedy Park, Skyline Wilderness Park, Napa State Hospital, schools, pre-schools, businesses, all people traveling on Hwy.

The mountains surrounding Napa Valley trap and concentrate this toxic pollution. The Napa Valley's invasive cancer rate is 20 percent higher than the State average. Wonder why the County and Syar Industries, Inc. are doing all they can to avoid testing and monitoring of the air in the vicinity of the quarry?



September 8, 2015: This is closer view taken on the same day from the same location as the photograph on the previous page. Syar Napa Quarry's toxic dust pollution degrades the air quality of the entire Napa Valley. This is a form of public, social abuse affecting everyone living in, working in, and visiting Napa Valley.

The technology and management practices exist to prevent this uncontrolled dust pollution but are not being implemented. Governmental oversight is lacking. Syar Industries, Inc. is not being a good corporate neighbor. The health and general well being of thousands of people are being openly abused by this uncontrolled mining operation.



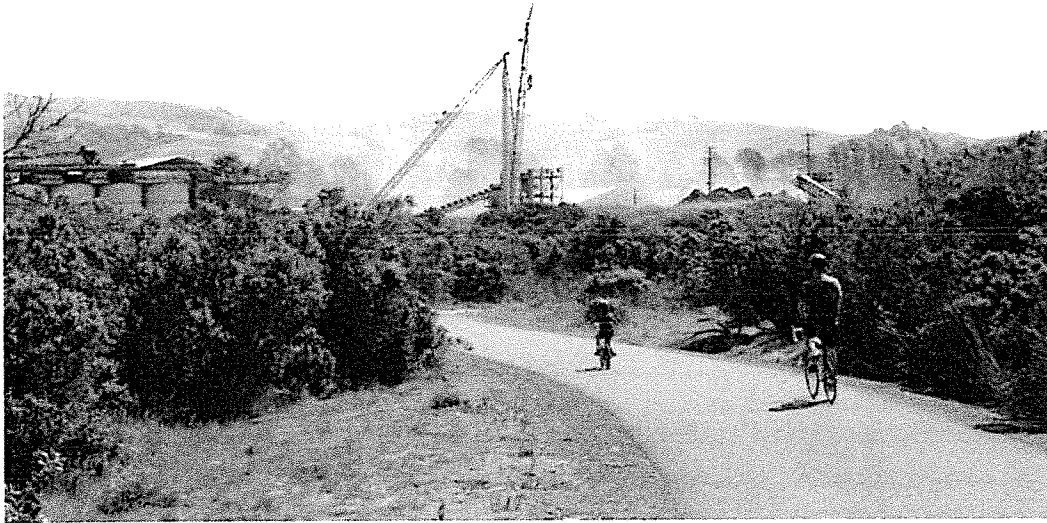
September 8, 2015: This photograph was taken from the middle parking lot at Kennedy Park facing northeast. At the time the photo was taken the air was quite still. But, soon after, the dust began moving north, over the large residential area, Napa State Hospital, schools, businesses, and Skyline Wilderness Park. This toxic dust fills the public air space degrading air quality and adversely affecting health of thousands of people. There is no rational justification for this blatant social abuse. This uncontrolled, toxic dust pollution is caused by a single business operation, Syar Napa Quarry.



September 9, 2015: This photograph was taken from the west side of the road across from the entrance/exit to Syar Napa Quarry, facing east. The uncontrolled, toxic dust pollution released into the air from the two trucks shown is typical. At the 9-2-15 Planning Commission Meeting, Syar representatives testified that this road dust was being controlled by use of a street sweeper. The County's EIR states the same. This photo was taken 7 days later. What is said to be the case by Syar and the County, is not what is happening in fact.



September 9, 2015: This photograph was taken from the west side of the roadway across from the entrance/exit to Syar Napa Quarry, facing south. This photo shows the uncontrolled, toxic dust pollution released into the air by a truck traveling down the merge lane to enter the traffic going south. Drivers and passengers, pedestrians and bicyclists, on the Napa-Vallejo Highway are involuntarily exposed to this toxic dust. The dust is continuously re-suspended in the air along the traffic corridor from Imola Avenue to the north and Kaiser Road to the south, and beyond. This is another example of Syar Napa Quarry's flagrant social abuse, releasing toxic dust into the public's common air space, repeatedly violating air quality standards.



March 31, 2015: This is a photograph taken along the south loop of the Kennedy Park River Trail facing southeast. The dust from around Syar Napa Quarry's sand piles, barged in from Richmond, CA, is being blown by the wind. The wind this day was coming from the east and carried this dust directly over the father and his son, and us. Syar Industries, Inc. has lax dust control management and releases vast quantities of dust into the public air space, regularly.

Public action is required to stop this social abuse because our governmental officials do not take this uncontrolled dust problem seriously.



June 12, 2015: This photograph was taken from the south loop of the River Trail in Kennedy Park. The uncontrolled dust pollution being released into the air is being generated by Syar Napa Quarry's AB Plant, where aggregate and recycled concrete is processed.

The quarry is required to control this toxic dust but refuses to do so, polluting at will, day-after-day.

OCT 21 2015

Agenda Item #

9C

Susanne von Rosenberg
Verbal Comments
Planning Commission Hearing 10-21-2015
Syar EIR/Permit

There have been extensive comments and a lot of technical work that's been done by the residents of Napa County. The work that's been done continues to show that there are flaws in the EIR, and many of these flaws have not been remedied.

In the interest of time, let me just mention two:

1). There is a significant impact from the proposed increase in noise from the quarry that is not been addressed. As we pointed out in the past, the noise data collected for the proposed Project in combination with the proposed noise threshold results in a 5 dB or greater increase in noise levels during the majority of the nighttime hours. 5 dB was set as a significance threshold in the EIR, but the entire analysis is being based on the noise limits set forth in the noise ordinance. The County cannot simply ignore one of the noise significance criteria in favor of another.

2) There continue to be mitigation measures that are infeasible. As Mr. Booth clearly demonstrated the impossibility of watering twice per day and staying within the current water allotment of 140.6 acre feet/year. Mitigation measure 4.8-2 which is intended to prevent groundwater depletion due to mining activities occurring below the potentiometric groundwater surface is also infeasible. The mitigation measure, which relies upon avoiding mining within 10 feet of the potentiometric surface, assumes that it is possible to accurately characterize groundwater flows in a fractured bedrock area to within 10 feet over a large area. Basic knowledge of the geology of fractured bedrock aquifers indicates that just because a hole is dry in one location, does not mean that there could not be a fracture 3 feet away that carries substantial groundwater flows. The entire history of the MST is one of well drilling being an unpredictable process, with good wells frequently being located less than 50 feet from bad wells.

Given the significance of some of the concerns, much more robust public access to monitoring data should be provided, and the county should take active steps to include the public in the monitoring effort. This should be incorporated into the mitigation monitoring and reporting program.

Given the many remaining deficiencies in the EIR it should not be certified. It should be recirculated with all the information that has been developed since the final EIR incorporated, and comments, many dating back to the Draft EIR, adequately addressed. The ad hoc manner in which project modifications have occurred since the release of the Final EIR is confusing to the public and arguably confusing to you, as decision makers, and therefore unacceptable.

More importantly, the permit should not be approved. 35 years is an excessively long period of time given the changes that we've experienced in Napa County in the last 35 years, and the likelihood of significant environmental, technological, and other changes in the next 35 years.

If a permit is granted, it should be phased. And it should be conditioned on Syar's adequate performance of its environmental compliance and reclamation obligations. However, the existing EIR and Mining and Reclamation Plan do not satisfy the findings required to issue a permit.

The County's surface mining regulations at section 16.12.360 set forth the required findings for granting a permit. The required findings cannot be made. For example, paragraph I states "The proposed timing

for reclamation requires reclamation to be fully completed as soon as it is feasible, considering the particular circumstances of the site to be reclaimed, and provides for appropriate *incremental* reclamation at the earliest feasible time, considering the particular circumstances of the site to be reclaimed." According to the mining and reclamation plan, 2% of the site has been reclaimed to date. From that it is apparent that Syar has not achieved the requirements in the findings under their current permit. They should not be granted another permit until the terms of the current permit are satisfied. Furthermore, the reclamation plan as developed does not meet the requirements of this finding either. Therefore the permit cannot be issued.

Supplemental comments:

- ① Air monitoring should be conducted now at the perimeter of the quarry. This will resolve the issue of whose models are correct.
- ② "Trust But Verify" is appropriate only when there is a history of compliance. Syar's compliance record do not support "trust but verify." Any monitoring should be performed by independent parties retained by the County at Syar's expense.
- ③ All monitoring data should be made available on-line for public review.
- ④ While the American Canyon quarry reclamation is admirable (except for the lack of trees), it is completely ~~dissimilar~~ different than the Napa quarry, which will have blank rock faces 50' high. (Grading will only be possible in a small portion of the Napa quarry; reclamation will require much more time.)
- ⑤ If a permit is approved, it should be short-term, with exclusions contingent on Syar's environmental compliance, reclamation performance, and applicable environmental and sedimentation factors.

OCT 21 2015

Susanne von Rosenberg Responses to Select Responses to Comments Agenda Item # 9C

Submitted at the Planning Commission Hearing 10-21-2015

Note: The FEIR provided responses to comments that were generally inadequate and dismissive. A general response to the responses to comments was provided earlier, and some issues have been addressed in detail in other comment letters and in verbal comments. The County has issued a variety of additional information; this information is taken into consideration in this document. This document provides responses to select responses to comments for which responses and any subsequent information continue to be inadequate. The absence of a response to a response should not be interpreted to mean that I consider the response and any additional information provided to date to be adequate. I expressly reserve the right to raise any issue on which I or any others have commented at any time during this process during any subsequent CEQA or legal action.

Letter V Response to Comments**Comment V-1**

Please note that some of these comments were provided during the public hearings; they are repeated here for completeness and context. Due to the length and complexity of the document, some comments are relevant to both the overall document/project description and a specific resource area; this creates some repetitiveness my comments. I was not able to review the entire document in detail, but I believe that the comments presented below make it clear that recirculation is required. Due to the complexity of the document, the County should consider hiring an independent consultant team to review and correct the document; it is well beyond the capacity of any single individual to adequately review this document, and only people extremely familiar with the requirement of each impact analysis as well as the underlying source documents would be able to ascertain whether there are other buried errors in the document. It is unfortunate that the document as written raises questions as to the reliability of the impact analysis.

Response to Comment V-1

This introductory comment identifies the relevancy of comments to different sections of the Draft EIR, that the commenter believes the Draft EIR should be recirculated, and that the county should hire an independent consultant team to review the Draft EIR. This general comment does not specifically comment on the adequacy of any certain section, impact or mitigation measure within the Draft EIR. No further response is necessary.

1. Overall Document**Comment V-2**

- a. The overall document is inadequate in that it fails to adequately characterize potential impacts for a variety of resource areas (see discussion below) and/or contains evident errors. The substantial deficiencies would result in a number of new significant impacts or requirements for new or different mitigation for resource areas including to aesthetics, air quality, hydrology, and potentially traffic. Therefore the revised document must be recirculated.

Response to Comment V-2

The analysis in the Draft EIR addresses the commenter's substantive concern, and the commenter does not provide any significant new information requiring recirculation of the Draft EIR pursuant to State CEQA Guidelines Section 15088.5.

Response to Response on Comment V-2

The substantive concerns are provided in subsequent comments. Many of these were dismissed. One example is the concern over inadequate characterization of the visual impacts, which required me to present the concern in the form of a powerpoint presentation at the January 7 2015 Planning Commission meeting. That presentation required more than 12 hours of work because the information required to do the analysis was scattered throughout the document and information from various graphics had to be manually overlaid to evaluate the potential concern. It was only subsequent to my presentation that this concern was seriously addressed through a project change involving the removal of 10 acres from the proposed Project and a subsequent visual analysis. It is impossible for a member of the public to devote an equal amount of time to each and every serious issue, and it is the duty of the County to ensure that issues raised are appropriately addressed. Although the County and the Project proponent have clearly made an increased effort to do so in the past 8 to 9 months, the work should have been done prior to the issuance of the FEIR. By failing to do so, the County and the Project proponent have created an ad hoc process that is confusing and inconsistent, and not within the intent of CEQA. The County and the Project proponent required a year to issue the FEIR, yet few changes were made and comment responses were generally dismissive and superficial.

The lack of a considered and meaningful response to the comments on the DEIR, the resulting lack of meaningful changes to the FEIR, and the subsequent on-going modifications to the project (including both the Project Description and mitigation measures, which are foundational elements and greatly affect the impact characterization) require the document to be recirculated. Although the changes subsequent to the FEIR are improvements over the Project as originally proposed, and the County is now making a well-intentioned effort to address serious deficiencies in the document, it is impossible for the public to take in all the changes that have been and understand their precise effects on potential Project impacts. Therefore the public cannot form a true understanding of the Project and its potential impacts. It is also highly doubtful that the decision makers can make a reliable decision given the many changes.

While there are doubtlessly others, two impacts that have been characterized as less than significant with mitigation are in fact significant. The first of these is the projected increase in noise from quarry operations. The document provides two significance criteria for noise – the County noise ordinance and a 5 dBA increase over ambient levels. The impact analysis however relies exclusively on the former significance criterion and ignores the latter. The noise measurements performed in support of the proposed Project clearly show that there would be a greater than 5 dBA increase in noise for the majority of the night-time hours if the County noise ordinance levels are selected as the allowable threshold. The County cannot selectively apply significance criteria, and by not acknowledging the greater than 5 dBA increase, the County has failed to disclose a significant impact of the Project.

Seepage of groundwater is supposed to be addressed by reinfiltrating the water into the subsurface via infiltration ponds. However, there is no assessment of the potential evaporative loss that will occur prior to the time that the seepage reaches an infiltration pond, nor from the infiltration ponds themselves. The acreage of such ponds is not disclosed, nor is the projected infiltration rate from the ponds. Thus, the evaporative losses cannot be quantified, and it is likely that substantial groundwater losses are not being accounted for. Because the site is limited in its groundwater use because it is located in the MST, any increase in groundwater use (including any evaporative losses) would result in a significant impact. This impact has not been adequately evaluated; available information suggests that the impact is likely to be significant, and the County has failed to adequately disclose this impact.

Based on these two examples, and the process as implemented, there are ample grounds for requiring recirculation of the EIR.

Comment V-3

- b. The document is also suspect because in at least three instances there are important inaccuracies in the way information is presented that would not be apparent to the casual reader. These are:
 - i. The reference to groundwater levels in the southern portion of the MST being generally stable; I noted this issue with the correct wording during the public hearing at the Planning Commission meeting. This misrepresentation of the facts occurs in both the Project Description and Appendix J. (See comment a. under Hydrology/Groundwater)

Response to Comment V-3

Reference to the Draft EIR characterizing the southern portion of the MST as being stable could not be found on page 4.8-9, in Appendix J or in the Project Description. Regardless, any summary of historical groundwater elevation trends in the MST were only for the purpose of providing background information. It was not the intent of the Draft EIR to characterize the groundwater elevation trends in the entire MST basin. Trends in groundwater elevation within the MST were not evaluated as part of the Draft EIR and were not used as technical justification for the use of additional groundwater by the project. The groundwater elevations which were used in the Draft EIR were selected to be representative of baseline conditions of the project site. The Draft EIR did use short-term groundwater elevation trends in Well #4 located on the project site for some technical evaluations related to hydraulic connectivity.

Response to Response on Comment V-3

The page number should have been 4.8-14. However, it would have been EXTREMELY easy to search on the cited information and discover the correct page. The dismissive way in which this comment was addressed is symptomatic of the way that the comment response process was conducted. Rather than addressing the substance of the comment (the misrepresentation of the condition of the southern MST groundwater levels), the response focused on the form. Comment language such as "It was not the intent of the Draft EIR to characterize the groundwater elevation trends in the entire MST basin." when there was NO request/comment requesting such, but only a comment specifically documenting a concern with the southern MST (i.e., the area in which the quarry is located) shows the non-responsive and borderline derogatory nature of the responses.

Comment V-4

- ii. The misleading distinction between groundwater and "subsurface water." Groundwater is any water found below the ground; the fact that it has not yet reached an aquifer does not mean that it is not serving as recharge to groundwater. Winzler & Kelly in Appendix J argue that because some of the groundwater at higher elevations appears to exit as seeps and springs (there is no assertion and certainly no information to suggest that all higher elevation groundwater exits as seeps and springs), all such water should be excluded from the definition of groundwater. This is clearly a specious distinction, as W&K also acknowledge that groundwater movement in fractured rock environments is impossible to predict. Clearly it can reasonably be argued that at least a portion of the higher elevation groundwater is likely to reach the main aquifer. In fact, while W&K argue that the low pressure head of the water exiting the fractures exposed by the current quarrying operations suggests that there is little movement of water into the main aquifer, the same information could also be interpreted to suggest that the majority of the water percolates quickly to the main aquifer.

Response to Comment V-4

The technical finding regarding the low pressure head in the "subsurface water" was not intended to imply that this "subsurface water" does not flow in a dominantly vertical direction towards the aquifer. In fact, the

commenter is correct in that the "subsurface water" is that portion of the rainwater which can be expected to form recharge to the aquifer. The exception to this recharge is the "subsurface water" that exits as springs, seeps or forms ponds. As the commenter suggested, these springs, seeps and ponds are also only a portion of the "subsurface water," and much of the "subsurface water" can be expected to form recharge to the aquifer. The point of the discussion in the Draft EIR was to provide a management strategy of the "subsurface water" that will become exposed in rock faces during quarry operations. Mitigation Measure 4.8.2 requires that this water be directed to retention ponds such that it can be infiltrated into the aquifer.

Response to Response on Comment V-4

Although it may be the intent to infiltrate water from seeps along the rock face, there are two major technical reasons that this is an inadequate response (and Mitigation Measure 4.8-2 is therefore also inadequate; other issues with that mitigation measures have been noted in verbal comments): 1) The document does not account for the evaporative losses that would occur prior to the seepage water reaching the infiltration ponds as well as from the ponds themselves, and 2) there is no assurance that infiltration will in fact occur (sediment carried in the run-off water from rock-face seepage will likely plug the pores/fractures in the material underlying the infiltration ponds). The document lacks the information necessary to determine whether seepage from rock faces would cause a significant impact or not. To avoid a significant impact from use of groundwater, any increase in evaporation of groundwater seepage must be off-set by reductions in water use elsewhere. Absent a projected quantification of evaporative losses associated with seepage, this impact cannot be adequately mitigated, and is therefore significant.

Comment V-5

- iii. The assertion that 54 lbs./day of NO_x and PM_{2.5}, and 80 lbs./day of PM₁₀ are acceptable average daily emissions. In fact, the October 2009 document referenced as the source of these significance thresholds indicates that they are maximum daily emissions; the 1999 BAAQMD CEQA guidelines also state that exceedance of the daily thresholds is considered a significant impact. The document does not disclose likely maximum daily emissions; therefore a potentially significant impact has simply not been evaluated.

Response to Comment V-5

Review of the Revised Draft Options and Justification Report CEQA Thresholds of Significance (BAAQMD 2009) did not yield a single instance where the document indicates daily thresholds are applicable to the maximum daily emissions. Conversely, four separate pages in the document (i.e., pages 3, 7, 22, and 26) indicate that the daily thresholds are applicable to the average daily emissions. Other documents that were published thereafter including the Proposed Thresholds of Significance (11/2009), Draft BAAQMD CEQA Guidelines (12/2009 and 5/2010), and Final BAAQMD CEQA Guidelines (5/2012) each state that the daily thresholds are applicable to the average daily emissions. Further evidence that the daily thresholds are for comparison to average daily emissions lies in the fact that there would be no need to have a 10 tons per year maximum annual emissions limit on NO_x if the 54 lbs/day threshold of significance were meant to be compared to the maximum daily emissions (i.e. 54 lbs/day * 365 days per year is slightly less than 10 tons per year). Similarly, there would be no need to have a 15 tons per year limit on PM₁₀ if 82 lbs/day were meant to be compared to the maximum daily emissions (i.e. 82 lbs/day * 365 days per year is slightly less than 15 tons per year). The threshold applies to the average daily emissions, as is properly reflected in the EIR analysis. Also, please see Response to Comment G-15.

Comment V-6

These types of errors/misrepresentations would not be apparent to a reader who is not familiar with the

source documents cited as references, and I assume that I have missed other instances of this nature for the resource areas for which I lack expertise. The reader should be able to rely on the accuracy of the information presented in the document, and the fact that there are these types of major but non-obvious errors/misrepresentations throws much of the impact analysis into question.

Response to Comment V-6

The Draft EIR was prepared per CEQA Guidelines Section 15151 (Standards for Adequacy of an EIR). This general comment does not specifically comment on the adequacy of any certain section, impact or mitigation measure within the Draft EIR. No further response is necessary.

Comment V-7

- c. The document takes a disingenuous approach to minimizing the potential effects of the activities that are proposed. In some cases, this information is so disingenuous as to be insulting to the reader. One specific example is the anecdotal information provided in the aesthetics section. In this case, the project team spoke to park users in Westwood Hills Park, some (many?) of whom believed that the quarry faces visible from Westwood Hills represented natural rock features. This information is then used to suggest/substantiate that therefore potential aesthetic impacts from future quarrying would have a less than significant visual impact. Not acknowledged in this case is the fact that Westwood Hills Park is over 3 miles from the project site, and the likelihood that the viewers have never had an undisturbed view of the quarry area; i.e., the quarry has been operation so long that the cut faces are part of the landscape – there have been no obvious and recent changes. The difference is that with the proposed project, there would be a significant change – an entire hillside would be removed, leaving over 350 feet of bare, vertical rock face instead of a gently sloping hillside. To try to gloss over the reality of potential impacts is simply unacceptable. There are multiple instances of this approach throughout the document; additional instances are described in the Project Description and resource area comments below.

Response to Comment V-7

Anecdotes are used to illustrate broader points that are confirmed through site and GIS analysis. As shown in images 41 and 42, 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 images, the exposed faces of the existing quarry are similar in visual character to the natural rock faces. Although the expanded quarry faces created by implementation of the proposed project will modify views of the project site from existing conditions, 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.

Two hundred thirty one (231) potentially sensitive receptor sites were identified in the visual study area, of which 12 representative sites were selected for visual simulation analysis. The Composite Viewshed of Project figure (Figure 4.1-3) illustrates that the sightlines with greatest views of the project would be from distant, relatively high ridges. Figure 4.1.1 describes the "distance zones" that were analyzed, while Figure 4.1-2 shows the landscape similarity zones analyzed. It is not feasible to analyze all potential impacts to all potential "sensitive receptors" (such as every park or individual houses). Instead, the analysis uses the 12 representative simulation viewpoints from various angles, orientations, and distances from within various landscape similarity zones. These 12 simulation viewpoints serve as representative examples for other locations that have similar angles, orientations, distances, or landscape similarity zones. Westwood Hills Park is one of the 12 simulation viewpoints and serves as a good representative site. Due to this and its likelihood to attract population, it was important to examine visual impacts to this area.

For most locations in the visual study area, impacts would be difficult to observe in detail due to the distances involved. Views from most distances would provide little visual contrast or color from the surrounding landscape. Existing disturbances or exposed rock is part of the visual character of the site today; additional quarrying does not significantly alter the overall appreciation of the landscape which already includes this within its composition.

Closer areas with 15-25 percent visibility of quarried rock faces are mostly zoned agricultural or industrial. Much of this is mid-ground distance and likely to be partially shielded. The overall character of the project site and its surroundings would not be substantially affected by implementation of the proposed project, as shown in Figure 4.1-3 (Composite Viewshed of Project) of the Draft EIR.

The visibility of impacts is a function of sightlines, including the angle of sight and fore- or mid-ground topography that may intervene. The Composite Viewshed of Project figure summarizes these criteria to provide an understanding of potential visibility impacts over the five mile radius surrounding the quarry. Also, please see Response to Comment V-29 and H-2.

Response to Response on Comment V-7

The viewshed analysis is biased toward distance views of the quarry. That fact, combined with the very small views of the affected area presented in the DEIR make it nearly impossible for the public to obtain a meaningful understanding of the visual changes in the landscape. While the document page size does present limitations in the sizes of figures as noted in Response to Comment V-8, below, there is no reason that viewshed figures cannot be the full 8.5x11 size vs. approximately 1/4 - 1/3 that size.

Comment V-8

- d. In many cases, the scale of figures makes it impossible to fully understand what is going on. Examples include the topographical figures showing proposed excavation contours with the project (a rather important piece of information), and the very small views provided in the aesthetics section. This creates further difficulties understanding the potential effects of the project.

Response to Comment V-8

Section diagrams, such as those found on Figure 3-6 Vertical Excavation Cross Sections (page preceding Chapter 4.0) provide before-and-after characterizations of the maximum extent of quarrying. They are simple line drawings with vertical exaggeration, which makes cut faces appear more severe than they actually would be.

The standard letter page size presents inherent limitations with respect to scaling and presentation of data. Photo simulations are high resolution images that may be zoomed in upon to view in greater detail using the electronic version available on the County's website (<http://www.countyofnapa.org/Syar/>).

Response to Response on Comment V-8

I have tried to zoom in on the photo simulations as suggested in this comment response, and the graphics simply get blurry. There are no high resolution graphics in the County website's EIR file.

Comment V-9/10/11

- e. The EIR is also very selective in the information it provides in the text, compared to what would be appropriate for the average reader. Some simple information is not provided (or not provided in

the appropriate section [e.g., the traffic section never discloses the actual increase in total daily truck trips; that information is only found in the noise section]), and other, relatively irrelevant and incomprehensible information is provided (e.g., the discussion of incremental health risk due to TACs provided on pg. 4.3-25; see especially the middle paragraphs and equation at the bottom of the page). EIRs are supposed to be comprehensible to a reader with an average high school education. This document clearly fails that test. The document also lacks an acronym list, which makes understanding the equation virtually impossible (e.g., ASF is used 4 times, but never defined). Another example of the failure to disclose relevant information in the appropriate section is that the air quality section describes specific production changes in each of the three pits; this information should be in the Project Description.

Response to Comment V-9

Please see Response to Comment V-6.

Response to Response to Comment V-9

The Response to Comment V-6 reads: The Draft EIR was prepared per CEQA Guidelines Section 15151 (Standards for Adequacy of an EIR). This general comment does not specifically comment on the adequacy of any certain section, impact or mitigation measure within the Draft EIR. No further response is necessary.

This response is symptomatic of the poor response to comments overall. Instead of making a genuine effort to repair deficiencies in the document (e.g., projected increases in truck trips should be clearly stated in the Project Description), the response effectively states that no further effort is required.

Response to Comment V-10

Comment noted. Please reference the acronym and abbreviations list in the Table of Contents of this Final EIR.

Response to Comment V-11

Please see Responses to Comments D-2 and V-19.

Comment V-12

- f. The EIR fails to disclose a major purpose of the proposed increase in permitted capacity, which is to replace the production of the Lake Herman quarry, which is nearly played out. Absent this undisclosed purpose, the document does not provide an adequate explanation of why such a large increase in capacity is required, when less than 65% of the currently-permitted capacity is utilized.

Response to Comment V-12

The primary objectives of the project, as described in Section 3.2 of the Draft EIR on page 3-2 are:

- To continue and extend operation of the existing Syar Napa Quarry for 35 years, thereby by providing a local, reliable, affordable, and consistent source of aggregate and aggregate-related materials to customers in the Napa region
- To expand the surface mining and reclamation plan by approximately 124 acres to allow for mining access to reliable, affordable, and a consistent source of aggregate and aggregate-related materials to customers in the Napa region
- To increase the annual permitted saleable quantity of aggregate and aggregate related materials from currently one million tons to two million tons

The above objectives, in addition to the supporting objectives (reference Section 3.2 for supporting project objectives), are the reasons for the proposed project, not the replacement of the Lake Herman quarry as the commenter states.

Comment V-13/14/15

- g. The proposed project faces an inherent conflict in the location of the mining activities, in that aesthetic, noise and recreational impacts would drive mining at lower elevations, whereas the need to avoid intercepting the groundwater potentiometric surface would promote mining at higher elevations. This conflict is not resolved with the mitigation measures provided. The potential impact on the size and scope of the project from implementing key mitigation measures should be characterized – e.g., it is unclear how much potential material would not be able to be mined if mitigation measure 4.8-2 is implemented. From the information presented in the document, it appears that approximately 100 feet of the total cut across most of the quarry areas, and up to 200 feet in the more westerly areas would be excluded. This seems to be a substantial portion of the total material available. Given the likely economic impact

Response to Comment V-13

The commenter is correct in that there are conflicts between maximizing recovery of the minable material and maintaining compliance with the mitigation measures. Adopted mitigation measures will be enforced by the county and mining activities may be limited by compliance with them. Please also see Response to Comment V-14.

Response to Comment V-14

The commenter is correct in that it is likely that the prohibition against mining into the aquifer and implementation of other key mitigation measures will result in less material being recovered. The project is expected to extend 35 years into the future. Pre-design of the mine at each stage of development is difficult and prone to inaccuracies because the economics and technology available for material recovery cannot be accurately evaluated based on what is known today. Mining operations are inherently market sensitive and market value and need for specific types of material vary greatly over time. Until the economic value and market demand for material is known with precision the cost/benefit of mining (and implementing all of the mitigation measures) cannot be evaluated. Mitigation Measure 4.8.2 recognizes this constraint with respect to groundwater and requires that groundwater elevation and groundwater use be monitored and reported annually. Prior to mining the applicant is required to identify the groundwater elevation annually in the area from which the resource is recovered and implement mitigation measures as required.

Response to Response to Comment V-14

The document does not characterize the likely effects of the mitigation measures, and the comment response does not address this comment. How much material would be eliminated if the groundwater potentiometric surface is taken into consideration, and how would that affect the very premise of this document, which is that there is sufficient material to keep the mine in operation for another 35 years?

Response to Comment V-15

Comment noted. Please see Response to Comment V-14.

Comment V-16

- h. Finally, the lack of line numbers in the document makes it much harder to provide comments. The recirculated document should contain line numbers to allow for specific comments

Response to Comment V-16

Comment noted. This comment does not comment on the adequacy of the Draft EIR. No further response is necessary. Also, please see Response to Comment V-2.

Response to Response to Comment V-16

The comment response should have read: "Any future versions of the EIR will contain line numbers." At minimum, the FERIR should have contained line numbers. This response and the lack of line numbers in the FEIR are simply obstructionist and insulting to the public, which is making a sincere effort to engage in the CEQA process.

2. Project Description

Comment V-17

- a. The Project Description virtually ignores the extensive residential use to the north and west of the quarry by focusing primarily on the immediately adjacent parcels/land use. This is a disingenuous characterization of the land use. The Project Description must be corrected to fully acknowledge the presence of residential areas, the pre-school and school, and Napa State Hospital to the north and northwest.

Response to Comment V-17

Section 3.3, "Site Information," paragraph 3 states that the project site "lies within an area of Napa County that accommodates a variety of uses. Surrounding uses immediately adjacent to the project site include vineyards to the south; recreation uses to the east and northeast (Skyline Wilderness Park); public institutional and educational uses to the north and northwest (Napa State Hospital, Chamberlin High School, Liberty High School, Creekside Middle School, Napa Preschool Program, Napa Child Development Center, and the County Office of Education); and industrial lands and SR 221 to the west. The Napa State Hospital and the northwest portion of the Skyline Wilderness Park separate the project site from the City of Napa. Other surrounding uses, including uses within the incorporated City of Napa, include educational (Napa Valley Community College), a cemetery (Inspiration Chapel and Napa Valley Memorial Park), recreation (John F. Kennedy Golf Course and Park), and office/industrial (Napa Valley Corporate Center) to the west, and residential (Terrace Shurtleff and River East Neighborhoods) to the north." No further information, with regard to adjacent/nearby uses, is necessary.

Response to Response to Comment V-17

The cited paragraph, rather than refuting the point made in this comment directly supports it. The only mention of residential use is within the City of Napa, as the very last item in a very long an extensive list of surrounding uses. Residential use in the County (i.e., the area east of Patton Ave) is entirely ignored.

Comment V-18

- b. The Project Description contains errors that affect the assessment of potential impacts (e.g., the description of the firing range)

Response to Comment V-18

The description of the firing range on page 3-4, last paragraph in Section 3.3, is accurate and appropriate for the assessment of potential impacts. No further response is necessary.

Response to Response to Comment V-17

The history of the firing range is not correct, and the characterization of its use is also incorrect.

Comment V-19/20

- c. The Project Description glosses over some important facts, and presents information in such a way as to minimize its apparent severity. For example, total proposed production volume would increase up to 178% from the 2009 baseline (from approximately 800,000 tons to 2,250,000 tons), but the document describes it as a doubling of capacity. Another fairly egregious obfuscation is in

the number of truck trips – the current production rate and haul trips indicate that the average load is 9 tons; based on the data presented the future average load would be 18 tons, suggesting that larger trucks or all truck-and-double-trailer combinations would be used. This is not stated anywhere in the Project Description, but would clearly have a strong effect on traffic, beyond just the increase in the number of truck trips.

Response to Comment V-19

The project description is detailed and adequate per CEQA Guidelines. As noted in Table 3-3 Syar Napa Quarry Annual Existing and Project Trips, of the Draft EIR, production under existing conditions is 810,364 tons per year. The project adds 1,190,000 tons per year. Under peak conditions, existing plus project, the quarry would operate at two million tons per year. The project sales represent a 147 percent increase over existing condition sales. In addition to sales information, Table 3-3 identifies imported materials as well. The data presented in Table 3-3 is accurate and was used in determining impacts to transportation, air quality, and greenhouse gas emissions. As impacts were calculated using the actual data presented in Table 3-3, potential impacts have been accurately reported in the Draft EIR.

Response to Response to Comment V-19

As stated in the comment, the number of truck trips and the fact that trucks with double trailer combinations will be required to haul the material is not disclosed in the Project Description. The information provided in the comment response is non-responsive and irrelevant to the comment.

Response to Comment V-20

Implementation of the project does not result in larger trucks being used to export material. There is, however, a difference between the existing conditions and the peak production of two million tons with regard to the type of material being exported and the size of the loads being exported. The exported material and truck trips for the existing conditions, as shown in Table 3-3 of the Draft EIR, was calculated based on an average of actual sales data over a 5-year period. This data shows that jobs were smaller and trucks were not always leaving the facility with full loads (a full load is considered 25 tons). Load sizes during this period ranged from 14 tons per load for aggregate sold to 25 tons per load for material transfers to other quarries, with an overall average of 18 tons per load, or nine tons per one-way trip. Under the rare peak production scenario of two million tons, the quarry would be running at full capacity to meet the demand of an unusually large project or responding to a natural disaster. In this scenario trucks would leave the quarry fully loaded at 25 tons, or 12.5 tons per one-way trip. In addition, the materials sold would shift. There would be a smaller percentage of aggregate and a higher percentage of asphalt sold under the peak condition as compared to the existing conditions. To determine the project export truck trips in Table 3-3, the export truck trips for the existing conditions was subtracted from the peak production trips. Because the existing conditions truck loads are smaller than the peak production truck loads, you cannot determine the project truck load size by simply dividing the project truck trips into the project tonnage.

Response to Response to Comment V-20

There is no basis for assuming that future truck trips leaving the quarry will suddenly (magically) all result in full trucks. The EIR should be reasonably conservative and assume that the current average load will continue into the future. Thus, truck trips are understated and the impact analysis must be revised.

Comment V-21

- d. The Project Description is extremely vague with regard to operating hours, indicating that 24/7 operations would be conducted when demand is high, but not providing any limitations on the number of days per year or any other measure by which such operation would be constrained. As

written, the Project Description provides an unlimited license to operate 24/7. 24/7 operation is unacceptable except in cases of local disaster. 24/7 operation should only be allowed in the case of natural disasters within a defined radius (i.e., the area defined as economically viable for aggregate sales for the purposes of the project), and only if the immediate needs of the disaster (e.g., collapse of a major road) specifically require the production of aggregate/asphalt. The Project Description should be modified to clearly specify the conditions under which 24/7 operation would be allowed; it should also specify the conditions under which operation outside normal business hours would be permitted. Even under current conditions (with the supposed shielding by the intervening hill), when work occurs on the north side of the quarry, the noise is extremely audible in our neighborhood, making it impossible to sleep at night or enjoy our gardens during the daytime (e.g., it is so disruptive, that having guests visit is not appropriate). It makes our outdoor spaces a stressful rather than peaceful.

Response to Comment V-21

As noted on page 3-14, second paragraph under Section 3.5.7, "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." Additionally, as noted on page 3-14, last paragraph, although the quarry would not operate 24 hours a day except in emergency situations, flexibility is required for public transportation work. Please see Response to Comment A-5 regarding proximity to an existing quarry.

Response to Response to Comment V-21

Flexibility for public transportation does not merit the same consideration as a true emergency. Syar should structure its operations (i.e., stockpile material) so that it can provide aggregate to overnight projects without operating the quarry at night. There is no need to conduct quarry and crushing operations at night for a roadwork project, because the demand for material can be forecasted in advance.

The request for meaningful limitations on 24-hour/day operations has not been addressed. This comment response is inadequate.

Comment V-22

- e. The proposed reclamation is much too slow and too limited; other than grassy cover, no reclamation is proposed until after the permit period expires, and then it consists of planting 5 gallon trees and tiny shrubs – and the bulk of that work is estimated to require up to 5 years. So 40 years after the permit is issued, initial planting would be completed. Clearly it would take decades for the trees to grow to a height that provides some type of visual screen. Mining should be planned to allow for reclamation as areas are exhausted; the Project Description should commit to, or the mitigation and monitoring program should require, that reclamation be phased to occur immediately upon completion of mining in certain areas.

Response to Comment V-22

The Syar Napa Quarry Reclamation Plan was prepared pursuant to the SMARA Statutes and Regulations and Napa County Code Chapter 16.12 (Surface Mining and Reclamation). Reclamation activities will be undertaken according to industry standards. Reference Section 3.5.1 (Proposed Mining and Reclamation Plan), on page 3-8, for a description of interim reclamation activities. No further response is necessary.

Response to Response to Comment V-22

The proposed reclamation plan does not comply with the Napa County requirements, which require reclamation to be "...fully completed as soon as it is feasible, considering the particular circumstances of the site to be reclaimed, and provides for appropriate incremental reclamation at the earliest feasible

time, considering the particular circumstances of the site to be reclaimed.” (Napa County Code 16.12.360, paragraph I).

Major improvements/revisions to the MRP are required to show how Syar will expeditiously complete both incremental and final reclamation. As written, the MRP allows Syar to avoid reclamation of any area that is still actively being mined, in other words, as long as Syar declares that an area is actively being mined, reclamation can be deferred. This is unacceptable. As a side note, the financial assurance being provided for reclamation is also inadequate and must be increased substantially. Documentation is required to show how the reclamation costs are being calculated.

Comment V-23

- f. The trees would also have to be very, very tall to actually screen the bare rock face. No reclamation is proposed for the typical steep slopes that would be cut to mine rock. Those slopes would be 50 feet tall, near vertical in many cases, and less than 1:1 H:V in all cases. Reclamation is only proposed for areas with slopes of 2:1 or greater. Other than the benches cut into the mining face, it does not appear that there will be any areas that are suitable for reclamation; this is another critical piece of information that is not clearly disclosed. Basically, the reclamation as proposed would leave a nearly sheer vertical cliff, hundreds of feet high, on the northwest and west sides of the quarry. That’s unacceptable. An improved reclamation plan is required to make this project acceptable.

Response to Comment V-23

Please see Response to Comment V-22.

Response to Response to Comment V-22

The comment response is non-responsive. The actual facts pointed out in the comment response are not addressed, and the MRP does not address how a few trees would provide adequate screening of tall rock faces. The MRP and Project Description also fail to adequately disclose how long it would take trees to grow to their full height – the types of trees recommended are drought tolerant, which is appropriate, but also very slow-growing as a result.

Comment V-24

- g. Maintenance of the reclamation effort, including repairs to the irrigation, is scheduled to occur in September and October. It is obviously much more important to be able to water in the dry season than in the wet season. This can only be considered an error in the Reclamation Plan, and points to the fact that more careful review of the Reclamation Plan is also required.

Response to Comment V-24

Please see Response to Comments V-22 and V-23.

Comment V-25

- h. The Project Description describes an annual Mining Plan that would be submitted to the County, but it’s not clear whether anyone has any authority to modify or restrict the proposed mining effort once the permit is granted. The limits of the County’s ability to regulate the mining operations post-permit should be clearly disclosed.

Response to Comment V-25

Section 3.5.1 beginning on page 3-7 describes the proposed Mining and Reclamation Plan prepared pursuant to SMARA and Napa County Code Chapter 16.12 (Surface Mining and Reclamation). This section also identifies the Adaptive Management Mining Strategy, and the annual mining plan (with

administrative report) in detail. Page 4.10-1, Section 4.10.2.1, first paragraph, provides information on Napa County's authority to regulate as follows, "Napa County has been delegated authority from the state to enforce SMARA in all unincorporated areas of the county. As such, the county is responsible for adopting a mining ordinance, issuing permits to mine, reviewing and approving reclamation plans and amendments, reviewing and approving financial assurances, and conducting annual inspections."

Comment V-26

- i. No new entrances or exits from Napa-Vallejo Highway (Rte. 221) are proposed, yet, the number of trucks entering and existing Syar will increase 75% or more, and apparently most of the trucks would be double-trailer combinations. This is simply an unacceptable approach. Currently, truck leaving Napa headed southbound have to make a left turn across northbound Rte. 221, and merge into traffic moving 55 miles an hour. Every time a truck attempts to merge, traffic is slowed drastically; larger and more frequent trucks would greatly increase this effect, as well as creating a significant hazard when crossing northbound 221.

Response to Comment V-26

Under peak project conditions trucks entering and exiting at Intersection 3 (the quarry entrance) would increase during the AM and PM between zero and 47 percent, depending on the turning movement and time. The Traffic Impact Study evaluated sight distance and intersection safety at each of the eight study intersections. The study concluded that the existing sight distance at all study intersections is acceptable per the Caltrans Highway Design Manual. In addition, the study looked at collision rates over a 5-year period and concluded that existing collision rates at Intersection 3 are at or below the state average. Therefore, no existing safety hazard was identified. The entrance to the quarry has had several improvements completed to improve overall intersection safety, reduce the potential for collisions, and reduce the potential for delays on SR 221 from trucks entering and exiting the quarry. These improvements include a southbound left turn lane allowing trucks to move out of the flow of traffic prior to turning left into the quarry; a southbound acceleration lane allowing trucks to pick up speed prior to merging into traffic on SR 221; and northbound acceleration and deceleration lanes into and out of the quarry entrance to allow for smoother transitions, improving safety, and reducing delays.

Comment V-27

- j. The air quality analysis assumes that peak hour production will remain unchanged (P 4.3-22, meaning that the hours of operation would have to increase substantially; the proposed increase in actual operating hours is not disclosed anywhere.

Response to Comment V-27

Section 3.5.7 (Schedule and Hours of Operation) beginning on page 3-14 provides in detail the schedule and hours of operation by activity (i.e., regular aggregate mining, processing, asphalt plant operation and sales). No further response is necessary.

3. Aesthetics

Comment V-28

- a. The images purporting to show the potential post-quarrying visual changes are MUCH too small in scale to allow for any kind of effective evaluation by the reader.

Response to Comment V-28

Please see Response to Comment V-8.

Comment V-29/30

- a. The aesthetics analysis completely fails to analyze effects on views from the south side of Napa, near Imola Avenue and Penny Lane/Patton Ave/4th Ave, and only briefly alludes to the northern neighborhood farther to the west. These areas would have foreground views of the steep quarry cuts. The cuts are proposed in the tallest hills to the south and southeast of the neighborhood; these peaks form the dominant visual feature of the south/southeast views. Any excavation/cut on these hills would therefore dominate the viewshed. Instead of correctly analyzing potential effects on the northern and northwestern neighborhoods, the analysis focuses predominantly on midground views, with only a few views from the east close to the actual quarry. The closest northern/northwestern camera point included in the analysis is over 2 miles away (point N48), and the direct line-of-sight camera point applicable to the northern neighborhood (C5) is at Napa Valley Country Club, 3 miles away. Sufficient distance will of course obscure potential visual effects. The County must ensure that Syar analyzes this impact; the resulting impact analysis will clearly lead to a finding of a significant and unavoidable impact to visual resources.

Response to Comment V-29

Two hundred thirty one (231) potentially sensitive receptor sites were identified, of which 12 representative sites were selected for visual simulation analysis. The Composite Viewshed of Project figure (Figure 4.1-3) illustrates that the sightlines with greatest views of the project would be from distant, relatively high ridges. Figure 4.1.1 describes the "distance zones" that were analyzed, while Figure 4.1-2 shows the landscape similarity zones analyzed. It is not feasible to analyze all potential impacts to all potential "sensitive receptors" (such as every park or individual houses). Instead, the analysis uses 12 different representative simulation viewpoints from various angles, orientations, and distances from within various landscape similarity zones. These 12 simulation viewpoints serve as representative examples for other locations that have similar angles, orientations, distances, or landscape similarity zones.

Visibility exposure for all sites within five miles of the project site was assessed in Figure 4.1-3 (Composite Viewshed of Project). Topography to the north of the quarry provides a greater level of visual shielding to communities to the north such as South Napa, with only minimal views of surface changes.

These are expressed in the Composite Viewshed figure as zero to 15 percent view of the project. Beyond ridgelines to the west, industrial development in the Rocktram neighborhood and agricultural land has the greatest level of visual exposure, for which less than 25 percent of the project may be visible.

Many areas within the Foreground view are shielded from views of the quarry by the relative angle of the view, and other features such as trees and buildings which obstruct quarry views.

Response to Comment V-30

Please see Response to Comment V-29.

Appendix F of the Draft EIR (Aesthetics Special Study) includes Table 1: Likelihood of Views and View Quality in Landscape Similarity Zones by Distance Zones which discusses the likelihood of views by distance from the project site. While the commenter does not specify where effects should have been analyzed from, it is inferred that the commenter believes Napa Country Club is too far away. The above-referenced table explains use of an open space area over closer urban/suburban land uses. Developed areas will have more screening from vegetation and other buildings than less developed areas that are

farther away.

The project's Composite Viewshed analysis referenced elsewhere would have indicated any exposed views to developed areas closer than the Napa Valley Country Club. Neighborhoods north of the quarry were found to have minimal changes to their views as a result of the maximum quarrying scenario.

Comment V-31

- b. The document asserts that most excavation would be screened because of topography and vegetation, with elevations of the hills between the proposed excavation areas and the views ranging from 175 to 375 feet. However, based on the excavation contours shown in the document (best seen in Figure A.2 of Appendix J), excavation will occur up to elevations above 700 feet on the east side of the State Blue Pit. Therefore 350 feet of very steep cut rock face would be exposed to general views all throughout the neighborhood (see cross sections A and F in Figure 3-6).

Response to Comment V-31

The modeled visibility of quarried areas has been analyzed and summarized in the Composite Viewshed of Project analysis and figure (Figure 4.1-3).

Comment V-32

- c. Another cross section is needed to the east of cross section F to clearly show the effect of removing most of the western face of the tallest hill to the southeast of the neighborhood.

Response to Comment V-32

Cross Sections analyze the interior of the mining areas grading and do not include topography beyond the project's property lines. Cross-Section F captures a representative view of the State Blue Pit area at maximum excavation, with worst-case depths of excavation, slope steepness, and bottom pit conditions. A section to the east of Cross-Section F would show gentler slopes and a shorter pit distance and would not provide a better understanding of visibility issues.

A better measure of the pit's visibility to the public from different vantages is the Composite Viewshed of Project figure (Figure 4.1-3) and Viewshed and Line-of-Sights Site N64 (Figure 4.1-14), which shows only minor backslope exposure. The rationale for using N64 as a photopoint as opposed to closer sites is based, as noted elsewhere, on the Composite Viewshed's visibility analysis and Table 1: Likelihood of Views and View Quality in Landscape Similarity Zones by Distance Zones.

Comment V-33

- d. The visual analysis completely ignores the substantial and significant effects the up to 35-year duration of a complete disruption of an extremely scenic view.

Response to Comment V-33

The visual analysis in Section 4.1 (Aesthetics) of the Draft EIR provides a thorough and detailed assessment of potential aesthetic impacts of the proposed project as described in the project description. The simulations show the impacts of the proposed project at the conclusion of the implementation of the project. Visual impacts in the intervening years between the initiation and conclusion of the project would be less than those at the conclusion (year 35).

Comment V-34

- e. Images 11 and 12 are reversed; this type of obvious error

Response to Comment V-34

Comment noted.

4. Air Quality

Comment V-35

- a. The document should point out that in 2011 there were frequent (6) exceedances of the PM_{2.5} NAAQS.

Response to Comment V-35

The 2011 monitoring results were adequately disclosed in the Draft EIR. PM_{2.5} is measured every six days and there was only one day, December 17, 2011, that exceeded the PM_{2.5} National Ambient Air Quality Standards (NAAQS) reported by CARB Air Quality and Meteorological Information System (<http://www.arb.ca.gov/aqmis2/aqmis2.php>; Attachment 1 in Appendix A). However, the number of days exceeding the standard is extrapolated to be six days due to the sampling frequency. This value was reported for the Vallejo monitoring station. The closest monitoring station to the project, the Napa Monitoring Station, began monitoring PM_{2.5} in December 2012 and reported only one day exceeding the PM_{2.5} standard in 2013 (Attachment 2 in Appendix A). As shown in Attachment 2, the Napa station has even fewer days of exceedance and lower average daily concentration than the Vallejo Station. Other years reported for Vallejo in Draft EIR Table 4.3-5 range from zero to seven days exceeding the standard which is consistent with the six days reported in 2011 and the six days reported for 2013 (Attachment 2). In summary, the six days of exceedances are unremarkable and do not warrant additional commentary or consideration beyond listing in Table 4.3-5.

Comment V-36

- b. As noted above, the 2009 BAAQMD document presents the 54 lbs./day and 82 lbs./day standards as maxima, not daily operating average.

Response to Comment V-36

The daily significance thresholds apply to the average daily emissions as discussed in Response to Comment V-5.

Comment V-37

- c. The analysis notes that equipment operating less than 100 hours during the 5-year baseline was not considered. Please provide an accounting of the equipment, including actual operating hours, hp, fuel type, and engine age. Without this information, it is impossible to determine whether a significant amount of air emissions have been omitted nor not.

Response to Comment V-37

Conservative baseline data were used by excluding units with less than 100 hours over five years from the existing condition, which actually overstates the project impact. Moreover, the In-Use Off-Road Regulation defines low-use as less than 200 hours per year which is 10 times the low-use standard (i.e. 20 hours per year) that was applied. Nevertheless, the historical equipment list and usage data provided by Syar was inadvertently omitted from the Draft EIR and is included in this Final EIR (Attachment 3 in Appendix A).

Comment V-38

- d. The referenced figures should be included in this section, not just in Appendix I (where they are hard to locate).

Response to Comment V-38

Comment noted; however, the figures for Appendix I belong in Appendix I and having duplicates could lead to confusion for the reader.

Comment V-39

- e. Idling assumptions for barges are extremely low. Tugs hauling barges would be expected to idle during the entire loading/unloading period, as they would be required to be immediately available should an emergency occur.

Response to Comment V-39

At 4,000 tons per load it would take approximately eight hours to unload the barge and the barge makes relatively few trips as compared to other modes of transportation having smaller payloads (e.g. rail, on-road). Barges would be tied to the dock during unloading and thus there would be no need for tugs to be standing by with engines idling. Idling is assumed to occur for one hour during each arrival and departure. The idle horsepower was assumed to be equal to the train engine idle horsepower (17 hp). Additional research (Harbor Craft Emissions Inventory Database) indicates that idling horsepower for harbor craft may be as high as 10 percent load. For two tugboats of 525 hp each the idle horsepower would total 104 hp. This value is 6.12 times greater than was assessed in both the Baseline and project scenarios and would increase the project change in emissions from 0.28 lbs/yr to 1.36 lbs/yr. Even if the idling emissions are greater than assessed it would not result in a substantive change to the analysis because the barge idling would: 1) remain a nominal source of diesel particulate matter (DPM) emissions and health risk in the context of the overall project (i.e., Table 4.3-12 reports project change in DPM of 0.77 tons (1,540 lbs/yr); 2) not influence the risk levels at the point of maximum impact or nearest residential/sensitive receptor which are both over one mile away (BAAQMD HRA methods would ordinarily exclude sources at that distance); 3) be reduced by phasing in of in-use commercial harbor craft engine regulations which could have been, but were not, accounted for in the AQHRA; and 4) be offset by reductions in risk resulting from Mitigation Measures 4.3-2A and 4.3-3.

Comment V-40

- f. The document both assumes that the quarry would provide materials through the North Bay region, and assumes an average haul distance of only 14.7 miles (p. 4.3-22). These two assumptions are mutually exclusive, and serve to understate potential air emissions, overstate the need for the project, or both.

Response to Comment V-40

The average trip distance of 14.7 miles is the longest default trip distance available in the CalEEMOD model that is used statewide to evaluate projects under CEQA. The default trip distances in CalEEMod were provided by the air districts or a default average for the state was used (CalEEMod User's Guide Appendix A). In the absence of specific data for the actual average trip distance, the 14.7 mile value is an appropriate average trip distance consistent with the regional nature of aggregates use. Some trips will be less than five miles (e.g. City of Napa, proposed Napa Jail Project is zero miles), some will be around 10 miles (e.g. Vallejo & Sonoma), and other trips will be 25 miles or more. Overall, the distance traveled is expected to average 14.7 miles. As discussed in the recently published Update of Mineral Land Classification of Aggregate Materials in the North San Francisco Bay P-C Region (CGS 2013), the P-C Region is currently importing almost 10 percent of the total aggregates consumed and nearly one-third of

the Portland Concrete Cement (PCC) aggregates consumed from Canada (P. 33, CGS). Moreover, the P- C Region is forecasted by CGS to have only 10 years of permitted aggregates reserves remaining. Regardless of the length of trip chosen for the project, it is reasonable to expect transportation emissions would be greater without the project because materials already travel greater distances from locations outside the region to consumers inside the region and the long term forecast indicates scarcity in future regional supplies of aggregates which would result in even greater amounts being shipped long distances. Lastly, the on-road emissions assume that all future growth in regional aggregates consumption is attributed to the project, which results in an overly conservative estimate. The project should only be required to account for its fair share of future growth. During the baseline years 2005 to 2009, the P-C Region consumed an average of 6,015,400 tons per year (P. 26, CGS) and the Syar Napa Quarry accounted for 810,363 tons per year (P. 3-5, Draft EIR); or approximately 13 percent. The project would produce up to 2,000,000 tons per year (P. 3-5, Draft EIR) which is approximately one-third of the baseline consumption rate. Accordingly, the project's fair share would be at least 66 percent less than the amount attributed in the Draft EIR and that reduction would more than offset any variation of actual trip lengths from the CalEEMod default assumption.

Comment V-41

- g. Table 4.3-9 should list only applicable measures; providing the entire table simply adds unnecessary text.

Response to Comment V-41

Comment noted.

Comment V-42

- h. Mitigation measure 4.3-2A is too vague, as it only requires the log to be updated upon the request of the County, and provides post-facto information. This information should be tracked real-time, and production scaled back immediately if thresholds are exceeded.

Response to Comment V-42

Mitigation Measure 4.3-2A requires the log to be updated "as necessary for the Owner/Operator to ensure compliance with this mitigation, but not less than semi-annually." The semi-annual requirement is sufficient because the impact is evaluated on a tons per year basis. Thus, exceedences would come to light in time for adjustments to be made so that the annual emissions threshold would not be exceeded either by curtailing production or by upgrading the offroad engines.

Comment V-43

- i. Mitigation measures 4.3-2A and -2B are impossible to enforce, and therefore not actually implementable. How would the County ensure that production is scaled back if Syar has contractual obligations?

Response to Comment V-43

Mitigation Measures 4.3-2A and 4.3-2B are enforceable as discussed in the Mitigation Monitoring and Reporting Program (separately bound) of this Final EIR. Syar's operations must be conducted within the parameters of its permits and conditions, and any contractual obligations Syar incurs that conflict with those parameters would not be considered in enforcing the requirements of these mitigation measures and associated conditions of approval, should the project be approved.

Comment V-44

- j. How can PM_{2.5} be reduced by 7.3 tons from the baseline by increasing production from 810,363 tons to 945,000 tons, with the only change being that the percentage of Tier 2 hours increases from an assumed baseline of 10% to 12%?

Response to Comment V-44

The Draft EIR emissions levels assume chemical dust suppressants and PM₁₀ efficient sweepers which, if comprehensively applied, would result in an emissions reduction as shown in Draft EIR Table 4.3-11. However, the mitigation measure language would allow for slightly less mitigation provided that emissions would remain less than significance thresholds. The PM_{2.5} emissions are reduced when throughput is increased to 945,000 tons per year because road dust dominates the PM_{2.5} emissions inventory and is reduced by application of Mitigation Measure 4.3-2B at production levels exceeding 810,363 tons per year, which is the baseline level of production. The dust will be suppressed for both existing and new trips, therefore, a reduction of the road dust formerly generated by existing trips is anticipated resulting in a benefit to the environment.

Comment V-45

- k. The post facto approach to mitigation for air quality impacts is also evident in mitigation measure 4.3-3, which likewise relies on the post-facto hp log described for measure 4.3-2. Furthermore, the measure relies on calculations to be performed by Syar; instead, Syar should provide funding for the County to hire its own consultant to perform these complex calculations.

Response to Comment V-45

Mitigation Measure 4.3-2A: Reduce NO_x will now include "The County will either hire a consultant or enlist the air district to assess initial compliance and determine whether the complexity of the task requires further outside assistance in future years," (reference Section 2 (Revisions to the 2013 Draft EIR) of this Final EIR for additional mitigation language)

5. Hydrology/Groundwater

Comment V-46

- a. The text misrepresents groundwater conditions in the southern portion of the MST. Page 4.8-9 states that GW elevations in the southern portion of the MST are generally stable, and cites the 2011 Groundwater Conditions Report prepared by Ludorff and Scalmanini for the County. What that report in fact says is "Groundwater levels in the southern portion of the MST, especially south of Coombsville Road, have generally been stable until the late 1990s and early 2000s, when a decline of about 10 to 30 feet in some locations has occurred." (p. 48). This is an egregious misstatement, creating a fundamental error in the analysis of groundwater impacts.

Response to Comment V-46

No such reference to MST is apparent on Page 4.8-9 of the Draft EIR. This section of the Draft EIR (4.8.1.3 Groundwater) is a general discussion related to the Conceptual Model for the hydrogeologic environment and anticipated general conditions in the immediate vicinity of the project site based on existing information. The Draft EIR includes project site and project specific analysis of groundwater and potential impacts in Impact Discussions 4.8-2 through 4.8-4. Furthermore, only a small portion of the MST area occurs on the very western extent of property as shown in Figure 4.8-5; a vast majority of the project site and project are not within the MST area. Also, please see Response to Comment V-3.

Comment V-47/48

- b. It is impossible to determine how much water might be prevented from recharging the local groundwater as a result of the proposed mining activities. The document acknowledges (in Impacts 4.8-2 through 4.8-4) that mining activities would increase withdrawal of groundwater and result in redirection of surface water flows away from current discharge points (e.g., Lake Camille, see Figure 4.8-6). The potential effects are not quantified. The associated mitigation measures speak to changing the proposed mining practices and monitoring overall water consumption. However, mitigation measures 4.8-2 and 4.8-3 are in direct conflict, as one prohibits mining deeper than 10 feet above the potentiometric surface (4.8-2) whereas mitigation measure 4.8.3 assumes that such quarrying WILL occur, and simply requires that water generated during such operations be reinfiltated within the same watershed. These are vastly different approaches, and cannot both be implemented. Also, Impact 4.8-2 states that large portions of the Arroyo Creek Watershed would have a flatter slope than under current conditions, and that therefore infiltration should not be adversely affected. This is contrasted with the finding in Impact 4.8-5 that notes that compared to existing conditions, all the onsite watersheds would experience an increase in run-off rates and volumes due to increased ground slope and disturbance.

Response to Comment V-47

Mitigation measure 4.8-2 and 4.8-3 were developed for different situations which are existing conditions at the quarry. Mitigation measure 4.8-2 is proposed for all areas where the existing ground surface is above the potentiometric groundwater elevation. The key element of mitigation measure 4.8-2 is to maintain a ground surface which is 10 feet above the potentiometric groundwater elevation. This effectively prevents mining in the aquifer. Mitigation measure 4.8-3 is proposed for areas where the existing ground surface is below the elevation of the potentiometric groundwater elevation (e.g. State Blue Pit). In this case, the key element of Mitigation Measure 4.8-3 prevents pumping pit water if it is transferred to another watershed. Mitigation Measure 4.8-3 was developed to maintain groundwater recharge in the area where open bodies of water have been created by previous mining activities (e.g. State Blue Pit). Mitigation Measure 4.8-2 was developed to prevent the creation of more open bodies of water such as State Blue Pit. Both Mitigation Measure 4.8-2 and 4.8-3 can be simultaneously implemented.

Response to Comment V-48

Under the proposed project, large areas of the upper Arroyo Creek Watershed (Snake Pit or Arroyo 3 Area) will have extensive excavations and mining of rock. These activities will result in much steeper slopes at the edges of the excavation and a larger area at the bottom of the excavation area with a greatly reduced slope. The finished grading in the bottom of the excavation will be contoured so that runoff is directed to the recharge areas in the Arroyo Creek aquifer or to the creek itself. The steeper edges and graded excavation floor will result in increased runoff rates which will be mitigated by the creation of detention ponds above the Arroyo Creek aquifer (see Appendix J Figure A.11 for aquifer location). Therefore, with mitigation incorporated, the overall infiltration for the watershed is not expected to be adversely affected as discussed in Section 4.8 (Hydrology and Water Quality), Impact discussion 4.8-2 of the Draft EIR (also, please see Response to Comment V-50).

Comment V-49

- c. The consultant creates an artificial distinction between groundwater and water below the surface, where only water found in a substantial aquifer is defined as groundwater,

whereas subsurface water at higher elevations that is recharging those aquifers is “merely” water below the surface. The EIR states:

“This distinction is made in the Winzler & Kelly 2012 report because interpretation of the data suggests that much of the rainfall precipitation occurring over the site infiltrates into the soil and fractured rock where it migrates through flow channels and seep conduits that are suspended above the regional groundwater elevation.” (p. 4.8-14)

This artificial distinction minimizes the apparent impact of making huge cuts into rock formations that serve to recharge near-by groundwater. Any water that is prevented from infiltrating is no longer available to recharge groundwater, whether or not it has already migrated to the fully saturated zone. Also, while W&K note (in Appendix J) having observed limited seepage out of the cut rock faces, and interpret this to suggest that there is not a lot of potentiometric head, the proposed depth of excavation is 250 feet below the lowest current elevation; this change in elevation may be greater than the total current pressure head. The estimated groundwater potentiometric surface is above 50 feet all the way to the west side of the quarry, and above 150 feet for most of the areas to be quarried (all areas except the State Grey Pit). Mitigation measure 4.8-2 requires all mining to occur no closer than 10 feet above the potentiometric groundwater surface, however, it is completely silent on how that depth would ultimately be determined, by whom, and how that provision would be enforced (or for that matter, whether mitigation measure 4.8-3 would be implemented instead).

Response to Comment V-49

The commenter is correct in that the “subsurface water” provides important contribution to aquifer recharge. The discussion regarding “subsurface water” has been clarified in Response to Comment V-4.

The commenter is correct with regard to the necessity to determining the elevation of groundwater prior to initiating mining in an area and that mining will modify the infiltration of “subsurface water.” The Draft EIR Mitigation Measure 4.8-2 specifies that springs created as a result of mining be monitored and that the flow from these springs be redirected as recharge to the aquifer. Mitigation Measure 4.8-2 also requires that exploratory borings be installed in any mining area expected to extend to within 50 feet of the groundwater elevation. This data is required prior to mining down to within 10 feet of groundwater. The Annual Groundwater Elevation Monitoring and Use Report prepared under the direction of a qualified Professional Engineer or Professional Geologist is also required.

Comment V-50

- d. There is no discussion of how continued infiltration would be ensured. Water draining from the mined areas is likely to contain elevated levels of suspended sediment, which is *intended* to settle out in the ponds/pits. The effect of the sediment would be to plug existing fractures and reduce infiltration from the pit. This effect was not addressed, nor was the reduction in total area available for infiltration (a specious argument is made that fractures would be exposed in the cut rock faces, and therefore infiltration would still be possible; no mention is made of the fact that vertical or near-vertical rock faces allow virtually zero time for infiltration).

Response to Comment V-50

Infiltration at the project site occurring under the proposed project would occur in multiple processes. The processes would occur differently based upon where the infiltration was occurring. The different conditions for infiltration are: deep ponds (State Blue Pit, State Grey Pit, and Shooting Range), detention

ponds in upper areas (Snake Pit and Arroyo Creek Aquifer), lower detention ponds, and Arroyo Creek.

Infiltration in deep pits occurs through fractures in the rock. It is assumed that these fractures ultimately convey the water to the regional alluvial aquifer, both within the MST and adjacent areas. The pits were created by mining rock and the walls of the pits are primarily rock. The pits are quite deep with large areas of vertical exposed rock surfaces. During the mining process, seeps in the rock faces were observed leaking water into the excavations. Water was observed primarily on the uphill sides of the pits. Once the mining in the pits is completed water is collected in the pits from surface water runoff and the exposed seeps in the walls of the excavations. Water levels in the pit are then raised above the seeps in the rock face where it can then infiltrate into the fractures. The amount of infiltration in the deep pits was estimated using a water balance approach which was summarized in Section 3.5 of Appendix J. With the removal of material under the proposed project and the routing of stormwater runoff into the pits this will likely result in an overall increase in the amount of groundwater infiltration to the adjacent regional aquifers. While sedimentation in these pits will occur over time, the depth of the pits will allow for large volumes of material to accumulate. The depth of water in these pits will create significant hydraulic head at the submerged seeps which supports increased infiltration.

Infiltration in the upper area detention ponds would occur by infiltration into the local Arroyo Creek Aquifer. The detention ponds would be located over the aquifer and sized to mimic the pre-project runoff condition for flow rate in Arroyo Creek. Water infiltrated into the Arroyo Creek Aquifer would then either enter Arroyo Creek or enter the regional alluvial aquifer in the lower reaches of the watershed as it does in pre-project conditions. Detention ponds would need to be maintained (removal of sediment) in accordance with the project's SWPPP.

Infiltration in the lower detention ponds would occur by infiltration directly into the alluvial aquifer. The detention ponds would be located over the aquifer and sized to mimic the pre-project runoff conditions. Detention ponds would need to be maintained (removal of sediment) in accordance with the project's SWPPP.

Infiltration associated with Arroyo Creek in the lower reaches would not change because the flow rate of Arroyo Creek will not be changed under project conditions.

Comment V-51

- e. While there is some discussion of potential evaporative losses resulting from increased exposure of former groundwater/subsurface water to the atmosphere, this effect is not quantified. A basic calculation should be conducted to assess the increased surface area of drainage pits and the resulting unpreventable increase in evaporation.

Response to Comment V-51

The evapotranspiration was explicitly calculated and the impacts of increased water surface area in ponds were included in the calculation. The process is described in Section 3.4.2 of the Draft EIR with the resulting values presented in Tables 4, 5, and 6 of Appendix J.

Comment V-52

- f. Much more detail is required to understand how best management practices could effectively reduce the need for water for quarry operations; how much water is used to water roads, how much is used in sand washing, etc.? Once those numbers are available,

the net effect of potential alternative measures (e.g., graveling quarry road or recycling sand washing water) can be evaluated. The current description of mitigation measure 4.8-4 is grossly inadequate

Response to Comment V-52

The amount of water used for watering roads and sand washing is relatively low (approximately 15 percent of total water demand) and any shortfalls in water would be made up with the import of water, on-site water savings, or through other off-site sources. Also, please see Response to Comment G-3.

To ensure that an increase in historic groundwater use at the facility does not occur as a result of the proposed surface mining project, the following condition of approval shall be implemented, should the project be approved:

Water Supply and Use – Condition of Approval:

The water source for surface mining and reclamation activities conducted and maintained pursuant to #08-00337-SMP, including but not limited to dust control, production and processing activities, and revegetation in excess of 140.6 acre-feet per year shall be from a source other than groundwater, unless and until a modification of #P08-00337-SMP has been conducted by the county to evaluate an alternate water supply, such as but not limited to groundwater, pursuant to the CEQA, and county policies.

Comment V-53

- g. Impact 4.8-8 correctly notes that lowering the groundwater table below Skyline Park could have adverse effects on the park. However, the discussion only addresses Maria Creek and Lake “Maria” (Lake Marie); it does not address the potential for vegetation die-off resulting from depleting “subsurface water” and/or groundwater levels.

Response to Comment V-53

It is possible that along the edge of the mine there will be a die-off of shallow rooted plants; however, this is accounted for in the 50-foot buffer/exclusion area identified in Figure 4.8-10 in Appendix J. Additionally, in Biological Resources Impact 4.4-9 discussion the potential indirect loss of vegetation (in particular oak woodland) located along fringe areas adjacent to mining activities.

Comment V-54

- h. Other items to note include:
 - i. The potentiometric surface shown in the conceptual site model on p. 4.8-9 (Image 2, the title of the image is mixed into the text) does not intersect the proposed excavation area, whereas the same contour clearly intersects the proposed excavation area in the same figure on p. 11 of Appendix J. It is also unclear why the potentiometric surface conveniently dips below the proposed expansion area for no apparent reason.

Response to Comment V-54

The commenter is correct in that both images use the same USGS base map to convey the conceptual position of the Syar Napa Quarry relative to the lower elevations of the mountains. The commenter is also correct in that the intent was to use identical images in both portions of the Draft EIR (page 4.8-9 and Appendix J). The red outline of the project area was shifted up 1/8 of an inch on page 4.8-9 by error during transfer of this graphic from Appendix J to the body of the Draft EIR. As the commenter noted the image title is also out of position. However, neither of these two minor image errors detracts from Image

2's intent or the validity of the overall analysis for disclosure purposes.

Comment V-55

- ii. The report indicates that the Latour Court well is shown in the Jamieson/American Canyon subarea; however, it does not provide any data to address potential connectivity to the MST. Given the proximity of the well to a conceptual basin boundary, it is clearly not appropriate to simply dismiss this well as potentially being connected to the MST.

Response to Comment V-55

The commenter is correct in that the boundary between the southern MST and the Jamieson/American Canyon subarea is a political boundary and is not based on a hydrogeologic boundary. Therefore, there is the possibility that pumping from the Latour Court well is part of the existing conditions for the southern part of the MST. The technical evaluation provided in the Draft EIR does not assume that there is a hydrogeologic boundary separating the southern MST from the Jamieson/American Canyon subarea. The evaluation and findings address the actual hydrogeologic conditions and ignore the political boundary.

Comment V-56/57

- iii. Appendix J indicates that all surface water from the State Grey Pit and Sand Plant drains to existing ponds for infiltration and evaporation. No statement is made regarding the State Blue Pit; however, no mention of filtration is made relative to the ponds capturing the State Blue Pit drainage. The EIR mentions (p. 4.8-10) that precipitation from the State Blue and State Grey Pits combines with additional upland rainfall and then infiltrates through fractures to recharge Lake Camille in the southern MST. The surface water flow contours (Fig 4.8-6) presented as the post-project condition shown most of the overland flow being captured by the State Blue Pit. It is therefore essential to know whether water infiltrates out of this pit, and what percentage is lost to evaporation from the pond or dust control and processing for quarry uses.

Response to Comment V-56

It is not clear if the commenter is asking a question. The commenter states "no mention of "filtration" is made ...". If it is assumed that the commenter means infiltration instead of "filtration" than this comment will be addressed in Response to Comment V-50.

Response to Comment V-57

The drainage into State Blue Pit is addressed in Section 2.3.2 of Appendix J "The State Blue Pit watershed collects overland drainage into an active hardrock mining pit located on the north end of the Quarry. Under current conditions, overland flow originating in the contributing watershed concentrates in a deep pit referred to as State Blue Pit that has a bottom elevation of approximately 100-ft (above msl). Under existing conditions, the pit intercepts all surface drainage and prevents overland drainage from continuing off-site."

Additional information on water entering State Blue Pit is discussed in Section 3.3.1, Appendix J. "Additionally, these basalt rock exposures do not appear to be saturated with water during the wet or dry season, and the water levels in State Blue Pit pond at the bottom of this basalt excavation do, however, fluctuate up and down regularly. These observations indicate that the State Blue Pit pond at the bottom of the excavation is occupying the void space of the excavation and is fed from, rain, overland flow from

rain, and by a limited number of fractures conveying infiltration occurring upgradient. Therefore, water captured within the State Blue Pit pond and the resultant water surface elevation does represent a regional groundwater potentiometric surface that would have existed had the area not been excavated; however it represents a volume of water that is conveyed downgradient, but the flow out is restricted by the limited number of fracture and joint systems. Additional water may enter the pond through up gradient fractures or over land flow faster than it can be re-infiltrated through down gradient fractures. This means that the surface elevation of this pond can be temporarily higher than the regional potentiometric elevation." Water lost due to uses such as dust control is addressed in the Water Supply Assessment, Appendix K.

The method of calculating infiltration in State Blue Pit is described in Section 3.4.4 and the amount of water infiltrated in this pit is tabulated in Table 6, Appendix J. This information is used in the water balance analysis. The results of the water balance are described in Section 3.5 and graphically presented in Figure 22, Appendix J.

Comment V-58/59

- iv. At the proposed depth of 50 feet, the project would most definitely be acting as a groundwater drain for the area around Penny Lane and the southern Coombsville area – the hydrographs in the 2011 Groundwater Condition Report show that most wells in this area have water levels at or above 100 feet; even the well that is in the relatively flat area to the northwest of the project area has an elevation of around 30 feet. My house is at an elevation of 105 feet, and has a pump set 60 feet down (i.e., an elevation of 45 feet) that is productive most of the year. More importantly, the well is artesian after wet springs, indicating that there is a direct connection between annual recharge and the groundwater elevation. Thus, reduction in recharge at the upper elevations would have a direct effect on our well. Because there is insufficient information about the response of the groundwater surface elevations in the Skyline Park/Syar Quarry areas to annual rainfall, it is possible to know whether the change in groundwater level in my well is reflective of a change in the potentiometric surface at higher elevations, or simply a reflection of increased infiltration (i.e., "subsurface water").

Response to Comment V-58

The proposed mitigation measures are designed to ensure that appropriate recharge to the aquifer is maintained. While the project as evaluated extends to a depth of 50 feet msl it is possible that application of the proposed mitigation measures will make this mining depth too complex or expensive to undertake.

Response to Comment V-59

As a technical point, an increase in infiltration will result in an increase in the elevation of the potentiometric surface elevation (or groundwater elevation). One of the goals of the mitigation measures is to maintain the groundwater elevations in the neighboring wells at levels which are consistent with existing conditions. It is expected that water elevations will fluctuate in wells based on the amount of rainfall in a particular season. The mitigation measures (in Section 4.8) are developed to avoid having the project influence the infiltration process in such a way as to interfere with the use of neighboring wells.

6. Noise

Comment V-60

- a. The document (p. 4.11-5) does not include residential areas in its listing of sensitive receptors in the vicinity of the quarry. How is it possible to ignore the residences immediately on and immediately north of Imola Ave? The next paragraph even acknowledges that residential land use is a noise sensitive receptor.

Response to Comment V-60

Comment noted. The discussion on Page 4.11-5 lists the land uses that border Syar Napa Quarry. Residential land uses are sensitive receptors to both noise and vibration, and are the focus of the impact analyses as summarized in the Impacts and Mitigation Measures section of the Draft EIR.

Comment V-61

- b. Noise monitoring on the north side of Syar was conducted in the open field on the southwest corner of Penny Lane on a day when mowing was occurring at Skyline Park immediately across the street the entire day (pers. comm., Kathy Felch; documented with photographs). Mowing occurs less than once per month, and therefore the baseline for the noise evaluation on the north side of the Syar property is invalid and must be redone using correct baseline data.

Response to Comment V-61

Noise monitoring conducted within Skyline Park near the Horse Arena (LT-4) documented ambient noise levels from Tuesday, October 6, 2009 to Monday, October 12, 2009. Based on a review of the noise data, ambient noise levels at Site LT-4 may have been influenced by mowing activities on Wednesday, October 7, 2009 (52 dBA Ldn); however, the noise data collected on the remaining days and over the weekend were not influenced by mowing noise (46 to 47 dBA Ldn). The data contained in Table 4.11-4 indicates that the range of hourly average noise levels on weekdays and weekends were very consistent. The data collected during the noise monitoring survey remain valid although one day's worth of noise data may have been influenced by mowing noise. Additionally, by definition the ambient noise level should include such intermittent background noises of the surrounding environment, such as noise from animals (such as geese and crows), traffic along roadways (including trash collection vehicles or other commercial vehicles), and from agricultural uses (such as tractors and wind machines) to appropriately characterize the noise environment of the area.

Comment V-62/63/64/65

- c. The noise analysis for the residential areas north of the quarry points to traffic on Imola Avenue as the primary noise source. However, the document does not distinguish between traffic levels during peak use (commute hours and as school is starting and ending) and night-time and evening hours. Furthermore, even though noise monitors were present only during the day time, when higher traffic noise occurs, they were able to hear backup alarms. This should therefore have pointed directly to the fact that backup alarms are extremely audible at night. While periodic noise spikes are permissible based on the way noise exposures are calculated, this analysis fails to recognize the disruptive effect of repeated, short-term noise spikes such as back-up alarms occurring at irregular intervals throughout the night time. Furthermore, the analysis did not consider locations further from Imola where traffic noise is more muffled, but quarry noise is still very audible, due to difference in shielding from terrain. Quarry noise originates at much higher elevation than traffic noise, and therefore travels further than traffic noise, which is muffled by intervening vegetation, structures, etc.

Response to Comment V-62

Draft EIR Table 4.11-4 presents the range of hourly average noise levels measured at all five long-term noise monitoring sites from Tuesday, October 6, 2009 to Monday, October 12, 2009. The range of noise

levels shown in this table is reflective of noise conditions during the peak traffic periods as well as during the evening and nighttime.

Response to Comment V-63

Please see Response to Comment V-62. As noted on Page 4.11-7, first paragraph, backup alarms were audible but not measurable above ambient noise levels generated by traffic.

Response to Comment V-64

The noise analysis uses several criteria to assess the significance of noise impacts from quarry operations upon sensitive receivers in the vicinity of the project. The Napa County Noise Ordinance includes noise limits that specifically address short duration sounds. The maximum instantaneous noise levels of short duration sounds from back-up alarms are not calculated to exceed the noise limits for short duration sounds set forth in the Noise Ordinance.

Response to Comment V-65

The noise analysis assessed the potential for noise impacts at credible worst-case receptor locations located nearest the quarry. Because noise levels attenuate with distance from the noise source, noise levels at the receptor locations nearest the quarry would have the greatest potential to exceed the Napa County Noise Ordinance limits. Mitigation Measure 4.11-1 is designed to reduce noise levels such that the project would not violate noise standards established in the Napa County General Plan and Napa County Noise Ordinance at the nearest receptors. It follows that mitigated noise levels at more distant receptors would also be in compliance with the Napa County General Plan and Napa County Noise Ordinance.

Comment V-66

- d. It should also be noted that while hours of operation (summer) are given as 6 a.m. to 10 p.m., operations actually typically occur from 5:30 a.m. to 11:30 p.m. (back-up alarms are audible during the period, and occasionally even earlier). In other words, the uninterrupted sleeping period in the summer when work is occurring near the north side of the property is 6 hours or less, which is grossly inadequate.

Response to Comment V-66

This general comment does not comment on the adequacy of the Draft EIR. No further response is necessary. The commenter's general concern will be forwarded to the decision-makers, via this document, for their consideration.

Comment V-67/68

- e. The document notes (p. 4.11-15) that quarry sounds were only audible and measurable "in the absence of local traffic..." – in other words, in the evening, at night and during large portions of the weekend. A significance threshold should be established specifically for evening/nighttime and weekend noise. Ambient noise during these time periods should be measured, and any increases in noise limited to 5 dBA (as described on p. 4.11-22 as a threshold of significance).

Response to Comment V-67

Significance thresholds used in the project's impact analysis were derived from applicable Napa County General Plan standards and Napa County Noise Ordinance limits.

Response to Comment V-68

Comment noted. Please see Response to Comment V-67.

Comment V-69/70

- f. The proposed noise thresholds do not correct for character of sound. Certainly backup alarms, and rock crushing/grinding are particularly offensive and cannot be compared to the kind of ambient background noise resulting from the steady hum of traffic. As specified in the noise ordinance:
 - B. Correction for Character of Sound. In the event the alleged offensive noise, as judged by the noise control officer, contains 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, the standard limits set forth in Tables 8.16.060 and 8.16.070 shall be reduced by five dB, but not lower than forty-five.

This means that the daytime noise standards should also be 45 dB, and this should be reflected in mitigation measure 4.11-1. Further, mitigation should be provided that requires Syar to avoid quarrying in the northern most are higher elevation areas during the evening, night, and weekend hours.

Response to Comment V-69

Impact 4.11-1 notes that because mining equipment typically generates steady noise levels while in operation, the most restrictive noise limit for the purposes of the assessment was determined to be the L₅₀ (the noise level exceeded 30 minutes in any hour). For steady noise, the L₅₀ noise limit is the lowest noise limit and would be exceeded before any of the other noise limits contained in the code.

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 L_{max} daytime and 65 dBA L_{max} nighttime) or ambient maximum instantaneous noise levels during daytime or nighttime periods.

Response to Comment V-70

Please see Response to Comment V-69.

Comment V-71

- g. While measured vibration/ground acceleration during the study was below significance thresholds, blasting events can nonetheless be felt, and periodically are severe (I have almost been thrown out of my chair). Notification as proposed by mitigation measure 4.11-2 should definitely be required, and monitoring should occur at sensitive receptor locations whenever there is evidence of disruptive levels of vibration as reported by residents.

Response to Comment V-71

Comment noted. The commenter's general concern will be forwarded to the decision-makers, via this document, for their consideration

Comment V-72/73

- h. Impact 4.11-3 acknowledges the effect of winds and temperature inversions on noise propagation. The effect of these conditions is not addressed in mitigation measure 4.11-1, but should be, as the wind direction is predominantly from the southwest to the northeast, and thus carries sound from various areas of the quarry operations to the northern residential areas. Work hours and locations should be restricted during these weather patterns to avoid excess noise exposures to residents.

Response to Comment V-72

Comment noted. Impact 4.11-3 notes that, "...atmospheric conditions can contribute to situations where distant receivers would be able to distinguish noise from project operations that would otherwise not normally be audible. However, audible sounds would not exceed hourly average or daily average noise level standards at distant, shielded receivers." Noise impacts were determined to be less-than-significant and additional mitigation is not required.

Response to Comment V-73

Comment noted. The commenter's general concern will be forwarded to the decision-makers, via this document, for their consideration.

Comment V-74/75

- i. Impact 4.11-4 does not clearly describe when rail trips would occur; if they were to occur during noise sensitive hours, the additional 4 round trips per day could become significant not only in the vicinity of the project, but at all locations along the track where sounding the train horn is required as the trains cross roads. This could lead to significant effects to residents south to American Canyon and beyond (to where the trains tracks join the main line), and residents and/or wildlife if the trains travel west along the SMART tracks.

Response to Comment V-74

The noise analysis assumed that rail trips resulting from the proposed project would occur during regular daytime operational hours.

Response to Comment V-75

Please see Response to Comment V-74.

Comment V-76

- j. One of the significant changes in noise levels in the vicinity of the project is associated with the increase in traffic since Coombsville because a defined appellation. Traffic volumes have increased considerably even east of the school, and traffic begins earlier and continues later than previously. This change in traffic patterns must be accounted for in the cumulative impact analysis.

Response to Comment V-76

The proposed project is not expected to increase traffic volumes along Imola Avenue east of State Route 221 and therefore is not expected to make a "cumulatively considerable" contribution to increased traffic noise levels at receptors in the Imola Avenue vicinity.

7. Transportation/Traffic

Comment V-77

- a. Imola Avenue north of the study area is a two-lane collector.

Response to Comment V-77

Imola Avenue is a four-lane collector west of SR 221, and a two-lane collector east of SR 221. The county appreciates the clarification.

Comment V-78

- a. No dredging of the Napa River channel has occurred for a decade, therefore it is unlikely that the channel is still at a depth of -15 feet MLLW.

Response to Comment V-78

According to the BookletChart, San Pablo Bay NOAA Chart 18654, dated April 2014, the Napa River depth is 14 to 15 feet in the straight portion of the river opposite the Horseshoe Bend and downstream of Kaiser Road where the barges are loaded.

Comment V-79

- a. The traffic analysis does not address the delays created by Syar truck traffic turning onto southbound 221; as noted earlier, the traffic in this area is typically moving at 55 mph during non-peak hours, and is slowed significantly each time a truck pulls into traffic, as it is impossible for the trucks to accelerate to a rate of speed consistent with the flow of traffic in the very short acceleration lane that current exists. Furthermore, these trucks create hazards as people swerve to avoid slowing down.

Response to Comment V-79

Refer to Response to Comment V-26.

Comment V-80/81

- a. The traffic section does not describe the increase in trucks trips per day (the noise analysis indicates trips would increase from 402 to 912 per day), which is an obvious and important factor in evaluating overall traffic impacts. The document fails to describe how fewer trucks (an increase of 60,329 over the baseline of 89, 343 trips) could haul a greater volume of material (increase of 1,091,956 tons compared to a baseline of 808,044 tons), and what that would mean in terms of the size of the trucks and their actual effect on traffic.

Response to Comment V-80

The total daily trips are identified in Table 4.15-12 on page 4.15-19 of the Draft EIR. In the context of determining noise impacts, looking at total volume is appropriate. However, traffic impacts are determined looking only at the peak hour conditions. In the case of this EIR, the threshold is whether the project would contribute greater than 50 peak hour trips to the intersections studied.

Response to Comment V-81

Refer to Response to Comment V-20.

Comment V-82

- b. Without delving into the traffic study itself, it is impossible to determine whether the number of peak hour trips was correctly calculated. The City of Napa 2004 reference cited provides a significance threshold of 50 peak hour trips or more if a minor stop controlled approach operates at LOS F. In a typical traffic analysis, each truck trip is counted as the equivalent of 2 passenger vehicle trips – was the significance threshold provided by the City of Napa applied correctly (i.e., will there be 25 or fewer actual truck trips at the other

intersections, and will the proposed mitigation measure reduce the actual number of truck trips from Basalt Road to less than 25/hour during the AM peak?

Response to Comment V-82

The determination and assignment of project generated trips was performed in accordance with Caltrans, County of Napa, City of Napa and Napa County Transportation and Planning Agency guidelines and requirements. These guidelines and requirements do not include a requirement to convert truck trips to passenger car equivalents.

Comment V-83

- c. The study cannot rely on the largely fictional southbound left-turn flyover at the 29/221 intersection, nor is it appropriate to suggest that because traffic conditions are already very bad that the project is therefore absolved of having to consider that condition or contribute to a solutions.

Response to Comment V-83

The Draft EIR found a project specific impact at Intersection 3 to be significant and includes Mitigation Measure 4.15-1 Transportation Demand Management Program to mitigate the impact to less than significant. The quarry will be required to restrict sales during the AM peak so that the addition of 50 truck trips is not exceeded. At other intersections no significant impacts requiring mitigation were identified. Furthermore, the project does not rely on the Highway 29/221 flyover to mitigate traffic impacts.

With regard to the *Suscol Flyover Improvement Project*, while implementation and realization of this project may not occur in the near future, it is inaccurate to characterize it as a "largely fictional" project. A Draft EIR (SCH #2009072094) has been circulated by The California Department of Transportation District #4 for this project and the Final EIR is currently being prepared for circulation.

