

# EXHIBIT “A”

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## MITIGATION MONITORING AND REPORTING PROGRAM SYAR NAPA QUARRY SURFACE MINING PERMIT #P08-00337-SMP

In order to mitigate or avoid significant effects resulting from the proposed project, Public Resources Code Section 21081.6 requires that monitoring and reporting procedures take place through a Mitigation Monitoring and Reporting Program (MMRP). **Table A-1** provides the MMRP for the proposed project in accordance with those guidelines. Clarifications to the mitigation identified in the response to comments on the Draft EIR have been incorporated into this MMRP.

PRELIMINARY - SUBJECT TO CHANGE

**TABLE A-1**  
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p><b>4.3 Air Quality</b> <b>4.3-2A Reduce NOx.</b> Any time production of 810,363 tons has been achieved in the previous 12-month period, the Applicant shall demonstrate emissions reductions necessary to ensure NOx emissions are less than the significance threshold by one or more of the following methods:</p> <ol style="list-style-type: none"> <li>1. Prepare a Horsepower-Hour Log (“Log”) of monthly horsepower-hours for off-road vehicles operated within the previous 12-month period. The Log shall include the rolling 12-month total horsepower-hours. Low use equipment operated less than 20 hours per year is excluded. The Log shall sum the horsepower-hours for each tier of engine and calculate the percent of horsepower-hours operated by engines in each tier category. Baseline conditions are established at 810,363 tons with a fleet mix of 39% Tier 0, 49% Tier 1, 10% Tier 2 and 2% Tier 3. The following tiered approach shall be followed:               <ol style="list-style-type: none"> <li>a) Production up to 945,000 tons per year shall be allowed upon continued demonstration that 12% of horsepower-hours operated are Tier 2 or better.</li> <li>b) Production up to 1,100,000 tons per year shall be allowed upon continued demonstration that 44% of the horsepower-hours are Tier 2 or better.</li> <li>c) Production up to 1,300,000 tons per year shall be allowed upon continued demonstration that 5% of horsepower-hours are Tier 3 or better and 72% of the horsepower-hours are Tier 2 or better.</li> <li>d) Production up to 1,550,000 tons per year shall be allowed upon continued demonstration that 25% of the horsepower-hours are Tier 3 or better and 90% of the horsepower-hours are Tier 2 or better.</li> <li>e) Production up to 1,750,000 tons per year shall be allowed upon continued demonstration that 60% of the horsepower-hours are Tier 3 or better and</li> </ol> </li> </ol>	Applicant/ County	Napa County Department of Planning, Building and Environmental Services; Bay Area Air Quality Management District	Project operation	Project operation	County/ State standards	Applicant

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Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>95% of the horsepower-hours are Tier 2 or better.</p> <p>f) Production up to 2,000,000 tons per year shall be allowed upon continued demonstration that 97% of the horsepower-hours are Tier 3 or better.</p> <p>2. Reduce NOx from rail transport by using a locomotive with a Tier 0 or better engine.</p> <p>3. Reduce on- and/or off-site emissions by some other means. The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I. For instance, control of NOx by installation of a VDECS on an engine or several engines may be sufficient to offset necessary reductions from overall fleet.</p> <p>4. The county will either hire a consultant or enlist the BAAQMD to assess initial compliance and determine whether the complexity of the task requires further outside assistance in future years.</p> <p>The Log shall be updated upon request by the County and as necessary for the Applicant to ensure compliance with this mitigation, but not less than semi-annually. If the County finds that operations have not achieved the required reductions, production shall be scaled back as necessary until reductions are achieved.</p>						
<p><b>4.3-2B: Reduce Fugitive Dust.</b> Any time production of 810,363 tons has been achieved in the previous 12-month period the Applicant shall demonstrate emissions reductions necessary to ensure PM<sub>10</sub> and PM<sub>2.5</sub> emissions from the project (i.e. expansion of the Quarry) are less than 15 tons per year for PM<sub>10</sub> and 10 tons per year for PM<sub>2.5</sub>. If the County finds that operations have not achieved the required reductions, production shall be scaled back as necessary until reductions are achieved. Reduction of fugitive dust shall be achieved through application of Item 1, and one or more of</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Project operation	Project operation	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>the methods listed in 2 through 5, below:</p> <ol style="list-style-type: none"> <li>1. Clean internal paved roads daily using a particulate matter efficient street sweeper.</li> <li>2. Maintain chemical dust suppressant, equivalent dust suppressant that achieves similar control, on the unpaved road surfaces as described in the manufacturer's specifications. Materials used for chemical dust suppressant shall not violate State Water Quality Control Board standards. Materials accepted by the California Air Resources Board and the US EPA, and which meet State water quality standards shall be considered acceptable.</li> <li>3. Apply water to blast sites prior to detonation.</li> <li>4. Limit speeds on unpaved areas to less than 15 MPH.</li> <li>5. Reduce on-site emissions by some other means (e.g. surface moisture content performance standard, watering frequency).</li> <li>6. Blasting is prohibited within 1,000 feet of vineyards during high wind conditions. High wind conditions means when instantaneous wind speed exceeds 25 miles per hour as measured using the methods described by South Coast Air Quality Management District Rule 403 and the Rule 403 Handbook.</li> </ol> <p>The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I of the EIR.</p>						
<p><b>4.3-3 Reduce Health Risk.</b> The Applicant shall implement the following mitigations to reduce health risk at sensitive receptors:</p> <ol style="list-style-type: none"> <li>2. Using the Horsepower-Hour Log described in Mitigation Measure 4.3-2A, the following tiered approach shall be followed: <ol style="list-style-type: none"> <li>a) Production up to 950,000 tons per year shall be allowed upon continued demonstration</li> </ol> </li> </ol>	Applicant	Napa County Department of Planning, Building and Environmental Services	Project operation	Project operation	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>that:</p> <ul style="list-style-type: none"> <li>i. Total excavated from Blue and Grey Pits combined does not exceed Baseline amount of 45% of facility total and 12% of horsepower-hours operated are Tier 2 or better; or</li> <li>ii. Total excavated from Blue and Grey Pits combined does not exceed 60% of facility total and 44% of horsepower-hours operated are Tier 2 or better.</li> </ul> <p>b) Production up to 1,100,000 tons per year shall be allowed upon continued demonstration that:</p> <ul style="list-style-type: none"> <li>i. Total excavated from Blue and Grey Pits combined does not exceed Baseline amount of 45% of facility total and 12% of horsepower-hours operated are Tier 2 or better; or</li> <li>ii. Total excavated from Blue and Grey Pits combined does not exceed 60% of facility total and 56% of horsepower-hours operated are Tier 2 or better.</li> </ul> <p>3 Reduce on-site emissions by some other means. For instance, control of particulates by installation of a VDECS on an engine or several engines that operate within the Blue and/or Grey Pits may be sufficient to offset necessary reductions from overall fleet.</p> <p>If the County finds that operations are not consistent with the measures above, then production shall be scaled back until compliance is achieved. The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I of the EIR.</p>						
<p><b>4.4 Biological Resources</b>  <b>4.4-1a</b> Implementation of the Mitigation Measure(s) 4.4-1 would</p>	Applicant	Napa County	Pre-project	Project	80% success/	Applicant

- SUBJECT TO CHANGE

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>reduce Impact 4.4-1 to a less-than-significant level by providing avoidance where feasible, requiring replacement of individual plants and enhancement of habitat, establishing success criteria, and monitoring to ensure success criteria are achieved.</p> <p>(a) Avoidance and Preservation Through designation of a 5-acre “Ceanothus Preservation and Replanting” area within chamise chaparral habitat previously slated to be designated as “Processing Area” (see Figure 4.4-4), direct and indirect impacts to approximately 42% of the mapped ceanothus plants will be avoided (i.e., 23 of the 55 plants will be preserved). This area will also be utilized for mitigation for potential direct and indirect impacts to the balance of up to 32 plants. There are several plants that are not expected to be directly impacted, as they are within avoidance areas; however, they are located on the edge of the existing mine and/or expansion area. Their close proximity to future mine face could result in indirect impact to these plants. Accordingly, these plants are included in the impact calculation and mitigation is identified for them at the same ratio as direct impacts.</p> <p>(b) Plant Replacement Each holly-leaf ceanothus plant shall be replaced at a 3:1 ratio within the 5-acre “Ceanothus Preservation and Replanting” area for impacts to approximately 32 plants. A total of 96 individual holly-leaved ceanothus will be planted to provide replacement and compensation for direct and potential indirect impacts. Since these individual plants are scattered within chamise chaparral area as well as a small area of coast live oak, and with a plant width of approximately 3.5 feet each, the occupied habitat of these 32 individual plants is estimated to be approximately 392 square feet. At a minimum, the existing habitat is estimated to be double the occupied area, allowing for spacing between individual plants (therefore, total of approximately 784 square feet, or 0.02 acres).</p>		Department of Planning, Building and Environmental Services	operation	operation and annually first three years	survival rate after three years	

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Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>(c) Planting Plan A qualified biologist shall prepare a Planting Plan for holly-leaf ceanothus for review and approval by Napa County prior to vegetation removal and replanting. The Planting Plan shall specify methods of plant propagation/procurement (i.e., plant salvage, propagation plan, etc.), habitat enhancement of replanted area, appropriate planting densities, watering protocol (duration/quantity/schedule), and maintenance requirements. The Planting Plan also shall address avoidance and conservation methods (i.e., fencing, etc.) for existing individual plants that are avoided by the mining footprint and designated processing area.</p> <p>(d) Additional Planting Specifications Replacement plants shall be from one-gallon size or larger containers and shall be planted in the fall in clusters of 3 to 20 individual plants, based on details provided in the Planting Plan. Mesh shelters or other equally effective measures shall be installed around the plants to protect them from rodent damage and deer browsing. Plants shall be mulched to enhance moisture retention and discourage weeds during the plant establishment period, and the area immediately surrounding the plants shall be weeded to reduce competition.</p> <p>(e) Monitoring and Success Criteria A qualified biologist shall monitor the enhanced habitat and plantings on an annual basis to ensure the replanting's achieve a minimum of 80% success/survival rate after three years, and to ensure habitat conditions remain adequate to support target species. If the success criterion has not been met after three years, supplemental plantings shall be made at the direction of a qualified biologist, and the plant establishment period shall be extended for an additional two-year period, with additional annual monitoring events. The Applicant shall submit documentation of monitoring to the County on an annual basis for minimum of three years or until success criteria are achieved, including survival rates, photographs, and</p>						

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Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
description of any maintenance or other pertinent issues identified by the monitoring biologist. The monitoring report shall also include information to illustrate the condition and location of any failed plantings.						
<p><b>4.4-1b</b> Implementation of Mitigation Measure 4.4-1b would ensure that potential for impacts to changing populations of special-status plants (CRPR) are reduced to a less-than-significant level by requiring updated seasonally-appropriate plant surveys prior to vegetation removal and/or grading/mining activities in undisturbed areas that contain potential habitat for special-status plant species. Since plant surveys are typically considered valid for a two- to three-year period, updated plant surveys will be conducted on a phased basis within areas anticipated for expansion/disturbance within three years prior to planned ground-disturbing activities.</p> <p>If new or expanded CRPR sensitive-listed plant species populations (List 1 or 2) are identified within areas planned for project ground vegetation-disturbing activities within three years, a plant replacement plan will be prepared by a qualified biologist. The plant replacement plan will specify a 3:1 replacement ratio, methods of plant propagation/procurement (i.e., plant salvage if feasible, propagation plan, etc.), habitat enhancement of replanted area, planting densities, watering protocol (duration/quantity/schedule), planting schedule, protective measures such as mesh shelters or other equally effective measures (and/or fencing) to protect plant establishment from rodent damage or deer browsing, maintenance requirements, success criteria, and monitoring to ensure success criteria are achieved. The plant replacement plan will be prepared for and submitted for approval by CDFW and the county prior to conducting expansion activities within the area of identified plant population(s).</p> <p>A qualified biologist shall monitor the enhanced habitat and</p>	Applicant	Napa County Department of Planning, Building and Environmental Services/ CDFW	Project construction	Project operation and annually first three years	Success criteria achieved	Applicant

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<p>plantings on an annual basis to ensure the replanting's achieve a minimum of 80 percent success/survival rate after three years, and to ensure habitat conditions remain adequate to support target species. If the success criterion has not been met after three years, supplemental plantings shall be made at the direction of a qualified biologist, and the plant establishment period shall be extended for an additional two-year period, with additional annual monitoring events. The Applicant shall submit documentation of monitoring to the county and CDFW on an annual basis for a minimum of three years or until success criteria are achieved, including survival rates, photographs, and description of any maintenance or other pertinent issues identified by the monitoring biologist. The monitoring report shall also include information to illustrate the condition and location of any failed plantings.</p>						
<p><b>4.4-2</b> Even though the species is unlikely to occur at or in the vicinity of the project site, as a precautionary measure, Mitigation Measure 4.4-2 is proposed to address any potential direct or indirect impacts. Implementation of the following would reduce Impact 4.4-2 to a less-than-significant level:</p> <p>(a) A qualified biologist shall perform pre-construction surveys for American badger prior to project activities that occur in potential badger habitat (grassland and low density woodland with less than 2 trees per acre).</p> <p>(b) No more than two weeks before earthmoving activities begin within areas determined to be potential badger habitat (grassland and low density woodland with less than 2 trees per acre) and that have not previously been disturbed, a qualified biologist shall conduct a survey for burrows/dens and American badgers of onsite areas within 500 feet of new earth movement activities. The purpose of the survey will be to determine whether burrows/dens exist within the area considered for disturbance within that construction year. Surveys shall not</p>	Applicant	County/ CDFW	Pre-construction	Pre-construction	State standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>be required for areas already disturbed and/or where there is not American badger habitat present.</p> <p>(c) If occupied burrows are found during pre-construction surveys, the biologist shall consult with CDFW to determine whether the project activities would adversely disrupt breeding activity of the badger.</p> <p>(d) If the biologist determines that construction activities would disrupt breeding activity, the Applicant shall ensure that occupied areas are avoided from March through August. Implementation of project activities within 500 feet of onsite occupied burrows during this time shall be delayed until a qualified biologist can determine that juvenile badgers are self-sufficient enough to move from their natal burrow and avoid project activities.</p>						
<p><b>4.4-3</b> Prior to commencement of quarrying activities within any undisturbed areas, a qualified biologist shall conduct pre-construction surveys for raptors and passerine birds prior to vegetation removal conducted during potential nesting season (February 1st through August 31st).</p> <p>Consistent with and pursuant to California Department of Fish and Game Code Sections 3503 and 3503.5, active bird nests shall not be disturbed without a permit or other authorization from USFWS and/or CDFW.</p> <p>(a) For earth-disturbing activities within previously undisturbed areas (including areas of grassland, shrubs, and trees) occurring between February 1st through August 31st, a qualified wildlife biologist shall conduct preconstruction surveys for passerine bird and raptor nests (including off-site areas with public access, excluding off-site private property) as follows: i) for areas that are not adjacent to lands within the Skyline Wilderness Park Combining District (NCC Chapter 18.90) surveys will be conducted within a 300 foot radius of earth-disturbing activities; and, ii) for areas that are adjacent to Skyline Wilderness Park designated lands surveys will be</p>	Applicant	USFWS; CDFW	Pre-construction	Pre-construction	Federal and State standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>conducted within a 0.25 mile radius of earth-disturbing activities. Because raptor nests may be difficult to identify during the egg laying, incubation, or chick brooding periods (late April to early June), an early season survey is recommended if project activity areas are known prior to late April. The biologist shall conduct the preconstruction surveys within the 14-day period prior to vegetation removal and ground-disturbing activities (it is recommended that a minimum of three separate days of surveys occur within that 14-day period).</p> <p>(b) In the event that nesting passerine birds and/or raptors are found, the biologist shall consult with CDFW and obtain approval for specific nest-protection buffers as appropriate based on species found prior to commencement of ground and vegetation disturbing activities. Generally, a minimum 150-foot buffer is required around active passerine bird nests and a minimum 300-foot buffer is required around active raptor nests during the breeding and nesting season, or until it is determined by a qualified biologist that all young have fledged. Nest protection measures shall apply to both onsite and offsite active nests that are located within 300 feet of project activities. These buffer zones may be modified in coordination with CDFW based on existing conditions at the project site. Buffer zones shall be fenced with temporary construction fencing, which will remain in place until the end of the breeding season or until young have fledged.</p> <p>(c) If project-related work lapses for 15 days or longer during the breeding season, a qualified biologist shall conduct another bird and raptor preconstruction survey and consult with CDFW as set forth above in sections (a) and (b) before project work may be reinitiated.</p>						
<p><b>4.4-5</b> Prior to commencement of any project or quarrying activities within any undisturbed areas occurring between March 1 and August 31 that contain trees the Applicant will implement (at the Applicants expense), the following</p>	Applicant	Napa County Department of Planning, Building and	Pre-construction	Pre-construction	Federal and State standards	Applicant

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Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>measures:</p> <p>(a) The Applicant shall retain a qualified biologist to conduct a habitat assessment for special-status bat habitat within 14 days of project initiation or tree removal.</p> <p>(b) If the habitat assessment identifies suitable special-status bat habitat and/or habitat trees, the biologist shall submit an avoidance plan for approval by the County and CDFW). The avoidance plan shall identify and evaluate the type of habitat present at the project site and specify methods for habitat and/or habitat tree removal. Trees with cavities, crevices and deep bark fissures shall be avoided. Bat habitat/tree removal shall occur in two phases conducted over two days under the supervision of a qualified biologist. In the afternoon on day one, limbs and branches of habitat trees without cavities, crevices and deep bark fissures would be removed by chainsaw. On day two, the entire tree can be removed.</p>		Environmental Services; CDFW				
<p><b>4.4-6</b> A qualified professional biologist shall conduct resource surveys for any future trail relocation areas that have not been previously surveyed as part of planning process prior to construction. Surveys shall be conducted for special-status wildlife and plant species and habitats that may occur in the trail relocation area(s) and vicinity, and if any sensitive biological resource is identified, it shall be avoided. Trail relocation in areas not previously surveyed shall not occur unless alignments can completely avoid sensitive biological resources. If impacts to biological resources as a result of trail relocation cannot be avoided through project design, then alternate segment alignments will be considered.</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction	County standards	Applicant
<p><b>4.4-7</b> (a) Prior to initiation of project activity that may affect the areas identified as C1 and C2 in the USACE-jurisdictional determination the Applicant shall obtain a Clean Water Act Section 404 permit from the USACE. If a 404 permit is obtained, then the Applicant must also obtain a water quality certification from the RWQCB under Clean</p>	Applicant	Napa County Department of Planning, Building and Environmental Services;	Prior to approval of #P08-00337-SMP	Pre-construction through construction	County and Federal standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>Water Act section 401. The Applicant shall compensate for the loss of wetland habitat in these areas to ensure no net loss of habitat functions and values. Onsite mitigation may not be feasible because there are no accessible remaining undisturbed areas suitable for wetland creation that are not already planned for project activities. A detailed wetland mitigation plan (subject to approval by the USACE) to provide compensation wetlands shall be required that includes a 5-year monitoring program and reporting requirements, responsibilities, performance success criteria, and contingency requirements. At the end of each monitoring year, an annual report shall be submitted to the USACE, RWQCB, and Napa County. The report shall document the hydrological and vegetative conditions of the mitigation wetlands, and shall recommend remedial measures as necessary to correct deficiencies. The compensation wetlands shall be located within the same watershed as project impacts. In lieu of creating compensation wetlands, the Applicant may purchase mitigation credits from an approved mitigation bank at a ratio of 2:1, or as otherwise approved by the USACE.</p> <p>(b) Prior to initiation of project activity that may affect sensitive wetland habitats in non-USACE-jurisdictional areas, the Applicant shall obtain permits as may be required by the RWQCB, CDFW, and Napa County, and shall replace wet areas, at a 2:1 ratio or as directed by the RWQCB, CDFW, and/or Napa County, to ensure no net loss of habitat functions and values. Onsite mitigation may not be feasible because there are no accessible remaining undisturbed areas suitable for wetland creation that are not already planned for project activities. A detailed wetland mitigation plan to provide compensation wetlands shall be required (subject to approval by applicable state and/or local jurisdictions) that includes a 5-year monitoring program and reporting requirements, responsibilities, performance success criteria, and contingency requirements. At the end of each monitoring year, an annual report shall be submitted to the regulatory</p>		USACE; RWQCB				

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Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>agencies. The report shall document the hydrological and vegetative conditions of the mitigation wetlands, and shall recommend remedial measures as necessary to correct deficiencies. The compensation wetlands shall be located within the same watershed as project impacts or other suitable areas as determined by the county.</p> <p>(c) As part of the proposed project, a 50-foot setback is included from the main stem of Arroyo Creek for new project elements beyond the extent of existing roads and development, thus avoiding impact to the riparian corridor along main stem Arroyo Creek. The 50-foot setback will be determined by mapping the Ordinary High Water Mark (OHWM) of the main stem (below 300-foot elevation) of Arroyo Creek on the project site. The OHWM and 50-foot setback will be flagged in the field for review and approval by state and/or local jurisdictions. In two small areas, the 50-foot setback shall be increased to approximately 60 feet to avoid two small riparian areas (0.07 acres) that extend beyond the 50-foot setback (see Figure 4.4-4). The drip-line of this additional vegetation will be flagged in the field for review and approval by state and/or local jurisdictions.</p>						
<p><b>4.4-8</b> Prepare an Invasive Species Management Plan (ISMP) for protected native perennial grassland areas and replanted mitigation areas (i.e., the Ceanothus Preservation/Replanting Area” described by Mitigation Measure 4.4-1). A qualified biologist shall prepare the ISMP that targets invasive plant species either existing on the project site or that could colonize in the future. The ISMP shall specify methods of early detection, management, and control of invasive plant species to improve and protect onsite habitats.</p> <p>The ISMP shall provide a list of target invasive species to be managed at the site with Cal-IPC rating of moderate or higher for the Napa and Mt. George quadrangles. Star thistle, medusa head grass, and french broom are known to occur on a nearby vineyard property and shall be</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction	80% success/survival rate after three years	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding															
<p>included on the list of target invasive species identified in the ISMP.</p> <p>The ISMP shall be implemented by the Applicant to control infestations of invasive species onsite as needed to minimize impacts of such species on remaining protected sensitive habitat areas. Target invasive species identified in the ISMP may be managed by hand-pulling, local application of herbicide, and/or light grazing, or other techniques recommended by the ISMP. Guidance through managed grazing helps reduce fire fuel loads and, if timed properly, can favor the maintenance and expansion of native plant species. Selective control of invasive species should be employed using best-management practices (BMPs) to minimize soil erosion, water contamination, or non-target herbicide effects that could occur during implementation of invasive species management techniques.</p>																					
<p><b>4.4-9</b> Direct and indirect impacts to approximately 130 acres of native oak woodlands shall be compensated at a total mitigation ratio of 2:1, including combination of onsite avoidance and preservation (see Figure 4.4-3 exclusion areas and 50 foot buffer zone along property lines), onsite replacement (see Figure 4.4-4), and offsite as summarized in the table below.</p> <p><b>Summary of Proposed Oak Avoidance, Replacement, and</b></p> <table border="1"> <thead> <tr> <th>Row</th> <th>Type</th> <th>Acres</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Coast Live Oaks Impact</td> <td>130</td> </tr> <tr> <td>B</td> <td>2:1 Ratio Mitigation Package Total</td> <td>259</td> </tr> <tr> <td>C</td> <td>Avoidance and Preservation (Onsite)</td> <td>136</td> </tr> <tr> <td>D</td> <td>Net Additional Mitigation Required</td> <td>123</td> </tr> </tbody> </table>	Row	Type	Acres	A	Coast Live Oaks Impact	130	B	2:1 Ratio Mitigation Package Total	259	C	Avoidance and Preservation (Onsite)	136	D	Net Additional Mitigation Required	123	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through construction	County standards	Applicant
Row	Type	Acres																			
A	Coast Live Oaks Impact	130																			
B	2:1 Ratio Mitigation Package Total	259																			
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D	Net Additional Mitigation Required	123																			

Mitigation Measure			Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
E	Replacement and Preservation (Onsite)	12	Onsite plantings	adjacent to existing oaks.				
F	Additional Replacement and/or Preservation	111	Offsite					
G	Total Replacement and Preservation	123	Rows E+F					
<p>Project mitigation may be accomplished through a combination of onsite avoidance/preservation, partial onsite replacement/preservation, and additional preservation in accordance with a plan prepared by a qualified biologist. The additional preservation will be achieved through onsite or offsite mitigation, in-lieu fee payment to the Oak Woodlands Conservation Fund or through other mitigation activities consistent with Public Resources Code section 21083.4 as developed and approved by the county.</p> <p><b>AVOIDANCE</b> The proposed project would avoid 136 acres of on-site oak woodlands in the Exclusion areas shown on Figure 4.4-3. These areas shall be protected via deed restriction in a form acceptable to the County and shall be recorded prior to any new vegetation removal activities.</p> <p><b>REPLACEMENT</b> A site evaluation of oak woodlands on the project site by an ecologist mapped out areas that appeared suitable for initiating oak replacement plantings (see Figure 4.4-4), and these activities would provide added benefit of enhancing the age structure of oak woodland at the site. These areas amount to approximately 12 acres of suitable area for potential onsite replacement for partial mitigation of impacts to oaks (additional onsite suitable area may be available upon additional investigation). The oak woodlands evaluation also concluded that planting and/or management practices could be conducted on site to enhance seedling establishment, improve the age structure</p>								

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Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>of the oak woodlands, and increase the sustainability of the oak stands, although these activities can be a challenge to implement due to long term commitment requirement, cost and labor intensive management techniques, and remote nature of some of the onsite areas for access for maintenance.</p> <p>A qualified biologist shall prepare an oak woodland establishment and/or restoration plan, in compliance with state and local requirements and subject to County approval, that shall specify the location of a minimum of 12 acres onsite for oak replacement/restoration, methods of implementation, propogule source(s), watering (schedule/amounts/duration), and maintenance of the oak woodland replacement areas, including measures to avoid deer browsing, as well as a monitoring protocol.</p> <p><b>OFF-SITE PRESERVATION</b> An additional 111 acres off-site shall be permanently preserved via easement or deed restriction or in-lieu fee payment to the Oak Woodlands Conservation Fund consistent with Public Resources Code section 21083.4 as developed and approved by the County. Off-site location(s) shall be located within Napa County and be of like quality and habitat value as those being removed, as determined by a qualified biologist and the County. In the event potential off-site preservation areas are determined to be of lesser quality and habitat value relative to the areas removed from the project site, the County would consider an increase in preserved acreage beyond the required 111 acres to offset the inequity in quality and value.</p>						
<p><b>4.4-10</b> Although the project is exempt from County setback requirements for creeks pursuant to Napa County Code Section 18.108.050.P (which exempts earthmoving activity associated with mining and mining-related activities conducted pursuant to and in compliance with an approved Surface Mining Permit), it is recommended that the</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through construction	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>proposed project implement a setback from upper Arroyo Creek/headwaters to protect both the upper reaches and main stem of Arroyo Creek. According to Napa County Code Section 18.108.025, for areas with slopes of 30-40 percent adjacent to creeks (which is the average for upper reaches of Arroyo Creek), generally an 85-foot setback would be required for development. The project is exempt from this requirement, yet due to the nature of the future quarry face cut of 76 degrees, the Applicant shall provide a setback of a minimum of 85 feet from upper reaches of Arroyo Creek.</p>						
<p><b>4.5 Cultural Resources</b></p> <p><b>4.5-3 Conduct Field Surveys for Historic and Archaeological Resources and Avoid Impacts from Trail Relocation.</b> Once the Skyline Trail relocation corridors are selected, the corridors must be surveyed by a qualified archaeologist. Any identified potentially significant archaeological or historical resources that would be directly or indirectly impacted by trail relocation and use must be avoided. The archaeologist shall identify, and the county shall review and approve, the appropriate buffer area around the resource to ensure both direct and indirect impacts are avoided. The size of the buffer area will be determined by a qualified archaeologist based upon the type of resource found and the visibility of the resource from the trail.</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction	County standards	Applicant
<p><b>4.5-4 Avoid or Minimize Impacts to Unknown Historical or Archaeological Resources.</b> In accordance with CEQA Guidelines Section 15064.5(f), should any previously unknown prehistoric or historic archaeological resources, such as, but not limited to, obsidian and chert flaked-stone tools or toolmaking debris, shellfish remains, stone milling equipment, concrete or stone footings, filled wells or privies, or deposits of metal, glass, or ceramic refuse be encountered during ground disturbing activities, work within 100 feet of these materials shall be stopped, and the operator shall consult with a</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during construction	State standards	Applicant

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<p>professional archaeologist. The archaeologist shall evaluate the significance of the find and identify appropriate mitigation measures as may be necessary if the deposit contains significant archaeological materials, and those mitigation measures shall be carried out prior to any resumption of related ceased earthwork. The archaeologist shall also undertake data recovery of the deposit unless the project can be modified to allow the materials to be left in place. Data recovery efforts must follow standard archaeological methods and all significant cultural resource materials recovered shall be subject to scientific analysis, professional museum curation, and a report prepared by the qualified archaeologist according to current professional standards, and the report shall be provided to the county.</p>						
<p><b>4.5-5 Avoid or Minimize Impacts to Unknown Human Remains.</b> Should human remains, associated grave goods, or items of cultural patrimony be encountered during quarry expansion or during other ground-disturbing activities, the following procedures shall be followed as required by Public Resources Code section 5097.9 and Health and Safety Code section 7050.5.</p> <p>In the event of discovery or recognition of any human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Napa County Coroner has determined that the remains are not subject to his or her authority. If the coroner determines the human remains to be Native American, he or she shall contact, by telephone within 24 hours, the State Native American Heritage Commission (NAHC). The NAHC shall assign a Most Likely Descendent (MLD). The MLD may provide recommendations regarding the treatment of the human remains and any associated cultural materials. If the quarry operator rejects the recommendations and the</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during construction	State standards	Applicant

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mediation by NAHC fails to provide acceptable measures, then the quarry operator shall rebury the Native American remains and associated grave goods with appropriate dignity on the property, in a location not subject to further subsurface disturbance.						
<p><b>4.5-6 Evaluation and Treatment of Paleontological Resources.</b> If paleontological resources (e.g., vertebrate bones, teeth, or abundant and well-preserved invertebrates or plants) are encountered during project activities, work in the immediate vicinity shall be diverted away from the find until a professional paleontologist assesses and salvages the resource, if necessary.</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during construction	State standards	Applicant
<p><b>4.6 Geology and Soils</b> <b>4.6-2a Supplemental Geotechnical Design Criteria.</b> The project shall not locate facilities on unstable slopes, to the extent feasible. Prior to construction of any roads, berms or dams associated with detention/sedimentation basins, or related structures, the operator shall retain a licensed geotechnical engineer and, when appropriate, a structural engineer to conduct a construction-level geotechnical investigation for the facility(ies). The geotechnical investigation shall evaluate seismic hazards and provide recommendations to mitigate the effect of strong ground shaking and unstable soils and slopes to a level of avoidance of structural failure. The geotechnical study shall provide design criteria to mitigate strong seismic ground shaking. The seismic design criteria shall take into account the active faults in the Napa area and beyond.</p> <p>The geotechnical study shall include evaluation of unstable land in the areas of stormwater improvements and road construction, including any areas susceptible to liquefaction or settlement, and any areas that may contain expansive soils. The study shall provide measures to repair, stabilize, or avoid such soils or slopes, and may</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction	County standards	Applicant

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<p>include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Removal and replacement of unstable materials in an existing landslide or in an actively eroding area with a stronger material;</li> <li>• Grading to remove loose material and provide an acceptably stable topographic configuration by terracing, reducing slope angles, and reducing the height of cut and fill slopes;</li> <li>• Installation of drainage facilities, such as subdrains and dewatering wells to reduce pore water pressure and reduce the risk of slope failure;</li> <li>• Covering steep slopes with concrete or vegetation;</li> <li>• Buttressing the slope or the toe of slopes to provide additional support to the slope. Where buttressing is not feasible, internal reinforcement such as a pinning system or lattice grid can be incorporated into the slope design to strengthen the slope;</li> <li>• Retaining walls or other external applications to strengthen slopes;</li> <li>• Placement of slope fencing or other material to stabilize rock fall from cut slope and mitigate hazards from falling rocks;</li> <li>• Removal of native soils and replacement with engineered fill materials not prone to seismically-induced liquefaction or shrinking and swelling;</li> <li>• Soil stabilization, such as lime treatment to alter soil properties to reduce shrink-swell potential to an acceptable level; and/or,</li> <li>• Deepening support structures to a depth where unstable soils are no longer present.</li> </ul> <p>The project shall be designed and constructed in conformance with the specific recommendations contained in design-level geotechnical studies, including recommendations for grading and ground improvement.</p>						
<p><b>4.6-2b Slope Stability Criteria.</b> A California registered Geotechnical Engineer shall</p>	Applicant	Napa County Department of	Pre-construction	Annually	County standards	Applicant

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<p>conduct slope stability inspections during excavation of the expansion area. Inspections shall be completed on an annual basis, at a minimum, as well as after heavy rain events (precipitation falling with an intensity in excess of 0.30 inches per hour) or earthquakes with a magnitude of 6.0 or greater. Inspections shall include mapping and movement monitoring of the slopes to assess the potential for project excavation, grading, and overburden storage to trigger movement of debris flow and landslides. If a slope condition presents risk to safety or the potential for mass movement, repair measures shall be recommended and promptly implemented. This may include repair, stabilization, or avoidance of landslides and areas of soil creep or possible debris flow. A memorandum summarizing the findings of the inspections and any recommendations shall be prepared and submitted to the County of Napa Engineering and Conservation Division and Syar each year. Engineering recommendations for slope repair or stabilization shall be approved by the County of Napa and incorporated into the project.</p>		<p>Planning, Building and Environmental Services</p>				
<p><b>4.7 Hazardous Materials</b></p> <p><b>4.7-2 Standard operating procedures shall be used during the handling of hazardous materials for the operation and maintenance of vehicles and equipment; and an approved Hazardous Material Business Plan shall be maintained for the project site.</b></p> <p>Syar shall develop SOPs for the use of hazardous materials including fuels and lubricants used onsite prior to implementation of the proposed project. Quarry personnel shall follow written SOPs during onsite operation and maintenance of all equipment. The SOPs, which are designed to reduce the potential for incidents involving hazardous materials, shall include the following information and protocols:</p> <ul style="list-style-type: none"> <li>• Refueling shall be conducted only with approved pumps, hoses, and nozzles.</li> </ul>	<p>Applicant</p>	<p>Napa County Department of Planning, Building and Environmental Services</p>	<p>Pre-construction</p>	<p>Pre-construction through operation</p>	<p>County standards</p>	<p>Applicant</p>

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<ul style="list-style-type: none"> <li>• Catch-pans shall be placed under equipment to catch potential spills during servicing.</li> <li>• All disconnected hoses shall be placed in containers to collect residual fuel from the hose.</li> <li>• Vehicle engines shall be shut down during refueling.</li> <li>• No smoking, open flames, or welding shall be allowed in refueling or service areas.</li> <li>• All refueling, maintenance of vehicles and other equipment, handling of hazardous materials, and staging areas shall occur at least 100 feet from water courses, existing groundwater wells, and any other water resource to avoid the potential for risk of surface and groundwater contamination.</li> <li>• Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents.</li> <li>• A spill containment kit that is recommended by the Napa County EHD or local fire department will be onsite and available to staff if a spill occurs.</li> <li>• A rinse water containment area shall be established outside the proposed creek setbacks and away from any areas that could potentially drain off site or potentially affect surface and groundwater quality. When quarry equipment is cleaned, only rinse water that is free of gasoline residues, other chemicals, and waste oils should be allowed to diffuse back into the quarry area. No rinse water shall be drained to a septic system or discharged to ground or surface water to prevent the release of hazardous materials into the environment during operation and maintenance of the proposed project.</li> <li>• To prevent the accidental discharge of fuel or other fluids associated with vehicles and other equipment, all workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.</li> </ul> <p>In the event that contaminated soil and/or groundwater or</p>						

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<p>other hazardous materials are generated or encountered during quarry operations, all work shall be halted in the affected area and the type and extent of the contamination shall be determined. Should a spill contaminate soil, the soil shall be put into containers and disposed of in accordance with federal, state, and local regulations. If containment and size of the spill is beyond the scope of the attending personnel, proper authorities shall be notified.</p> <p>Pursuant to Chapter 6.95 of the California Health and Safety Code, Syar has produced a HMBP for the Syar Napa Quarry. The HMBP shall include a hazardous material inventory that shall be updated annually as required by law. Syar shall amend the existing HMBP inventory form for the Syar Napa Quarry, in accordance with state law, in the following instances if warranted as a result of the proposed project:</p> <ul style="list-style-type: none"> <li>• A 100 percent or more increase in the quantity of a previously disclosed material; or,</li> <li>• Any handling of a previously undisclosed hazardous material above the reportable quantity thresholds of 500 pounds of solid, 55 gallons of liquid or 200 cubic feet of gas.</li> </ul> <p>The Syar Napa Quarry HMBP shall meet the standards of the Hazardous Material Business Plan and Emergency Action Plan (Napa County Department of Environmental Management, 2008) and shall be subject to approval by Napa County. The amended HMBP shall include:</p> <ul style="list-style-type: none"> <li>• An inventory of the type and quantity of hazardous materials stored onsite</li> <li>• A site map</li> <li>• Risks of using the hazardous materials</li> <li>• Spill prevention methods</li> <li>• Emergency response plan</li> <li>• Employee training</li> </ul>						

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<ul style="list-style-type: none"> <li>Emergency contacts</li> </ul> <p>The plan shall also include a review of each chemical used onsite and a determination on whether any substitution with less hazardous chemicals can be made. Changes shall be made as appropriate. The hazardous materials inventory, site map, emergency response plan, business owner form, and business activities form must be submitted to the EHD. If there is any change in storage of a hazardous material or 100 percent increase in quantity of a hazardous material the EHD must be notified within 30 days. An employee training record shall be filed onsite and may be inspected by the EHD once every three years.</p> <p>Waste oil containers shall be stored in secondary containments that include oil-impervious bermed areas or liners, retaining walls, and/or are stored on impervious concrete floors. Waste oil containers shall be covered during rain events and not be stored within any buffers, creek setback, or other exclusion areas. Waste oil containers shall be labeled "waste oil". The containers shall also be labeled with the following information: accumulation start date; the hazardous properties of the waste (ex. flammable, corrosive, reactive, toxic, etc.) and the name and address of the facility generating the waste. All waste oil containers shall be transported offsite by a licensed transporter and taken to a waste oil recycling facility.</p>						
<p><b>4.8 Hydrology and Water Quality</b></p> <p><b>4.8-1 Update Industrial Storm Water Pollution Prevention Plan to address new land disturbance and operations changes.</b></p> <p>Prior to construction and annually as necessary, the Applicant shall update the Napa Quarry's existing Industrial SWPPP to reflect additional areas of land disturbance and changes in operation resulting from the project. The Applicant shall modify the SWPPP as the project</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County standards	Applicant

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<p>progresses and as conditions warrant to remain consistent and compliant with SWRCB Order No. 97-03-DWQ, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.</p> <p>The updated SWPPP shall identify the sources of pollution that may affect the quality of industrial stormwater discharges and authorized non-storm water discharges, and describe and ensure the implementation of BMPs to reduce or prevent pollutants in industrial stormwater discharges. The updated SWPPP shall also include monitoring measures and other requirements contained in Order No. 97-03. Implementation of the SWPPP shall include inspections and monitoring. The Applicant shall continue to compare quarterly monitoring results to current and future EPA suggested benchmark levels to determine the effectiveness of onsite control measures and make adjustments accordingly. The Regulatory Benchmark Levels presented in Table 4.8-2 will be used as a basis for compliance where no discharges from the site will exceed 100 mg/l of Total Suspended Solids or 200 umho/cm of Specific Conductance. In addition the project will not result in a net increase in sediment load.</p> <p>Two additional mitigation measures are related to revisions to the SWPPP and are discussed in further detail below. Mitigation Measure 4.8-5 includes updating the SWPPP annually to incorporate modifications to the detention ponds as they are adapted to mine conditions. Mitigation measure 4.8-6 includes updating the SWPPP to address the storage and handling of hazardous materials.</p>						
<p><b>4.8-2 Avoid depleting groundwater supplies or interfering with groundwater recharge mechanisms including maintaining a 10-foot vertical separation between final grade and regional groundwater potentiometric elevation.</b></p>	Applicant	Napa County Department of Planning, Building and Environmental	Pre-construction	Pre-construction through operation	County and State standards	Applicant

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<p>This Mitigation Measure requires that existing volumes of groundwater recharge be maintained and that a vertical buffer of undisturbed native soil/rock will remain in place which maintains the final grade elevation no closer than 10 feet above the spring season regional groundwater potentiometric elevation. This mitigation measure precludes excavation and mining of material within 10 feet of the regional groundwater potentiometric surface to prevent the creation of open water bodies subject to evaporation or springs which can drain regional groundwater to surface drainage creeks.</p> <p>The project does not include direct groundwater extraction from the vicinity of Arroyo Creek. Direct groundwater extraction is addressed in Impact 4.8-3 and Impact 4.8-4. However, excavation deeper than the regional groundwater potentiometric elevation could allow regional groundwater to drain to the ground surface and be discharged from the project area as surface water. In order to avoid depleting groundwater supplies in the vicinity of Arroyo Creek (and all mined areas of the Syar Napa Quarry) the grade of the excavation will be maintained a minimum of 10 feet above the elevation of the regional groundwater potentiometric elevation. This mitigation will preclude regional groundwater from discharging as surface water and draining to the Arroyo Creek channel.</p> <p>The estimated regional groundwater potentiometric elevations presented in Figure 4.8-6 are based on a compilation of existing data which include well data on- and off-the project site and observations of areas where regional groundwater appears to have been intersected by quarry activities (i.e. State Blue Pit). It is expected that the actual elevation of regional groundwater potentiometric elevation will vary from the estimates provided in Figure 4.8-6. Adherence with this mitigation measure requires accurate and contemporary understanding of the regional groundwater potentiometric elevation under the Syar Napa</p>		Services				

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<p>Quarry. This understanding is necessary in order to avoid excavating into the 10-foot vertical buffer zone. To obtain the data necessary to comply with this mitigation measure, the Applicant will provide Napa County with an Annual Groundwater Elevation Monitoring and Use Report, prepared under the direction of a qualified Professional Engineer or Professional Geologist, that quantifies the groundwater potentiometric elevations during spring of each year when groundwater elevations are expected to be highest at the Syar Napa Quarry. The Applicant shall install exploratory borings and/or monitoring wells as required to quantify the regional groundwater potentiometric in areas of mining when the excavation is likely to extent to within 50 feet of the groundwater elevations presented on Figure 4.8-6 or the most recent Annual Groundwater Elevation Monitoring and Use Report which is required by this Mitigation Measure. All excavation activity at the Syar Napa Quarry will be conducted to maintain a 10-foot separation of undisturbed native soil/rock between the finished grade and the underlying groundwater potentiometric elevation as determined by the most recent Annual Groundwater Elevation Monitoring and Use Report.</p> <p>To avoid interfering with the groundwater recharge mechanisms, the Applicant shall also ensure that any subsurface flow in fractures or soil that is exposed or intercepted by the excavation will be reinfiltated within the same watershed boundaries. Any surface water that is not the direct result of surface water runoff during rain events is infiltrated or directed to groundwater onsite and within the same watershed and as depicted on Figure 4.8-10. Surface water which is the direct result of rain events is infiltrated to groundwater or directed to the existing channels. Spring season monitoring is to be conducted concurrent with SWPPP monitoring to visually verify that springs and subsurface flow exposed as a result of mining activities is infiltrated back into the subsurface before reaching the surface flow channels. If persistent springs</p>						

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<p>are formed by mining activities the owner/operator shall hire a qualified professional to assess springs and provide an evaluation to the County to determine if the elevation of these springs are part of the regional groundwater potentiometric surface; if so, mining will not advance further below this elevation.</p> <p>While no direct groundwater extraction has been proposed in the Arroyo Creek vicinity, the existing Well #4 could be activated for extraction or an additional well could be installed. The extraction of groundwater from Well #4 or from any additional well at the project site, including the Arroyo Creek vicinity, should be subject to the groundwater extraction limitations discussed under Impact 4.8-4 which are related to the extraction of groundwater from the Quarry Well.</p>						
<p><b>4.8-3 Avoid reducing the groundwater potentiometric elevation by increasing consumptive use of surface water or surface occurrence of regional groundwater as a result of quarry activities.</b></p> <p>The potentially significant impacts discuss under Impact 4.8-3 are all related to conducting quarry operations at elevations that are at or below the regional groundwater potentiometric elevation. Mitigation Measure 4.8-3 requires that all water extracted from open bodies of water that are at the regional groundwater potentiometric elevation is infiltrated within the same watershed from which the extraction occurs or is considered a consumptive use of groundwater. This will prevent depletion of the groundwater resource by consumptive use of water derived from open bodies of water such as State Blue Pit. Mitigation Measure 4.8-3 does not apply to the draining of ponded surface water which is an elevation higher than the underlying regional groundwater potentiometric elevation. Ponded surface water which occurs in temporary low areas in active mining areas may be pumped to detentions ponds within the same watershed.</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County and State standards	Applicant

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<p>As part of quarry activities, water is pumped from open water bodies such as State Blue Pit for consumptive quarry activities such as dust control and other uses where the water is not reinfiltrated. The volume of groundwater that is pumped from those water bodies where the water surface elevation is effectively the same as the regional groundwater potentiometric elevation (i.e. State Blue Pit) will be considered part of the groundwater use allocation for the project. Consumptive use from open water bodies such as State Blue Pit will be recorded and considered a part of the groundwater allocation in the same manner as the groundwater pumping from the Quarry Well (see Impact 4.8-4). The volume of water used to wash materials is not included in the quantification of groundwater use if it is returned to the aquifer by reinfiltration. The volume of wash water returning to detention ponds for infiltration is not considered in quantifying groundwater use because it is not a consumptive use of groundwater.</p>						
<p><b>4.8-4 Avoid depleting groundwater supplies by water reuse and obtaining new supplies of additional water for operations.</b>            No additional water from on-site resources is available to accommodate the additional water demand of the proposed project. The maximum allowable annual usage is 45.8 million gallons (140.6 acre-ft) per year. This mitigation measure includes metering to verify that demands upon on-site water resources are not exceeded. This mitigation measure also includes accommodating any additional water demands with a combination of water reuse, new water sources or water conservation methods. Monitoring usage is preferred over monitoring the elevation of groundwater in the aquifer because a number of occurrences which are not related to the proposed project can have an effect on the elevation of the regional groundwater elevation. Examples of such occurrences are sustained drought conditions, higher than average annual</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County and State standards	Applicant

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<p>precipitation or an increase in off-site pumping.</p> <p>In order to monitor the use of the existing on-site sources, metering and record keeping are required. Mitigation would include metering of all water use at the site. These sources include:</p> <ol style="list-style-type: none"> <li>1. Groundwater from the Quarry Well, or any other groundwater well located anywhere on-site or related to the project that could have a similar impact;</li> <li>2. Water collected from open water bodies in contact with the regional groundwater potentiometric elevation; or</li> <li>3. Impounded surface water that would otherwise infiltrate to groundwater.</li> </ol> <p>If new wells are installed and/or if existing wells (i.e. Well #4) are brought into production, the extraction from these wells will be included in the annual usage total. The total of groundwater/surface water used for quarry operations would be totaled and reported annually. The annual usage would be compared against the baseline usage on an annual basis.</p> <p>On-site water that is used which can be used non-consumptively such as a controlled process where the water is used for sand washing and then recharged to the groundwater through a detention basin would not be included in the total of water used if it can be monitored and reported as part of the annual water usage report. Mitigation also will be applied by off-setting the need for additional water by reuse of the water and gains in process efficiency. This could include gravel application to roadways and production areas to reduce dust generation and the need for dust suppression by water application. It could also include process revisions to reuse sand wash water rather than allow the water to drain off as surface water or to allow it to evaporate in shallow ponds that have low infiltration benefit.</p>						

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<p>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.</p>						
<p><b>4.8-5 Reduce Potential for Offsite Runoff.</b>  The Applicant shall design and construct detention ponds in the mined watersheds to reduce stormwater runoff volume, rates and sedimentation in addition to maintaining infiltration to groundwater. The specific locations of these detention ponds will be determined during the development of the grading and drainage plans, as required by the county's Surface Mining and Reclamation Ordinance. To facilitate this, the Applicant shall submit a final detailed design-level hydrologic and hydraulic analysis as necessary or as part of the annual mining plan proposed as part of the project to Napa County detailing the implementation of the proposed drainage plans, including detention pond facilities that will conform to the following standards and include the following components:</p> <ol style="list-style-type: none"> <li>1. The project shall ensure peak runoff in 2-, 10-, 50-, and 100-year storm events during the years of active mining and at the end of mining is not greater than under existing conditions. The final grading and drainage plan, including detention pond designs, shall be prepared by a California licensed Professional Engineer. All design and construction details shall be depicted on the grading and drainage plans and shall include, but not be limited to, inlet and outlet water control structures, grading, designated maintenance access, and connection to existing drainage facilities.</li> <li>2. The Napa County Department of Engineering and</li> </ol>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County and State standards	Applicant

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<p>Conservation Division shall review and approve the grading and drainage plans prior to implementation to ensure compliance with Napa County standards. The Applicant shall implement any additional improvements deemed necessary by the county.</p> <p>3. Once constructed, the drainage components, including detention ponds designed for the watersheds, shall be inspected by the County's Engineering and Conservation Division and maintained per the guidelines outlined in the Sediment Basin BMP found in the Napa Quarry SWPPP.</p> <p>The Applicant shall ensure that all disturbed areas of the quarry are graded in conformance with the approved grading and drainage plans in such a manner as to direct stormwater runoff to a properly sized detention pond.</p>						
<p><b>4.8-6 Update Industrial Storm Water Pollution Prevention Plan to address hazardous materials spill response actions.</b></p> <p>The Applicant shall revise Spill Prevention and Countermeasure Plan, Hazardous Materials Business Plan, and Emergency Response Plan to directly address the potential for a spill or release of hazardous material near or into a water body that is directly connected to the regional aquifer. The revision shall include provisions for training in spill response and containment and maintaining access to the needed equipment to respond to a spill. The revisions to the plan will also contain provisions to eliminate or minimize the storage of hazardous materials in areas which drain to portions of the project site were the regional groundwater is exposed. These revisions would then be incorporated into the SWPPP by summary and reference.</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through operation	County and State standards	Applicant
<p><b>4.11 Noise and Vibration</b></p> <p><b>4.11-1 Noise Restrictions in Expansion Area North and East of the State Blue Pit and Snake Pit (Pasini Parcel).</b></p> <p>The Applicant shall:</p> <ul style="list-style-type: none"> <li>Not carry out mining activities between the</li> </ul>	Applicant	Napa County Department of Planning, Building and	Pre-project operation	Project Operation	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>hours of 10:00 PM and 7:00 AM in mining expansion areas to the north and east of the State Blue Pit where there are residences not shielded by intervening terrain.</p> <ul style="list-style-type: none"> <li>• With the exception of blasting and the removal of overburden; 1) Not conduct daytime mining activities (between the hours of 7:00 AM and 10:00 PM) in unshielded areas to the north and east of the State Blue Pit or Snake Pit within 2,500 feet of the nearest sensitive receptors (residences or trails within Skyline Park), 2) shall ensure that noise levels at the nearest receptor locations north or east of the quarry shall not exceed 50 dBA L50 from 7:00 AM to 10:00 PM and 45 dBA L50 from 10:00 PM to 7:00 AM. The quarry shall utilize the following measures or equivalent: <ul style="list-style-type: none"> <li>○ Maintain acoustical shielding for receivers north or east of the quarry so that existing terrain features provide the maximum amount of shielding for the longest time possible.</li> <li>○ Use the quietest available equipment when removing topsoil and overburden.</li> <li>○ Conduct noise monitoring and maintain noise monitoring reports to ensure that daytime noise levels from aggregate mining within the expansion areas to the north and east of the State Blue Pit do not exceed 50 dBA L50 at the nearest receptor locations north or east of the quarry. Submit noise monitoring reports to the County Environmental Health and Engineering and Conservation Divisions upon request.</li> </ul> </li> </ul>		Environmental Services				
<p><b>4.11-2 Blasting Vibration Reduction Measures.</b> The Applicant shall:</p> <ul style="list-style-type: none"> <li>• Monitor peak particle velocity and peak sound pressure during each blast to ensure that vibration levels are under 0.20 in/sec PPV and air-blast</li> </ul>	Applicant	Napa County Department of Planning, Building and Environmental	Pre-project operation	Project operation	County standards	Applicant

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p>overpressures are under 133 dB(L) at sensitive land uses (residences and school). Blasts shall be modified to reduce the charge weight per delay. The charge weight per delay shall not exceed 175 lbs. for blasting near the northernmost property boundary to maintain vibration levels below 0.20 in/sec PPV and air-blast overpressures below 133 dB(L) at sensitive land uses. Monitoring records shall be provided to the County Environmental Health and Engineering and Conservation Divisions upon request.</p> <ul style="list-style-type: none"> <li>• Conduct stemming and burdening (filling the drilled holes with dirt and rock above the explosive charge) of the blast holes to confine the blast charges into the ground and to minimize acoustic overpressure levels.</li> <li>• Furthermore, to ensure that surrounding residence and sensitive receptors are aware of blasting events, the permittee/operator shall notify the County, sensitive receptors, and surrounding residences prior to blasting. The applicant shall request contact information from residences and sensitive receptors that wish to be notified and provide notification at least 24-hours in advance of the blast. This provision will be included as a condition of approval should the project be approved.</li> </ul>		Services				
<p><b>4.15 Transportation</b>  <b>4.15-1 Transportation Demand Management Program.</b>  The project applicant (Syar) shall operate their sales activities to limit the number of new truck trips entering and exiting the quarry during the AM peak hour to no more than 50. A dedicated Syar staff coordinator would be required to implement and monitor truck trips in accordance with this limit and report to the county annually regarding compliance. Additionally, it is recommended that permanent traffic count and classifiers be installed within the public right-of-way so that reported trip information can be verified.</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-project operation	Project operation	County standards	Applicant

PRELIMINARY - SUBJECT TO CHANGE

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<p><b>4.17 Greenhouse Gases</b>  <b>4.17-2 Greenhouse Gas Reduction Plan.</b>  The Applicant shall prepare a Greenhouse Gas Reduction Plan (GHG Reduction Plan).</p> <p>The GHG Reduction Plan shall identify the measures to be used to reduce the GHG emissions associated with the proposed project below the 1,100 MT CO<sub>2</sub>e annual land use threshold (or increase of 1,100 MT CO<sub>2</sub>e over baseline conditions). The effectiveness of each measure in the GHG Reduction Plan shall be quantified, indicating its contribution to the reduction of GHG emissions. The Applicant shall choose from, but not be limited to, the following measures to incorporate into the GHG Reduction Plan:</p> <ul style="list-style-type: none"> <li>• Fuel on-road and off-road vehicles with alternative fuels (such as hybrid, biodiesel, and electric);</li> <li>• Plant native trees and vegetation that have low emissions of volatile organic compounds species for carbon sequestration in locations at the project site not to be disturbed by quarrying activities;</li> <li>• Replace diesel-powered vehicles with newer model, low-emission vehicles or replace diesel engines with higher fuel efficiency engines or use retrofit emission control devices, such as diesel oxidation catalyst, verified by the California Air Resources Board as old vehicles or engines no longer become operable;</li> <li>• Develop a monitoring program that reduces diesel-fueled idling times beyond that required under the California Air Resources Board Heavy-Duty Vehicle Idling Emission Reduction Program;</li> <li>• Require that on-road haul trucks that are under contract with the quarry operator use 2003 model or newer trucks;</li> </ul>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-project operation	Project operation	County standards	Applicant

PRELIMINARY - SUBJECT TO CHANGE

Mitigation Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
<ul style="list-style-type: none"> <li>• Establish an on-site renewable energy system (such as solar);</li> <li>• Install an automated load out system;</li> <li>• Contribute to a State or County offset mitigation program.</li> </ul> <p>The GHG Reduction Plan shall be reviewed and approved by Napa County and shall be updated as necessary to address changing conditions and regulations. Prior to implementing the GHG Reduction Plan, the Applicant shall monitor GHG emissions bi-annually in a GHG inventory submitted to the County for review. The first inventory shall be calculated as a three-year average after issuance of the use permit (for example, if the use permit is issued in 2014, then the first inventory shall be performed in 2018 for years 2015 through 2017). A three-year average would accommodate the variability in aggregate sales from year to year. The inventory shall follow the most recent version of the General Reporting Protocol of the California Climate Action Registry or other protocol as appropriate and approved by the County (CCAR 2007). The Applicant, however, is not required to report the inventory to the Climate Action Registry Reporting Online Tool (CARROT) (CCAR 2011). The purpose of the inventory is to compare emissions from project operations to the baseline emissions established in this EIR, which is approximately 7,200 MT CO<sub>2</sub>e per year (if new baseline emissions are established as a result of refined reporting methods, the use of a different baseline is acceptable with approval by the County). At such time as the inventory indicates GHG emissions are at or over baseline conditions (7,200 MT CO<sub>2</sub>e per year), then the Applicant shall implement measures in the GHG Reduction Plan as necessary to avoid emissions above the 1,100 metric ton threshold (i.e.: 8,300 MT CO<sub>2</sub>e per year – baseline plus threshold).</p>						

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