

DRAFT
CONDITIONS OF APPROVAL
*****FOR DISCUSSION PURPOSES ONLY*****
Planning Commission Date: January 7, 2014

Syar Napa Quarry
Surface Mining Permit #P08-00337
2301 Napa Vallejo Highway
APNs: 045-360-005,046-370-012, -013, -015, -022, -025,
046-390-002, -003, and 046-450-071

1. SCOPE:

- A. This permit shall be limited to the mining and reclamation of the Syar Napa Quarry and associated aggregated processing and production activities as follows:
1. The excavation, processing, and sales of up to 1.3 million tons of aggregate and related aggregate materials (such as recycled concrete, asphalt, and reclaimed asphaltic product) from the quarry annually for the next 35 years beginning on the effective day of this Surface Mining Permit;
 2. An approximate 124-acre expansion of the current surfacing mining and reclamation areas and continued mining and associated operations within the mining areas identified in the "Syar Industries Inc., Napa Quarry Mining and Reclamation Plan dated September 20, 2012" (herein referred to the 2012 Mining and Reclamation Plan) and Excavation Limits identified in Figure 3-5 (Limits of Vertical Excavation) of the Project's EIR;
 3. An increase in mining depth from approximately 300 feet and 150 feet above mean sea level (msl) to no greater than 50 feet above msl and land in accordance with Mitigation Measure 4.8-2;
 4. Installation and operation of Reclaimed Asphaltic Product (RAP) handling equipment at the facility's existing asphaltic batch plant with overall production of asphalt not to exceed 300,000 tons per year;
 5. Establishment of the following hours of operation:
 - i. Regular Aggregate Mining Operations: Construction Season (June to November) Monday-Friday 6 AM to 9:30 PM, Off Season (December to May) Monday through Friday 7 AM to 3:30 PM.
 - ii. Regular Aggregate Processing Operations: Construction Season Monday-Friday 6 AM to 10 PM, Off Season Monday through Friday 7 AM to 3:30 PM.
 - iii. Regular Asphalt Plant Operations: Year-round Monday-Friday 7 AM to 3:30 PM.
 - iii. Regular Aggregate Sales: Year-round Monday-Friday 7 AM to 3:30 PM.
 6. Relocate and improve portions of Skyline Trail that were originally constructed on the quarry property back onto Skyline Wilderness Park lands as identified in Figure 4.14-1 of the Project's EIR;

7. Ongoing operation of existing aggregate processing support facilities as identified in Section 3.5.4 of the project EIR (incorporated herein by reference) and attached as Figure 1;
 8. Reclamation of all areas disturbed both henceforth and in the past in conformance with and identified in the 2012 Mining and Reclamation Plan, as modified by these conditions of approval and mitigation measures of this Surface Mining Permit; and
 9. An increase of 10 to 20 new employees.
- B. The mining operation and reclamation shall be carried out in substantial conformance with the submitted 2012 Mining and Reclamation Plan, including but not limited to, maximum production amounts, and identified excavation limits (both vertically and horizontally), It is the responsibility of the owner/operator/permittee to communicate the requirements of these conditions and all mitigation measures to all contractors, employees, and customers of the quarry (as applicable) to ensure compliance is achieved.

Any expansion or change in excavation limits, an increase in production amount, and use of the quarry (including aggregate production and processing support facilities) shall be in accordance with the approved Surface Mining Permit (Chapter 16.12 of the Napa County Code (NCC)), the Surface Mining and Reclamation Act (Public Resources Code section 2710 et seq.), and the State Mining and Geology Board Regulations (California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1). Any deviation or modification of the 2012 Mining and Reclamation Plan or to the mining operations identified in this permit may be subject to the mining plan revision or amendment process pursuant to NCC Sections 16.12.520 and 16.12.530.

- C. The project shall be reviewed by the Planning Commission every five (5) years at a noticed public hearing to determine its compliance with these conditions of approval, mitigation measures, and the approved 2012 Mining and Reclamation Plan. The Commission may after hearing the testimony presented impose additional conditions as necessary to address compliance issues. A fee for said review and public hearing shall be charged consistent with the fees in effect at the time of the hearing and shall be paid by the operator/owner/permittee. Said hearings shall commence in 2020.
- D. All prior mining-related discretionary permits on this property including, but not limited to, UP-128182 and UP-27374 authorizing current mining, quarrying, associated operation of the quarry, and reclamation shall be superseded by this Surface Mining Permit.

2. PROJECT SPECIFIC CONDITIONS:

The following project specific conditions of approval shall apply to all operational activities and subsequent reclamation of the facility. The permittee shall comply with all County, Division, Departments and Agency requirements including all applicable

building codes, zoning standards, and requirements. The determination as to whether or not the permittee has substantially complied with the requirements of other County Divisions, Departments and Agencies shall be determined by those Divisions, Departments or Agencies. The inability of permittee to substantially comply with the requirements of other County Divisions, Departments and Agencies may result in the need to modify the approved surface mining permit.

A. Permit Applicability

The owner, operator or any successor in interest shall comply with all of the conditions of approval of this permit and the mitigation measures established in the 2014 Syar Napa Quarry Expansion and Surface Mining Permit #P08-00337 Final Environmental Impact Report (State Clearinghouse #2009062054). The owner, operator or any successor in interest shall also comply with the provisions of NCC Chapter 16.12, the Surface Mining and Reclamation Act (PRC Section 2710 et seq.), and the State Mining and Geology Board Regulations (CCR, Title 14, Division 2, Chapter 8) throughout mining and reclamation activities at the quarry site.

B. Mitigation Measures

The operator/permittee shall comply with all mitigation measures identified in the Final Environmental Impact Report attached as Exhibit A and incorporated herein by reference, the Mitigation Monitoring and Reporting Program attached as Exhibit B and incorporated herein by reference.

C. Permit Term

All mining operations, related material processing, storage, and shipping, and asphalt production shall permanently cease on-site and reclamation shall begin by June 1, 2050, unless continued mining and/or mine-related activities after that time are authorized by a separate surface mining permit approved by the County.

D. Permit Limitation

The operator/permittee is authorized operate the facility in accordance with the permit Scope identified in Condition #1 above and to conduct all ancillary and related uses identified in Figure 1 attached including the placement and utilization of portable equipment necessary for mining operations and reclamation); and the installation, maintenance and realignment of internal access and mine roads on the site including those shown on Figure 3-5 of the Project's EIR.

Introduction of additional uses, production of products other than those specified in this permit (such as but not limited to gravel, drain rock, fill, road base, rip-rap, asphalt, and recycled concreted and asphalt), expansion of the area to be mined/excavated, expansion into other areas of the site, installation of equipment or construction of facilities including roads and access ways outside of the identified excavation areas in the 2012 Mining and Reclamation Plan and Figure

3-5 (Limits of Vertical Excavation) of the Project's EIR, parking/stockpiling/storage of vehicles, equipment, and materials in areas other than those identified in the project site plans, and exceeding the production amounts authorized herein shall be prohibited unless and until a revised or amended mining and reclamation, or separate surface mining permit is authorized by the Planning Commission or Planning, Building and Environmental Services (PBES) Director.

E. Groundwater Supply and Use

Groundwater use for quarry operations shall not exceed 140.6 acre-feet per year.

F. Blasting

Blasting shall be conducted only between the hours of 10 AM and 4 PM on weekdays in accordance with the Syar's Blasting Procedures (see Figure 2). In particular, the operator/permittee shall notify the PBES Department and any agencies, businesses, and local residents requiring or requesting such notice, at least 24 hours in advance of any blasting events. The operator/permittee shall record each blast event and maintain blasting logs for two (2) years: blasting records/logs shall be made available to the Planning Department upon request.

G. Site Maintenance

All trash, unnecessary or un-useable equipment, scrap, buildings, and installations of the Quarry operation shall be removed as necessary and properly disposed of to maintain a neat and orderly site.

H. Public Roads

All loaded trucks leaving the site shall be properly trimmed and secured so as to prevent spillage of materials onto the public roadway. In the event that spillage onto the road does occur, said spillage shall be removed immediately. Additionally, the site access road and adjacent public roadway shall be swept as necessary with appropriate equipment (such as power vacuum street sweeper) if visible soil material is carried or tracked out onto public roadways.

I. Other Regulatory Permits

The owner, operator, or permittee shall obtain and maintain permits from State, Federal, and local regulatory agencies as applicable to the activities authorized herein, including but not limited to permits and approvals from: the Napa County Building Division; the Napa County Public Works Department; the U.S. Army Corps of Engineers; the California Department of Fish and Wildlife; the Bay Area Air Quality Management District; the Regional Water Quality Control Board; and the U.S. Fish and Wildlife Service.

J. Annual Compliance and Assurance Update Report

During the life of this permit, the operator/permittee shall annually prepare and submit a written report to the PBES Department, as part of the operation's annual inspection reporting requirements pursuant to NCC Section 16.12.500, Public

Resources Code Section 2774, and the project's Annual Mining Plan demonstrating compliance with all of the conditions of approval and mitigation measures for this permit and as identified herein. Said report shall also include an updated Financial Assurance Cost Estimate (FACE) as required pursuant to NCC Section 16.12.415 and PRC Section 2773.1(a)(3) for review and approval by the County and verification of the following from the permittee:

1. That the operation has maintained an adequate Financial Assurance Mechanism Pursuant to NCC Sections 16.12.400 and 16.12.435 in the amount of the most recently approved FACE.
2. That the operation is in compliance with Napa County's Stormwater Management and Discharge Control Program (NCC Chapter 16.28).
3. That the Storm Water Pollution Prevention Plan (SWPPP – WDID #228I005111) that the facility operates under has been updated as necessary to accommodate changing conditions and is in compliance with National Pollutant Discharge Elimination System (NPDES) requirements.
4. That mining operations and practices are conducted in compliance with the safety requirements of the Mine Safety and Health Administration, the California Division of Occupational Safety and Health (Cal-OSHA), the State Division of Industrial Safety, and California Mine Safety Orders.
5. That the operation has maintained a public liability policy for both the mining and reclamation operations which provides for personal injury and property protection to compensate all persons injured or for property damaged as a result of such operations.

K. Air Quality

The operator/permittee shall implement the following Air Quality Best Management Practices (BMPs) during quarry operational activities and reclamation:

1. All exposed surfaces (graded areas, staging areas, stockpiles, and unpaved roads) shall be covered or watered twice per day.
2. All trucks hauling soil, sand and other loose materials shall be covered in accordance with Section 23114 of the California Vehicle Code during transit to and from the site.
3. The site access road and adjacent public roads shall be swept daily with wet power vacuum street sweepers, if visible soil material is carried/tracked out onto roadways.
4. Traffic on unpaved areas and roads shall be limited to 15 mph.
5. Grading and earthmoving activities shall be suspended when winds exceed 25 mph.
6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes, as required by the California airborne toxics control measure - Title 13, Section 2485 of California Code of Regulations (CCR). Signs clearly indicating this provision shall be installed at all access points.
7. All construction equipment shall be maintained and properly tuned in accordance in manufacturer's specifications. All equipment shall be checked

by a certified mechanic and determined to be running in proper condition prior to operation.

8. A sign with the telephone number and person to contact at the Lead Agency (Napa County) regarding dust complaints shall be visibly posted at the site. The Air District's phone number shall also be visible.

L. Creek Protection

The operator/permittee shall implement the following measures to prevent the inadvertent encroachment into specified creek setbacks during mining operations and reclamation:

1. Prior to any earthmoving and mining activities adjacent to creeks, the location of creek setbacks as identified in the 2012 Mining and Reclamation Plan or as specified in NCC Section 18.108.025, shall be clearly demarcated in the field with temporary construction fencing, which shall be placed at the outermost edge of required setbacks shown on the project plans. The precise locations of said fences shall be inspected and approved by the Planning Division prior to any earthmoving and/or mining activities occurring adjacent to creeks. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of mining operations and reclamation activities. The protective fencing shall remain in place for the duration of project operation and reclamation.
2. In accordance with NCC Section 18.108.100 (Erosion hazard areas – Vegetation preservation and replacement) trees that are inadvertently removed that are not within the boundary of the project and/or not identified for removal as part of #P08-00337-SMP shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the PBES Director.

M. Tree and Woodland Protection

The operator/permittee shall implement the following Tree/Woodland Protection measures:

1. Prior to any earthmoving or mining activities occurring adjacent to trees or woodlands to be retained, temporary fencing shall be placed at the edge of the dripline of trees to be retained that are located within 50-feet of the project area. The precise locations of said fences shall be inspected and approved by the Planning Division prior to the commencement of any earthmoving activities. No disturbance, including grading, placement of fill material, storage of equipment, etc. shall occur within the designated areas for the duration of mining operations and reclamation activities.
2. Trees removed that are not within the boundary of the project and/or not identified for removal as part of #P08-00337-SMP shall be replaced on-site with fifteen-gallon trees at a ratio of 2:1 at locations approved by the PBES Director.
3. The operator/permittee shall refrain from severely trimming the trees and vegetation to be retained adjacent to mining and quarrying activities.

N. Because this permit supersedes prior surface mining approvals, Applicant shall cooperate with County in terminating Napa County Agreement No. 2225.

3. RECLAMATION

A. Applicability

Reclamation of all mined and quarried areas shall be in conformance with the 2012 Mining and Reclamation Plan as modified by these conditions of approval and the mitigation measures adopted for this Surface Mining Permit.

B. Timing

Initiation of reclamation shall commence as soon as feasible in areas where mining is complete. Said areas shall be identified in the project's Annual Mining Plan specified within the 2012 Mining and Reclamation Plan.

C. Completion

Reclamation of an area shall not be considered complete until the performance standards established in the 2012 Mining and Reclamation Plan identified below have been met and thereafter maintained for at least three (3) years without irrigation, supplemental seeding, fertilizing, or other human intervention.

PLANTING SUCCESS CRITERIA

No.	SITE LOCATION	TREE/SHRUB COVERAGE ³	TREE/SHRUB DENSITY ²	TREE and SHRUB / GRASSLAND SPECIES RICHNESS ¹
1	Benches w/ Oak Woodland	47%	20 / 222	75% / 80%
2	Benches w/ Chamise Chaparral	36%	333 / 222	75% / 80%
3	Benches w/ Coyote Brush Chaparral	24%	0 / 222	80% / 80%
4	2:1 Cut Slopes w/ Oak Woodland	47%	18 / 2,150	75% / 80%
5	2:1 Cut Slope w/ Chamise Chaparral	36%	4,840 / 2,150	75% / 80%
6	2:1 Cut Slope w/ Coyote Brush Chaparral	24%	0 / 2,150	80% / 80%
7	2:1 Cut Slope w/ Grassland	80%	Not Applicable	80%
8	Fill Slopes w/ Oak Woodland	47%	18 / 2,150	75% / 80%
9	Fill Slopes w/ Chamise Chaparral	36%	4,840 / 2,150	75% / 80%
10	Fill Slopes w/ Coyote Brush Chaparral	24%	0 / 2,150	80% / 80%
11	Fill Slopes w/ Grassland	80%	Not Applicable	80%
12	Valley Floor w/ Grassland and Oaks	47%	18 / 222	75% / 80%

Notes: Tables 5 and 6 of the 2012 Mining and Reclamation Plan identifies the tree/shrub types to be used for each community. The tables also shows the specific seed mix to be used for each community. In addition, the grassland seed

mixes identified on Table 6 will be used as follows: oak woodland (OW) communities will use the oak woodland grassland mix; the chaparral (coyote bush (CBC) and chamise (CC)) will use the chaparral grassland seed mix; and the grassland (GL) community will use the grassland seed mix.

1 Species richness % is derived from the tree and seed mix identified on Tables 5 and 6 of the 2012 Mining and Reclamation Plan. Communities with trees and/or shrubs the % does not include the grassland. The species richness is shown as (tree and shrub % / grassland %). For the OW community only one or two of the oak types identified will be used in any given area (to be determined by a biologist). There are 5 tree/shrub species in the OW community; 5 species in the CC; 6 species in the CBC. For the grassland seed mixes there are 8 seed types in the GL mix; 5 seed types in the OW mix; and 11 seed types in the CC and CBC mix.

2 The plant density on the benches (Nos. 1-3) are shown as 25,000 square feet or .57 acres. The remaining densities (Nos. 4-12) are for one acre. The density does not include the grassland mixes for the respective areas. The densities given are (tree # / shrub #) derived from Table 5.

3 For plantings on the benches (Nos. 1-3) the % is that of a 1,000 linear foot bench, 25 feet wide. For the remaining (Nos. 4-12) the % is for one acre coverage. Baseline coverage for the OW is 95%, CC is 60%, CBC is 40% and GL is 100%. The coverage % given in Table 12 is an anticipated successful coverage % after revegetation. The % does not include grasslands in the OW, CC or CBC communities.

4. SIGNS

Prior to installation of any new quarry identification or directional signs, detailed plans, including elevations, materials, color, and lighting, shall be submitted to the PBES Department for administrative review and approval. All signs shall meet the design standards as set forth in Chapter 18.116 of the Napa County Code.

5. LIGHTING

All exterior lighting, including quarry operations and support facility lighting, shall be shielded and directed downward, located as low to the ground as possible, the minimum necessary for security, safety, or operations, and shall incorporate the use of motion detection sensors to the greatest extent practical. No flood-lighting or sodium lighting of the buildings is permitted, including architectural highlighting and spotting. Low-level lighting shall be utilized in parking areas as opposed to elevated high-intensity light standards.

Prior to installation of any new lighting and issuance of any necessary building permits (including electrical permits) at the quarry facility and pursuant to this approval, two copies of a detailed lighting plan showing the location and specifications for all lighting fixtures to be installed on the property shall be submitted for Planning Division review and approval. All lighting shall comply with the California Building Code.

6. OUTDOOR STORAGE/SCREENING/UTILITIES

All outdoor storage of mining and quarrying equipment shall be screened from the view of adjacent properties by a visual barrier consisting of fencing or dense landscaping to the greatest extent practical. No stored item shall exceed the height of the screening. Water and fuel tanks, and similar structures, shall be screened to the greatest extent practical so as to not be visible from public roads and adjacent parcels.

New utility lines required for this project that are visible from any designated scenic transportation route (see Circulation Element of the General Plan and Chapter 18.106 of the Napa County Code) shall be placed underground or in an equivalent manner be made virtually invisible from the subject roadway.

7. COLORS

The colors used for new quarry and mining facilities and structures shall be limited to earth tones that will blend the facility into the colors of the surrounding site specific vegetation and the owner/operator shall obtain the written approval of the PBES Department prior to painting the facility structures. Highly reflective surfaces are prohibited.

8. ADDRESSING

All project site addresses shall be determined by the PBES Director, and be reviewed and approved by the United States Post Office, prior to issuance of any building permit. The Director reserves the right to issue or re-issue an appropriate situs address at the time of issuance of any building permit to ensure proper identification and sequencing of numbers. For multi-tenant or multiple structure projects, this includes building permits for later building modifications or tenant improvements.

9. INDEMNIFICATION

If an indemnification agreement has not already been signed and submitted, one shall be signed and returned to the County within twenty (20) days of the granting of this approval using the PBES Department's standard form.

10. AFFORDABLE HOUSING MITIGATION

To the extent applicable, prior to County issuance of any building permits necessary for this project, the applicant shall pay the Napa County Affordable Housing Mitigation Fee in accordance with the requirements of Napa County Code Chapter 18.107 or as may be amended by the Board of Supervisors.

11. MONITORING COSTS

All staff costs associated with monitoring compliance with these conditions, permit conditions, and project revisions shall be borne by the operator and/or property owner. Costs associated with conditions and mitigation measures that require monitoring, including investigation of complaints, other than those costs related to investigation of complaints of non-compliance that are determined to be unfounded, shall be charged. Costs shall be as established by resolution of the Board of Supervisors in accordance with the hourly consulting rate established at the time of the monitoring and shall include maintenance of \$500 deposit for construction compliance monitoring that shall be retained until grant of final occupancy. Violations of conditions of approval or mitigation measures caused by the permittee's contractors, employees, and/or guests are the responsibility of the permittee.

The Planning Commission may implement an audit program if compliance deficiencies are noted. If evidence of compliance deficiencies is found to exist by the Commission at some time in the future, the Commission may institute the program at the applicant's expense (including requiring a deposit of funds in an amount

determined by the Commission) as needed until compliance assurance is achieved. The Planning Commission may also use the data, if so warranted, to commence revocation hearings in accordance with Chapter 16.12 (Surface Mining and Reclamation) of the Napa County Code.

FIGURE 1

Syar Napa Quarry Aggregate Processing, Sales, and Office Facilities

The proposed project includes the continued operation of the existing Syar Napa Quarry facilities listed below. These facilities are all located in the western portion of the quarry property within the main processing area, west of SR 221. No area expansion and no increased capacity demands are proposed for the following facilities:

- Main Quarry Office - quarry operation offices and restrooms.
- Scale house - located at the entrance of the quarry, used to weigh loaded and unloaded on-road highway trucks.
- Material and equipment storage yards - located primarily in the western portion of the quarry near the main processing area.
- Aggregate and aggregate products testing laboratory - testing is done on aggregate and aggregate products to ensure compliance with required specifications.
- Maintenance and service buildings – area used for the purpose of storing and maintenance equipment and materials used in maintenance activities. Minor maintenance of vehicles and equipment are completed on the quarry property in designated areas. Large scale maintenance is completed at the maintenance shop located on the west side of SR 221.
- Stockpiles of overburden and topsoil – existing overburden and topsoil piles are located in multiple areas of the quarry. These stockpiles are stored for use as engineered fill or used in interim and final reclamation activities.

The proposed project includes the continued operation of the existing Syar Napa Quarry facilities listed below. No area expansion is proposed; however, increased throughput (i.e. an increase in production inputs and end-product yield) is expected in association with the project for the following facilities:

- Primary aggregate processing plant – located in the western portion of the quarry property. This is the main aggregate processing area for basalt and rhyolite rock.
- Two asphaltic concrete plants - located in the western portion of the quarry property within the main processing area. These facilities consist of the equipment used to manufacture asphaltic concrete (AC) and other asphalt products.
- Sand plant - used primarily to wash sand. Secondly this plant is used to sort an uneconomical aggregate material into aggregate products that can be crushed or sold.
- Aggregate Base (AB)/recycling plant - located in the central portion of the quarry property. This area is used to store and process recycled concrete and asphalt. This area is also the main processing plant for rhyolite rock products.

- Haul Roads - are located throughout the quarry property. The haul roads are used primarily by on-highway trucks and off-highway trucks to transport aggregate materials from active mining sites to the appropriate processing areas.
- Barge landing area located adjacent to the Napa River - located adjacent to the Napa River on the west side of SR 221. This area is connected to the main quarry property by a paved haul road. This area is used to barge in sand from the San Francisco Bay or to barge out rock products.
- Railroad spur - located on the west side of SR 221. This area is used to rail in products used in the manufacturing of saleable products and to rail out aggregate products.

The proposed project includes the continued operation and an expected increase in throughput of the existing Syar Napa Quarry facilities listed below. Relocation and/or an increase in footprint area are also expected in association with the following facilities as a result of the project:

- Process water ponds - are located in the northwest corner of the quarry property. These ponds capture the water and fine sediment from the sand plant.
- Drainage swales - located throughout the quarry property. The drainage swales are used to convey surface water to the appropriate location.
- Sediment control ponds - located throughout the quarry property. These ponds are used to capture surface water allowing the fine sediment from mining activities to settle out prior to the surface water either being released from the site from controlled location or to be absorbed into the groundwater.
- Haul Roads - used to haul material in both highway and off-road vehicles, and are used as the primary access routes throughout the quarry.

FIGURE 2

Syar Industries, Inc. Blasting Procedures

Syar Industries (Syar) maintains all necessary Federal, State and local permits and licenses to receive, use and store explosives. It should be noted that the information outlined in this blasting procedure plan is not all inclusive but an outline of the required elements to blasting at a mine property. Syar adheres to all applicable laws and regulations outlined in the Department of Justice, Bureau of Alcohol, Tobacco and Firearms (ATF), Federal Explosives Law and Regulations, dated 2007. In addition to the Division of Occupational Safety and Health (DOSH), California Code of Regulations, Title 8, Section 5293 – Misfires, Subchapter 7, General Industry Safety Orders, Group 18, Explosives and Pyrotechnics, Article 116, Handling and Use of Explosives – Blasting Operations. All blasters at Syar’s facilities have been trained by the United States Department of Labor, Mine Safety and Health Administration (MSHA) Blasting Training Program.

1 Storage of Explosive Materials

1.1 Types of Surface Magazines

The storage of explosives on a mine site requires the use of a building or structure, other than an explosives manufacturing building. This building or structure is described as a magazine. The MSHA only allows Type 1 or Type 2 magazines on mine properties. Syar Industries, Inc. (Syar) utilizes Type 1 magazines on all quarry properties where blasting occurs. A Type 1 magazine is a permanent structure: a building, an igloo or “Army-type structure”, a tunnel, or a dugout. It is to be bullet-resistant, fire-resistant, weather-resistant, theft-resistant, and ventilated.

1.2 Placement

Outdoor magazines must comply with the minimum distances specified from inhabited buildings, railways, and highway, and, in addition, they should be separated from each other if two or more are located on one property. The magazine(s) shall be separated from the distances specified in the American Table of Distances (ATF, 2007).

1.3 Housekeeping

Magazines are to be kept clean, dry and free from grit, paper, empty packages and containers, and rubbish. Floors are to be regularly swept. Brooms and other utensils used in the cleaning and maintenance of magazines must have a no spark-producing metal parts, and may be kept in magazines. The area surrounding the magazines is to be kept clear of rubbish, brush, dry grass, or trees (except live trees more than 10 feet tall), for no less than 25 feet in all directions. Volatile materials are to be kept a distance of no less than 50 feet from outdoor magazines. Living foliage which is used to stabilize the earthen covering of a magazine need not be removed.

1.4 Smoking and Open Flames

Smoking, matches, open flames, and spark producing devices are not permitted in any magazine. These items are also not permitted within 50 feet of any outdoor magazine or within any room containing and indoor magazine.

2 Recordkeeping

2.1 Explosive Materials

Records of all explosives must be maintained. Tally sheets must show date and name of person making each transaction. In case of theft or loss of any explosive materials from stock shall, within 24 hours of discovery, report the theft or loss by telephoning 1-800-800-3855 and on ATF Form 5400.5 (formerly Form 4712) in accordance with the instruction on the form. The theft or loss shall also be reported to the appropriate local authorities.

2.2 Blasters Log

For every blast a complete log shall be created by the quarry manager or person in charge. The blaster's log shall include the following:

- Date and time blast occurred;
- Quarry name;
- Enter specific location of face (if applicable);
- Weather conditions, including wind speed and direction;
- Blaster's name;
- Number and depth of holes;
- Spacing of holes and burden;
- Enter amount of detonators, boosters, detonating cord and delays;
- Sketch drill pattern;
- Number of pounds per hole;
- Enter time of detonation
- Note any misfires.

3 Blasting

3.1 Loading Explosive Materials--General

Loading shall not commence until all drilling is completed and drill holes are cleaned or blown out, unless this procedure is impracticable under conditions encountered. When conditions justify simultaneous loading and drilling in the same area, such operations shall be separated as widely as practicable and in no case shall a drilling operation be closer than 50 feet to a hole being loaded. All drill holes shall be sufficiently large to

freely admit the insertion of the explosive materials. At least 5 foot candles illumination shall be provided to safely perform loading operations. Only approved lights shall be used within 50 feet of the loading area.

3.2 Shot Guarding

After the shot is loaded and ready to be fired, a complete check of the area must be made to determine that no one remains in any area that could prove hazardous.

No vehicle traffic shall be permitted over loaded holes.

Loading operations shall be carried on with the smallest practical number of persons and explosive materials loading equipment present and no one but the loading crew, inspection personnel, and authorized supervisory personnel shall be allowed within 50 feet of the loading area.

All blasting operations will be conducted using initiation systems which cannot be affected by stray current or radio frequency energy.

3.3 Lightning and Electrical Storms

Include provisions for a detection system capable of warning the loading crew when a storm is 100 miles away. When a storm is detected 50 miles from the loading operation, the storm's movement is to be monitored. When a storm is detected at 25 miles from the loading operation, loading operations will be discontinued and all persons in the blast area withdrawn to a safe location.

3.4 Work Practices

Though not all inclusive, work practices consist of the following:

- K-rails, barriers, traffic control systems and/or natural terrain shall be used to prevent entry by vehicular traffic into the loading site.
- The amount of explosive materials delivered into a loading area shall not exceed the amount estimated by the licensed blaster as necessary for the blasting.
- No holes shall be loaded except those to be fired in the next round of blasting.
- The detonator, if used, shall be properly encased in explosives when inserted into the drill hole.
- Tamping shall be by pressured or light blows only, and never by excessive ramming. The primer shall not be tamped.
- All blast holes in open work shall be stemmed to a point that will sufficiently confine the charge.
- Stacks of explosive materials shall be spaced and distributed in the loading area to prevent propagation of an explosion between any two piles or loaded holes in the event of a premature explosion in any portion of the blast area.
- No explosive materials shall be left unattended at the blast site.
- Loaded holes shall not be left unattended.

- Explosive materials shall be kept separated from detonators until charging is started.
- Capped primers shall be made up at the time of charging and as close to the blasting site as conditions allow.
- Only wooden or other non-sparking implements shall be used to punch holes in an explosive cartridge.
- Areas in which charged holes are awaiting firing shall be guarded or barricaded and posted or flagged against unauthorized entry.
- The double-trunk line or loop system shall be used in detonating-cord blasting.
- Trunk lines, in multiple-row blasts, shall make 1 or more complete loops, with crossties between loops at intervals of not over 200 feet.
- No one but the ATF approved attendant(s), the loading/detonation crew, inspection personnel, and authorized supervisory personnel shall be allowed within 50 feet of the loaded holes.

3.5 Firing of Explosives

The Blaster's Priorities:

- The safety of the blaster, blasting crew, and surrounding personnel.
- The prevention of damage to surrounding property.
- The accomplishment of the blasting tasks in an efficient manner.

Procedures:

The licensed blaster-in-charge shall fix the time of blasting.

Blasts are not to be fired without a warning signal/procedure. The signals, which may be given by a siren, air horn, whistle or other device, shall be loud enough to be heard clearly in areas that could possibly be affected by the blast or fly rock from the blast. In addition, blasts are not to be fired until the licensed blaster-in-charge verifies the following:

- All surplus explosive materials are in a safe place;
- All security personnel at the blast area are in the proper location; and
- All personnel are either outside of the blast area or under sufficient cover.

Precautions, such as the following, shall be taken to prevent unauthorized entry into the blast area: warning signs, barricades, or flaggers when necessary.

Warning signals shall be given by the use of a compressed air whistle, a horn, lights or equivalent means, such as flaggers or voice warning and shall be clearly audible at the most distant point in the blast area. Where other than flagger or other visible method or voice warning is used, the following signals are recommended:

- **Warning Signal** – 5 minutes prior to the blast, a 1 minute series of long audible signals;
- **Blasting Signal** – 1 minute prior to the blast a series of short audible signals;
- **All-Clear Signal** – Following inspection of the blast area a prolonged audible signal.

The type of warning signal or method shall be posted at one or more conspicuous locations and all employees shall be made familiar with the signals and instructed accordingly.

The “ALL CLEAR” signal shall not be given until the licensed blaster has made a thorough, visual inspection of the blast area for misfires. In the event of a misfire, the requirements of outlined in Section 4 (see below) shall be complied with before the “ALL CLEAR” signal is given.

Warning signs, indicating a blast area, shall be maintained at all approaches to the blast area. The warning sign lettering shall not be less than 4 inches in height on a contrasting background.

Whenever blasting is being conducted in the area immediately adjacent to gas pipelines, flammable liquid gas pipelines, electric, water, fire alarm, telephone, telegraph, and steam utilities, the licensed blaster shall notify the appropriate representatives of such pipelines or utilities at least 24 hours in advance of blasting. The notification shall specify the location and intended time of such blasting. Verbal notice shall be confirmed with written notice before the blast. In an emergency this time limit may be waived.

Employees shall be prohibited from entering the blast area after blasting until any toxic vapor/fumes, dust and gases have been reduced to safe limits.

After blasting, the blasting crew shall wait at least 5 minutes before returning to the point of blasting.

4 Misfires

After each shot the blast area shall be examined for misfires. If any are found, or suspected to exist, they shall be reported to the mine manager or person in charge. Steps shall be taken to eliminate all undetonated explosive materials. In the case of a detonator misfire, the shot area shall be made safe under competent supervision by one of the following means after a 30 minute wait following electric or non-electric shock tube blasting, or a 60 minute wait following fuse cap blasting:

- Where practical a new primer shall be inserted into the hole and the hold reblasted; or
- Where the hole cannot be reblasted, the stemming and explosive shall be washed out with water; or
- Where blasting agents are used, try to remove the detonator and cap sensitive explosive materials.

Where reblasting, washing, or removing explosive materials is unsafe or impracticable in a geophysical operation, DOSH and surface owners shall be notified within 24 hours. The notice shall include the location, depth, and the amount of the undetonated explosive material. Following the concurrence by DOSH that retrieval of the explosive material in a misfire is impractical or unsafe, a substantial concrete cap capable of containing the explosion shall be placed above the explosive material at least 3 feet below the ground surface, or other permanent protection shall be installed.

If explosive materials are suspected of burning in a hole, all persons in the endangered area shall move to a safe location and no one shall return to the hole until the danger has passed, but in no case within 1 hour.

No other work shall be performed in the danger area except that is necessary to remove the hazard of the misfire. No other employees except the licensed blaster and the necessary crew shall be in the danger area when a misfire hazard is being removed.

Exhibit A

MITIGATION MEASURES

A) AIR QUALITY

Mitigation Measure 4.3-2a: Reduce NOx: 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:

1. Prepare a Horsepower-Hour Log (“Log”) of monthly horsepower-hours for offroad vehicles operated within the previous 12-month period. The Log shall include the rolling 12-month total horsepower-hours. Low use equipment operated less than 20 hours per year is 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:

a) Production up to 945,000 tons per year shall be allowed upon continued demonstration that 12% of horsepower-hours operated are Tier 2 or better.

b) Production up to 1,100,000 tons per year shall be allowed upon continued demonstration that 44% of the horsepower-hours are Tier 2 or better.

c) Production up to 1,300,000 tons per year shall be allowed upon continued demonstration that 5% of horsepower-hours are Tier 3 or better and 72% of the horsepower-hours are Tier 2 or better.

2. Reduce NOx from rail transport by using a locomotive with a Tier 0 or better engine.

3. Reduce on- and/or off-site emissions by some other means.

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.

The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I of the DEIR. For instance, control of NOx by installation of a VDECS on an engine or several engines may be sufficient to offset necessary reductions from overall fleet.

The Log shall be updated upon request by the County and as necessary for the Applicant to ensure compliance with this mitigation, but not less than semi-annually. If the County finds that operations have not achieved the required reductions, the Applicant shall scale back production as necessary until reductions are achieved.

Mitigation Measure 4.3-2b: Reduce Fugitive Dust: 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 PM₁₀ and PM_{2.5} emissions from the proposed Project

(i.e. expansion of the Quarry) are less than 15 tons per year for PM₁₀ and 10 tons per year for PM_{2.5}. 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 compliance with Item 1, and one or more of the methods listed in 2 through 5, below:

1. Applicant shall clean internal paved roads daily using a particulate matter efficient street sweeper.
2. Applicant shall maintain chemical dust suppressant, equivalent dust suppressant that achieves similar control, on the unpaved road surfaces as described in the manufacturer's specifications. Materials used for chemical dust suppressant shall not violate State Water Quality Control Board standards. Materials accepted by the California Air Resources Board and the US EPA, and which meet State water quality standards shall be considered acceptable.
3. Applicant shall apply water to blast sites prior to detonation.
4. Applicant shall limit speeds on unpaved areas to less than 15 MPH.
5. Applicant shall reduce on-site emissions by some other means (e.g. surface moisture content performance standard, watering frequency).
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.

The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I of the DEIR.

Mitigation Measure 4.3-3: Reduce Health Risk. The Applicant shall implement the following mitigations to reduce health risk at sensitive receptors:

2. Using the Horsepower-Hour Log described in Mitigation Measure 4.3-2A, the following tiered approach shall be followed:
 - a) Production up to 950,000 tons per year shall be allowed upon Applicant's continued demonstration that:
 - i. The total excavated from Blue and Grey Pits combined does not exceed Baseline amount of 45% of facility total and 12% of horsepower-hours operated are Tier 2 or better; or
 - ii. The total excavated from Blue and Grey Pits combined does not exceed 60% of facility total and 44% of horsepower-hours operated are Tier 2 or better.
 - b) Production up to 1,100,000 tons per year shall be allowed upon Applicant's continued demonstration that:
 - i. The total excavated from Blue and Grey Pits combined does not exceed Baseline amount of 45% of facility total and 12% of horsepower-hours operated are Tier 2 or better; or
 - ii. The total excavated from Blue and Grey Pits combined does not exceed 60% of facility total and 56% of horsepower-hours operated are Tier 2 or better.
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.

If the County finds that operations are not consistent with the measures above, then the Applicant shall scale back production until compliance is achieved. The effectiveness of this measure shall be demonstrated to the County by submittal of emissions calculations similar to those in Appendix I of the DEIR.

B) BIOLOGICAL RESOURCES

Mitigation Measure 4.4-1a. Implementation of the Mitigation Measure 4.4-1 by the Applicant would reduce this biological impact to a less-than-significant level by providing avoidance where feasible, requiring replacement of individual plants and enhancement of habitat, establishing success criteria, and monitoring to ensure success criteria are achieved as follows:

a) **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 of the DEIR), direct and indirect impacts to approximately 42% of the mapped ceanothus plants shall be avoided (i.e., 23 of the 55 plants will be preserved). This area shall also be utilized for mitigation for potential direct and indirect impacts for the balance of up to 32 plants. There are several plants that are not expected to be directly impacted, as they are within avoidance areas; however, they are located on the edge of the existing mine and/or expansion area. Their close proximity to the future mine face could result in indirect impact to these plants. Accordingly, these plants are included in the impact calculation and mitigation is identified for them at the same ratio as direct impacts.

b) **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 shall be planted to provide replacement and compensation for direct and potential indirect impacts. Since these individual plants are scattered within chamise chaparral area as well as a small area of coast live oak, and with a plant width of approximately 3.5 feet each, the occupied habitat of these 32 individual plants is estimated to be approximately 392 square feet. At a minimum, the existing habitat is estimated to be double the occupied area, allowing for spacing between individual plants (therefore, total of approximately 784 square feet, or 0.02 acres).

c) **Planting Plan.** A qualified biologist shall prepare a Planting Plan for holly-leaf ceanothus for review and approval by the Napa County PBES Department 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.

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.

e) **Monitoring and Success Criteria.** A qualified biologist shall monitor the enhanced habitat and plantings on an annual basis to ensure the replantings achieve a minimum of 80% success/survival rate after three years, and to ensure habitat conditions remain adequate to support target species. If the success criterion has not been met after three years, supplemental plantings shall be made at the direction of a qualified biologist, and the plant establishment period shall be extended for an additional two-year period, with additional annual monitoring events. The Applicant shall submit documentation of monitoring to the County on an annual basis for a minimum of three years or until success criteria are achieved, including survival rates, photographs, and a description of any maintenance or other pertinent issues identified by the monitoring biologist. The monitoring report shall also include information to illustrate the condition and location of any failed plantings.

Mitigation Measure 4.4-1b: 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.

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).

A qualified biologist shall monitor the enhanced habitat and plantings on an annual basis to ensure the replantings achieve a minimum of 80 percent success/survival rate after three years, and to ensure habitat conditions remain adequate to support target species. If the success criterion has not been met after three years, supplemental plantings shall be made at the direction of a qualified biologist, and the plant establishment period shall be extended for an additional two-year period, with additional annual monitoring events. The Applicant 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.

Mitigation Measure 4.4-2: Even though the species is unlikely to occur at or in the vicinity of the project site, as a precautionary measure, Mitigation Measure 4.4-2 addresses any potential direct or indirect impacts. Implementation of the following would reduce Impact 4.4-2 to a less-than-significant level:

a) The Applicant shall retain a qualified biologist to perform pre-construction surveys for American badger prior to project activities that occur in potential badger habitat (grassland and low density woodland areas with less than 2 trees per acre).

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 earthmoving activities. The purpose of the survey will be to determine whether burrows/dens exist within the area considered for disturbance within that construction year. Surveys shall not be required for areas already disturbed and/or where there is not American badger habitat present.

c) If occupied burrows are found during pre-construction surveys, the biologist shall consult with CDFW to determine whether the project activities would adversely disrupt the breeding activity of the badger.

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.

Mitigation Measure 4.4-3: 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. Prior to commencement of quarrying activities within any undisturbed areas, the Applicant shall retain a qualified biologist to conduct pre-construction surveys for raptors and passerine birds prior to vegetation removal conducted during potential nesting season (February 1st through August 31st).

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 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).

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 the species found prior to commencement of ground and vegetation disturbing activities. Generally, a minimum 150-foot buffer is required around active passerine bird nests and a minimum 300-foot buffer is required around active raptor nests during the breeding and nesting season, or until it is determined by a qualified biologist that all young have fledged. Nest protection measures shall apply to both onsite and offsite active nests that are located within 300 feet of 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 shall remain in place until the end of the breeding season or until young have fledged.

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.

Mitigation Measure 4.4-5: 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 shall implement, at the Applicant's expense, the following measures:

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.

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.

Mitigation Measure 4.4-6: The Applicant shall retain a qualified professional biologist to conduct resource surveys for any future trail relocation areas that have not been previously surveyed as part of the planning process prior to construction. Surveys shall be conducted for special-status wildlife and plant species and habitats that may occur in the trail relocation area(s) and vicinity, and if any sensitive biological resource is identified, it shall be avoided. Trail relocation in areas not previously surveyed shall not occur unless alignments would completely avoid sensitive biological resources. If impacts to biological resources as a result of trail

relocation cannot be avoided through project design, then alternate segment alignments shall be considered.

Mitigation Measure 4.4-7: The overall goal of mitigation for impacts to wetlands and riparian communities is that no net loss occurs. Implementation of the following mitigation measure(s) would mitigate these potential impacts through the avoidance and preservation, creation, restoration, and/or enhancement, the implementation of best management practices (BMPs) to prevent and reduce potential impacts, and the development of a detailed mitigation and/or restoration plan to offset loss of these habitats that would monitor success and ensure that once mitigated or preserved, these habitats are appropriately protected from disturbance. The result of these efforts, in combination with compliance with the Clean Water Act (Sections 404 and 401), the state Fish and Game Code, NPDES regulations, and local standards and policies, would be either avoidance of existing features, or on or offsite mitigation as permitted by the regulatory agencies. Implementation of these mitigation measures would reduce the impact to sensitive riparian habitats to a less-than-significant level.

To reduce potential wetland impacts, the Applicant shall:

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 shall also obtain a water quality certification from the RWQCB under Clean 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.

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 required (subject to approval by applicable state and/or local jurisdictions) that includes a 5-year monitoring program and reporting requirements, responsibilities, performance success criteria, and contingency requirements. At the end of each monitoring year, an annual report shall be submitted to the regulatory agencies. The report shall document the hydrological and vegetative

conditions of the mitigation wetlands, and shall recommend remedial measures as necessary to correct deficiencies. The compensation wetlands shall be located within the same watershed as project impacts or other suitable areas as determined by Napa County.

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 the main stem Arroyo Creek. The 50-foot setback will be determined by mapping the Ordinary High Water Mark (OHWM) of the main stem (below 300-foot elevation) of Arroyo Creek on the project site. The OHWM and 50-foot setback shall be flagged in the field for review and approval by state and/or local jurisdictions.

In two small areas, the 50-foot setback shall be increased to approximately 60 feet to avoid two small riparian areas (0.07 acres) that extend beyond the 50-foot setback (see DEIR Figure 4.4- 4). The drip-line of this additional vegetation shall be flagged in the field for review and approval by state and/or local jurisdictions.

Mitigation Measure 4.4-8: At the Applicant's expense, the Applicant shall retain a qualified biologist to prepare an Invasive Species Management Plan (ISMP) for protected native perennial grassland areas and replanted mitigation areas (i.e., the Ceonothus Preservation /Replanting Area" described by Mitigation Measure 4.4-1). The ISMP shall target invasive plant species either existing on the project site or that could colonize in the future, and shall specify methods of early detection, management, and control of invasive plant species to improve and protect onsite habitats.

The ISMP shall provide a list of target invasive species to be managed at the site with Cal- IPC rating of moderate or higher for the Napa and Mt. George quadrangles. Star thistle, medusa head grass, and french broom are known to occur on a nearby vineyard property and shall be included on the list of target invasive species identified in the ISMP.

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. Targeted invasive species identified in the ISMP may be managed by handpulling, local application of herbicide, and/or light grazing, or other techniques recommended by the ISMP. Guidance through managed grazing helps reduce fire fuel loads and, if timed properly, can favor the maintenance and expansion of native plant species. Selective control of invasive species shall be employed using best-management practices (BMPs) to minimize soil erosion, water contamination, or non-target herbicide effects that could occur during implementation of invasive species management techniques.

Mitigation Measure 4.4-9: The Applicant shall, at the Applicant's expense, compensate for direct and indirect impacts to approximately 130 acres of native oak woodlands at a total mitigation ratio of 2:1, including combination of onsite avoidance and preservation (see DEIR Figure 4.4-3 exclusion areas and 50 foot buffer zone along property lines), onsite replacement (see DEIR Figure 4.4-4), and offsite as summarized in the table below.

Summary of Proposed Oak Avoidance, Replacement, and Preservation

Row	Type	Acres	Notes
A	Coast Live Oaks Impact	130	117.3 direct plus 12.4 indirect for root impacts
B	2:1 Ratio Mitigation Package Total	259	
C	Avoidance and Preservation (Onsite)	136	Buffer and exclusion areas onsite
D	Net Additional Mitigation Required	123	Rows B-C
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

Project mitigation shall 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 shall be achieved through onsite or offsite mitigation, in-lieu fee payment to the Oak Woodlands Conservation Fund or through other mitigation activities consistent with Public Resources Code section 21083.4 as developed and approved by the County.

AVOIDANCE

The proposed Project would avoid 136 acres of onsite oak woodlands in the Exclusion areas shown on Figure 4.4-3 of the DEIR. 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.

REPLACEMENT

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 DEIR Figure 4.4-4), and these activities would provide added benefit of enhancing the age structure of oak woodland at the site. These areas amount to approximately 12 acres of suitable area for potential onsite replacement for partial mitigation of impacts to oaks (additional onsite suitable area may be available upon additional investigation). The oak woodlands evaluation also concluded that planting and/or management practices could be conducted on site to enhance seedling establishment, improve the age structure of the oak woodlands, and increase the sustainability of the oak stands, although these activities can be a challenge to implement due to long term commitment requirement, cost and labor intensive management techniques, and remote nature of some of the onsite areas for access for maintenance.

A qualified biologist shall prepare an oak woodland establishment and/or restoration plan, in compliance with state and local requirements and subject to County approval. The plan shall specify the location of a minimum of 12 acres onsite for oak replacement/restoration,

methods of implementation, propagule 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.

OFF-SITE PRESERVATION

An additional 111 acres offsite 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 offsite preservation areas are determined to be of lesser quality and habitat value relative to the areas removed from the project site, the County would consider an increase in preserved acreage beyond the required 111 acres to offset the inequity in quality and value.

Mitigation Measure 4.4-10: Although the proposed Project is exempt from County setback requirements for creeks pursuant to Napa County Code Section 18.108.050(P) (which exempts earthmoving activity associated with mining and mining-related activities conducted pursuant to and in compliance with an approved Surface Mining Permit), it is recommended that the proposed Project implement a setback from the upper Arroyo Creek/headwaters to protect both the upper reaches and the main stem of Arroyo Creek. According to Napa County Code Section 18.108.025, for areas with slopes of 30-40 percent adjacent to creeks (which is the average for upper reaches of Arroyo Creek), generally an 85-foot setback would be required for development. The Syar Project is exempt from this requirement, yet due to the nature of the future quarry face cut of 76 degrees, the Applicant shall provide a setback of a minimum of 85 feet from the upper reaches of Arroyo Creek to reduce potential impacts on biological resources and functions.

C) CULTURAL AND PALEONTOLOGICAL RESOURCES

Mitigation Measure 4.5-3: Conduct Field Surveys for Historic and Archaeological Resources and Avoid Impacts from Trail Relocation. Once the Skyline Trail relocation corridors are selected, the corridors shall be surveyed by a qualified archaeologist retained by the Applicant at the Applicant's expense. Any identified potentially significant archaeological or historical resources that would be directly or indirectly impacted by trail relocation and use shall be avoided. The archaeologist shall identify, and the County shall review and approve, the appropriate buffer area around the resource to ensure both direct and indirect impacts are avoided. The size of the buffer area shall be determined by a qualified archaeologist based upon the type of resource found and the visibility of the resource from the trail.

Mitigation Measure 4.5-4: Avoid or Minimize Impacts to Unknown Historical or Archaeological Resources. In accordance with CEQA Guidelines Section 15064.5(f), should any previously unknown prehistoric or historic archaeological resources, such as, but not limited to, obsidian and chert flaked-stone tools or toolmaking debris, shellfish remains, stone milling equipment, concrete or stone footings, filled wells or privies, or deposits of metal, glass, or ceramic refuse be encountered during ground disturbing activities, work within 100 feet of these materials shall be stopped, and the Applicant shall, at the Applicant's expense, consult with a

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.

Mitigation Measure 4.5-5: Avoid or Minimize Impacts to Unknown Human

Remains.

Should human remains, associated grave goods, or items of cultural patrimony be encountered during quarry expansion or during other ground-disturbing activities, Applicant shall comply with the following procedures as required by Public Resources Code section 5097.9 and Health and Safety Code section 7050.5. In the event of discovery or recognition of any human remains, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the Napa County Coroner has determined that the remains are not subject to his or her authority. If the coroner determines the human remains to be Native American, he or she shall contact, by telephone within 24 hours, the State Native American Heritage Commission (NAHC). The NAHC shall assign a Most Likely Descendent (MLD). The MLD may provide recommendations regarding the treatment of the human remains and any associated cultural materials. If the Applicant rejects the recommendations and the mediation by NAHC fails to provide acceptable measures, then the Applicant shall rebury the Native American remains and associated grave goods with appropriate dignity on the property, in a location not subject to further subsurface disturbance.

Mitigation Measure 4.5-6: Evaluation and Treatment of Paleontological Resources.

If paleontological resources (e.g., vertebrate bones, teeth, or abundant and well-preserved invertebrates or plants) are encountered during 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.

D) GEOLOGY AND SOILS

Mitigation Measure 4.6-2a: Supplemental Geotechnical Design Criteria. No new buildings are proposed for the project. Therefore, no mitigation is necessary regarding potential future impacts to buildings. However, berms and dams associated with detention/sedimentation basins and other related structures constructed during the implementation and ongoing operation of the proposed Project could potentially be subject to strong ground shaking and potential structural failure.

The Applicant shall not locate facilities on unstable slopes, to the extent feasible. Prior to construction of any roads, berms or dams associated with detention/sedimentation basins, or related structures, the Applicant shall, at the Applicant's expense, retain a licensed geotechnical engineer and, when appropriate, a structural engineer to conduct a construction-level

geotechnical investigation for the facility(ies). The 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.

The geotechnical study shall include an evaluation of unstable land in the areas of stormwater improvements and road construction, including any areas susceptible to liquefaction or settlement, and any areas that may contain expansive soils. The study shall provide measures to repair, stabilize, or avoid such soils or slopes, and may include, but not be limited to:

- Removal and replacement of unstable materials in an existing landslide or in an actively eroding area with a stronger material;
- Grading to remove loose material and provide an acceptably stable topographic configuration by terracing, reducing slope angles, and reducing the height of cut and fill slopes;
- Installation of drainage facilities, such as subdrains and dewatering wells to reduce pore water pressure and reduce the risk of slope failure;
- Covering steep slopes with concrete or vegetation;
- Buttrussing the slope or the toe of slopes to provide additional support to the slope. Where buttrussing is not feasible, internal reinforcement such as a pinning system or lattice grid can be incorporated into the slope design to strengthen the slope;
- Retaining walls or other external applications to strengthen slopes;
- Placement of slope fencing or other material to stabilize rock fall from cut slope and mitigate hazards from falling rocks;
- Removal of native soils and replacement with engineered fill materials not prone to seismically-induced liquefaction or shrinking and swelling;
- Soil stabilization, such as lime treatment to alter soil properties to reduce shrink-swell potential to an acceptable level; and/or,
- Deepening support structures to a depth where unstable soils are no longer present.

The proposed Project shall be designed and constructed in conformance with the specific recommendations contained in design-level geotechnical studies, including recommendations for grading and ground improvement.

Mitigation Measure 4.6-2b: Slope Stability Criteria. A California registered Geotechnical Engineer, retained and paid by the Applicant, shall conduct slope stability inspections during excavation of 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 a risk to safety or the potential for mass movement, repair measures shall be recommended and promptly implemented by the Applicant. This may include repair, stabilization, or avoidance of landslides and areas of soil creep or possible debris flow. A memorandum summarizing the findings of the inspections and any recommendations shall be prepared and submitted to the Napa County Engineering and Conservation Division and Syar

each year. Engineering recommendations for slope repair or stabilization shall be approved by Napa County and incorporated into the proposed Project.

E) HAZARDS AND HAZARDOUS MATERIALS

Mitigation Measure 4.7-2: Standard operating procedures (SOPs) shall be used during the handling of hazardous materials for the operation and maintenance of vehicles and equipment; and an approved Hazardous Material Business Plan shall be maintained for the project site.

(a) 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:

- Refueling shall be conducted only with approved pumps, hoses, and nozzles.
- Catch-pans shall be placed under equipment to catch potential spills during servicing.
- All disconnected hoses shall be placed in containers to collect residual fuel from the hose.
- Vehicle engines shall be shut down during refueling.
- No smoking, open flames, or welding shall be allowed in refueling or service areas.
- All refueling, maintenance of vehicles and other equipment, handling of hazardous materials, and staging areas shall occur at least 100 feet from water courses, existing groundwater wells, and any other water resource to avoid the potential for risk of surface and groundwater contamination.
- Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents.
- A spill containment kit that is recommended by the Napa County Environmental Health Division (EHD) or local fire department will be onsite and available to staff if a spill occurs.
- A rinse water containment area shall be established outside the proposed creek setbacks and away from any areas that could potentially drain off site or potentially affect surface and groundwater quality. When quarry equipment is cleaned, only rinse water that is free of gasoline residues, other chemicals, and waste oils should be allowed to diffuse back into the quarry area. No rinse water shall be drained to a septic system or discharged to ground or surface water to prevent the release of hazardous materials into the environment during operation and maintenance of the proposed Project.
- To prevent the accidental discharge of fuel or other fluids associated with vehicles and other equipment, all workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

In the event that contaminated soil and/or groundwater or other hazardous materials are generated or encountered during quarry operations, all work shall be halted in the affected area and the type and extent of the contamination shall be determined. 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.

(b) Syar has prepared a Hazardous Materials Business Plan (HMBP) for the Syar Napa Quarry. The HMBP shall be updated annually as required by law. Syar shall amend the existing HMBP inventory form for the Syar Napa Quarry, in accordance with state law, in the following instances if warranted as a result of the proposed Project:

- A 100 percent or more increase in the quantity of a previously disclosed material; or,
- Any handling of a previously undisclosed hazardous material above the reportable quantity thresholds of 500 pounds of solid, 55 gallons of liquid or 200 cubic feet of gas.

(c) 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: an inventory of the type and quantity of hazardous materials stored onsite; a site map; risks of using the hazardous materials; spill prevention methods; emergency response plan; employee training and emergency contacts.

(d) The HMBP shall also include a review of each chemical used onsite and a determination on whether any substitution with less hazardous chemicals can be made. Changes shall be made as appropriate. The hazardous materials inventory, site map, emergency response plan, business owner form, and business activities form must be submitted to the 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.

(e) 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.

F) HYDROLOGY AND WATER QUALITY

Mitigation Measure 4.8-1: Update Industrial Storm Water Pollution Prevention Plan to address new land disturbance and operations changes. Prior to construction and annually as necessary, the Applicant shall update the Syar Napa Quarry's existing Industrial SWPPP to reflect additional areas of land disturbance and changes in operation resulting from the proposed Project. The Applicant shall modify the SWPPP as the project 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.

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 of the DEIR shall be used as a basis for compliance where no discharges from the site shall exceed 100 mg/l of Total Suspended Solids or 200 umho/cm of Specific Conductance. In addition the project shall not result in a net increase in sediment load.

Mitigation Measure 4.8-2: Avoid depleting groundwater supplies or interfering with groundwater recharge mechanisms including maintaining a 10-foot vertical separation between final grade and regional groundwater potentiometric elevation. The Applicant shall maintain existing volumes of groundwater recharge and shall ensure that a vertical buffer of undisturbed native soil/rock remains in place which maintains the final grade elevation no closer than 10 feet above the spring season regional groundwater potentiometric elevation. The Applicant shall not excavate and/or mine material within 10 feet of the regional groundwater potentiometric surface to prevent the creation of open water bodies subject to evaporation or springs which can drain regional groundwater to surface drainage creeks.

The proposed Project does not include direct groundwater extraction from the vicinity of Arroyo Creek. However, excavation deeper than the regional groundwater potentiometric elevation could allow regional groundwater to drain to the ground surface and be discharged from the project area as surface water. In order to avoid depleting groundwater supplies in the vicinity of Arroyo Creek (and all mined areas of the Syar Napa Quarry) the grade of the excavation shall be maintained 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.

The estimated regional groundwater potentiometric elevations presented in DEIR Figure 4.8-6 are based on a compilation of existing data which include well data on- and off-the project site and observations of areas 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 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 shall provide Napa County with an Annual Groundwater Elevation Monitoring and Use Report, prepared under the direction of a qualified Professional Engineer or Professional Geologist, that quantifies the groundwater potentiometric elevations during spring of each year when groundwater elevations are expected to be highest at the Syar Napa Quarry. The 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 extend 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 shall be conducted to maintain a 10-foot separation of undisturbed native soil/rock between the finished grade and the underlying groundwater potentiometric elevation as determined by the most recent Annual Groundwater Elevation Monitoring and Use Report.

To avoid interfering with the groundwater recharge mechanisms, the Applicant shall also ensure that any subsurface flow in fractures or soil that is exposed or intercepted by the excavation shall 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 shall 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 are formed by mining activities the owner/operator shall hire a qualified professional to assess springs and provide an evaluation to the County to determine if the elevation of these springs are part of the regional groundwater potentiometric surface; if so, mining shall not advance further below this elevation.

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

Mitigation Measure 4.8-3: Avoid reducing the groundwater potentiometric elevation by increasing consumptive use of surface water or surface occurrence of regional groundwater as a result of quarry activities. All water extracted from open bodies of water that are at the regional groundwater potentiometric elevation shall be reinfiltated 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. This Mitigation Measure 4.8-3 shall 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.

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 reinfiltated. The volume of groundwater that is pumped from those water bodies where the water surface elevation is effectively the same as the regional groundwater potentiometric elevation (i.e. State Blue Pit) shall be considered part of the groundwater use allocation for the project. Consumptive use from open water bodies such as State Blue Pit shall be recorded and

considered a part of the groundwater allocation in the same manner as the groundwater pumping from the Quarry Well. The volume of water used to wash materials shall not be included in the quantification of groundwater use if it is returned to the aquifer by infiltration. 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.

Mitigation Measure 4.8-4: Avoid depleting groundwater supplies by water reuse and obtaining new supplies of additional water for operations. No additional water from onsite resources is available to accommodate the additional water demand of the proposed Project. The Applicant's maximum allowable annual groundwater usage for the proposed Project shall not exceed 45.8 million gallons (140.6 acre-ft) per year. This mitigation measure includes metering to verify that demands upon onsite water resources are not exceeded. This mitigation measure also includes accommodating any additional water demands with a combination of water reuse, new water sources or water conservation methods. Monitoring usage is preferred over monitoring the elevation of groundwater in the aquifer because a number of occurrences which are not related to the proposed Project can have an effect on the elevation of the regional groundwater elevation.

In order to monitor the use of the existing onsite sources, the Applicant shall monitor, meter and maintain records of all water use at the site. These sources include:

1. Groundwater from the Quarry Well, or any other groundwater well located anywhere onsite or related to the project that could have a similar impact;
2. Water collected from open water bodies in contact with the regional groundwater potentiometric elevation; and/ or
3. Impounded surface water that would otherwise infiltrate to groundwater.

If new wells are installed and/or if existing wells (i.e. Well #4) are brought into production, the extraction from these wells shall be included in the annual usage total. The total of groundwater/surface water used for quarry operations shall be totaled and reported annually to the County. The annual usage will be compared against the baseline usage on an annual basis.

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.

The Applicant shall also off-set additional water demands by reusing water and increasing processing efficiencies. This could include gravel application to roadways and production areas to reduce dust generation and the need for dust suppression by water application. It could also include process revisions to reuse sand wash water rather than allow the water to drain off as surface water or to allow it to evaporate in shallow ponds that have low infiltration benefit

If additional water is required for the proposed Project, the additional water shall be obtained from offsite sources such as new wells outside of the MST. Off-site sources of recycled

water are available and water can be purchased from public or private sources. If additional water sources are not available then the Applicant shall reduce its production volume to a level that the water use does not exceed the maximum allowable annual usage of 45.8 million gallons (140.6 acre-ft) per year.

Mitigation Measure 4.8-5: Reduce Potential for Offsite Runoff. 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 shall 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 shall conform to the following standards and includes the following components:

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.

2. The Napa County Department of Engineering and Conservation Division shall review and approve the grading and drainage plans prior to implementation to ensure compliance with Napa County standards. The Applicant shall implement any additional improvements deemed necessary by the County.

3. Once constructed, the drainage components, including detention ponds designed for the watersheds, shall be inspected by the County's Engineering and Conservation Division and maintained per the guidelines outlined in the Sediment Basin BMPs found in the Napa Quarry SWPPP. 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.

Mitigation Measure 4.8-6: Update Industrial Storm Water Pollution Prevention Plan to address hazardous materials spill response actions. The Applicant shall revise its 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 where the regional groundwater is exposed. These revisions shall then be incorporated into the SWPPP by summary and reference.

G) NOISE AND VIBRATION

Mitigation Measure 4.11-1: Noise Restrictions in Expansion Area North and East of the State Blue Pit and Snake Pit (Pasini Parcel): To reduce noise impacts:

- No mining activities shall occur between the 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.
- With the exception of blasting and the removal of overburden the Applicant shall: 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) Ensure that noise levels at the nearest receptor locations north or east of the quarry shall not exceed 50 dBA L_{50} from 7:00 AM to 10:00 PM and 45 dBA L_{50} from 10:00 PM to 7:00 AM.
- The Applicant shall utilize the following measures or equivalent:
 - (a) Maintain acoustical shielding for receivers north or east of the quarry so that existing terrain features provide the maximum amount of shielding for the longest time possible.
 - (b) Use the quietest available equipment when removing topsoil and overburden.
 - (c) 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 L_{50} 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.

Mitigation Measure 4.11-2: Blasting Vibration Reduction Measures. To reduce vibration impacts, the Applicant shall:

- 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 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.
- 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.
- To ensure that surrounding residence and sensitive receptors are aware of blasting events, Syar shall notify the County, sensitive receptors, and surrounding residences prior to blasting. The 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.

D) TRANSPORTATION

Mitigation Measure 4.15-1: Transportation Demand Management Program. To reduce cumulative traffic impacts, Syar shall operate its sales activities to limit the number of new truck trips entering and exiting the quarry during the AM peak hour to no more than 50. A dedicated Syar staff coordinator shall monitor truck trips in accordance with this limit and report to the County annually regarding compliance. Additionally, it is recommended that permanent traffic count and classifiers be installed within the public right-of-way so that reported trip information can be verified.

EXHIBIT “B”

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>4.3 Air Quality 4.3-2A Reduce NOx. 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"> 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"> a) Production up to 945,000 tons per year shall be allowed upon continued demonstration that 12% of horsepower-hours operated are Tier 2 or better. b) Production up to 1,100,000 tons per year shall be allowed upon continued demonstration that 44% of the horsepower-hours are Tier 2 or better. c) Production up to 1,300,000 tons per year shall be allowed upon continued demonstration that 5% of horsepower-hours are Tier 3 or better and 72% of the horsepower-hours are Tier 2 or better. 2. Reduce NOx from rail transport by using a locomotive with a Tier 0 or better engine. 3. Reduce on- and/or off-site emissions by some other 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 	<p>Applicant/ County</p>	<p>Napa County Department of Planning, Building and Environmental Services; Bay Area Air Quality Management District</p>	<p>Project operation</p>	<p>Project operation</p>	<p>County/ State standards</p>	<p>Applicant</p>

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>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>4.3-2B: Reduce Fugitive Dust. 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 PM₁₀ and PM_{2.5} emissions from the project (i.e. expansion of the Quarry) are less than 15 tons per year for PM₁₀ and 10 tons per year for PM_{2.5}. 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 the methods listed in 2 through 5, below:</p> <ol style="list-style-type: none"> 1. Clean internal paved roads daily using a particulate matter efficient street sweeper. 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 	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>quality standards shall be considered acceptable.</p> <ol style="list-style-type: none"> 3. Apply water to blast sites prior to detonation. 4. Limit speeds on unpaved areas to less than 15 MPH. 5. Reduce on-site emissions by some other means (e.g. surface moisture content performance standard, watering frequency). 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. <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>4.3-3 Reduce Health Risk. The Applicant shall implement the following mitigations to reduce health risk at sensitive receptors:</p> <ol style="list-style-type: none"> 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"> a) Production up to 950,000 tons per year shall be allowed upon continued demonstration that: <ol style="list-style-type: none"> 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 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. b) Production up to 1,100,000 tons per year 	Applicant	Napa County Department of Planning, Building and Environmental Services	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>shall be allowed upon continued demonstration that:</p> <ul style="list-style-type: none"> 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 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. <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>4.4 Biological Resources</p> <p>4.4-1a Implementation of the Mitigation Measure(s) 4.4-1 would 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</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-project operation	Project operation and annually first three years	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>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> <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</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>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 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>4.4-1b 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</p>	Applicant	Napa County Department of Planning, Building and Environmental Services/	Project construction	Project operation and annually first three years	Success criteria achieved	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>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 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</p>		CDFW				

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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>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>4.4-2 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 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</p>	Applicant	County/ CDFW	Pre-construction	Pre-construction	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
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>4.4-3 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 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</p>	Applicant	USFWS; CDFW	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>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>4.4-5 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 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.</p>	Applicant	Napa County Department of Planning, Building and Environmental Services; CDFW	Pre-construction	Pre-construction	Federal and State 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>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>						
<p>4.4-6 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>4.4-7 (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 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</p>	Applicant	Napa County Department of Planning, Building and Environmental Services; USACE; RWQCB	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>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 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</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>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>4.4-8 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 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</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																								
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>4.4-9 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>Summary of Proposed Oak Avoidance, Replacement, and Preservation</p> <table border="1" data-bbox="260 849 892 1325"> <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> <tr> <td>E</td> <td>Replacement and Preservation (Onsite)</td> <td>12</td> </tr> <tr> <td>F</td> <td>Additional Replacement and/or Preservation</td> <td>111</td> </tr> <tr> <td>G</td> <td>Total Replacement and Preservation</td> <td>123</td> </tr> </tbody> </table> <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</p>	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	E	Replacement and Preservation (Onsite)	12	F	Additional Replacement and/or Preservation	111	G	Total Replacement and Preservation	123	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through construction	County standards	Applicant
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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>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>AVOIDANCE 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>REPLACEMENT 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 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</p>						

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>acres onsite for oak replacement/restoration, methods of implementation, propagule 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>OFF-SITE PRESERVATION 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>4.4-10 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 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>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through construction	County standards	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>4.5 Cultural Resources</p> <p>4.5-3 Conduct Field Surveys for Historic and Archaeological Resources and Avoid Impacts from Trail Relocation. Once the Skyline Trail relocation corridors are selected, the corridors must be surveyed by a qualified archaeologist. Any identified potentially significant archaeological or historical resources that would be directly or directly 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>4.5-4 Avoid or Minimize Impacts to Unknown Historical or Archaeological Resources. In accordance with CEQA Guidelines Section 15064.5(f), should any previously unknown prehistoric or historic archaeological resources, such as, but not limited to, obsidian and chert flaked-stone tools or toolmaking debris, shellfish remains, stone milling equipment, concrete or stone footings, filled wells or privies, or deposits of metal, glass, or ceramic refuse be encountered during ground disturbing activities, work within 100 feet of these materials shall be stopped, and the operator shall consult with a 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</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during 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
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>4.5-5 Avoid or Minimize Impacts to Unknown Human Remains. Should human remains, associated grave goods, or items of cultural patrimony be encountered during quarry expansion or during other ground-disturbing activities, the 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 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>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during construction	State standards	Applicant
<p>4.5-6 Evaluation and Treatment of Paleontological Resources. If paleontological resources (e.g., vertebrate bones, teeth, or abundant and well-preserved invertebrates or plants) are encountered during project activities, work in the immediate vicinity shall be diverted away from the find until</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Continuously during 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
a professional paleontologist assesses and salvages the resource, if necessary.						
<p>4.6 Geology and Soils</p> <p>4.6-2a Supplemental Geotechnical Design Criteria. 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 include, but not be limited to:</p> <ul style="list-style-type: none"> • Removal and replacement of unstable materials in an existing landslide or in an actively eroding area with a stronger material; • Grading to remove loose material and provide an acceptably stable topographic configuration by terracing, reducing slope angles, and reducing the height of cut and fill slopes; • Installation of drainage facilities, such as subdrains and dewatering wells to reduce pore water pressure and reduce the risk of slope failure; 	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction	County standards	Applicant

PUBLIC COMMENTARY - 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"> • Covering steep slopes with concrete or vegetation; • Buttressing the slope or the toe of slopes to provide additional support to the slope. Where buttressing is not feasible, internal reinforcement such as a pinning system or lattice grid can be incorporated into the slope design to strengthen the slope; • Retaining walls or other external applications to strengthen slopes; • Placement of slope fencing or other material to stabilize rock fall from cut slope and mitigate hazards from falling rocks; • Removal of native soils and replacement with engineered fill materials not prone to seismically-induced liquefaction or shrinking and swelling; • Soil stabilization, such as lime treatment to alter soil properties to reduce shrink-swell potential to an acceptable level; and/or, • Deepening support structures to a depth where unstable soils are no longer present. <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>4.6-2b Slope Stability Criteria. A California registered Geotechnical Engineer shall 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</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Annually	County 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
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>4.7 Hazardous Materials</p> <p>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.</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"> • Refueling shall be conducted only with approved pumps, hoses, and nozzles. • Catch-pans shall be placed under equipment to catch potential spills during servicing. • All disconnected hoses shall be placed in containers to collect residual fuel from the hose. • Vehicle engines shall be shut down during refueling. • No smoking, open flames, or welding shall be allowed in refueling or service areas. • All refueling, maintenance of vehicles and other equipment, handling of hazardous materials, and staging areas shall occur at least 100 feet from water courses, existing groundwater wells, and any 	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through 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>other water resource to avoid the potential for risk of surface and groundwater contamination.</p> <ul style="list-style-type: none"> • Service trucks shall be provided with fire extinguishers and spill containment equipment, such as absorbents. • A spill containment kit that is recommended by the Napa County EHD or local fire department will be onsite and available to staff if a spill occurs. • A rinse water containment area shall be established outside the proposed creek setbacks and away from any areas that could potentially drain off site or potentially affect surface and groundwater quality. When quarry equipment is cleaned, only rinse water that is free of gasoline residues, other chemicals, and waste oils should be allowed to diffuse back into the quarry area. No rinse water shall be drained to a septic system or discharged to ground or surface water to prevent the release of hazardous materials into the environment during operation and maintenance of the proposed project. • To prevent the accidental discharge of fuel or other fluids associated with vehicles and other equipment, all workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. <p>In the event that contaminated soil and/or groundwater or other hazardous materials are generated or encountered during quarry operations, all work shall be halted in the affected area and the type and extent of the contamination shall be determined. 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</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>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"> • A 100 percent or more increase in the quantity of a previously disclosed material; or, • Any handling of a previously undisclosed hazardous material above the reportable quantity thresholds of 500 pounds of solid, 55 gallons of liquid or 200 cubic feet of gas. <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"> • An inventory of the type and quantity of hazardous materials stored onsite • A site map • Risks of using the hazardous materials • Spill prevention methods • Emergency response plan • Employee training • Emergency contacts <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</p>						

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<p>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>4.8 Hydrology and Water Quality</p> <p>4.8-1 Update Industrial Storm Water Pollution Prevention Plan to address new land disturbance and operations changes.</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 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</p>	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-construction	Pre-construction through 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>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>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.</p> <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>	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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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 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 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</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>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 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</p>						

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<p>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>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.</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> <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 infiltrated. 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</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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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>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>4.8-4 Avoid depleting groundwater supplies by water reuse and obtaining new supplies of additional water for operations.</p> <p>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 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"> 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; 2. Water collected from open water bodies in contact with 	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>the regional groundwater potentiometric elevation; or 3. Impounded surface water that would otherwise infiltrate to groundwater.</p> <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> <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>						

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<p>4.8-5 Reduce Potential for Offsite Runoff. 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"> 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. 2. The Napa County Department of Engineering and Conservation Division shall review and approve the grading and drainage plans prior to implementation to ensure compliance with Napa County standards. The Applicant shall implement any additional improvements deemed necessary by the county. 3. Once constructed, the drainage components, including detention ponds designed for the watersheds, shall be inspected by the County's Engineering and Conservation Division and maintained per the guidelines outlined in the Sediment Basin BMP found in the Napa Quarry SWPPP. 	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>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>4.8-6 Update Industrial Storm Water Pollution Prevention Plan to address hazardous materials spill response actions. 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>4.11 Noise and Vibration 4.11-1 Noise Restrictions in Expansion Area North and East of the State Blue Pit and Snake Pit (Pasini Parcel). The Applicant shall:</p> <ul style="list-style-type: none"> • Not carry out mining activities between the 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. • 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 	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-project operation	Project Operation	County standards	Applicant

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<p>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:</p> <ul style="list-style-type: none"> ○ 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. ○ Use the quietest available equipment when removing topsoil and overburden. ○ 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. 						
<p>4.11-2 Blasting Vibration Reduction Measures. The Applicant shall:</p> <ul style="list-style-type: none"> • 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 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. • Conduct stemming and burdening (filling the 	Applicant	Napa County Department of Planning, Building and Environmental Services	Pre-project operation	Project operation	County standards	Applicant

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<p>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.</p> <ul style="list-style-type: none"> 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. 						
<p>4.17 Greenhouse Gases 4.17-2 Greenhouse Gas Reduction Plan. 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 CO₂e annual land use threshold (or increase of 1,100 MT CO₂e 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"> Fuel on-road and off-road vehicles with alternative fuels (such as hybrid, biodiesel, and electric); 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; 	Applicant	Napa County Department of Planning, Building and Environmental Services	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
<ul style="list-style-type: none"> • 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; • 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; • Require that on-road haul trucks that are under contract with the quarry operator use 2003 model or newer trucks; • Establish an on-site renewable energy system (such as solar); • Install an automated load out system; • Contribute to a State or County offset mitigation program. <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</p>						

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<p>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 CO₂e 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 CO₂e 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 CO₂e per year – baseline plus threshold).</p>						

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