

**EXHIBIT 3**  
**SAN RAFAEL ROCK QUARRY ARP AND AQP**  
**MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Aesthetics</b>				
<b>R4.1-1:</b> Visual impacts on the view from Vantage Point 3, the public walkway and public road southwest of the site.	<b>R4.1-1a:</b> Implementation of Mitigation Measure R4.12-6a, retention of Hoffman Kiln #1 and its stack would partly mitigate this impact. <b>R4.1-1b:</b> Implementation of Mitigation Measures R4.12-3a, 3b, 4a, 4b, 5a, 5b, 5c, 6a, and 6b to ensure that key historic structures are preserved, would also mitigate the adverse visual impacts that would result from the loss of these structures.	<b>R4.1-1:</b> SRRQ to submit revised amended reclamation plan. The Marin County DPW will verify SRRQ's compliance with Mitigation Measures R4.1-1a and R4.1-1b. See also Mitigation Monitoring Measures R4.12-3, 4, 5, and 6.	Specification for preservation of historic structures to be included with Conforming Amended Reclamation Plan, to be submitted within 60 days of AQP approval. Detailed grading plans for Reclamation Phases III and IV to be submitted with grading permit applications. See referenced Mitigation Measures.	Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan and specified plans. See referenced Mitigation Measures.
<b>R4.1-2:</b> Visual impacts on the view from Vantage Point 5, Via Montebello near San Marino Drive in the Peacock Gap Neighborhood.	See Mitigation Measure R4.1-1a.	See Mitigation Monitoring Measure R4.1-1.	See above.	See above.
<b>P4.1-9:</b> Proposed nighttime operations would introduce new sources of light and glare.	<b>P4.1-9:</b> The AQP will restrict operations that have the potential to cause nighttime sources of light and glare and that are visible from public vantage points (including the Bay and vantage points across the Bay), roadways, and residences to daytime hours, except during emergency operations. See Mitigation Measure 4.6-6b in Section 4.6, Land Use and Planning.	<b>P4.1-9:</b> The Marin County DPW will verify SRRQ's compliance with Mitigation Measure P4.1-9. See also Mitigation Monitoring Measure 4.6-6 in Section 4.6, Land Use and Planning.	Upon issuance of the AQP.	Verified by Marin County DPW continuous program of periodic inspections of SRRQ activity, and reported by SRRQ in annual report of quarry operations and reclamation.
<b>Air Quality</b>				
<b>R4.2-1:</b> Reclamation grading under Phases 1-3 of the proposed Amended Reclamation Plan would result in an increase in daily emissions of criteria air pollutants above emissions that would have occurred under the 1982 Amended Reclamation Plan. This increase in daily emissions would exceed the Bay Area Air Quality Management District-established significance thresholds for nitrogen oxides and particulate matter equal to or less than 10 microns.	<b>R4.2-1a:</b> The project applicant has recently initiated the use of biodiesel fuel in all quarry rolling stock. Biodiesel is the only alternative fuel for which a detailed emissions evaluation has been submitted to the United States Environmental Protection Agency (USEPA). The effectiveness of emission reduction resulting from the use of biodiesel is dependant upon the percent of biodiesel contained in the mixture (USEPA, 2002). The most common blend, and that currently used at SRRQ, is a 20 percent biodiesel and 80 percent conventional diesel (B-20). B-20 will reduce particulate and CO emission by approximately 12 percent, and reduce hydrocarbon emissions by approximately 20 percent. Use of biodiesel may increase or decrease NOx emissions (McCormick et al, 2006).	<b>R4.2-1:</b> SRRQ shall implement all mitigation measures as requirements of the AQP conditions of approval. The Marin County DPW will be responsible for monitoring implementation of all Impact R4.2-1 mitigation measures.	Upon approval of Conforming ARP, to be submitted within 60 days of AQP approval, the requirement shall become part of the ARP. Alternative fuel usage shall begin when reclamation activity begins.	Verified by Marin County DPW continuous program of periodic inspections of SRRQ activity, and reported by SRRQ in annual report of quarry operations and reclamation. Emission reduction measures and compliance with emission CAP to be verified by Marin County DPW, and reported by SRRQ in

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Air Quality (cont.)				
<p><b>R4.2-1 (cont.)</b></p>	<p><b>R4.2-1b:</b> SRRQ has already upgraded SRRQ's entire fleet of off-road diesel equipment to USEPA Tier 3 standards, ahead of regulatory requirements that at least 10 percent of the fleet be upgraded each year. SRRQ also plans to upgrade its tug boat fleet to Tier 2 standards prior to the end of 2008.</p> <p><b>R4.2-1c:</b> SRRQ already implements several measures to control dust. These will be continued under the project:</p> <ul style="list-style-type: none"> <li>• All trucks leaving the Quarry shall be washed down, including the undercarriage, prior to entering Point San Pedro Road (except trucks transporting asphalt). The wash down and adjoining areas shall be paved to minimize tracking of dust and dirt. Point San Pedro Road will be swept up to two times per day, except on rainy days, when no sweeping will occur, subject to the approval of the City of San Rafael;</li> <li>• The Quarry shall maintain all required erosion control measures and stormwater management plans, and shall keep current and comply with all permits required by the Regional Water Quality Control Board;</li> <li>• The Quarry shall maintain all dust abatement devices, and shall keep current and comply with all permits required by the BAAQMD.</li> </ul> <p><b>R4.2-1d:</b> The project sponsor shall be required to continue existing emission reduction practices, including use of alternative fuels, use of low-emission diesel equipment, and dust abatement measures.</p> <p><b>R4.2-1e:</b> The applicant shall implement additional dust abatement measures identified by BAAQMD as feasible dust control, during all reclamation grading activities:</p> <ul style="list-style-type: none"> <li>• Cover all trucks hauling soil, sand, and other loose materials as a part of reclamation activities, or require such trucks to maintain at least two feet of freeboard between the top of the material and top of truck;</li> <li>• Pave, apply water at a minimum three times daily in dry weather, or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at the Quarry;</li> </ul>			<p>annual report of quarry operations and reclamation. The BAAQMD is the administrator of the emissions credit program, and will be responsible for ensuring compliance with the terms of participation in this program.</p>

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Air Quality (cont.)				
R4.2-1 (cont.)	<ul style="list-style-type: none"> <li>• Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at the Quarry;</li> <li>• Hydroseed, apply non-toxic soil stabilizers, or water to inactive reclamation areas (previously graded areas inactive for ten days or more);</li> <li>• Limit traffic speeds on unpaved roads to 15 miles per hour;</li> <li>• Install sandbags or other erosion control measures to prevent silt runoff to public roadways;</li> <li>• Replant vegetation in disturbed areas as soon as the growing seasons dictates;</li> <li>• Install wind breaks or plant trees/vegetative wind breaks at the windward sides of the reclamation areas until such time as the vegetation is established;</li> <li>• Suspend reclamation-related excavation and grading activities when wind (as instantaneous gusts) exceeds 25 miles per hour; and</li> <li>• Limit the area subject to reclamation-related excavation, grading and other construction activity at any one time.</li> </ul> <p><b>R4.2-1f:</b> The project applicant shall keep all off-road equipment well-tuned and regularly serviced to minimize exhaust emissions, and shall establish a regular and frequent check-up and service/maintenance program for all operating equipment at the Quarry.</p> <p><b>R4.2-1g:</b> To further reduce emissions from off-road diesel equipment, the applicant shall fuel on-site diesel-powered mobile equipment used in reclamation activities with a minimum 80 percent biodiesel blend (B-80) or use other equipment and/or fuel that achieves the same reduction in particulate (PM-10) emissions. The applicant shall also use Purinox<sup>™</sup>, another approved additive, or other measures to reduce NOx and PM-10 emissions to the maximum extent feasible given current technologies.</p> <p><b>R4.2-1h:</b> Off-road diesel equipment operators shall be required to shut down their engines rather than idle for more than 5 minutes, unless such idling is necessary for proper operation of the vehicle.</p>			

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Air Quality (cont.)				
<b>R4.2-1 (cont.)</b>	<p><b>R4.2-1i:</b> If the mitigation measures listed above do not reduce emissions to below threshold values, the applicant will acquire BAAQMD off-site emission offset credits in sufficient quantity to reduce emissions from reclamation grading to levels below significance thresholds.</p> <p><b>R4.2-1j:</b> The applicant will limit on-site mining operations on days on which reclamation grading activities are performed, such that total emissions from the site are not increased above significance thresholds. To ensure the effectiveness of this measure, the Quarry will be required to maintain and report to the BAAQMD and the County Public Works Department a record of reclamation and operations activities, with an estimate of emissions from each. The baseline for combined emissions is the current level of emissions for mining operations, as shown in Table 4.2-13.1, plus the baseline emissions for the reclamation grading phase, as shown in Tables 4.2-10 and 4.2-11. The limit for combined emissions from mining and reclamation will therefore be the sum of the current emissions levels from mining operations, the baseline emission levels for reclamation grading, and the BAAQMD's threshold values for criteria pollutants, as shown in Table 4.2-10.1 for each reclamation phase.</p>	<p>The BAAQMD is the administrator of the emissions credit program and will be responsible for ensuring compliance with the terms of participation in this program.</p> <p>The BAAQMD is the administrator of the emissions credit program and will be responsible for ensuring compliance with the terms of participation in this program</p>	<p>Implementation of emission credits will be on an as-needed basis.</p> <p>As above.</p>	<p>Emission reduction measures and compliance with emission cap to be verified by Marin County DPW, and reported by SRRQ in annual report of quarry operations and reclamation. The BAAQMD is the administrator of the emissions credit program, and will be responsible for ensuring compliance with the terms of participation in this program.</p> <p>As above.</p>
<b>R4.2-2:</b> Phase 4 of the 2004 Amended Reclamation Plan would include cut and fill activities that were not included in 1982 Amended Reclamation Plan. These new reclamation activities would result in emissions of criteria pollutants that would exceed BAAQMD significance thresholds.	<p><b>R4.2-2a:</b> Mitigation measures R4.2-1a, b, and c apply to Phase 4 as well.</p> <p><b>R4.2-2b:</b> Implement Mitigation Measures R4.2-1d through R4.2-1j for Phase 4.</p>	<b>R4.2-2:</b> The Marin County Public Works Department will be responsible for monitoring implementation of all mitigation measures.	Upon commencement of Phase 4 reclamation.	Emission reduction measures and compliance with emission CAP to be verified by Marin County DPW, and reported by SRRQ in annual report of quarry operations and

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Air Quality (cont.)				
				reclamation. The BAAQMD is the administrator of the emissions credit program, and will be responsible for ensuring compliance with the terms of participation in this program.
<p><b>R4.2-3:</b> Reclamation activities will generate greenhouse gas emissions that will contribute to climate change.</p>	<p><b>R4.2-3a:</b> The applicant already uses a 20 percent biodiesel blend (B-20) in on-site mobile equipment; see Mitigation Measure R4.2-1a. The CO<sub>2</sub> produced by burning biodiesel is considered “biogenic,” that is, it is part of the natural cycling of carbon in the atmosphere and biosphere. Because it is not from a fossil source, it is not included in GHG inventories. Therefore, the use of B-20 reduces CO<sub>2</sub> emissions that contribute to global climate change from on-site mobile equipment by approximately 20 percent.</p> <p><b>R4.2-3b:</b> Implementation of Mitigation Measure R4.2-1d, f, g, and h will reduce running time of diesel equipment, replace diesel equipment with less polluting equipment, and increase the use of biodiesel in on-site equipment. The amount of reduction in GHG emissions is estimated to be approximately an additional 65 percent.</p> <p><b>R4.2-3c:</b> Within one year of project approval, the applicant shall prepare and implement a GHG reduction plan. The plan will include a complete inventory of reclamation-related GHG emissions and will demonstrate how the Quarry will reduce or offset remaining un-mitigated GHG emissions. The plan will prioritize emission reduction through energy conservation and other measures; for those emissions that cannot be reduced, the plan shall specify how emissions will be offset. Offsets may take the form of installation of on-site alternative energy generation facilities (such as solar power) or off-site compensation, such as monetary contribution to a project that sequesters carbon. Examples of such projects include wetland restoration, purchase of carbon credits verified by the California Climate Action Registry, and reforestation. On-site offsets will be given higher priority than off-site offsets, and offsets with co-benefits, such as reduction of particulate</p>	<p><b>R4.2-3:</b> In addition to Mitigation Monitoring Measure R4.2-1, the Marin County Public Works Department will be responsible for reviewing and approving the GHG reduction plan. The Marin County DPW will also be responsible for monitoring implementation of the GHG reduction plan.</p>	<p>Upon submittal of a Conforming Amended Reclamation Plan within 60 days of permit approval; ongoing monitoring of emission reduction measures. GHG reduction plan to be submitted within one year of AQP approval.</p>	<p>Emissions reductions and adherence to GHG reduction plan to be reported annually by SRRQ in annual report of quarry operations and reclamation, and verified by Marin County DPW, beginning one year after permit approval.</p>

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Air Quality (cont.)				
<b>R4.2-3</b> (cont.)	emissions within the vicinity of the Quarry, and restoration of habitat for special status species, will be given higher priority. The plan must demonstrate how, at a minimum, the Quarry will reduce reclamation-related, non-biogenic GHG emissions consistent with the Marin County Greenhouse Gas Reduction Plan and Countywide Plan Update policies: the plan must demonstrate how reclamation-related emissions are reduced or offset, such that total emissions are 15% below the emissions associated with ARP82, or no more than 2,489 tons of eCO <sub>2</sub> . The plan will include an implementation schedule. The plan will be submitted to the Marin Public Works Department for review and approval. In addition, the initial emissions inventory prepared as part of the plan will be reported to the California Climate Action Registry or a successor organization as a baseline inventory, and the Quarry will conduct and report additional inventories annually.			
<b>R4.2-5:</b> The proposed Amended Reclamation Plan would result in post-reclamation development and land uses that will emit greenhouse gasses, and contribute to global climate change.	<b>R4.2-5:</b> The applicant shall revise the ARP to include a standard to guide the future design of the final Development Plan (due to be submitted to the County three years prior to the cessation of mining) to incorporate a detailed inventory of GHG emissions associated with the planned post-reclamation development, and a plan to reduce GHG emissions consistent with Countywide Plan policies and other relevant County, state and federal standards, as applicable.	<b>R4.2-5:</b> The Marin County DPW will review the revised ARP for completeness prior to project approval.	Upon submittal of a Conforming Amended Reclamation Plan within 60 days of permit approval; and as part of the Final Development Plan, to be submitted 3 years prior to the cessation of mining.	Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation plan, and, later, upon submittal of the Final Development Plan.
<b>P4.2-6:</b> Future Quarry operations under the proposed Amended Surface Mining and Quarrying Permit could exceed baseline levels of production, with concomitant increases in emissions of criteria air pollutants above threshold values.	<b>P4.2-6a:</b> Mitigation measures R4.2-1a, R4.2-1b, and R4.2-1c apply to equipment used in ongoing quarrying operations as well. <b>P4.2-6b:</b> Implement Mitigation Measures R4.2-1d through R4.2-1h for ongoing quarrying operations as well as reclamation activities. <b>P4.2-6c:</b> Implement Mitigation Measure P4.6-6b (see Section 4.6, Land Use and Planning), which would limit Quarry operations to the baseline level.	<b>P4.2-6:</b> The Marin County DPW will be responsible for oversight and enforcement of these provisions. DPW will verify that a revised application for the AQP that contains the above provisions, including the Operational Dust Mitigation Plan/Program, and will approve said provisions prior to issuance of the AQP. After issuance of the AQP, DPW will conduct routine field inspection to verify implementation of these provisions. The Quarry must report its annual production to the County and to the State each year.	Emission reduction requirements and cap on annual production to become conditions of approval of the AQP, and will be implemented upon AQP approval.	Verified by Marin County DPW, and reported by SRRQ in annual report of quarry operations and reclamation.

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Air Quality (cont.)</b>				
<p><b>P4.2-7:</b> Proposed amendments to the Surface Mining and Quarrying Permit could result in an increase in greenhouse gas emissions, and contribute to global climate change.</p>	<p><b>P4.2-7a:</b> The applicant proposes to limit truck trips into and out of the Quarry to 250 trips per day, which is below the baseline level of truck trips. Therefore, GHG emissions from haul trucks would not increase above 1990 levels.</p> <p><b>P4.2-7b:</b> The applicant already uses a 20 percent biodiesel blend in on-site mobile equipment; see Mitigation Measure R4.2-1a. Biodiesel reduces CO2 emissions that contribute to global warming, since biodiesel is derived from plant and animal sources, not fossil sources.</p> <p><b>P4.2-7c:</b> Mitigation Measure P4.2-6b will further reduce GHG emissions below 1990 levels from on-site mobile equipment used for Quarry operations.</p> <p><b>P4.2-7d:</b> : Mitigation Measure P4.6-6b will limit production to baseline levels, which will ensure no increase in emissions from on-site mobile diesel equipment and tugboats.</p> <p><b>P4.2-7e:</b> The Greenhouse Gas Reduction Plan specified in Mitigation Measure R4.2-3c shall also include an inventory of operations-related GHG emissions and a plan to reduce these emissions by 15 percent.</p>	<p><b>P4.2-7:</b> See Mitigation Monitoring Measures R4.2-1, R4.2-3, P4.2-6 and P4.6-6.</p>	<p>See referenced mitigation measures.</p>	<p>See referenced mitigation measures.</p>
<p><b>C4.2-9:</b> Reclamation activities under the Amended Reclamation Plan and Quarry operations under the Amended Surface Mining and Quarrying Permit would result in emissions of toxic air contaminants, including diesel particulate matter, increasing the risk of cancer for nearby sensitive receptors.</p>	<p><b>C4.2-9a:</b> As noted in Mitigation Measures R4.2-1 and P4.2-6, the applicant has taken measures to reduce DPM emissions from on-site equipment, including upgrading to lower emission engines and use of B-20 fuel.</p> <p><b>C4.2-9b:</b> Implement Mitigation Measure P4.6-6b, which would limit multi-year annual average production levels to 1982.</p> <p><b>C4.2-9c:</b> Implement Mitigation Measure R4.2-1 and Mitigation Measure P4.2-6 to further reduce DPM emissions from on-site mobile equipment used both for reclamation and for mining operations.</p>	<p><b>C4.2-9:</b> See Mitigation Monitoring Measures R4.2-1, P4.2-6, and P4.6-6.</p>	<p>See referenced mitigation measures.</p>	<p>See referenced mitigation measures.</p>
<p><b>C4.2-12:</b> Toxic air contaminants emitted from past Quarry operations, in conjunction with planned future operations under the AQP (as well as currently unplanned but reasonably foreseeable future operations), reclamation activities under the Amended Reclamation Plan,</p>	<p>No additional mitigation is available to further reduce the cancer health risks from the current projects or from reasonably foreseeable future projects, beyond those stated in Mitigation Measures C4.2-9a, b, and c.</p>	<p><b>C4.2-10:</b> See Mitigation Monitoring Measures R4.2-1, P4.2-6, and P4.6-6.</p>	<p>See referenced mitigation measures.</p>	<p>See referenced mitigation measures.</p>

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<b>Air Quality (cont.)</b>				
and post-reclamation land uses could cause significant cumulative health effects.				
<b>C5-3:</b> The project would add incrementally to cumulative air pollutant emissions.	Implement Mitigation Measures R4.2-1a through j and R4.2-2a and b.	<b>C5-5:</b> See Mitigation Monitoring Measures R4.2-1 and R4.2-2.	See referenced mitigation measures.	See referenced mitigation measures.
<b>Biological Resources</b>				
<b>R4.3-2:</b> Reclamation activities during Phases 1 through 4, as well as post-reclamation uses of the site will result in the loss of native vegetation at San Rafael Rock Quarry, including mixed perennial grassland, coastal scrub, and coast live oak woodlands.	<b>R4.3-2a:</b> ARP04 contains "Standards for Preserving Sensitive Habitat Areas." Implementation of these standards will protect specific areas of oak woodland and native grassland. <b>R4.3-2b:</b> The applicant shall submit to the Marin County Department of Public Works a revised ARP that includes the preservation of the small hill, consistent with ARP82. Any plans for future alteration of the small hill for post-reclamation development may be proposed as part of the final Development Plan, due to be submitted three years prior to the cessation of mining.	<b>R4.3-2:</b> The Marin County DPW shall be responsible for reviewing revisions to ARP04 prior to its adoption, and for monitoring compliance with standards contained therein.	Upon submittal of a Conforming Amended Reclamation Plan, within 60 days of permit approval, and throughout period of reclamation.	Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan,, and ongoing during quarry operations and reclamation.
<b>R4.3-3:</b> Reclamation activities implemented in Phases 1 through 4 could result in temporary disturbance to or mortality of Point Reyes bird's beak and Gairdner's yampah.	<b>R4.3-3a:</b> ARP04 delineates areas to be preserved, including portions of South Hill, the Grassy Knoll, and the marsh areas. <b>R4.3-3b:</b> Prior to each reclamation phase and during the planning for post-reclamation development presence/absence surveys for special-status plants will be conducted by a qualified botanist within areas to be disturbed. <ul style="list-style-type: none"><li>• Surveys will be conducted in accordance with CNPS and CDFG rare plant survey guidelines.</li><li>• Surveys will be conducted prior to the start of each phase of reclamation activities, during the flowering period when the species is most readily identifiable (June – October).</li><li>• The results of the surveys will be filed with the County; if the presence of any of these species is confirmed, a copy of the survey results will be forwarded to CDFG, and Mitigation Measure R4.3-3c will be implemented.</li><li>• In the event that special-status plants are proven absent, then no additional mitigation is necessary.</li></ul>	<b>R4.3-3a:</b> The Marin County DPW shall be responsible for ensuring that special status plant surveys are conducted prior to planned disturbance, for ensuring implementation of Mitigation Measure R4.3-3 in the event that species presence is affirmed, and for making a final determination of success.	Prior to commencement of each reclamation phase and prior to submittal of Final Development Plan, and, if presence is affirmed, during reclamation.	Verified by Marin County DPW prior to issuance of grading permits for each reclamation phase, and as part of review of Final Development Plan.

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Biological Resources (cont.)				
<p><b>R4.3-3</b> (cont.)</p>	<p><b>R4.3-3c:</b> In the event that special-status plant populations are found during the surveys conducted pursuant to Mitigation Measure R4.3-3b, the project proponent will avoid disturbance to the species by establishing a visible buffer zone of not less than 25 feet prior to construction or by relocating reclamation activities if feasible to avoid disturbance. Where necessary reclamation activities cannot be altered to avoid disturbance, the applicant shall relocate affected special-plant populations and/or restore similar habitat in another location:</p> <ul style="list-style-type: none"> <li>• Protection of special status species will be coordinated by a qualified biologist.</li> <li>• Disturbance or mortality of special status plant habitat and species shall be avoided as a priority. If a qualified biologist determines that restoration would provide equivalent or more effective mitigation, special-status plant habitat and/or sensitive plant communities may instead be restored on-site at a 2:1 ratio in areas that are to remain as post-reclamation open space, such as the Grassy Knoll or within the salt marshes.</li> <li>• Special-status plants and/or seeds will be salvaged from areas of disturbance and moved to restoration areas on or off the site; if this is not feasible, an alternate source of seed or plant material will be selected by a qualified biologist.</li> <li>• A five-year restoration mitigation and monitoring program will be developed and implemented. Appropriate performance standards will include, but are not limited to: a 75 percent survival rate of restoration plantings or plant cover; absence of invasive plant species (any species listed on the California Invasive Plant Council's California Invasive Plant Inventory); and a functioning, self-sustaining plant community at the end of five years.</li> </ul>	<p><b>R4.3-3b:</b> In the event that special-status plants are trans-located or that habitat for them is restored, Annual Mitigation and Monitoring reports will be prepared and submitted to California Department of Fish and Game.</p>	<p>As needed.</p>	<p>Verified by Marin County DPW during translocation, and annually thereafter.</p>
<p><b>R4.3-4:</b> Reclamation activities implemented in Phases 1 through 4, as well as post-reclamation development could result in damage to or removal of protected trees that are within or adjacent to areas to be reclaimed or developed.</p>	<p><b>R4.3-4a:</b> ARP04 delineates areas to be preserved, including portions of South Hill and the Grassy Knoll.</p>	<p><b>R4.3-4:</b> Marin County DPW shall be responsible for ensuring that the specified actions are undertaken prior to planned disturbance, and for ensuring implementation of Mitigation Measure R4.3-4e.</p>	<p>Prior to commencement of each reclamation phase and prior to any disturbance of areas where protected trees are growing.</p>	<p>Verified by Marin County DPW prior to issuance of grading permits for each reclamation phase, and during site inspections thereafter.</p>

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Biological Resources (cont.)				
R4.3-4 (cont.)	<p><b>R4.3-4b:</b> Implement Mitigation Measure 4.3-2b to protect the trees located on the small hill in the NW Quadrant.</p> <p><b>R4.3-4c:</b> The applicant will implement the following measures in order to minimize damage to protected trees that are to be preserved on-site:</p> <ul style="list-style-type: none"> <li>• Prior to the start of any clearing, stockpiling, excavation, grading, compaction, paving, change in ground elevation, or construction, preserved trees that occur adjacent to project construction areas shall be identified as preserved and clearly delineated by constructing short post and plank walls, or other protective fencing material, at the dripline of each tree.</li> <li>• The delineation markers shall remain in place for the duration of the work.</li> <li>• Where reclamation activities would encroach upon the dripline of a preserved tree, special construction techniques will be required to allow the roots of remaining trees within the project site to breathe and obtain water (examples include, but are not limited to, use of hand equipment for tunnels and trenching, and/or allowance of only one pass through a tree's dripline). Tree wells or other techniques may be used.</li> <li>• The following shall not occur within the dripline of any retained tree: parking; storage of vehicles, equipment, machinery, stockpiles of excavated soils, or construction materials; or dumping of oils or chemicals.</li> <li>• If a tree within a preserved area is damaged or destroyed, the applicant shall replace the tree at a ratio of 2:1 with trees of the same species. Tree replacement shall be performed by a certified arborist.</li> </ul> <p><b>R4.3-4d:</b> All pruning activities of preserved trees shall be performed by a certified arborist. No more than 25 percent of a tree's canopy shall be removed during pruning activities of retained trees.</p> <p><b>R4.3-4e:</b> The project proponent shall develop and implement a five-year monitoring program for any required replacement plantings, as specified in Mitigation Measure R4.3-4c.</p>	See also Mitigation Monitoring Measure R4.3-2.		

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Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
<b>R4.3-4</b> (cont.)	Performance standards for tree replacement include all of the following: 75 percent survival rate of restoration plantings; absence of invasive plant species (any species listed on the California Invasive Plant Council's California Invasive Plant Inventory); and self-sustaining trees at the end of five years. If these criteria are not met, the applicant shall re-plant and success shall again be assessed after five years.			
<b>R4.3-5:</b> Reclamation activities as well as post-reclamation development could result in substantial adverse effects on wetlands and waters of the U.S. under the jurisdiction of the Army Corps of Engineers, waters of the State under the jurisdiction of California Department of Fish and Game or the Regional Water Quality Control Board, and waters and land under Bay Conservation and Development Commission and State Lands Commission jurisdiction, and would be inconsistent with standards established for the Baylands Corridor in the Countywide Plan update.	<b>R4.3-5a:</b> ARP04 contains standards for setbacks from marsh areas. As stated in Chapter 3, Project Description, the saltwater and brackish marsh areas in the NW Quadrant would be protected by maintaining a setback from the edge of the existing marsh, maintaining high quality stormwater runoff, and keeping the outlet works of the marsh in good working order. ARP04 further states that stormwater quality would be monitored, and that the setback would align with the edge of current operations, including the edge of existing pavement and/or storage areas in the McNear's Brickyard storage area. As this component of ARP04 does not comply with the setback requirements for the Baylands Corridor contained in the Countywide Plan Update, Mitigation Measure R4.3-5b is necessary to further mitigate this impact.	<b>R4.3-5a:</b> The Marin County DPW shall be responsible for ensuring that setbacks are established and maintained, and that BMPs and other measures to avoid construction-related impacts on wetlands are implemented during reclamation activities.	Upon submittal of Conforming Amended Reclamation Plan within 60 days of permit approval, and ongoing throughout period of reclamation.	Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan,, and ongoing during quarry reclamation.
	<p><b>R4.3-5b:</b> All jurisdictional wetland areas to be avoided shall be protected by setbacks throughout site reclamation and post-reclamation development consistent with the Baylands Corridor designation of the site in the Countywide Plan Update:</p> <ul style="list-style-type: none"> <li>• Setbacks for the NW Quadrant marshes shall be consistent with the requirements of the Baylands Corridor designation for the site. During reclamation activities, no temporary or permanent reclamation stockpiles, berms, or other features shall be placed within 100 feet of the NW Quadrant marshes. Buffers shall be included as part of post-reclamation development design in the vicinity of the NW Quadrant marshes and shall be a minimum of 100 feet in width.</li> <li>• Setbacks for seeps and seasonal wetlands shall be a minimum of 50 feet.</li> <li>• Areas that are avoided and provided with setbacks will be further protected by Best Management Practices (BMPs),</li> </ul>	<b>R4.3-5b:</b> Conditions of additional permits needed for work within jurisdictional waters will be monitored by the relevant permitting agencies, including the USACE, RWQCB, and BCDC.	Upon submittal of permit applications for work within jurisdictional wetlands	Appropriate permitting agency (USACE, RWQCB, CDFG, BCDC), at time of permit application review.

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
<p><b>R4.3-5</b> (cont.)</p>	<p>as described in Mitigation Measure R4.3-5d below. Such measures include the installation of silt fencing, straw wattles or other appropriate erosion and sediment control methods or devices along roads and at the 100 foot setback limits. Such BMPs shall also be employed if and when reclamation grading and post-reclamation development requires work within the setbacks as described above, between the feature and the activity.</p> <p><b>R4.3-5c:</b> All necessary jurisdictional wetland permits and approvals of appropriate regulatory agencies shall be obtained prior to each relevant phase of reclamation.</p> <p><b>R4.3-5d:</b> The applicant shall conduct reclamation activities in a manner that avoids erosion and sedimentation of wetland areas, through implementation of standard BMPs to maintain water quality and control erosion and sedimentation during construction as required by compliance with the General National Pollution Discharge Elimination System (NPDES) Permit for Construction Activities and as established by mitigation measures set forth in Section 4.5, Hydrology and Water Quality.</p> <p>Mitigation measures would include, but would not be limited to, installing silt fencing between jurisdictional waters and project related activities, locating fueling stations away from potentially jurisdictional features, and otherwise isolating construction work areas from any identified jurisdictional features. In addition, BMPs identified in the Long-term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region (LTMS) (Corps, 2001) shall be implemented to prevent degradation of water quality resulting from dredging activities within open waters. These BMPs include: silt fencing and gunderbooms or other appropriate methods for keeping dredged materials from leaving the project site.</p> <p><b>R4.3-5e:</b> The applicant shall revise the ARP to include as a standard for guiding development of the final Development Plan that post-reclamation residential, commercial, and mixed use development, except as otherwise permitted by BCDC, shall not occur within the 100 foot shoreline band subject to BCDC jurisdiction.</p>			

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Biological Resources (cont.)</b>				
<p><b>R4.3-6:</b> Reclamation activities and post-reclamation development activities such as dredging, pile driving, jetty construction, and other “in-water” construction activities would result in temporary disturbances to aquatic biological resources and Essential Fish Habitat.</p>	<p><b>R4.3-6a:</b> Prior to open-water construction activities, the applicant shall obtain the necessary permits from the USACE and other regulatory agencies. Open-water construction will not begin prior to obtaining necessary permits.</p> <p><b>R4.3-6b:</b> All open-water construction activities shall adhere to the guidelines of the then-current version of the LTMS.</p> <p><b>R4.3-6c:</b> To minimize wetland disturbance the construction of the connecting channel from the Main Quarry Bowl to the Bay and removal or installation of rip-rap along the Bay shoreline will either operate from dry land or from water-based equipment such as barges, scows, derrick barges, and tugs.</p>	<p><b>R4.3-6:</b> USACE and other permit conditions are likely to include the relevant guidelines of the LTMS; it is anticipated that adherence to these conditions will be monitored by the USACE or other agencies, such as NMFS, designated in the permits.</p>	<p>Upon submittal of application for permit for open-water construction activities.</p>	<p>Appropriate permitting agency (such as USACE), during review of permit application and subsequently during work performed under any such permit.</p>
<p><b>R4.3-7:</b> Poor water quality in the deep water within the flooded Main Quarry Bowl could occur due to long residence times and stratification at depth. The proposed project may result in degradation of water quality within the deep areas of the harbor basin. This condition could result in impacts to special-status aquatic species.</p>	<p><b>R4.3-7:</b> Implement Mitigation Measure R4.5-6 in Section 4.5, Hydrology and Water Quality.</p>	<p><b>R4.3-7:</b> The Marin County Department of Public Works will be responsible for reviewing the report specified in Mitigation Measure R4.5-6.</p>	<p>See referenced mitigation measure (R4.5-6).</p>	<p>See referenced mitigation measure (R4.5-6).</p>
<p><b>R4.3-8:</b> Reclamation activities conducted in the vicinity of the process water ponds in the NW and SW Quadrants have the potential to adversely impact California red-legged frog.</p>	<p><b>R4.3-8a:</b> ARP04 includes surveys for CRLF in its “Standards for Preserving Sensitive Habitat Areas,” to be conducted prior to filing for grading permits for each reclamation phase, as well as undefined setbacks to be established in the site’s Development Plan.</p>	<p><b>R4.3-8a:</b> Surveys for CRLF in its “Standards for Preserving Sensitive Habitat Areas,” shall be conducted prior to filing for grading permits for each reclamation phase. Results shall be submitted to USFWS and CDFG.</p>	<p>Upon submittal of application for grading permits for each reclamation phase.</p>	<p>Verified by Marin County DPW during review of grading permit applications, and during site inspections.</p>
	<p><b>R4.3-8b:</b> The applicant shall conduct reclamation and post-reclamation development activities in and around the process water ponds in the NW and SW Quadrants in a manner that avoids take of CRLF through surveys to determine whether the species is present, and, if so, to reduce the risk of take of individuals of the species, as specified below. Specifically, the following measures shall be implemented:</p> <ul style="list-style-type: none"> <li>The project proponent shall retain a qualified biologist to conduct a habitat assessment for CRLF according to U.S. Fish and Wildlife Service (USFWS) guidelines prior to filing for grading permits for Reclamation Phase 1. The habitat</li> </ul>	<p><b>R4.3-8b:</b> The Marin CountyDPW shall verify that a CRLF habitat assessment and protocol-level surveys, if required, have been completed and reviewed by USFWS prior to issuance of the grading permits. DPW will notify USFWS if take of CRLF occurs in association with the project within 48 hours of the incident.</p>	<p>Prior to issuance of grading permit for each reclamation phase.</p>	<p>Verified by Marin County DPW prior to issuance of grading permit for each reclamation phase.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
R4.3-8 (cont.)	<p>assessment shall be submitted to USFWS for review. If, following the review of the habitat assessment, USFWS recommends protocol-level field surveys, then the project sponsor shall conduct protocol-level field surveys for CRLF within aquatic habitat that provides potential breeding habitat (the process water ponds in the NW and SW Quadrants) on the project site</p> <ul style="list-style-type: none"> <li>• If no CRLF are found during the habitat assessment and/or protocol level surveys associated with Phase 1 reclamation activities then the project proponent shall consult with USFWS as to the necessity of conducting further assessments or surveys for Phases 2 through 4 and/or for post-reclamation development.</li> <li>• If, as a result of the habitat assessment and/or protocol level surveys, CRLF are found on the project site, the project applicant shall initiate informal consultation with the USFWS to determine the need for formal consultation and preparation of a Biological Assessment and Biological Opinion (required by the federal Endangered Species Act). Specific measures to protect CRLF shall be determined in consultation with USFWS and may include, but are not limited to, the following measures, which are derived from the USFWS Programmatic Biological Opinion (PBO) for impacts to CRLF. The PBO summarizes typical project effects and provides generic preventive measures designed to substantially reduce the risk of incidental "take" of CRLF within the project area: <ul style="list-style-type: none"> <li>– The name and credentials of a biologist qualified to act as construction monitor shall be submitted to USFWS for approval at least 15 days prior to commencement of work.</li> <li>– A qualified biologist shall conduct pre-construction surveys within aquatic habitat by two weeks prior to the onset of construction activities. Surveys shall be completed for all life cycle stages of CRLF (e.g., egg masses, tadpole, juveniles, and adults) that may occur within the project area. If adult CRLF, tadpoles or eggs are found within the construction disturbance zone, the</li> </ul> </li> </ul>			

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
R4.3-8 (cont.)	<p>approved biologist shall contact USFWS to determine if moving any of these life-stages is appropriate. If USFWS approves moving the animals, the approved biologist shall be allowed sufficient time to move them from the construction sites before work activities begin. If no frogs are detected during these surveys, construction-related activities may proceed without further requirements for the protection of individuals, although habitat protection measures (i.e., avoidance of intermittent drainages and riparian habitat) shall still be observed.</p> <ul style="list-style-type: none"> <li>- Exclusionary fencing, such as silt fences, shall be installed around the process ponds and around all construction areas that are within 100 feet of or adjacent to potential CRLF habitat. Once fencing is in place, it shall be maintained by the proponent until completion of construction within or adjacent to the enclosure.</li> <li>- Prior to commencement of any earthmoving activities, the monitoring biologist shall train all construction personnel and work crews on the sensitivity and identification of the CRLF and the penalties for the "take" of this species. In addition, visual materials shall be provided to assist in identifying the species. Training sessions will be repeated for all new employees before they access the project site and periodically throughout project construction.</li> <li>- The monitoring biologist will demarcate construction avoidance areas in the field and monitor construction activities within 300 feet of aquatic habitat for CRLF. The demarcation shall remain on-site until all initial vegetation clearing and habitat disturbance is completed.</li> <li>- All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 100 feet from any riparian habitat or water.</li> </ul>			

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Biological Resources (cont.)</b>				
<p><b>R4.3-9:</b> Reclamation activities and post-reclamation development activities conducted in the vicinity of the process water ponds in the NW Quadrant have the potential to impact northwestern pond turtles.</p>	<p><b>R4.3-9:</b> The applicant shall conduct reclamation and post-reclamation development activities in and around the process water ponds in the NW Quadrant in a manner that avoids take of northwestern pond turtle through surveys to determine whether the species is present, and, if so, to limit reclamation and post-reclamation development activities as specified below. Specifically, prior to filing for Phase 1 reclamation grading permits, a qualified biologist who is permitted by CDFG to move turtles and their nests shall perform northwestern pond turtle surveys within suitable habitat in and around the process ponds in the NW Quadrant. Surveys and subsequent actions shall include the following:</p> <ul style="list-style-type: none"> <li>• Surveys shall be conducted for nests as well as individuals.</li> <li>• If WPT are found during initial surveys a qualified biologist shall be present when project-related activities within or adjacent to suitable aquatic habitat for northwestern pond turtle are occurring and will be responsible for temporarily relocating adult WPT that move into work areas.</li> <li>• No work within the process ponds or on their banks will proceed until the work area is determined to be free of WPT or their nests.</li> <li>• If a nest is located within the process pond area and may be impacted by reclamation activities, it shall be caged to exclude predators and monitored closely until the eggs hatch. Hatchlings shall be moved to an appropriate facility and reared until they are large enough to survive in the wild. They shall then be released into appropriate suitable habitat. All aspects of these activities shall be conducted by a qualified biologist in consultation with CDFG.</li> <li>• If no turtles are found during surveys associated with Phase 1 reclamation activities the project proponent shall consult with CDFG regarding the need for further future surveys.</li> </ul>	<p><b>R4.3-9:</b> The Marin County DPW shall verify the submittal of a northwestern pond turtle survey report, as well as the implementation of protective measures, if necessary, prior to issuance of Phase 1 grading permits. A report shall be prepared by a qualified biologist documenting the presence/absence of WPT at SRRQ, as well as the measures taken to protect them if present, and submit to the County and to CDFG.</p>	<p>Prior to issuance of Phase 1 grading permit.</p>	<p>Verified by Marin County DPW, prior to issuance of Phase 1 grading permit.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
<p><b>R4.3-10:</b> Reclamation activities resulting in the destruction of abandoned buildings or tree removal within the San Rafael Rock Quarry could adversely impact special status bat species.</p>	<p><b>R4.3-10:</b> The applicant shall conduct reclamation activities involving tree removal and building demolition in a manner that avoids disturbance or mortality of bats, through surveys to determine whether bats are present, and, if so, to limit reclamation activities as specified below. Specifically, the applicant shall take the following measures to avoid direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula:</p> <ul style="list-style-type: none"> <li>• A qualified bat biologist, acceptable to the CDFG, shall conduct surveys of all potential bat habitat within 500 feet of reclamation activities prior to initiation of such activities. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernaculum, day or night).</li> <li>• Removal of trees or demolition of buildings showing evidence of bat activity will occur during the period least likely to impact the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula and between August 15 and April 15 for maternity roosts). If active day or night roosts are found the bat biologist shall take actions to make such roosts unsuitable habitat prior to tree removal or building demolition.</li> <li>• A no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFG. Bat roosts initiated during construction are presumed to be unaffected, and no buffer is necessary. However, "take" of individuals, including harming, harassing, or killing, will be prohibited.</li> <li>• If pre-construction surveys indicate that roosts are inactive or potential habitat is unoccupied during the reclamation or construction period, no further mitigation is</li> </ul>	<p><b>R4.3-10:</b> The Marin County DPW shall verify that bat survey reports have been submitted prior to tree removal and shall not issue a grading permit, if required, prior to submittal of the bat survey report.</p>	<p>Upon submittal of application for grading permits for each reclamation phase, and prior to removal of trees or structures.</p>	<p>Verified by Marin County DPW prior to issuance of grading permit for each reclamation phase, and prior to tree or structure removal.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
<p><b>R4.3-10</b> (cont.)</p>	<p>required. Trees and buildings that have been determined to be unoccupied by special status bats and that are located outside the no-disturbance buffer for active roosts may be removed or demolished.</p> <ul style="list-style-type: none"> <li>If known bat roosting habitat is to be destroyed during tree removal or building demolition activities, artificial bat roosts shall be constructed at least two weeks prior to such disturbance in an undisturbed area of the property, at least 200 feet from any ongoing or future activities. The design and location of the artificial bat roost(s) shall be determined by a qualified bat biologist.</li> </ul>			
<p><b>R4.3-11:</b> Reclamation activities and post-reclamation development could adversely affect special-status nesting raptors and other nesting birds.</p>	<p><b>R4.3-11a:</b> ARP04 includes nesting raptor surveys as part of the "Standards for Preserving Sensitive Habitat Areas."</p> <p><b>R4.3-11b:</b> The applicant shall conduct reclamation and post-reclamation development activities in a manner that avoids direct losses of nests, eggs, and nestlings and indirect impacts to avian breeding success. Specifically:</p> <ul style="list-style-type: none"> <li>During the breeding bird season (January 1 through August 31) a qualified biologist will survey activity sites for nesting raptors and passerine birds not more than 14 days prior to any ground-disturbing activity or vegetation removal.</li> <li>If reclamation or construction activities occur only during the non-breeding season between September 1 and December_31, no surveys will be required.</li> <li>Results of the surveys will be forwarded to CDFG (as appropriate) and avoidance procedures will be adopted, if necessary, on a case-by-case basis. Avoidance procedures shall be reviewed and approved by CDFG. Depending on the species involved, these may include construction buffer areas (up to several hundred feet in the case of raptors) or seasonal restriction of activities.</li> </ul>	<p><b>R4.3-11:</b> Each year, prior to the commencement of bird breeding season (January 1), SRRQ shall submit a memorandum to the Marin County DPW stating whether the quarry intends to conduct any reclamation activities during the following year that could impact breeding birds. If so, the quarry will be required to undertake the survey specified in Mitigation Measure R4.3-11b. The Marin County DPW shall verify the submittal of breeding bird surveys.</p> <p>Results of the surveys will be forwarded to CDFG and avoidance procedures will be adopted, if necessary, on a case-by-case basis. Avoidance procedures shall be reviewed and approved by CDFG. Depending on the species involved, these may include construction buffer areas (up to several hundred feet in the case of raptors) or seasonal restriction of activities.</p>	<p>Prior to January 1 of each year.</p>	<p>Verified by Marin County DPW and CDFG.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Biological Resources (cont.)</b>				
<p><b>R4.3-12:</b> Post-reclamation residential and commercial development adjacent to marsh habitat could result in long-term adverse impacts to special-status species inhabiting the adjacent marsh habitat through increases in the levels of human noise and activity, lighting, as well as the introduction of domestic animals.</p>	<p><b>R4.3-12a:</b> ARP04 proposes to establish buffer areas around the marshes.</p> <p><b>R4.3-12b:</b> The applicant shall submit revisions to ARP04 that include a standard for development of the final Development Plan (to be submitted three years prior to cessation of mining activities) that requires the applicant to conduct post-reclamation development activities in a manner that avoids harassment, disturbance, and mortality of nesting birds and other wildlife that inhabit the SRRQ marshes. The standard will include development of a Marsh Wildlife and Habitat Protection Plan, to be prepared as a part of the Development Plan, and subject to review and approval by the Marin County Community Development Agency, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service. Components of the plan will include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• In accordance with the policies set forth in the Marin Countywide Plan (2007) the project development footprint will maintain a set back of at least 100 feet from marsh habitat on the project site.</li> <li>• Cyclone fencing with vinyl slats for screening shall be installed at the setback distance between the marshes and all residential or commercial development. Appropriate native vegetation will be planted both inside and outside of the fence to provide further screening. The fence will be designed specifically to provide a barrier to exclude cats, dogs, and other household pets from marsh areas and will also provide a visual screen between marsh wildlife and human activity.</li> <li>• To minimize the potentially-adverse effect of night lighting on the adjacent salt marsh habitat the following will be utilized: street lighting only at intersections, low-intensity street lamps and low elevation lighting poles, and internal silvering of the globe or external opaque reflectors to direct light away from marsh habitat. In addition, private sources of illumination around homes shall also be directed and/or shaded to minimize glare into the marsh.</li> </ul>	<p><b>R4.3-12a:</b> The Marin County DPW will be responsible for reviewing the revised ARP for completeness prior to project approval.</p> <p><b>R4.3-12b:</b> The Marin County Community Development Agency, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service shall be jointly responsible for review and approval of the Marsh Wildlife and Habitat Protection Plan as part of review and approval of the final Development Plan.</p>	<p>Upon submittal of Conforming Amended Reclamation Plan, within 60 days of permit approval.</p> <p>During review of final Development Plan</p>	<p>Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan,.</p> <p>Marin County CDA and appropriate resource agencies, prior to approval of final Development Plan.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
<b>R4.3-12</b> (cont.)	<ul style="list-style-type: none"> <li>An education program for residents will be developed including posted interpretive signs and informational materials regarding the sensitivity of the marsh habitat, the dangers of unleashed domestic animals in this area, and discouragement of the practice of feeding feral cats.</li> </ul>			
<p><b>P4.3-13:</b> Continued operations at the Quarry under an Amended Surface Mining and Quarrying Permit could adversely affect California red-legged frogs should they occur at the Quarry site.</p>	<p><b>P4.3-13:</b> The applicant shall conduct Quarry operations in a manner that avoids take of California red-legged frog. This mitigation measure shall be implemented through the following:</p> <ul style="list-style-type: none"> <li>As a condition of approval of the AQP by the County, and prior to any site disturbing activity within 300 feet of the ponds or fresh water marsh, the applicant shall retain a qualified biologist to conduct a habitat assessment for CRLF according to U.S. Fish and Wildlife Service (USFWS) guidelines. The habitat assessment shall be submitted to USFWS for review. If, following the review of the habitat assessment, USFWS recommends protocol-level field surveys, then the project sponsor shall conduct protocol-level field surveys for CRLF within aquatic habitat that provides potential breeding habitat (the process ponds in the NW and SW Quadrants) on the project site. The project proponent shall provide the County with the results of the habitat assessment, USFWS review, and protocol-level surveys, if required, prior to any site disturbing activity within 300 feet of the subject areas.</li> <li>If no CRLF are found during the habitat assessment or protocol level surveys, then with the concurrence of USFWS, no further mitigation shall be required.</li> <li>If, as a result of the habitat assessment or protocol level surveys, CRLF are found to inhabit the process ponds in the NW and SW Quadrants, the project proponent shall initiate informal consultation with the USFWS to determine the need for formal consultation and preparation of a Biological Assessment and Biological Opinion (required by the Federal Endangered Species Act). Consultation will consider whether or not continued use of the process ponds in the NW and/or SW Quadrants is possible without take of CRLF and whether or not a take permit would be required for continued use.</li> </ul>	<p><b>P4.3-13:</b> The Marin County DPW shall verify that a CRLF habitat assessment and protocol-level surveys, if required, have been completed and reviewed by USFWS prior to site disturbing activity within 300 feet of the three process water ponds or the freshwater marsh. Each year, as part of its annual report to the County, SRRQ shall provide a statement regarding its intent, if any, to conduct site-disturbing activity within 300 feet of the ponds or fresh water marsh, and of its plans for conducting the specified habitat assessment.</p> <p>The habitat assessment and survey results shall be submitted to USFWS for review.</p> <p>The project proponent shall provide the County with the results of the habitat assessment, USFWS review, and protocol-level surveys, if required, prior to any site disturbing activity within 300 feet of the subject areas.</p>	<p>Annually, and prior to site-disturbing activity within 300 feet of the ponds or fresh water marsh.</p>	<p>Verified by Marin County DPW, annually, and prior to site-disturbing activity as specified.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Biological Resources (cont.)</b>				
<p><b>P4.3-14:</b> Continued operations at the Quarry under an Amended Surface Mining and Quarrying Permit could adversely affect northwestern pond turtle should they occur at the Quarry site.</p>	<p><b>P4.3-14:</b> The applicant shall conduct Quarry operations in a manner that avoids disturbance to or mortality of northwestern pond turtle. This mitigation measure shall be implemented through the following: As a condition of approval for the AQP by the County and prior to any site disturbing activity within 300 feet of the NW Quadrant process water ponds, a qualified biologist who is permitted by CDFG to move turtles and their nests shall perform western pond turtle surveys within suitable habitat in and around the process ponds in the NW Quadrant.</p> <ul style="list-style-type: none"> <li>• Surveys shall be conducted for nests as well as individuals.</li> <li>• If WPT are found during initial surveys a qualified biologist shall be present when project-related activities within or adjacent to suitable aquatic habitat for northwestern pond turtle are occurring and will be responsible for temporarily relocating adult WPT that move into work areas.</li> <li>• No work within the process ponds or on their banks will proceed until the work area is determined to be free of WPT or their nests.</li> <li>• If a nest is located within the process pond area and may be impacted by Quarry associated operations, it shall be caged to exclude predators and monitored closely until the eggs hatch. Hatchlings shall be moved to an appropriate facility and reared until they are large enough to survive in the wild. They shall then be released into appropriate suitable habitat. All aspects of these activities shall be conducted by a qualified biologist in consultation with CDFG.</li> <li>• A report shall be prepared by a qualified biologist documenting the presence/absence of WPT at SRRQ, as well as the measures taken to protect them if present, and submitted to the County and to CDFG.</li> </ul>	<p><b>P4.3-14:</b> The Marin County DPW shall verify the submittal of a WPT survey report, as well as the implementation of protective measures, if necessary, have been completed and reviewed by USFWS prior to site disturbing activity within 300 feet of the two process water ponds. Each year, as part of its annual report to the County, SRRQ shall provide a statement regarding its intent, if any, to conduct site-disturbing activity within 300 feet of the ponds or fresh water marsh, and of its plans for conducting the specified habitat assessment.</p> <p>A report shall be prepared by a qualified biologist documenting the presence/absence of WPT at SRRQ, as well as the measures taken to protect them if present, and submitted to the County and to CDFG.</p>	<p>Annually, and prior to site-disturbing activity within 300 feet of the ponds or fresh water marsh.</p>	<p>Verified by Marin County DPW, annually, and prior to site-disturbing activity as specified.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Biological Resources (cont.)</b>				
<p><b>P4.3-15:</b> Continued operations at the Quarry under an Amended Surface Mining and Quarrying Permit could adversely affect special-status birds at the Quarry site as well as heron and egret rookeries at the Marin Islands Wildlife Refuge.</p>	<p><b>P4.3-15:</b> The applicant shall conduct Quarry operations in a manner that avoids direct losses of nests, eggs, and nestlings and potential indirect impacts to avian breeding success resulting from vegetation removal as well as variability in quarrying activity levels on South Hill. This mitigation measure will be implemented through the following:</p> <ul style="list-style-type: none"> <li>• During the breeding bird season (January 1 through August 31) a qualified biologist will survey sites for nesting raptors and passerine birds not more than 14 days prior to any vegetation removal (including trees, shrubs, scrub, and grassland vegetation). In addition, vegetation on South Hill will be surveyed if quarrying activities on South Hill cease for a period of more than one week during breeding bird season.</li> <li>• Surveys shall also be conducted during breeding season in those areas of the project site that a qualified biologist determines may have nesting special status bird species present that could potentially be impacted by indirect noise impacts of operations such as truck traffic or blasting at that time.</li> <li>• If vegetation removal or cessation of mining activities on South Hill occurs only during the non-breeding season, between September 1 and December 31, no surveys will be required.</li> <li>• Results of the surveys will be forwarded to the County and CDFG (as appropriate) and avoidance procedures will be adopted, if necessary, on a case-by-case basis that will ensure that the potential for an impact on any nesting raptors or passerine birds is eliminated. Depending on the species, these can include buffer areas (up to several hundred feet in the case of raptors) or seasonal avoidance. Vegetation of any kind identified as supporting active nests will not be removed until nestlings have fledged. If survey results are positive for nesting birds, vegetation removal or mining on South Hill will not occur until submittal and review of reports and implementation of any necessary avoidance measures. Special-status bird sightings shall also be submitted to the CNDDDB.</li> </ul>	<p><b>P4.3-15:</b> The Marin County DPW shall verify the submittal of breeding bird surveys as part of routine quarry inspection or as a condition of any DPW permit, such as grading.</p> <p>Each year, prior to the commencement of bird breeding season (January 1), SRRQ shall submit a memorandum to the Marin County DPW stating whether the quarry intends to conduct any reclamation activities during the following year that could impact breeding birds. If so, the quarry will be required to undertake the survey specified in Mitigation Measure P4.3-15. The Marin County DPW shall verify the submittal of breeding bird surveys.</p> <p>Results of the surveys will be forwarded to the County and CDFG (as appropriate) and avoidance procedures will be adopted, if necessary, on a case-by-case basis that will ensure that the potential for an impact on any nesting raptors or passerine birds is eliminated. Depending on the species, these can include buffer areas (up to several hundred feet in the case of raptors) or seasonal avoidance. Vegetation of any kind identified as supporting active nests will not be removed until nestlings have fledged. If survey results are positive for nesting birds, vegetation removal or mining on South Hill will not occur until submittal and review of reports and implementation of any necessary avoidance measures. Special-status bird sightings shall also be submitted to the CNDDDB.</p>	<p>Prior to January 1 of each year.</p>	<p>Verified by Marin County DPW and CDFG.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Biological Resources (cont.)</b>				
<p><b>P4.3-16:</b> Continued operations at the Quarry under an Amended Surface Mining and Quarrying Permit could adversely affect special-status bats at the Quarry site.</p>	<p><b>P4.3-16:</b> The applicant shall conduct Quarry operations in a manner that avoids direct mortality of roosting special-status bats and disturbance of maternity roosts or winter hibernacula. This mitigation measure will be implemented through the following:</p> <ul style="list-style-type: none"> <li>• A qualified bat biologist, acceptable to the CDFG, shall conduct surveys of trees slated for removal as a result of quarrying activity. Potentially suitable habitat shall be located visually. Bat emergence counts shall be made at dusk as the bats depart from any suitable habitat. In addition, an acoustic detector shall be used to determine any areas of bat activity. At least four nighttime emergence counts shall be undertaken on nights that are warm enough for bats to be active. The bat biologist shall determine the type of each active roost (i.e., maternity, winter hibernaculum, day or night).</li> <li>• Removal of trees showing evidence of bat activity will occur during the period least likely to impact the bats as determined by a qualified bat biologist (generally between February 15 and October 15 for winter hibernacula and between August 15 and April 15 for maternity roosts). If active day or night roosts are found the bat biologist shall take actions to make such roosts unsuitable habitat prior to tree removal.</li> <li>• A no-disturbance buffer shall be created around active bat roosts being used for maternity or hibernation purposes at a distance to be determined in consultation with CDFG. Active bat roosts located within 500 feet and line of sight of existing centers of Quarry activities are presumed to be unaffected, and no buffer is necessary. However, "take" of individuals will be prohibited.</li> <li>• If surveys indicate that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. Trees that have been determined to be unoccupied by special status bats and that are located outside the no-disturbance buffer for active roosts may be removed or demolished.</li> </ul>	<p><b>P4.3-16:</b> The Marin County DPW shall verify that bat survey reports have been submitted as part of routine quarry inspection or as a condition of any DPW permit, such as grading. Prior to quarry-related tree removal a report shall be submitted to the County that details the survey results and any actions taken to protect special-status bats. Any special-status bat sightings shall also be submitted to the CNDDDB.</p>	<p>Prior to removal of trees or structures.</p>	<p>Verified by Marin County DPW prior to tree or structure removal.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Biological Resources (cont.)				
<p><b>P4.3-16</b> (cont.)</p>	<ul style="list-style-type: none"> <li>• If known bat roosting habitat is to be destroyed during tree removal or building demolition activities, artificial bat roosts shall be constructed at least two weeks prior to such disturbance in an undisturbed area of the property, at least 200 feet from any ongoing or future activities. The design and location of the artificial bat roost(s) shall be determined by a qualified bat biologist.</li> <li>• Prior to quarry-related tree removal a report shall be submitted to the County that details the survey results and any actions taken to protect special-status bats. Any special-status bat sightings shall also be submitted to the CNDDDB.</li> </ul>			
<p><b>C4.3-18:</b> Impacts of the ARP and AQP on the salt marshes present at the project site would make a considerable contribution to cumulative impacts on marsh habitat.</p>	<p><b>C4.3-18a:</b> See Mitigation Measure R4.3-5a.</p> <p><b>C4.3-18b:</b> The applicant shall prepare a Marsh Restoration plan and implement the recommendations as soon as practicable, and in any case, shall complete the marsh restoration prior to completion of Phase 1 reclamation. This mitigation measure will be implemented through the following:</p> <ul style="list-style-type: none"> <li>• The project proponent shall develop and submit a Tidal Marsh Restoration plan to the County and other applicable resource agencies within 1 year of approval of the AQP. The Plan will include, but not be limited to, the following elements: <ul style="list-style-type: none"> <li>– A baseline study of existing marsh conditions, including topography, a complete analysis of current hydrology, vegetation, and wildlife that will be used to inform subsequent marsh restoration planning.</li> <li>– A thorough analysis of the potential effects of tidal restoration on adjacent infrastructure and existing marsh vegetation.</li> <li>– Development of a suite of restoration alternatives, with tidal restoration as the preferred alternative, providing constraints do not preclude this course of action.</li> <li>– Feasible goals for marsh restoration with quantifiable objectives that can be measured over time to determine whether goals are being met.</li> </ul> </li> </ul>	<p><b>C4.3-18:</b> The Marin County DPW shall verify that that a Tidal Marsh Restoration Plan has been prepared within one year of approval of the AQP and shall monitor its implementation through periodic inspections and receipt of progress reports from the Quarry. The Marin County DPW, as well as any other permitting agencies (should permitting be required as part of restoration), shall review annual monitoring reports.</p>	<p>Plan to be prepared within one year of AQP approval; implementation schedule will be specified in the plan, but shall be completed prior to completion of phase 1 reclamation.</p>	<p>Verified by Marin County DPW with input from appropriate resource agencies, upon submittal of plan. Plan implementation monitoring verified on a periodic basis or at conclusion of specific restoration actions.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Biological Resources (cont.)</b>				
<b>C4.3-18 (cont.)</b>	<ul style="list-style-type: none"> <li>– A detailed plan for marsh restoration, including, if necessary to achieve objectives, plans for excavation of new channels, addition of new culverts, setbacks, buffers, etc.</li> <li>– A maintenance schedule for any mechanical devices or features, such as tide gates, specified in the plan.</li> <li>– A monitoring plan to determine optimum inundation levels for the marshes. This would include measurements of hydrology, sediment accretion, and changes in vegetation over time.</li> <li>– A schedule for annual monitoring reports, which shall be submitted to the Department of Public Works, as well as all permitting agencies as required.</li> </ul>			
<b>Geology, Soils, and Seismicity</b>				
<b>R4.4-1:</b> Prior to the completion of site reclamation, the project site could be subject to slope instability hazards, including landslides, debris flows, and rockfalls caused by seismic or non-seismic mechanisms.	<b>R4.4-1:</b> The applicant shall include the recommendations made in the Supplemental Geotechnical Data Report Proposed Changes to Mining Plan by ENGEO, Incorporated dated April 11, 2005 as part of the proposed project. These recommendations include conducting supplemental geotechnical pit observations, groundwater monitoring, and slope monitoring which shall be conducted by a California Certified Engineering Geologist or Registered Professional Geotechnical Engineer with oversight by the State Office of Mine Reclamation. In addition, the average slope inclination shall not exceed 60 degrees for a maximum vertical height of 350 feet, a minimum of 30-foot-wide benches shall be constructed at maximum 90-foot intervals, and inter-bench face inclinations shall not exceed 75 degrees.	<b>R4.4-1:</b> It is anticipated that the requirements of Mitigation measure R4.4-1 will become conditions of approval of the ARP, and as such, will be monitored by the Marin County DPW.	Upon submittal of Conforming Amended Reclamation Plan within 60 days of permit approval.	Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan and ongoing during quarry operations and reclamation. SRRQ's annual report of quarry operations and reclamation shall contain a review of their conformance with these standards.
<b>R4.4-2:</b> Soil erosion of exposed cut or fill slopes, native slopes with removed vegetation, and soil stockpiles could result in soil erosion and loss of topsoil.	<b>R4.4-2a:</b> The applicant has prepared a Stormwater Management Plan and Stormwater Pollution Prevention Plan that specifies best management practices for reducing erosion and sedimentation. The applicant has also prepared Standards for Stormwater and Erosion Control of Reclaimed Areas and Standards for Revegetation of Reclaimed Areas, both of which will apply to reclamation activities (see Chapter 3, Project Description).	<b>R4.4-2:</b> It is anticipated that the requirements of Mitigation measure R4.4-2b will become conditions of approval of the ARP, and as such, will be monitored by the Marin County DPW.	Upon submittal of Conforming Amended Reclamation Plan within 60 days of permit approval.	Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan and ongoing during quarry operations and reclamation. SRRQ's annual report of quarry

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Geology, Soils, and Seismicity (cont.)				
<p><b>R4.4-2</b> (cont.)</p>	<p><b>R4.4-2b:</b> Mitigation Measure R4.4-2b: The project applicant shall incorporate into the grading and construction specifications provisions requiring that all phases of construction implement best management practices (BMPs) to reduce and eliminate soil erosion and loss of topsoil. The contractor shall implement these BMPs, and the contractor shall be responsible for the inspection and maintenance of the BMPs through all phases of reclamation.</p> <p>Mitigation Measure R4.5-2b in Section 4.5, Hydrology and Water Quality, also contains measures that would serve to further mitigate potential erosion effects.</p>			<p>operations and reclamation shall contain a review of their conformance with these measures.</p>
<p><b>R4.4-3:</b> Unstable slopes or soils could adversely affect post-reclamation land uses of the Quarry site.</p>	<p><b>R4.4-3a:</b> The proposed grading and other earthwork activities included in ARP04 would be designed such that all potential development areas would be located on either bedrock or consolidated engineered fill, with known and predictable strengths and stability.</p> <p><b>R4.4-3b:</b> The geotechnical recommendations provided in the Supplemental Geotechnical Data Report, which are being implemented as part of the project (see Mitigation Measure R4.4-1) include the preparation of a design-level geotechnical investigation following the cessation of mining.</p> <p><b>R4.4-3c:</b> The additional studies recommended in the Supplemental Geotechnical Data Report and specified in Mitigation Measure R4.4-3b will include a study to determine how the site may be developed following reclamation in order to avoid or mitigate to less than significant impacts related to soil and slope stability.</p> <p>At the time the study is prepared, there will be a greater understanding of the bedrock stability and the properties and performance of the Quarry walls. A comprehensive re-evaluation of slope stability shall be performed based on results from geotechnical observations throughout the mining period, groundwater monitoring, slope monitoring, and laboratory testing of on-site materials which would include compression tests and shear tests of joint surfaces.</p>	<p><b>R4.4-3:</b> It is anticipated that the specifics of the final Development Plan, including site-specific geotechnical investigation and application of its results, will become conditions of approval of the ARP, and as such, will be monitored by the Marin County DPW.</p>	<p>Upon submittal of Conforming Amended Reclamation Plan within 60 days of permit approval, and upon submittal of final Development Plan.</p>	<p>Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan and during review of final Development Plan.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Geology, Soils, and Seismicity (cont.)</b>				
<b>R4.4-3 (cont.)</b>	<p>The design-level, site-specific geotechnical investigation shall be prepared by a California licensed Geotechnical Engineer or Certified Engineering Geologist and include review of the supplemental geotechnical evaluations and monitoring conducted throughout the history of mining activities. The investigation shall include final grading recommendations, mitigation of any identified compressible or liquefiable soils, slope stability analyses, calculation of factors of safety, and structural foundation recommendations to ensure that post-reclamation development will be in accordance with the then-current requirements of the California Building Code and the Marin County Building and Safety Division or City of San Rafael Building Code. These recommendations shall be incorporated into the final design plans for post-reclamation development.</p> <p><b>R4.4-3d:</b> If the design-level, site-specific geotechnical investigation specified above determines that achievement of factors of safety adequate for the intended post-reclamation uses are infeasible in some or all of the reclaimed Quarry, the report shall specify appropriate alternative post-reclamation uses or limitations on the planned use.</p>			
<b>Hydrology and Water Quality</b>				
<p><b>R4.5-2:</b> Grading associated with the proposed project would increase the potential for eroded sediments to degrade the quality of surface water sources including the San Francisco Bay.</p>	<p><b>R4.5-2a:</b> ARP04 includes a Stormwater Management Plan and Stormwater Pollution Prevention Plan, both of which will be implemented as part of the project.</p> <p><b>R4.5-2b:</b> The applicant shall include as part of the SWPPP and Stormwater Management Plan, a monitoring and maintenance element that would require scheduled periodic monitoring of BMP performance and condition. At a minimum, stormwater and erosion control BMPs shall be monitored after major storms, prior to the first rain event, and midway through large storm events extending over several days. Temporary BMPs (e.g., fiber rolls) shall be monitored for performance and immediately replaced if necessary. Performance and failure of BMPs shall be described in the annual report to the RWQCB as required under the SWPPP. Monitoring and maintenance shall be conducted by an erosion control specialist contracted by the applicant. Monitoring and maintenance reports shall be filed with the applicant and available to the County on request.</p>	<p><b>R4.5-2:</b> The Marin County DPW will be responsible for monitoring implementation of the above mitigation measure, which will become a condition of approval of the project. Monitoring will occur during periodic inspections of the Quarry.</p>	<p>Upon submittal of Conforming Amended Reclamation Plan within 60 days of permit approval, and ongoing during quarry operations and reclamation.</p>	<p>Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan and ongoing during quarry operations and reclamation. SRRQ's annual report of quarry operations and reclamation shall contain a review of their conformance with these plans.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Hydrology and Water Quality (cont.)</b>				
<p><b>R4.5-6:</b> Poor water quality conditions could occur in the deep water within the flooded Main Quarry Bowl due to long residence times and stratification at depth. The proposed project may result in degradation of water quality within the deep areas of the harbor basin.</p>	<p><b>R4.5-6:</b> Within one year of approval of the Amended Reclamation Plan, the applicant shall submit a concept engineering and economic report for use and future maintenance of a mechanical mixing or aeration system, or another engineered approach, that will result in avoidance or elimination of a stratified water column within the Main Quarry Bowl after it is flooded. The report will be conducted by qualified limnologists and water quality engineers. The system design will be at a schematic level and will be stamped by a California professional engineer, and will include calculations that demonstrate that the system will maintain water quality objectives established in the San Francisco Bay Regional Water Quality Control Board's Basin Plan. The report will include an analysis of operating and maintenance costs for the system, as well as predicted energy requirements and greenhouse gas emissions, and a plan for minimizing both of these; and will identify a funding source to ensure continued operation of the system after reclamation.</p>	<p><b>R4.5-6:</b> The Marin County DPW will be responsible for reviewing the report and schematic design specified in Mitigation Measure R4.5-6.</p>	<p>Within one year of approval of the ARP.</p>	<p>Verified by Marin County DPW, within one year of approval of the ARP.</p>
<p><b>R4.5-8:</b> The project reclamation and post-reclamation activities would result in an increase in the possibility of inundation by a mudflow, seiche, tsunami, or sea level rise.</p>	<p><b>R4.5-8:</b> Prior to implementation of Phase 4 reclamation, the Quarry shall model effects of the maximum expected tsunami, seiche event, and anticipated sea level rise, considering the latest climate change information, and county policies and regulations in effect at the time, and proposed adequate setback and final contour elevations in a report to the County. A revised Phase 4 reclamation plan shall be submitted as appropriate.</p>	<p><b>R4.5-8:</b> The Marin County DPW will be responsible for reviewing the modeling report and, if required, reviewing and approving the revised Phase 4 reclamation plan to backfill the Main Quarry Bowl.</p>	<p>Upon submittal of application for grading permit for Phase 4 reclamation.</p>	<p>Verified by Marin County DPW, during review of grading permit for Phase 4 reclamation, and during and at conclusion of Phase 4 reclamation grading.</p>
<p><b>R4.5-10:</b> Post-reclamation development could produce stormwater runoff that would result in a degradation of surface water quality.</p>	<p><b>R4.5-10:</b> The applicant shall submit a revised ARP that includes standards for preventing polluted stormwater runoff from entering the Main Quarry Bowl after it is flooded. The standards will be used to guide development of the final Development Plan, due to be submitted three years prior to the anticipated completion of mining.</p>	<p><b>R4.5-10:</b> The Marin County DPW will be responsible for reviewing the revised ARP for completeness prior to project approval.</p>	<p>Upon submittal of Conforming Amended Reclamation Plan within 60 days of permit approval, and upon submittal of final Development Plan.</p>	<p>Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan and during review of final Development Plan.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Land Use and Planning				
<p><b>R4.6-3:</b> ARP04 would conflict with existing uses at the periphery of the project site as a result of incompatible land uses.</p>	<p><b>R4.6-3a:</b> As stated in Section 4.7, as a project mitigation, SRRQ proposes to construct a berm along the northern border of the NE Quadrant, and to retrofit all rolling vehicles at the Quarry with broadband backup alarms. Broadband alarms reduce nuisance noise effects by being directional (unlike conventional backup alarms), by being 5 dBA quieter than conventional back-up alarms, and by generating noise that has a less intrusive tonal quality.</p> <p><b>R4.6-3b:</b> Implement Mitigation Measure R4.7-1b.</p> <p><b>R4.6-3c:</b> In addition to the requirements of Mitigation Measure R4.7-2, implementation of the following construction noise abatement measures would reduce the annoyance impact of construction and reclamation activity noise.</p> <ul style="list-style-type: none"> <li>• The applicant shall limit all reclamation grading activities in the NE Quadrant to 7:00 a.m. to 5:00 p.m. Monday through Friday.</li> <li>• Equipment and trucks used for all reclamation activities shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds).</li> <li>• All construction equipment powered by internal combustion engines shall be properly muffled and maintained;</li> <li>• Unnecessary idling of internal combustion engines shall be prohibited.</li> </ul> <p><b>R4.6-3d:</b> Each year by May 1 and not later than 30 days prior to the commencement of reclamation activities, SRRQ shall inform by mail all residences on Marin Bay Park Court, Heritage Drive, and San Marino Drive, and the public at large of the start date, nature of the work, and expected duration of the 8-10 week period during which reclamation grading activities will occur that year.</p>	<p><b>R4.6-3:</b> The Marin County DPW will monitor implementation of and adherence to Mitigation Measures R4.6-3a, b, c, and d. The standards and measures specified in the mitigation measures will be incorporated into a revised Amended Reclamation Plan</p>	<p>Upon submittal of Conforming Amended Reclamation Plan within 60 days of permit approval, and ongoing during quarry operations and reclamation.</p>	<p>Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan and ongoing during quarry operations and reclamation. SRRQ's annual report of quarry operations and reclamation shall contain a review of their conformance with these standards.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Land Use and Planning (cont.)</b>				
<p><b>R4.6-5:</b> Activities associated with the phased implementation of the reclamation plan would conflict with County Code Title 22 (Section 22.112.020) restrictions on nonconforming uses.</p>	<p><b>R4.6-5a:</b> ARP04 proposes to limit reclamation grading activities to an 8-10 week period during each dry season.</p> <p><b>R4.6-5b:</b> Although the effects of the intensification of site activities resulting from the reclamation plan cannot be precisely quantified, implementation of Mitigation Measure R4.6-3b, above, regarding noise, and measures to control dust currently being implemented, required by existing permits, proposed by the applicant or identified in this EIR as discussed at Impact 4.2-1 and Impact 4.2-2 in Section 4.2, Air Quality, would help reduce the environmental effects of intensified site use on land uses adjacent to the site.</p>	<p><b>R4.6-5:</b> Mitigation Measures R4.6-5a and b will become conditions of approval of the ARP; as such, their implementation and effectiveness will be monitored by the Marin County DPW.</p>	<p>Upon submittal of Conforming Amended Reclamation Plan, within 60 days of permit approval, and ongoing during quarry operations and reclamation.</p>	<p>Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan, and ongoing during quarry operations and reclamation. SRRQ's annual report of quarry operations and reclamation shall contain a review of their conformance with these standards.</p>
<p><b>P4.6-6:</b> The Amended Surface Mining and Quarrying Permit would allow for an intensification of quarry operations beyond 1982 levels, in excess of the Quarry's legal nonconforming use under Title 22 of the County Code.</p>	<p><b>P4.6-6a:</b> The applicant proposes to limit daily truck traffic to 250 one-way trips per day (125 in and 125 out). This appears to be less than the daily average during the period 1980-1982 and within the baseline for Quarry operations.</p> <p><b>P4.6-6b:</b> Quarry operations shall be limited to the levels of intensity extant in 1982, at the time that the Quarry became a legal nonconforming use. This will include the following:</p> <ul style="list-style-type: none"> <li>• Maximum annual production shall be limited to the fluctuating baseline level of production as defined in Chapter 3, Project Description i.e., a 5-year rolling average of no more than 1,414,667 tons per year, and a maximum level of production of 1,697,600 tons in any one year;</li> <li>• Operations shall be limited to those in place in 1982, i.e., noise-generating operations will be limited to daylight hours on weekdays, except during a declared emergency;</li> <li>• Blasting shall be limited to an annual (calendar year) average of two times per week (104 times per year).</li> </ul>	<p><b>P4.6-6:</b> The specific requirements of these Mitigation Measures shall become conditions of approval of the AQP. As such, responsibility for monitoring implementation of this mitigation measure shall lie with the Marin County DPW.</p>	<p>Upon approval of the AQP, and annually thereafter</p>	<p>Verified by Marin County DPW. SRRQ's annual report of quarry operations and reclamation shall contain a review of their conformance with these conditions.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Noise and Vibration</b>				
<p><b>R4.7-1:</b> Construction of a berm along the northern property line of the NE Quadrant would result in temporary construction noise (Significant) but would also result in the creation of a noise buffer for daily operations.</p>	<p><b>R4.7-1a:</b> All rolling vehicles at the Quarry are retrofitted with broadband backup alarms. Broad band alarms reduce nuisance noise effects by being directional (unlike conventional backup alarms), being 5 dBA quieter than conventional back-up alarms and by generating noise that is less intrusive tonal quality (Brigade Electronics, 2007; Hub-4, 2007).</p> <p><b>R4.7-1b:</b> Implementation of the following construction noise abatement measures would reduce the impact of temporary construction noise. Because of its temporary nature, berm construction noise impacts would be similar to those resulting from site preparation and grading of most general development projects.</p> <ul style="list-style-type: none"> <li>• The applicant shall limit berm construction to 7:00 a.m. to 5:00 p.m. Monday through Friday;</li> <li>• Equipment and trucks used for berm construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds);</li> <li>• All construction equipment powered by internal combustion engines shall be properly muffled and maintained;</li> <li>• Unnecessary idling of internal combustion engines shall be prohibited.</li> </ul>	<p><b>R4.7-1:</b> The Marin County DPW will be responsible for monitoring adherence to noise mitigation measures. Standards and measures will be incorporated into a revised Amended Reclamation Plan.</p>	<p>Upon submittal of Conforming Amended Reclamation Plan, within 60 days of permit approval, and ongoing during quarry operations and reclamation.</p>	<p>Verified by Marin County DPW, upon submittal of Conforming Amended Reclamation Plan, and ongoing during quarry operations and reclamation. SRRQ's annual report of quarry operations and reclamation shall contain a review of their conformance with these requirements.</p>
<p><b>P4.7-7:</b> Continued blasting at the Quarry would expose neighbors of San Rafael Rock Quarry to vibrations that exceed human annoyance levels.</p>	<p><b>P4.7-7a:</b> The AQP contains the following provisions to limit the adverse effects of blasting:</p> <ul style="list-style-type: none"> <li>• Blasting vibration beyond the Quarry property boundary shall be limited to a maximum peak velocity of 0.5 inches per second.</li> <li>• The quarry shall provide 36 hours advance notification of blasting to local residents and to the County of Marin by posting the date and approximate time of scheduled blasts on a web site.</li> </ul>	<p><b>P4.7-7:</b> As a condition of approval of the new AQP, SRRQ will be required to fund a seismic monitoring program. DPW will verify compliance with this requirement through the receipt and review of blasting reports from SRRQ.</p>	<p>Standards will apply upon approval of AQP. Blasting plan to be submitted within six months of approval of AQP.</p>	<p>Verified by Marin County DPW, on an ongoing basis. SRRQ's annual report of quarry operations and reclamation shall contain a review of their conformance with these standards.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Noise and Vibration</b>				
<b>P4.7-7</b> (cont.)	<ul style="list-style-type: none"> <li>• Blasting shall be limited to the hours of 11:30 a.m. to 1:30 p.m. Monday through Friday. No blasting is to occur on State holidays or weekends.</li> </ul> <p><b>P4.7-7b:</b> Implementation of the following would reduce the impact of vibration and air-overpressure from rock blasting activities:</p> <ul style="list-style-type: none"> <li>• Blasts should be designed to maintain a minimum scaled distance of 52.8 ft/lb<sup>1/2</sup>, as defined in the Revey Associates report (Appendix J).</li> <li>• Corresponding to the scale distance, the ground motion should not exceed 0.25 inches per second peak particle velocity.</li> <li>• All charges should be confined with clean crushed stone of height equal to or greater than 25 charge diameters, as defined on Page 21 of the Revey Associates report. Air-overpressure measured near residential home should never exceed 133 dBL, as measured with 2-Hz monitoring equipment.</li> <li>• All charges should be confined with rock burden equal to or greater than 25 charge diameters, as defined on Page 21 of the Revey Associates report.</li> </ul> <p>All blast monitoring of ground motion and air-overpressure effects done by either SRRQ personnel or third-party service providers should be done in full conformance with ISEE guidelines provided in Attachment I of the Revey Associates report (Appendix J)</p>			
<b>Hazardous Materials</b>				
<b>R4.8-1:</b> Hazardous materials transported or used onsite during proposed mining and reclamation activities (i.e., petroleum products,) could be spilled or otherwise released through improper handling or storage.	<p><b>R4.8-1a:</b> SRRQ maintains an updated Hazardous Material Business Plan that contains operator information, a hazardous material inventory, site maps, and an Emergency Response Action Plan.</p> <p><b>R4.8-1b:</b> SRRQ shall maintain and periodically update its Hazardous Material Business Plan during the entire reclamation period.</p>	<b>R4.8-1:</b> Review of the Hazardous Materials Business Plan will be the responsibility of the Marin County DPW.	Periodic updates to be submitted and reviewed biannually.	Verified by Marin County DPW, beginning one year after approval of ARP, and every two years thereafter.

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
<b>Hazardous Materials (cont.)</b>				
<p><b>P4.8-3:</b> Transport, storage, and use of explosives could result in accidental explosions or exposure to hazardous substances.</p>	<p><b>P4.8-3a:</b> As previously described under Mitigation Measure R4.8-1a, SRRQ maintains an updated Hazardous Material Business Plan that contains operator information, a hazardous material inventory, site maps, and an Emergency Response Action Plan.</p> <p><b>P4.8-3b:</b> The applicant shall prepare and maintain a blasting plan that describes how the Quarry will consistently comply with applicable blasting regulations and standards of practice. The blasting plan will contain a complete description of clearing and guarding procedures; descriptions of how explosives will be safely transported, stored, and used at the site in accordance with applicable regulations; evacuation, security and fire prevention procedures; blasting equipment list, and procedures for notification of nearby receptors in the event of an accident or emergency involving explosives. The blasting plan shall incorporate the recommendations contained in the Revey Associates, Inc. report (pp. 23-24) attached as Appendix J. The blasting plan must be prepared within six months of approval of the AQP. The plan will be subject to review and approval by the County Department of Public Works.</p>	<p><b>P4.8-3:</b> The Marin County DPW will be responsible for review and approval of the blasting plan.</p>	<p>Blasting plan to be submitted within six months of approval of ARP.</p>	<p>Verified by Marin County DPW, upon submittal of blasting plan; implementation of blasting plan verified during periodic site inspections and in review of annual report of quarry operations.</p>
<b>Public Services, Utilities, and Energy</b>				
None.				
<b>Transportation and Traffic</b>				
None.				
<b>Population and Housing</b>				
None.				
<b>Cultural Resources</b>				
<p><b>R4.12-1:</b> Phased reclamation grading activities could result in adverse effects to prehistoric or unique archaeological resources, including those previously unidentified.</p>	<p><b>R4.12-1a (applies to all project phases):</b> In the event that any human remains, artifacts, or other indicators of prehistoric or historic use of the parcel are encountered during site preparation or construction activities on any part of the project site, all work at the vicinity of the discovered site shall stop and the project sponsor shall contact the Marin County Environmental Coordinator immediately. If human remains are encountered, the County Coroner must also be</p>	<p><b>R4.12-1a:</b> In the event of discovery, the Marin County DPW staff shall verify that a report has been submitted and all construction work has been stopped. In the event that the report indicates that any human remains, artifacts, or other indicators of prehistoric or historic use of the parcel are encountered</p>	<p>Upon approval of ARP and continuing for the duration of reclamation activities.</p>	<p>Verified by Marin County DPW on an as-needed basis. The Quarry shall include in its annual report to the County any instance of discovery of cultural resources in the course of quarry</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Cultural Resources (cont.)				
R4.12-1 (cont.)	<p>contacted. A registered archaeologist, chosen by the County and paid for by the project sponsor, shall assess the site and shall submit a written evaluation to the Community Development Agency Director advancing appropriate conditions to protect the site and the resources discovered. State law designates procedures should human remains be encountered. If the remains are deemed to be Native American and prehistoric, the Coroner must contact the Native American Heritage Commission so that a "Most Likely Descendant" can be designated. No work at the site may recommence without approval of <b>the Agency Director</b>.</p>	<p>during site preparation or construction activities on any part of the project site, the Marin County DPW staff shall verify that a registered archaeologist has been retained to assess the site and had submitted a written evaluation to the <b>Agency Director</b> advancing appropriate conditions to protect the site and the resources discovered before work commences on the site. If human remains are encountered, the DPW staff shall verify that the County Coroner has been contacted and that all future work is carried out in accordance with the mitigation measures.</p>		<p>operations or reclamation, and how Mitigation Measure R4.12-1a was implemented.</p>
	<p><b>R4.12-1b (applies to Phase 4 of reclamation grading):</b> The applicant shall retain the services of a qualified archaeological consultant who has expertise in California prehistory to review reclamation grading plans and identify areas of potential concern, including previously undisturbed or minimally disturbed areas. The archeological consultant shall monitor all ground-disturbing or vegetation removal activities in identified areas of concern during construction to ensure that any previously undiscovered cultural resources are properly identified and preserved or otherwise mitigated in accordance with prevailing professional standards and Public Resources Code §21083.2. If an intact archaeological deposit is encountered, all soil-disturbing activities in the vicinity of the deposit will cease. The archaeological monitor will be empowered to redirect crews and heavy equipment until the deposit is evaluated. The monitor will immediately notify the Marin County Department of Public Works of the encountered archaeological deposit. The monitor will, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, present the findings of this assessment to Marin County. If Marin County, in consultation with the archaeological monitor, determines that a significant archaeological resource is present and that the resource could be adversely affected by the proposed project, the applicant shall take steps to:</p>	<p><b>R4.12-1b:</b> Prior to issuance of the Phase 4 Grading Permit for ground disturbing reclamation activities, the applicant will present to Marin County DPW written procedures for compliance with Mitigation Measure R4.12-1b. Compliance monitoring, and any consultations and approvals by the County required in the above mitigation measures, will be the responsibility of the Marin County.</p>	<p>Upon issuance of Phase 4 grading permit</p>	<p>Verified by Marin County DPW, during Phase 4 reclamation.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Cultural Resources (cont.)				
R4.12-1 (cont.)	<ul style="list-style-type: none"> <li>• Redesign the project to avoid any adverse effects on the significant archaeological resource; or</li> <li>• Develop and implement an archaeological data recovery program (ADRP) (unless the archaeologist determines that the resource is of greater interpretive than research significance and that interpretive use of the resource is feasible). If the circumstances warrant an archaeological data recovery program, an ADRP will be conducted that will preserve and recover important archeological data from the find, to the extent that adverse effects will be avoided. The project archaeologist will consult with Marin County to determine the scope of the ADRP. The archaeologist will prepare a draft ADRP that will be submitted to Marin County and the state Office of Historic Preservation for review and approval. The ADRP will identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain (i.e., the ADRP will identify the scientific/historical research questions that are applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions). Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods will not be applied to portions of the archaeological resources if nondestructive methods are practical.</li> </ul>			
<p><b>R4.12-3:</b> Construction of the top soil stockpile fill area "F" under Phase 1 of the proposed project would demolish or substantially alter the c. 1910 Caretaker's Residence, a potentially eligible historic resource pursuant to California Environmental Quality Act Section 15064.5.</p>	<p><b>R4.12-3a:</b> The project sponsor shall relocate the top soil stockpile fill area "F" under Phase 1 of the proposed project, to avoid potentially adverse effects to the Caretaker's Residence. The fill area could be relocated either to the east or to the west of this potentially eligible historic resource, or split into two smaller stockpiles, to avoid the resource.</p> <p><b>R4.12-3b:</b> Prior to commencement of Phase 1 reclamation grading, the applicant shall submit a detailed plan to the Marin County Department of Public Works detailing stockpiles and haul routes, and protection of historic resources. The plan will clearly show how the Caretaker's Residence and other potentially eligible historic resources will be protected and preserved.</p>	<p><b>R4.12-3:</b> The Marin County DPW will be responsible for review, approval, and monitoring implementation of these mitigation measures.</p>	<p>Plans for preservation of the Caretaker's Residence shall be included in a conforming ARP, to be submitted within 60 days of AQP approval. Detailed grading plans showing preservation of this structure to be submitted with application for Phase 1 grading permit.</p>	<p>Verified by Marin County DPW, during review of Phase 1 grading permit application, and during Phase 1 grading.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Cultural Resources (cont.)				
<p><b>R4.12-4:</b> Construction of the surcharge berm under Phase 2 of the proposed project would demolish or substantially alter the McNear's Brickyard c. 1902 Boarding House and Office, two potentially eligible historic resources pursuant to California Environmental Quality Act Section 15064.5.</p>	<p><b>R4.12-4a:</b> The project sponsor shall relocate and/or redesign the surcharge berm proposed under Phase 2 of the proposed project, to avoid potentially adverse impacts to the Boarding House and Office structures. The north-south leg of the berm could be narrowed to avoid these resources, allowing more fill to occur on the east-west portion of the berm. To ensure adherence to this mitigation measure, prior to commencement of Phase 2 reclamation grading, the applicant shall submit a detailed plan to the Marin County Department of Public Works detailing the precise location of the surcharge berm, as well as areas that will be used to support construction of the berm. The plan will clearly show how the Boarding House and Office structures and other potentially eligible historic resources will be protected and preserved.</p> <p><b>R4.12-4b:</b> If relocation or alteration of the surcharge berm will affect the geotechnical properties of the site required for intended post-reclamation development, the applicant shall revise the conceptual design for the NW Quadrant Reclamation Plan accordingly.</p>	<p><b>R4.12-4:</b> The Marin County DPW and the Marin County Community Development Agency will be responsible for review, approval, and monitoring implementation of the plan specified in Mitigation Measure R4.12-4a.</p>	<p>Plans for preservation of the Boarding House and Office shall be included in a conforming ARP, to be submitted within 60 days of AQP approval. Detailed grading plans showing preservation of these structures to be submitted with application for Phase 2 grading permit.</p>	<p>Verified by Marin County DPW, during review of Phase 2 grading permit application, and during Phase 2 grading.</p>
<p><b>R4.12-5:</b> Reclamation activities in the SW Quadrant under Phase 3 of the phased grading plan may demolish or substantially alter the former c. 1935 U.S. Army Signal House, a potentially eligible historic resources pursuant to California Environmental Quality Act Section 15064.5.</p>	<p><b>R4.12-5a:</b> The project sponsor shall redesign the reclamation activities in the SW and NW Quadrants under Phase 3 of the proposed project to avoid potentially adverse impacts to the former c. 1935 U.S. Army Signal House. The southernmost limits of the reclamation activity area could be reduced by approximately 100 feet to avoid this historic resource, potentially allowing more reclamation activities to occur on the northern, eastern, or western portions of SW-3.</p> <p><b>R4.12-5b:</b> The provisions of Mitigation Measures R4.12-3 and R4.12-4a to protect the Caretaker's residence and the McNear's Brickyard Boarding House and Office shall be kept in place for Phase 3 reclamation grading.</p> <p><b>R4.12-5c:</b> To ensure adherence to mitigation measures R4.12-5a and b, prior to commencement of Phase 3 reclamation grading, the applicant shall submit a detailed plan to the Marin County Department of Public Works detailing reclamation grading activities. The plan will clearly show and describe how the affected potentially historic resources, including the c 1935 U.S. Army Signal House, the</p>	<p><b>R4.12-5:</b> The Marin County DPW and the Marin County Community Development Agency will be responsible for review, approval, and monitoring implementation of the plan specified in Mitigation Measure R4.12-5c.</p>	<p>Plans for preservation of the U.S. Army Signal House shall be included in a conforming ARP, to be submitted within 60 days of AQP approval. Detailed grading plans showing preservation of these structures to be submitted with application for Phase 3 grading permit.</p>	<p>Verified by Marin County DPW, during review of Phase 3 grading permit application, and during Phase 3 grading.</p>

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Cultural Resources (cont.)				
<b>P4.12-5</b> (cont.)	Caretaker's residence, and the McNear's Brickyard Boarding House and Office structures, as well as any other potentially eligible historic resources will be protected and preserved.			
<b>R4.12-6:</b> Reclamation grading phase 4 of the 2004 Amended Reclamation Permit would demolish four potentially eligible historic buildings at McNear's Brickyard, including 1) c. 1902 Cookhouse, 2) c. 1902 Drysheds, 3) c. 1902 Hoffman Kiln #1, 4)c. 1904 Hoffman Kiln #2, and 5) c. 1910s Worker's Shed. Even with the possible retention of Hoffman Kiln #1 under the Amended Reclamation Plan, Phase 4 would additionally alter the historic setting of Hoffman Kiln #1 to the extent that it would no longer qualify for listing in the National Register of Historic Places or California Register of Historic Resources.	<b>R4.12-6a:</b> The ARP states that one of the Hoffman Kilns and its stack may be retained in the post-reclamation development.  <b>R4.12-6b:</b> The project sponsor shall revise the applicable portion of ARP04 to specify preservation of the following four historic resources: 1) c. 1902 Cookhouse, 2) c. 1902 Drysheds, 3) c. 1902 Hoffman Kiln #1, 4) c. 1904 Hoffman Kiln #2, and 5) c. 1910s Worker's Shed. The neighborhood commercial uses proposed for the NW Quadrant shall be constructed to provide a sufficient setback to allow these structures to visually 'read' as a working brickyard, with all original components of the brickmaking industry intact.	<b>R4.12-6:</b> The Marin County DPW will be responsible for reviewing and approving revisions to ARP04 prior to project approval.	Plans for preservation of 1) c. 1902 Cookhouse, 2) c. 1902 Drysheds, 3) c. 1902 Hoffman Kiln #1, 4)c. 1904 Hoffman Kiln #2, and 5) c. 1910s Worker's Shed shall be included in a conforming ARP, to be submitted within 60 days of AQP approval. Detailed grading plans showing preservation of these structures to be submitted with application for Phase 4 grading permit.	Verified by Marin County DPW, during review of Phase 4 grading permit application, and during Phase 4 grading.
<b>P4.12-9:</b> Continued quarrying at the project site could adversely affect prehistoric or unique archaeological resources, including those previously unidentified.	<b>P4.12-9:</b> In the event that any human remains, artifacts, or other indicators of prehistoric or historic use of the parcel are encountered during site preparation or construction activities on any part of the project site, all work at the vicinity of the discovered site shall stop and the project sponsor shall contact the Marin County Environmental Coordinator immediately. If human remains are encountered, the County Coroner must also be contacted. A registered archaeologist, chosen by the County and paid for by the project sponsor, shall assess the site and shall submit a written evaluation to the Community Development Agency Director advancing appropriate conditions to protect the site and the resources discovered. State law designates procedures should human remains be encountered. If the remains are deemed to be Native American and prehistoric, the Coroner must contact the Native American Heritage Commission so that a "Most Likely Descendant" can be designated. No work at the site may recommence without approval of the Agency Director.	<b>P4.12-9:</b> In the event of discovery, the Marin County Community Development Agency staff shall verify that a report has been submitted and all construction work has been stopped. In the event that the report indicates that any human remains, artifacts, or other indicators of prehistoric or historic use of the parcel are encountered during site preparation or construction activities on any part of the project site, the Marin County CDA staff shall verify that a registered archaeologist has been retained to assess the site and had submitted a written evaluation to the Agency Director advancing appropriate conditions to protect the site and the resources discovered before work commences on the site. If	Upon approval of AQP and continuing for the duration of reclamation activities.	Verified by Marin County DPW on an as-needed basis. The Quarry shall include in its annual report to the County any instance of discovery of cultural resources in the course of quarry operations or reclamation, and how Mitigation Measure P4.12-9 was implemented.

**SAN RAFAEL ROCK QUARRY ARP AND AQP (Continued)  
MITIGATION MONITORING AND REPORTING PROGRAM**

Environmental Impact	Mitigation Measures	Mitigation Monitoring and Reporting Measures	When Implemented	Verified by and Date
Cultural Resources (cont.)				
P4.12-9 (cont.)		human remains are encountered, the CDA staff shall verify that the County Coroner has been contacted and that all future work is carried out in accordance with the mitigation measures.		

Key:

- AQP – Amended Quarry Permit
- ARP – Amended Reclamation Plan
- BAAQMD – Bay Area Air Quality Management District
- BCDC – Bay Conservation and Development Commission
- CDA – Community Development Agency
- CDFG – California Department of Fish and Game
- DPW – Department of Public Works
- RWQCB – Regional Water Quality Control Board
- SRRQ – San Rafael Rock Quarry
- USACE – US Army Corps of Engineers